

Appendix D

Biological Resources Technical Report

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Biological Technical Report for the Sunrise Specific Plan City of San Marcos, California

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AOS	American Ornithological Society
BSA	biological study area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of San Marcos
CNPS	California Native Plant Society
HCP	Habitat Conservation Plan
IPaC	Information for Planning and Consultation
LI	Light Industrial Zoning
MHCP	Multiple Habitat Conservation Plan
NA	not applicable
NCCP	Natural Community Conservation Plan
RWQCB	Regional Water Quality Control Board
SanGIS	San Diego Geographic Information Source
SR-1	Semi-Rural 1 Zoning
SPA	Specific Plan Area
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Service

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1 INTRODUCTION

Dudek has prepared this Biological Technical Report (report) for the Sunrise Specific Plan (Project) in support of Project review by the City of San Marcos (City) in the California Environmental Quality Act (CEQA) evaluation process. It is also intended to support environmental review by other applicable regulatory resource agencies as needed.

The Project site is located in the jurisdictions of the City of San Marcos and the County of San Diego (County); however, it is proposed to be annexed into the City. The site is located at the southeastern portion of the City of San Marcos, bordering the City of Escondido to the east and unincorporated County of San Diego lands to the south (Figure 1, Project Location). The purpose of this report is to provide the methods and results of the focused and reconnaissance-level surveys conducted in summer/fall 2017 and spring/summer 2018, which included vegetation mapping, focused botanical and rare plant surveys, coastal California gnatcatcher (*Polioptila californica californica*) surveys, and a delineation of jurisdictional wetlands and non-wetland waters. This report includes an impact analysis based on survey results and federal, state, and local regulations, as well as measures to avoid and minimize impacts to biological resources.

Currently, the City does not participate in the Natural Community Conservation Plan (NCCP) program as a signatory to the North County Multiple Habitat Conservation Plan (MHCP). However, habitat conservation and connectivity goals outlined in the MHCP were integrated into the CEQA evaluation analysis, and the MHCP designated conservation areas and sensitive habitats were considered in the analysis and this report.

1.1 Project Description

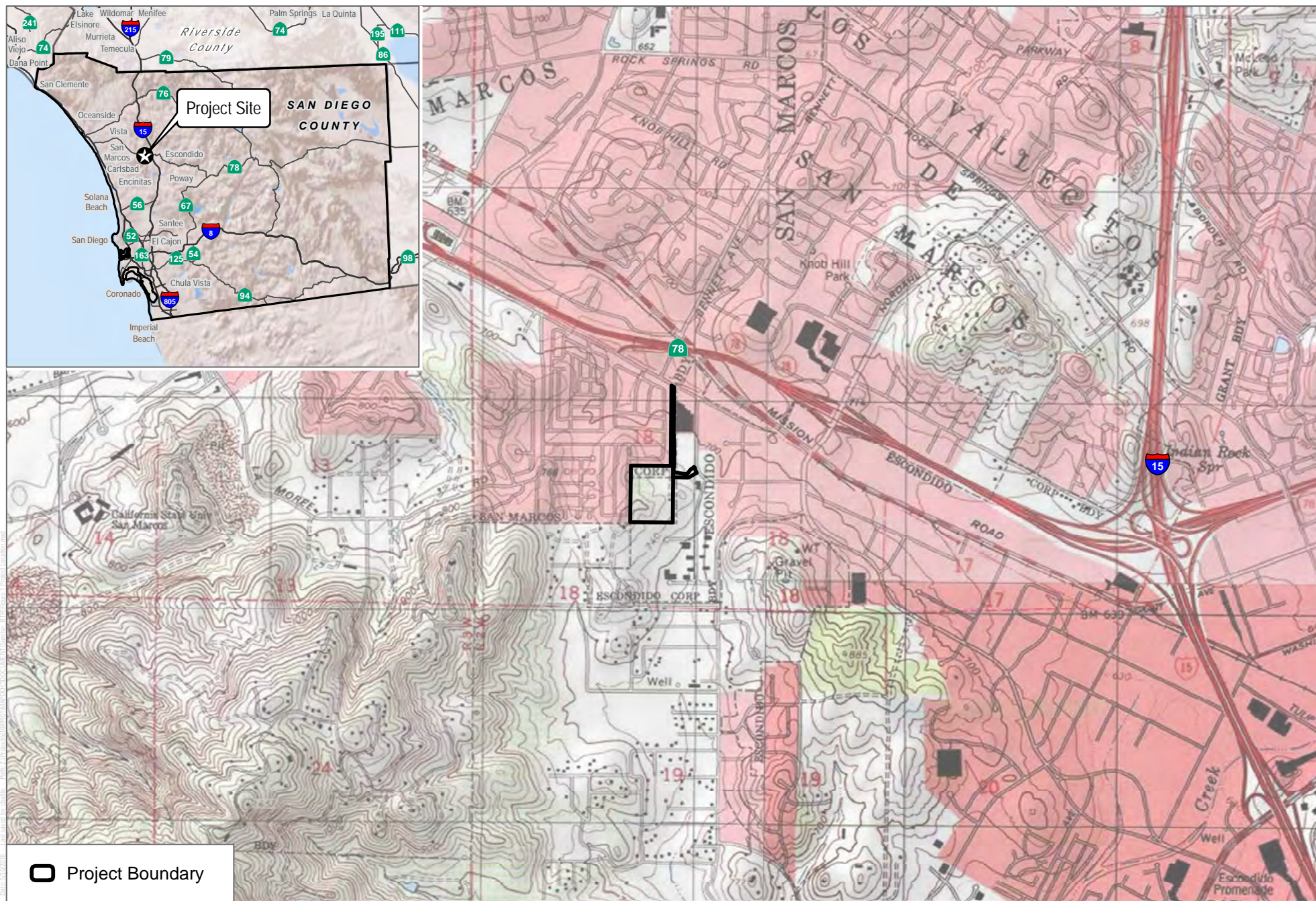
The proposed project would involve a development consisting of an Annexation, General Plan Amendment, Rezone, Multi-Family Site Development Plan, Specific Plan, Tentative Map, Grading Variance, and Conditional Use Permit. If approved, these entitlements would allow the development of 192 multi-family units within the project site. The Specific Plan is a comprehensive planning document that establishes development guidelines for the project site. The document will serve as the primary land use, policy, and regulatory document for the project by providing a development planning review process, as authorized by California Government Code §65450, in conjunction with the City of San Marcos Zoning Ordinance, Chapter 20.535. The permitted uses within the project site with adoption of the Specific Plan would be multi-family residential with public and private recreational and open space. The project site plan is shown on Figure 2, Conceptual Site Plan.

The proposed project would allow for the development of approximately 192 multi-family residential dwelling units, resulting in a gross density of approximately 13.3 dwelling units per

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acre. The proposed residential units would be comprised of 100 two-story townhomes and 92 three-story townhomes. The proposed project also includes open space, active recreational areas, bio-retention areas, circulation improvements, and a public services and facilities plan.

The proposed project would require several off-site improvements including storm drainage facilities, roadway network construction, and sewer improvements.



SOURCE: USGS 7.5-Minute Series San Marcos Quadrangle

FIGURE 1

Project Location

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2 PROJECT SETTING

2.1 Project Location

The 15.51-acre Project site, including 14.44 acres on-site and 1.07 acres in off-site areas, is composed of two undeveloped lots within the jurisdiction of the City of San Marcos and County of San Diego. The Project site is located approximately 0.25 miles southeast of Highway 78, 1.5 miles east of the California State University San Marcos, and approximately 1.5 miles west of Interstate 15. Specifically, the Project site is west of Meyers Avenue/Corporate Drive and south of E. Barham Drive (Figure 1). The site is located on the U.S. Geological Service (USGS) 7.5-Minute San Marcos Quadrangle Map on Section 18, in Township 12 South, Range 2 West of the San Bernardino Base and Meridian.

2.2 Soils

The U.S. Department of Agriculture Soil Survey mapped most of the Project area as underlain by the following soil types: Fallbrook sandy loam (FaB), 2% to 5% slopes; Vista coarse sandy loam (VsC), 5% to 9% slopes; Vista coarse sandy loam (VsD), 9% to 15% slopes; Vista coarse sandy loam (VsD2), 9% to 15% slopes, eroded; and Visalia sandy loam (VaB), 2% to 5% slopes (USDA 2018a).

2.3 Land Uses

2.3.1 On-Site Land Uses

The Project is located south of E. Barham Drive, west of Meyers Avenue/Corporate Drive, and east of La Moree Road and is composed of two undeveloped lots. The on-site land use is currently unoccupied and disturbed from previous grading and past agricultural use.

2.3.2 Surrounding Land Uses

The site is bordered primarily by residential neighborhoods to the west and commercial development to the east, north, and south.

2.4 Watersheds and Hydrology

The Project area is located within the Carlsbad Hydrologic Unit. The Carlsbad Hydrologic Unit (904.00) is a triangular area covering approximately 210 square miles (SDRWQCB 2002). This hydrologic unit is bordered by San Luis Rey Hydrologic Unit to the north and San Dieguito Hydrologic Unit to the east and south. The Project area is located within the San Marcos Hydrologic Subarea.

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The Carlsbad Hydrologic Unit includes one small coastal lagoon (Loma Alta Slough) and four major coastal lagoons, including Buena Vista, Agua Hedionda, Batiquitos, and San Elijo (SDRWQCB 2002).

3 METHODS

Dudek conducted a literature review and subsequent reconnaissance-level and focused surveys to determine the presence or potential presence of sensitive biological resources on the Project site. This section describes the literature review, methods of field surveys, and survey limitations.

3.1 Literature Review

Prior to conducting the field investigation, Dudek conducted a review of the existing biological resources and species within the vicinity of the survey area using the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CDFW 2018a–e), the California Native Plant Society Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2018), U.S. Fish and Wildlife Service (USFWS) Critical Habitat and Occurrence Data (USFWS 2018a), the San Diego Natural History Museum’s Plant Atlas and Bird Atlas, and the San Diego Geographic Information Source (SanGIS). Dudek obtained special-status species occurrence data from the above sources by querying records within the City’s USGS 7.5-Minute Quadrangle Map and the 8-Quadrangle Maps surrounding the Project site, including the Morro Hill, Bonsall, Pala, San Luis Rey, Valley Center, Encinitas, Rancho Santa Fe, and Escondido USGS Quadrangle Maps. In addition, Dudek reviewed the following available resources to assess the potential for biological and wetland resources within the Project site and vicinity:

- List of potentially occurring listed species generated from a review of the USFWS’s Information for Planning and Consultation (IPaC) Trust Resources Report (USFWS 2018b) list of federal and threatened species
- USGS National Hydrography Dataset (USGS 2018a)
- USFWS National Wetlands Inventory (USFWS 2018c)
- StreamStats (USGS 2018b)
- U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey (USDA 2018a)
- *City of San Marcos Subarea Habitat Conservation Plan/Natural Communities Conservation Plan* (public review draft) (SANDAG 2001)

Prior environmental documents prepared for the Project provided information on biological resource constraints previously identified. The documents reviewed include the following:

- *Coastal California Gnatcatcher Survey Results for the Sunrise Garden Properties* (Cadre Environmental 2006)

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- *Biological Technical Report for the Meyers Parcel* (REC Consultants Inc. 2005)
- *Preliminary Jurisdictional Wetland Delineation, Review, and Update, Meyers Avenue Site* (Kleinfelder West Inc. 2007)

3.2 Field Surveys

Dudek biologists completed reconnaissance-level surveys for sensitive resources, vegetation mapping, focused botanical and rare plant surveys, focused coastal California gnatcatcher surveys, and wetland delineation surveys within the Project site to gain a clear understanding of natural resources present and the species with potential to occur based on the habitats present. The entirety of the 15.51-acre Project site was included in the biological study area (BSA), which includes the on-site property and the off-site areas that will be part of the Project (Figure 2). Each survey included an inventory of the plant and wildlife species encountered. Biologists documented the presence of special-status species, but negative surveys were not considered confirmation of absence.

Survey methodologies are detailed below. During surveys, biologists walked the BSA and recorded visual and audial observations. Table 1 provides the dates, times, site conditions, and observations for each survey.

Table 1
Biological Survey Schedule and Conditions

Date	Personnel	Survey Type	Time	Survey Conditions
07/06/17	JM	Habitat assessment, vegetation mapping, and wetland delineation	8:30 a.m.–11:30 a.m.	75°F–83°F; 0% cc, 0–5 mph winds
03/16/18	EBE	Coastal California gnatcatcher focused survey	11:22 a.m.–12:09 p.m.	72°F; 30%–40% cc, 0–3 mph
03/23/18	EBE	Coastal California gnatcatcher focused survey	8:18 a.m.–11:11 a.m.	68.8°F–76°F, 20%–90% cc, 0–5 mph winds
03/30/18	APC, KJM, MLO	Coastal California gnatcatcher focused survey	8:45 a.m.–10:34 a.m.	60°F–74°F, 0% cc, 1–4 mph winds
04/06/18	AH, SC	Coastal California gnatcatcher focused survey	7:45 a.m.–9:25 a.m.	58°F–64°F, 40%–50% cc, 0–4 mph winds
04/13/18	KJM	Coastal California gnatcatcher focused survey	9:35 a.m.–11:00 a.m.	67°F–69°F, 0% cc, 1–5 mph winds
04/20/18	KJM	Coastal California gnatcatcher focused survey	9:40 a.m.–11:18 a.m.	63°F–69°F, 0% cc, 1–5 mph winds
05/11/18	JM, MLO	Focused rare plant survey	8:00 a.m.–12:48 p.m.	58°F–60°F; 100% cloud cover; 0–10 mph wind

Personnel: JM = Jake Marcon; EBE = Erin Bergman; APC = Anna Cassidy; KJM = Kamarul Muri; MLO = Monique O'Connor; AH = Anita Hayworth; SC = Shana Carey

Notes: °F = degrees Fahrenheit; cc = cloud cover; mph = mile per hour

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3.2.1 Vegetation Community and Land Cover Mapping

To locate and characterize natural vegetation communities, including habitats for special-status species, within the Project area, Dudek conducted vegetation mapping. The field mapping was consistent with the *Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities* (CDFG 2009), and vegetation communities were identified by keying them out in the *Manual of California* (Sawyer et al. 2009), resulting in a vegetation map that can be “cross-walked” to North County MHCP vegetation communities.

Vegetation mapping was conducted within the BSA in July 2017 in conjunction with the initial reconnaissance-level surveys for sensitive resources (Table 1). Mapping was performed in the field through interpretation of field maps with a high-quality aerial photographic basemap.

3.2.2 Flora

All plant species encountered during the field surveys were identified to subspecies or variety, if possible. Species that could not be identified in the field were brought into the laboratory for further investigation. Latin and common names for plant species with a California Rare Plant Rank (formerly California Native Plant Society List) follow the California Native Plant Society Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2018). For plant species without a California Rare Plant Rank, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2018) and common names follow the *List of Vegetation Alliances and Associations* (CDFW 2010) or the U.S. Department of Agriculture, Natural Resources Conservation Service, State Plants Checklist (USDA 2018b). A cumulative plant species list is provided in Appendix A.

3.2.3 Fauna

Biologists recorded the wildlife species detected during field surveys by sight, calls, tracks, scat, or other signs. Latin and common names for vertebrate species referred to in this report follow Crother (2012) for amphibians and reptiles, Wilson and Reeder (2005) for mammals, and the American Ornithological Society *Checklist of North and Middle American Birds* (AOS 2018) for birds. A cumulative wildlife species list is provided in Appendix B.

3.2.4 Special-Status and/or Regulated Resources

Special-status biological resources are defined as follows: (1) species that have been given special recognition by federal, state, or local resource agencies and environmental organizations due to limited, declining, or threatened population sizes (including federally and state listed, CDFW Species of Special Concern, and California Native Plant Society List 1B and 2); (2) species and habitat types recognized by local and regional resource agencies as special-status (includes species that were

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described as covered within the draft San Marcos Subarea Plan); (3) habitat areas or vegetation communities that are unique, of relatively limited distribution, or of particular value to wildlife; (4) wildlife corridors and habitat linkages; and (5) U.S. Army Corps of Engineers jurisdictional waters of the United States (including wetlands), CDFW-jurisdictional streams, and waters of the state subject to the permitting authority of the Regional Water Quality Control Board (RWQCB).

3.2.4.1 Focused Surveys for Special-Status Plant Species

Dudek biologists familiar with the target special-status plant species and general flora of the northern County of San Diego region conducted seasonally timed focused surveys of the BSA in May 2018. Based on the literature review, Dudek identified special-status plant species that had occurred or that could occur within or in the vicinity of the Project site.

The focused botanical survey was conducted in accordance with the USFWS, CDFW, and California Native Plant Society guidelines (USFWS 2000; CDFG 2009; CNPS 2001). These surveys involved pedestrian transects spaced approximately 20 to 30 meters (approximately 66 to 98 feet) apart, depending on topography and vegetative cover. During the surveys, when a special-status species was observed, the occurrence was mapped using sub-meter accuracy GPS equipment.

3.2.4.2 Focused Surveys for Coastal California Gnatcatcher

Dudek biologists performed focused surveys for coastal California gnatcatcher in spring 2018 in conformance with the currently accepted protocol of USFWS (USFWS 1997) for projects that are not within an NCCP jurisdiction. A digital recording of coastal California gnatcatcher vocalizations was played approximately every 50 to 100 feet to induce responses from potentially present coastal California gnatcatcher. If a coastal California gnatcatcher was detected, the recorded playback was terminated to minimize potential for harassment. A 100-scale (1 inch = 100 feet) aerial photograph of the BSA overlaid with the vegetation and site boundaries was used to map any coastal California gnatcatcher detected. Binoculars (8 x 42 strength) were used to aid in detecting and identifying bird species. Detailed survey methodology is included in the *2018 Focused California Gnatcatcher Survey Report for the Proposed Sunrise Project* included as Appendix C.

3.2.4.3 Wetland Delineation and Jurisdictional Determination

Dudek reviewed hydrologic features that would likely be subject to the jurisdiction of the U.S. Army Corps of Engineers, RWQCB, and CDFW within the BSA, including a review of the *Preliminary Jurisdictional Wetland Delineation, Review, and Update, Meyers Avenue Site* previously completed by Kleinfelder West Inc. (2007). Dudek's survey efforts included a formal wetland delineation in July 2017 to define and characterize the jurisdictional waters present within

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the BSA. Hydrologic features under the jurisdiction of the U.S. Army Corps of Engineers acting under Section 404 of the Clean Water Act, RWQCB acting under Section 401 of the Clean Water Act and the Porter-Cologne Act, and CDFW acting under Sections 1600–1607 of the California Fish and Game Code would have been delineated, if present, during the field survey.

3.2.5 Survey Limitations

The 2018 focused botanical survey was completed during the known blooming period for target species and were timed to coincide with peak blooming based on regional conditions. Focused wildlife surveys were conducted during daylight hours under weather conditions that allowed for quality biological observations (e.g., surveys were not conducted during rain). Because surveys were conducted during the day, the likelihood of detecting nocturnal and crepuscular species, such as many mammal species, was relatively low. Negative results for species that were not the subject of focused surveys should not be interpreted to indicate that those species are absent.

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4 RESULTS

This section discusses the results of the literature review, reconnaissance survey, and focused surveys conducted in 2017 and 2018. The BSA boundary for vegetation mapping and special-status plants is included on Figure 2, Biological Resources, and the survey areas for coastal California gnatcatcher focused surveys is included in Appendix C. Cumulative lists of plant and wildlife species are included in Appendices A and B, respectively.

4.1 Vegetation Communities, Land Covers, and Floral Diversity

Six vegetation communities/land covers were mapped within the Project site, including wild oats grassland, California buckwheat scrub (including Disturbed), black sage scrub, white sage scrub, disturbed habitat, and ornamental (Table 2; Figure 2).

Table 2
Vegetation Communities and Land Covers On Site

Oberbauer General Vegetation Community (Code)	Holland 1986, as modified by Oberbauer 2008	Vegetation/ Land Cover Type	Acres	
			On Site	Off Site
Disturbed or developed areas (10000)	11300 Disturbed Habitat	Disturbed habitat ¹	2.94	—
	10000 (not specified in Holland)	Ornamental ¹	—	0.15
Scrub and chaparral (30000)	32500 Diegan Coastal Sage scrub	Black sage scrub	4.52	—
	32800 Flat-topped buckwheat	California buckwheat scrub	0.36	0.02
	32800 Flat-topped buckwheat	Disturbed California buckwheat scrub	1.55	—
	32500 Diegan Coastal Sage scrub	White sage scrub	0.07	—
Grasslands, vernal pools, meadows, and other herb communities (40000)	42200 Non-native grassland	Wild oats grassland ¹	5.00	0.90
Total			14.44	1.07²

Note:

¹ Dominated by non-native plant species.

² The 1.07 acres off-site is comprised of 0.76 acres for the eastern access road and 0.31 acres for grading associated with the entrance from Meyers Avenue.

The majority of the Project site is composed of wild oats grassland, which is dominated by non-native, naturalized plant species. However, the southern section of the site contains relatively uninvaded black sage scrub. Native vegetation communities within the Project site include 4.52 acres of black sage scrub, 0.38 acres of California buckwheat scrub, 1.55 acres of disturbed California buckwheat scrub, and 0.07 acres of white sage scrub, which is a total of 6.52 acres of coastal sage scrub and its subcategories of habitat. Non-native vegetation communities include 5.90 acres of wild

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oats grassland (on and off site), 0.15 acres of ornamental vegetation (off site), and 2.94 acres of disturbed habitat comprised of historic/abandoned agricultural (orchard) land uses.

4.1.1 Black Sage Scrub

Black sage scrub is a subcategory of scrub and chaparral plant community as described in Oberbauer et al. (2008) and is defined as Diegan coastal sage scrub based on Holland (1986). Black sage scrub is dominated by black sage (*Salvia mellifera*) in the shrub canopy that is less than 6 feet in height. The shrub canopy is continuous or intermittent with a variable herbaceous layer and seasonal grasses. Black sage scrub communities occur between an elevation of 3 feet and 4,430 feet above mean sea level on dry slopes and alluvial fans (Sawyer et al. 2009).

4.1.2 California Buckwheat Scrub (Including Disturbed Form)

California buckwheat scrub is a subcategory of scrub and chaparral plant community as described in Oberbauer et al. (2008) and is defined as flat-topped buckwheat based on Holland (1986). California buckwheat scrub is dominated by California buckwheat (*Eriogonum fasciculatum*) in the shrub canopy that is less than 6 feet in height. The shrub canopy is continuous to intermittent with a variable grassy herbaceous layer. California buckwheat scrub occurs between sea level and 3,900 feet above mean sea level on upland slopes and intermittently flooded washes (Sawyer et al. 2009). Disturbed California buckwheat scrub is also dominated by California buckwheat; however, these areas have been subjected to historic anthropogenic disturbance, which has resulted in lower overall native shrub cover, higher relative non-native species cover, and generally reduced habitat quality.

4.1.3 White Sage Scrub

White sage scrub is a subcategory of scrub and chaparral plant community as described in Oberbauer et al. (2008) and is defined as Diegan coastal sage scrub based on Holland (1986). White sage scrub is dominated by white sage (*Salvia apiana*) in the shrub canopy that is less than 1.5 feet and 6 feet in height. The shrub canopy is intermittent to continuous and two tiered with a variable herbaceous layer. White sage scrub occurs between an elevation of 900 feet and 5,250 feet above mean sea level on dry slopes and rarely flooded low-gradient deposits along streams (Sawyer et al. 2009).

4.1.4 Wild Oats Grassland

Wild oats grassland is a subcategory of non-native grassland plant community as described in Oberbauer et al. (2008) and is defined as a non-native grassland based on Holland (1986). Wild oats grassland is dominated by white oats (slender oat [*Avena barbata*] and/or wild oat [*Avena fatua*]) in the open to continuous herbaceous layer that is less than 4 feet. Wild oats grassland occurs between 30 feet and 3,900 feet above mean sea level on rangelands and openings in woodlands (Sawyer et al. 2009).

4.1.5 Disturbed Habitat

Disturbed habitat is described in Oberbauer et al. (2008), defined as areas that have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil substrate. Disturbed habitat within the project site typically occurs in areas where soils have been recently or repeatedly disturbed by grading or compaction resulting in the growth of very few native perennials. The disturbed habitat is comprised largely of a prior orchard, and is nearly entirely dominated by non-native annual weedy species.

Note that the disturbed habitat was previously mapped as agricultural (orchard) land; however, since the time of initial surveying and report preparation, on site trees from previous historic agricultural uses have been removed by the property owner in June 2018, separate from the proposed project. Dudek completed a nesting bird survey prior to the orchard tree removals, the results of which were negative.

4.1.6 Ornamental

This land cover type is described by Oberbauer et al. (2008) as an area where non-native ornamental species and landscaping schemes have been installed and maintained. Thus, impacts to these areas would not require mitigation.

Ornamental plantings were mapped within the off-site impact area. This vegetation community is associated primarily with residential landscaping between urban/developed plots. This land cover supports a myriad of ornamental species in the BSA, including but not limited to jade plant (*Crassula ovata*), ice plant (*Carpobrotus edulis*), and oleander (*Nerium oleander*).

4.1.7 Floral Diversity

A total of 81 vascular plant species, consisting of 43 native species (53%) and 38 non-native species (47%), were recorded within the BSA (Appendix A).

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Project Boundary

Off-Site Grading Boundary

2018 Focused Survey Results

Coastal California Gnatcatcher

Belding's Orange-Throated Whiptail

2017 Reconnaissance Survey

Coastal California Gnatcatcher

CNDDDB and USFWS Occurrence Records

Coastal California Gnatcatcher

Vegetation Communities and Land Covers

AG, Agricultural Orchard

BSC, Black Sage Scrub

CBS, California Buckwheat Scrub

ORN, Ornamental

WOG, Wild Oats Grassland

WSS, White Sage Scrub

dCBS, Disturbed California Buckwheat Scrub



SOURCE: SANGIS 2017

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4.2 Wildlife

The Project site supports habitat for a number of upland wildlife species within the native and non-native dominated vegetation communities present on site. A total of 43 wildlife taxa were recorded within the BSA during surveys conducted in 2017/2018. Appendix B includes a cumulative list of wildlife species observed on the Project site.

Invertebrates

The Project provides a variety of microhabitats that invertebrates could use for foraging and reproduction. No focused invertebrate surveys were conducted; however, three species of butterfly were identified during the biological surveys in 2017/2018 including queen (*Danaus piliippus*), Behr's metalmark (*Apodemia mormo virgulti*), and anise swallowtail (*Papilio zelicaon*).

Amphibians and Reptiles

Amphibians require standing or flowing water for part or all of their life cycles. Ponds, seasonal pools, and drainages provide suitable habitat for common amphibian species. The Project site does not contain water features suitable for the aquatic portion of the amphibian life cycle, and no amphibians were observed within the BSA.

Reptiles occur in a variety of habitats. Many species shelter in small burrows, which they use as refuge from extreme temperatures and to avoid predators. Biologists observed two reptile species, western fence lizard (*Sceloporus occidentalis*) and Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), within the BSA during surveys in 2017/2018.

Birds

In total, 36 bird species representing 20 families were observed on site, including species common to grasslands, shrublands, and woodland habitats. Grassland species occurring on site include foraging raptors, such as red-tailed hawk (*Buteo jamaicensis*). Common shrubland species observed on the site include California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), California quail (*Callipepla californica*), California scrub-jay (*Aphelocoma californica*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), and phainopepla (*Phainopepla nitens*). Common woodland species observed on site include great horned owl (*Bubo virginianus*). Several of the bird species observed on site are species that are urban-tolerant or attracted to urban settings, including American crow (*Corvus brachyrhynchos*), white-crowned sparrow (*Zonotrichia leucophrys*), and western kingbird (*Tyrannus verticalis*). See Appendix B for the cumulative list of birds observed on the Project site.

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Mammals

The Project site provides a variety of vegetative communities that common small mammalian species can use as cover and for food gathering, in turn providing a prey base for larger mammals and birds of prey. Biologists observed one native mammal species, woodrat (*Neotoma* sp.), as well as one introduced species, domestic cat (*Felis catus*), during surveys conducted in 2017/2018.

4.3 Special-Status/Regulated Resources

4.3.1 Special-Status Plant Species

Dudek did not observe special-status plant species within the Project site during reconnaissance-level and focused rare plant surveys. Black sage scrub is the vegetation community least invaded by non-native species on the Project site and was considered the most likely to contain sensitive species. However, no such species were observed. No sensitive plant species have moderate or high potential to occur within the Project site (Appendix D, Special-Status Plant Species Potential to Occur within the Project Site).

4.3.2 Special-Status Wildlife Species

A historic coastal California gnatcatcher point (California Natural Diversity Database) exists within the black sage scrub mapped on site. A focused survey conducted within suitable coastal California gnatcatcher habitat on the Project site failed to detect any coastal California gnatcatcher in 2006 (Cadre Environmental 2006). However, one coastal California gnatcatcher individual was observed during the focused surveys completed in 2018 associated with this report. In addition, one special-status reptile, Belding's orange-throated whiptail, was observed during the field surveys. Along with the two special-status species observed during the 2018 surveys, the following five species have moderate to high potential to occur within the Project site: red diamondback rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), pallid bat (*Antrozous pallidus*), and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) (Appendix E, Special-Status Wildlife Species Potential to Occur within the Project Site). The one federally listed species, coastal California gnatcatcher, is discussed below. The other special-status wildlife species are discussed in Section 5.5, Impacts to Special-Status Wildlife Species.

Coastal California Gnatcatcher

Coastal California gnatcatcher is federally listed as threatened and is a California Species of Special Concern. Coastal California gnatcatcher breeds in lower elevations (less than 500 meters, or 1,640 feet) south and west of the Transverse and Peninsular Ranges (Atwood and Bolsinger

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1992). Higher densities of this species occur in coastal San Diego and Orange Counties, and lower densities are found in Los Angeles, inland Orange, western Riverside, southwestern San Bernardino, and inland San Diego Counties (Atwood 1993; Preston et al. 1998). The coastal California gnatcatcher primarily occupies open coastal sage scrub habitat that is dominated by California sagebrush.

The BSA supports suitable habitat for the coastal California gnatcatcher within the black sage, white sage, and California buckwheat vegetation communities present on site. The coastal California gnatcatcher observations in 2018 found a single male individual located within the black sage scrub vegetation community. USFWS occurrence records for this species are also located within the black sage scrub vegetation community. An incidental observation made during the 2017 reconnaissance-level survey found an individual coastal California gnatcatcher within the disturbed habitat on site; however, this area does not constitute suitable habitat for this species. Coastal California gnatcatcher do not typically occupy black sage– and white sage–dominated vegetation communities; however, because the species was identified within the black sage scrub vegetation, the habitat available within the BSA is determined to support relatively good quality habitat for this species.

4.3.3 Special-Status Vegetation Communities

CDFW rankings of 1, 2, or 3 are considered high priority for inventory or special-status vegetation communities, and impacts to these communities typically require mitigation. Within the Project site, one vegetation community, white sage scrub (State Rank 3), is considered special status. In addition, vegetation communities that provide suitable habitat for special-status plant or wildlife species are considered special status in accordance with CEQA Guidelines, Section 15206 (b)(5). In addition to white sage scrub, California buckwheat scrub and black sage scrub would be considered special status due to the presence of coastal California gnatcatcher on site and their potential presence within each of these vegetation community types.

4.3.4 Jurisdictional Waters

The results of the literature review indicated that no potential wetland or non-wetland water features were present within the BSA. A subsequent jurisdictional delineation field assessment completed by Dudek in 2017 as part of the overall survey effort concluded that no jurisdictional wetlands or waters were present within the BSA. Prior formal jurisdictional delineations previously referenced that were completed on the adjoining property in 2005 by REC Consultants and in 2007 by Kleinfelder West Inc., did not result in the identification of jurisdictional wetlands or waters within the BSA.

4.4 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals. They may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping stones for dispersal.

To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. Movement corridors identified within the City are generally composed of relatively narrow riparian corridors including San Marcos Creek, Las Posas Creek, Twin Oaks Valley Creek, Buena Creek, and Agua Hedionda Creek (City of San Marcos 2012). The Project site is located a minimum of approximately 2 miles from the nearest identified wildlife corridor. Larger tracts of developed open space within the County are farther to the south and southwest in the vicinity of Mount Whitney, the Olivenhain Reservoir, the Elfin Forest Recreational Preserve, and Lake Hodges, which is presumed to provide the best quality wildlife habitat in the local region that would be used by the majority of the resident and migratory wildlife.

The approximately 15.2-acre BSA is not expected to provide for wildlife movement or serve as an important habitat linkage and is not located within a designated Biological Core Linkage Area (BCLA); however, there is potential for some use of the BSA by both resident and migratory species due to the presence of limited habitat features, including mature trees, coastal sage scrub vegetation, and open areas for foraging. The Project is located within a currently undeveloped parcel that is surrounded by existing, high-density commercial and residential development. Because of regular human activity and considerable vehicle traffic in and surrounding the BSA, predominantly urban-adapted wildlife species are expected to occur in this area, such as raccoons (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), and brush rabbits (*Sylvilagus* spp.).

4.5 Regional Resource Planning Context

The following two jurisdictions are included in the resource-planning context of the site: the City of San Marcos and the County of San Diego. Because the Project site falls within the City's sphere of influence, it is anticipated to be reviewed in accordance with the current regulatory framework in place with the City. As such, the County is not anticipated to provide regulatory oversight or review. The City of San Marcos Subarea Habitat Conservation Plan/NCCP (Subarea Plan) has not been finalized or implemented, and the City is no longer an active participant in the NCCP program and the subregional MHCP conservation planning effort. However, it is the City's policy to comply with the conservation policies identified in the Draft San Marcos Subarea Plan, including an assessment of designated BCLA or MHCP Focused Planning Area (FPA) in the context of the proposed project. In addition, the Project will be evaluated to ensure consistency with CEQA.

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5 PROJECT IMPACTS AND SIGNIFICANCE DETERMINATION

5.1 Definition of Impacts

This section defines the types of impacts considered in this report to analyze the potential effects of the Project on biological resources. The Project impacts are shown on Figure 3. These impacts are discussed in more detail as follows.

Direct impacts were quantified by overlaying the anticipated limits of grading on the biological resources and quantifying impacts. For this report, “direct permanent impacts” refer to the areas where the development, roads, and fuel modification zones are proposed. Direct temporary impacts refer to the areas where grading and temporary construction areas are proposed within the open space; these areas would be restored and are, therefore, considered temporary. Direct impacts were quantified by overlaying the proposed impacts on geographic information system–located biological resources.

Indirect impacts are reasonably foreseeable effects caused by Project implementation on remaining or adjacent biological resources outside the proposed development, roads, and fuel modification zones. Indirect impacts may affect areas within the defined Project site but outside the limits of grading, non-impacted areas, and areas outside the Project site, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to trail use and development of the Project site. In most cases, indirect effects are not quantified, but in some cases, quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

5.2 Explanation of Findings of Significance

This report analyzes impacts to sensitive vegetation communities, special-status wildlife species, wildlife corridors and habitat connectivity, and regional resource planning to determine whether such impacts are significant. CEQA Guidelines, Section 15064(b), states that an ironclad definition of “significant” effect is not possible because the significance of an activity may vary with the setting. However, CEQA Guidelines, Section 15065(a), lists impacts that are helpful in defining whether a project may have a significant effect on the environment. Mandatory findings of significance, which require preparation of an environmental impact report, occur when there is substantial evidence that a project could (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, or (5) reduce the number or restrict the range of a rare or endangered plant or animal.

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The following are the significance thresholds for biological resources provided in the CEQA Appendix G environmental checklist, which states that a project could potentially have a significant effect if it (14 CCR 15000 et seq.):

- Has a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Has a substantial adverse effect 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 Game or U.S. Fish and Wildlife Service.
- Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.
- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

5.3 Impacts to Vegetation Communities and Land Covers

The Project site supports six vegetation communities and/or land cover types (Table 3). Construction of the Project would result in direct impacts to 15.51 acres of vegetation communities and land covers, which compose the BSA. Of the total, 6.52 acres of impacts will occur to native dominated vegetation communities, and 8.7 acres of impacts will occur to non-native dominated vegetation communities and land covers.

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Table 3
Direct Permanent Impacts to Vegetation Communities and Land Covers

Oberbauer General Vegetation Community (Code)	Holland 1986, as modified by Oberbauer 2008	Vegetation/Land Cover Type	On-Site Impacts (acres)	Off-Site Impacts (acres)	Total Acres
Disturbed or developed areas (10000)	11300 Disturbed Habitat	Disturbed habitat ¹	2.94	—	2.94
	10000 (not specified in Holland)	Ornamental ¹	—	0.15	0.15
Scrub and chaparral (30000)	32500 Diegan Coastal Sage scrub	Black sage scrub	4.52	—	4.52
	32800 Flat-topped buckwheat	California buckwheat scrub	0.36	0.02	0.38
	32800 Flat-topped buckwheat	Disturbed California buckwheat scrub	1.55	—	1.55
	32500 Diegan Coastal Sage scrub	White sage scrub	0.07	—	0.07
Grasslands, vernal pools, meadows, and other herb communities (40000)	42200 Non-native grassland	Wild oats grassland ¹	5.00	0.90	5.90
Total			14.44	1.07	15.51

Note:

¹ Dominated by non-native plant species.

One of these vegetation communities, white sage scrub, is considered special status based on the State Rank, and due to the use of the coastal sage scrub vegetation communities by special-status wildlife, the removal of 4.52 acres of black sage scrub, 0.07 acres of white sage scrub, and 1.93 acres of California buckwheat scrub is considered **significant, absent mitigation (Impact BIO-1)**.

Because the entirety of the BSA will be permanently impacted, no indirect impacts to vegetation communities are anticipated to occur within the Project site. However, short-term construction effects to vegetation communities located outside of the BSA and adjacent to the Project site may include fugitive dust; runoff; sedimentation; erosion; chemical pollution; and accidental clearing, grading, and trampling. Due to the largely developed condition of the surrounding lands, indirect impacts are anticipated to be minimal and are considered **less than significant**. Implementation of standard construction practices, including consistency with the Construction General Permit Order 2009-009-DWQ, will essentially eliminate indirect impacts to off-site vegetation communities from the Project.

5.4 Impacts to Special-Status Plant Species

There were no special-status plant species observed within the Project area during the 2018 focused special-status plant surveys. In addition, no special-status plant species have moderate or high potential to occur (Appendix D). Therefore, **no direct impacts** are anticipated.

Because the entirety of the BSA will be permanently impacted, no indirect impacts to special-status plant species are anticipated to occur within the Project site. Indirect impacts to vegetation communities cited above can also affect special-status plant species that are potentially present outside of the BSA and adjacent to the Project site. However, as described in Section 5.3, Impacts to Vegetation Communities and Land Covers, these potential impacts are considered **less than significant** due to the largely developed condition of the surrounding lands and the anticipated implementation of the Construction General Permit Order 2009-009-DWQ.

5.5 Impacts to Special-Status Wildlife Species

Two special-status wildlife species were observed within the Project site: coastal California gnatcatcher and Belding's orange-throated whiptail. Of particular importance is the observation of one adult male coastal California gnatcatcher on three of the six protocol survey visits within the black sage scrub vegetation community. Direct impacts to coastal California gnatcatcher may potentially occur if Project activities take place during the breeding season for this species (February 15–August 31). Direct impacts to Belding's orange-throated whiptail may potentially occur during ground-disturbing activities, since this species is presumed to occur within the Project site year-round. Additionally, direct impacts to suitable habitat for these wildlife species, as well as other special-status wildlife species with potential to occur within the Project site, including pallid bat, northwestern San Diego pocket mouse, Southern California rufous-crowned sparrow, Cooper's hawk, and red diamondback rattlesnake, are proposed to occur during Project implementation. Impacts to special-status wildlife species are considered **significant, absent mitigation (Impact BIO-2)**.

Because the entirety of the BSA will be permanently impacted, no indirect impacts to special-status wildlife species are anticipated to occur within the Project site. Indirect impacts to vegetation communities cited above can also affect special-status plant species that are potentially present outside of the BSA and adjacent to the Project site. However, as described in Section 5.3, these potential impacts are considered **less than significant** due to the largely developed condition of the surrounding lands, the nearest location of potentially suitable species habitat being at least 800 feet away, and the anticipated implementation of the Construction General Permit Order 2009-009-DWQ.

5.6 Impacts to Wildlife Corridors and Habitat Connectivity

As indicated in Section 2.3.2, Surrounding Land Uses, the Project site is bordered by residential and commercial development in all directions, limiting the effectiveness of the site as a wildlife movement corridor. As described in Section 4.4, Wildlife Corridors and Habitat Linkages, a better quality wildlife movement corridor is present to the south and southwest of the Project site, which is presumed to be used by the majority of resident and migratory wildlife species. Although the Project site provides some suitable habitat for wildlife species, the utility of this habitat is expected to be low due to the small size and discontinuity with regional open space. Therefore, impacts to wildlife corridors and linkages would not be substantial and are considered **less than significant**.

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SOURCE: SANGIS 2017

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5.7 Impacts to Regional Resource Planning

As indicated in Section 1.1, Project Description, the Project would require zone change approvals from the County of San Diego and the City of San Marcos. The Project does not fall within the North County MSCP or any other approved NCCP/HCP subarea plan; however, as noted above it is the City's policy to comply with the conservation policies identified in the Draft San Marcos Subarea Plan. The project is not located within a designated BCLA or FPA, and therefore, it is consistent with the conservation policies of the Draft San Marcos Subarea Plan. In addition, the Project would be required to conform to the goals and policies in the *City of San Marcos General Plan* (City of San Marcos 2012) related to the protection of biological resources. Following implementation of proposed mitigation measures, the Project is expected to be found to be in conformance with the Draft San Marcos Subarea Plan and the General Plan. Therefore, **no impacts** related to regional resource planning are anticipated.

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6 MITIGATION

Impact BIO-1 The Project would result in the removal of 4.52 acres of black sage scrub, 0.07 acres of white sage scrub, and 1.93 acres of California buckwheat scrub.

This impact to sensitive vegetation communities is significant, absent mitigation. The impact would be reduced to less than significant by implementing the following proposed mitigation measure:

MM-BIO-1.1 As compensation for direct impacts to special-status vegetation communities, the applicant shall be required to provide off-site compensatory mitigation lands acceptable to the City and regulatory agencies. On-site mitigation is not possible due to the proposed development of the entire project boundary and off-site area. The compensatory mitigation lands shall be secured through purchase of credits in an approved mitigation or conservation bank, in-lieu fee program, or permittee responsible mitigation, as determined to be appropriate following consultation with the resource agencies. Purchase of mitigation credits will occur prior to the issuance of a grading permit. Compensatory mitigation shall be provided at the ratios presented in the following table, which conform to the mitigation required for impacts to coastal sage scrub habitat occupied by coastal California gnatcatcher in the Draft San Marcos Subarea Plan.

Proposed Mitigation for Impacts to Vegetation Communities and Land Covers

Oberbauer General Vegetation Community (Code)	Holland 1986, as modified by Oberbauer 2008	Vegetation/Land Cover Type	Total Impact Acres	Mitigation Ratio	Total Mitigation Acres Required
Disturbed or developed areas (10000)	11300 Disturbed Habitat	Disturbed habitat ¹	2.94	NA	0
	10000 (not specified in Holland)	Ornamental ¹	0.15	NA	0
Scrub and chaparral (30000)	32500 Diegan Coastal Sage scrub	Black sage scrub	4.52	2:1	9.04
	32800 Flat-topped buckwheat	California buckwheat scrub	0.38	2:1	0.76
	32800 Flat-topped buckwheat	Disturbed California buckwheat scrub	1.55	2:1	3.10
	32500 Diegan Coastal Sage scrub	White sage scrub	0.07	2:1	0.14

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Proposed Mitigation for Impacts to Vegetation Communities and Land Covers

Oberbauer General Vegetation Community (Code)	Holland 1986, as modified by Oberbauer 2008	Vegetation/Land Cover Type	Total Impact Acres	Mitigation Ratio	Total Mitigation Acres Required
Grasslands, vernal pools, meadows, and other herb communities (40000)	42200 Non-native grassland	Wild oats grassland ¹	5.90	NA	0
Total			15.51	—	13.04

Note: NA = Not applicable

¹ Dominated by non-native plant species.

Impact BIO-2 The Project would result in direct impacts to special-status wildlife species, including one single male coastal California gnatcatcher, and suitable habitat for these species.

These impacts to special-status wildlife are significant, absent mitigation. These impacts would be reduced to less than significant by implementing the following proposed mitigation measures:

MM-BIO-1.1 Implement MM-BIO-1.1.

MM-BIO-2.1 Pre-construction educational meetings, construction-limit staking at the edge of the disturbance area, and biological monitoring during vegetation clearing and grading activities shall occur. Construction/contractor personnel shall complete a Workers Environmental Awareness Program to ensure compliance with environmental/permit regulations and mitigation measures. Construction-limits staking and biological monitoring shall prevent inadvertent impacts on special-status wildlife species and their habitat.

MM-BIO-2.2 Avoid clearing of vegetation during the nesting season. Suitable habitat for coastal California gnatcatcher shall not be cleared between February 15 and August 31 (or sooner if a biologist demonstrates to the satisfaction of the USFWS that all nesting is complete). Prior to the initiation of vegetation clearing activities outside of the nesting season, a biologist will perform a minimum of three focused surveys, on separate days, to determine the presence of gnatcatchers in the project impact footprint. Surveys will begin a maximum of 7 days prior to performing vegetation clearing/grubbing and one survey will be conducted the day immediately prior to the initiation of clearing/grubbing. If any gnatcatchers are found within the project impact footprint, the biologist will direct construction personnel to begin vegetation clearing/grubbing in an area away from the gnatcatchers. It will be the

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responsibility of the biologist to ensure that gnatcatchers are not in the vegetation to be cleared/grubbed by flushing individual birds away from clearing/grubbing. The biologist will also record the number and location of gnatcatchers disturbed by vegetation clearing/grubbing.

MM-BIO-2.3

Nesting Bird Survey: If construction activity occurs during the coastal California gnatcatcher breeding season (typically February 15 through August 31), a biologist will perform a minimum of three focused surveys, on separate days, to determine the presence of California gnatcatcher nest building activities, egg incubation activities, or brood rearing activities in or within 500 feet of these areas. The surveys will begin a maximum of 7 days prior to project construction and one survey will be conducted the day immediately prior to the initiation of work. Additional surveys will be done once a week during project construction in the breeding season. These additional surveys may be suspended as approved by the Service. The Permittee will notify the Service at least 7 days prior to the initiation of surveys and within 24 hours of locating any California gnatcatchers.

If a California gnatcatcher nest is found in or within 500 feet of project construction, the biologist will postpone work within 500 feet of the nest and contact the Service to discuss: (i) the best approach to avoid/minimize impacts to nesting birds (e.g., sound walls); and (ii) a nest monitoring program acceptable to the Service. Subsequent to these discussions, work may be initiated subject to implementation of the agreed upon avoidance/minimization approach and nest monitoring program. Nest success or failure will be established by regular and frequent trips to the site, as determined by the biologist and through a schedule approved by the Service. The biologist will determine whether bird activity is being disrupted. If the biologist determines that bird activity is being disrupted, the Permittee will stop work and coordinate with the Service to review the avoidance/minimization approach. Coordination between the Permittee and Service to review the avoidance/minimization approach will occur within 48 hours. Upon agreement as to the necessary revisions to the avoidance/minimization approach, work may resume subject to the revisions and continued nest monitoring. Nest monitoring will continue until fledglings have dispersed or the nest has been determined to be a failure, as approved by the Service.

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APPENDIX A
Cumulative Plant Species List

APPENDIX A

Cumulative Plant Species List

VASCULAR SPECIES

MONOCOTS

AGAVACEAE—AGAVE FAMILY

Hesperoyucca whipplei—chaparral yucca

Yucca schidigera—Mojave yucca

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

CYPERACEAE—SEDGE FAMILY

Cyperus esculentus—yellow nutsedge

Eleocharis macrostachya—pale spike rush

JUNCACEAE—RUSH FAMILY

Juncus xiphioides—irisleaf rush

POACEAE—GRASS FAMILY

- * *Avena barbata*—slender oat
- * *Brachypodium distachyon*—purple false brome
- * *Bromus diandrus*—ripgut brome
- * *Bromus hordeaceus*—soft brome
- * *Bromus madritensis*—compact brome
- * *Cortaderia jubata*—purple pampas grass
- * *Cynodon dactylon*—Bermudagrass
- * *Festuca myuros*—rat-tail fescue
- * *Hordeum murinum*—mouse barley
- * *Polypogon monspeliensis*—annual rabbitsfoot grass
- * *Pennisetum setaceum*—fountain grass swards
- Distichlis spicata*—salt grass

EUDICOTS

AIZOACEAE—FIG-MARIGOLD FAMILY

* *Carpobrotus edulis*—ice plant

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac

* *Schinus molle*—Peruvian peppertree

APPENDIX A (Continued)

- * *Schinus terebinthifolius*—Brazilian peppertree
- Rhus integrifolia*—lemonade berry

APOCYNACEAE—DOGBANE FAMILY

Asclepias fascicularis—Mexican whorled milkweed

ASTERACEAE—SUNFLOWER FAMILY

- Baccharis sarothroides*—desertbroom
- Corethrogyne filaginifolia*—common sandaster
- Eriophyllum confertiflorum*—golden-yarrow
- Osmadenia tenella*—false rosinweed
- Pseudognaphalium californicum*—ladies' tobacco
- Pseudognaphalium stramineum*—cottonbatting plant
- * *Centaurea melitensis*—Maltese star-thistle
- * *Cirsium vulgare*—bull thistle
- * *Helminthotheca echiioides*—bristly oxtongue
- * *Lactuca serriola*—prickly lettuce
- * *Sonchus asper*—spiny sowthistle
- Gutierrezia sarothrae*—broom snake weed
- Artemisia californica*—California sagebrush
- Baccharis pilularis*—coyote brush
- Isocoma menziesii*—Menzies's golden bush
- Baccharis salicifolia*—mulefat
- Hazardia squarrosa*—sawtooth golden bush
- Ambrosia psilostachya*—western ragweed

BORAGINACEAE—BORAGE FAMILY

Amsinckia menziesii—Menzies' fiddleneck

Phacelia cicutaria—caterpillar phacelia

Plagiobothrys collinus var. *californicus*—Cooper's popcornflower

BRASSICACEAE—MUSTARD FAMILY

- * *Brassica nigra*—black mustard
- * *Hirschfeldia incana*—shortpod mustard
- * *Raphanus sativus*—cultivated radish

CHENOPODIACEAE—GOOSEFOOT FAMILY

- * *Salsola australis*—Russian thistle

APPENDIX A (Continued)

CISTACEAE—ROCK-ROSE FAMILY

Crocanthemum scoparium—no common name

CONVOLVULACEAE—MORNING-GLORY FAMILY

* *Convolvulus arvensis*—field bindweed

CUCURBITACEAE—GOURD FAMILY

Marah macrocarpa—Cucamonga manroot

ERICACEAE—HEATH FAMILY

Arctostaphylos glandulosa ssp. *glandulosa*—Eastwood's manzanita

EUPHORBIACEAE—SPURGE FAMILY

Croton setiger—dove weed

* *Euphorbia maculata*—spotted sandmat

* *Ricinus communis*—castorbean

FABACEAE—LEGUME FAMILY

* *Acacia longifolia*—Sydney golden wattle

* *Acacia redolens*—bank catclaw

Acmispon glaber—deer weed

Acmispon americanus—Spanish clover

GERANIACEAE—GERANIUM FAMILY

* *Erodium botrys*—longbeak stork's bill

LAMIACEAE—MINT FAMILY

Salvia mellifera—black sage

Trichostema lanceolatum—vinegarweed

* *Marrubium vulgare*—horehound

MYRSINACEAE—MYRSINE FAMILY

* *Lysimachia arvensis*—scarlet pimpernel

OLEACEAE—OLIVE FAMILY

* *Olea europaea*—olive

PAPAVERACEAE—POPPY FAMILY

Eschscholzia californica—California poppy

PHRYMACEAE—LOPSEED FAMILY

Mimulus aurantiacus—bush monkeyflower

APPENDIX A (Continued)

PLANTAGINACEAE—PLANTAIN FAMILY

Antirrhinum nuttallianum ssp. *nuttallianum*—violet snapdragon

PLUMBAGINACEAE—LEADWORT FAMILY

* *Limonium perezii*—Perez’s sea lavender

POLEMONIACEAE—PHLOX FAMILY

Navarretia hamata—hooked pincushionplant

POLYGONACEAE—BUCKWHEAT FAMILY

Chorizanthe fimbriata—fringed spineflower

* *Rumex crispus*—curly dock

Eriogonum fasciculatum—California buckwheat

PORTULACACEAE—PURSLANE FAMILY

* *Portulaca oleracea*—little hogweed

RHAMNACEAE—BUCKTHORN FAMILY

Ceanothus tomentosus—woollyleaf ceanothus

ROSACEAE—ROSE FAMILY

Adenostoma fasciculatum—chamise

Heteromeles arbutifolia—toyon

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple

TAMARICACEAE—TAMARISK FAMILY

* *Tamarix ramosissima*—saltcedar

ULMACEAE—ELM FAMILY

* *Ulmus parvifolia*—Chinese elm

* Non-native species

APPENDIX B
Cumulative Wildlife Species List

APPENDIX B

Cumulative Wildlife Species List

BIRD

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

- Icterus bullockii*—Bullock’s oriole
- Icterus cucullatus*—hooded oriole
- Sturnella neglecta*—western meadowlark

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

- Psaltiriparus minimus*—bushtit

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

- Falco sparverius*—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

- Haemorhous mexicanus*—house finch
- Spinus lawrencei*—Lawrence’s goldfinch
- Spinus psaltria*—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

- Sayornis nigricans*—black phoebe
- Sayornis saya*—Say’s phoebe
- Tyrannus verticalis*—western kingbird
- Tyrannus vociferans*—Cassin’s kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

- Buteo jamaicensis*—red-tailed hawk
- Buteo lineatus*—red-shouldered hawk

APPENDIX B (Continued)

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna’s hummingbird
Selasphorus rufus—rufous hummingbird
Selasphorus sasin—Allen’s hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay
Corvus corax—common raven

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

olioptila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

STARLINGS AND ALLIES

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

APPENDIX B (Continued)

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Petrochelidon pyrrhonota—cliff swallow

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—western bluebird

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Cardellina pusilla—Wilson's warbler

Oreothlypis celata—orange-crowned warbler

Setophaga coronata—yellow-rumped warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Melanerpes formicivorus—acorn woodpecker

WRENS

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick's wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

APPENDIX B (Continued)

INVERTEBRATE

BUTTERFLIES

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Danaus gilippus—queen

RIODINIDAE—METALMARKS

Apodemia mormo virgulti—Behr's metalmark

PAPILIONIDAE—SWALLOWTAILS

Papilio zelicaon—anise swallowtail

MAMMAL

DOMESTIC

FELIDAE—CATS

* *Felis catus*—domestic cat

RATS, MICE, AND VOLES

CRICETIDAE—RATS, MICE, AND VOLES

Neotoma sp.—woodrat

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis hyperythra beldingi—Belding's orange-throated whiptail

* Non-native species

APPENDIX C

*2018 Focused California Gnatcatcher Survey
Report for the Proposed Sunrise Project*

May 17, 2018

10499-01

U.S. Fish and Wildlife Service
Attention: Recovery Permit Coordinator
2177 Salk Avenue #250
Carlsbad, California 92008

Subject: 2018 Focused California Gnatcatcher Survey Report for the Proposed Sunrise Project, Cities of San Marcos, Escondido and County of San Diego, California

Dear Recovery Permit Coordinator:

This report documents the results of six protocol-level presence/absence surveys for coastal California gnatcatcher (*Poliophtila californica californica*) (CAGN) that were conducted for the Sunrise project (proposed project) by Dudek biologists between March 16, 2018, and April 20, 2018. The proposed project is located in the cities of San Marcos and Escondido and the County of San Diego, south of E. Barham Drive, east of La Moree Drive and west of Meyers Avenue/Corporate Drive. The proposed project consists of 19.4 acres, of which approximately 6.49 acres is suitable CAGN habitat. Surveys were conducted in all areas of suitable gnatcatcher habitat.

CAGN is a federally listed threatened species and a California Department of Fish and Wildlife (CDFW) Species of Special Concern. It is closely associated with coastal sage scrub habitat and is therefore threatened primarily by loss, degradation, and fragmentation of this habitat. CAGN typically occurs below 820 feet above mean sea level (amsl) within 22 miles of the coast and 1,640 feet amsl for inland regions (Atwood and Bolsinger 1992). Studies have suggested that CAGNs avoid nesting on very steep slopes (greater than 40%) (Bontrager 1991). CAGN is also impacted by brown-headed cowbird (*Molothrus ater*) nest parasitism (Braden et al. 1997).

This report is intended to satisfy reporting requirements for the following CAGN-permitted biologists:

- Anita Hayworth #TE-781084
- Erin Bergman Permit #TE-53771B
- Kamarul Muri Permit #TE-813545

PROJECT LOCATION AND EXISTING CONDITIONS

The approximate 19.4-acre proposed project site is located within the cities of San Marcos and Escondido and the County of San Diego, California and is situated in the eastern portion of the U.S. Geological Survey 7.5-minute San Marcos quadrangle, Section 18; in Township 12 South; Range 2 West (Figure 1). The proposed project is located south of E. Barham drive, west of Meyers avenue/Corporate drive and east of La Moree road and is comprised of two undeveloped lots (Figure 1). Of the 19.4-acre project site, 6.49 acres consist of suitable habitat for CAGN (Figure 2).

Elevations in the site range from approximately 20 to 60 feet amsl. Topography on site consists of flat, developed areas adjacent to the road on which the inn and restaurant are located, with a bank to the north that slopes downward toward the floodplain of the San Luis Rey River.

Four predominant soil units occur within the site including; Fallbrook sandy loam (2 to 5 percent slopes), Vista course sandy loam (5 to 9 percent slopes), Vista course sandy loam (9 to 15 percent slopes), and Visalia sandy loam (2 to 5 percent slopes) (NRCS 2017).

VEGETATION COMMUNITIES

Based on species composition and general physiognomy, six vegetation communities are present on site. Their acreages are presented in Table 1. Approximately 6.49 acres of CAGN-suitable habitat were mapped on the project site in accordance with Holland (1986) and Oberbauer et al. (2008), as described in Table 1 and shown on Figure 2.

Table 1
Vegetation Communities and Land Covers On Site

Vegetation Communities/Land Cover Type	Acres
Agricultural (Orchard)*	2.94
Black sage scrub	4.52
California buckwheat scrub	0.35
disturbed California buckwheat scrub	1.55
Ornamental*	0.15
White sage scrub	0.07
Wild oats grassland*	9.85
Total	19.43

* Dominated by non-native plant species.

The majority of the proposed project site is composed of wild oats grassland which is dominated by non-native, naturalized plant species. However, the southern section of the site contains relatively uninvaded black sage scrub. Native vegetation communities within the proposed project site include 4.52 acre of black sage scrub, 0.35 acre of California buckwheat scrub, 1.55 acres of disturbed California buckwheat scrub, and 0.07 acres of white sage scrub, which is a total of 6.49 acres of coastal sage scrub and its subcategories of habitat. Non-native vegetation communities on site include 9.85 acres of wild oats grassland, 0.15 acre of ornamental vegetation, and 2.94 acre of historic/abandoned agricultural (orchard) which consists of a mix of abandoned avocado and pine trees.

METHODS

Suitable habitat within and adjacent to the proposed project site was surveyed six times by Dudek wildlife biologists Erin Bergman (EBE) Permit #TE-53771B, Anita Hayworth (AH) Permit #TE-780184, and Kamarul Muri (KJM) Permit # TE-813545 according to the schedule provided in Table 2. The surveys were conducted in conformance with the currently accepted protocol of the U.S. Fish and Wildlife Service (USFWS 1997) for projects that are not within an NCCP jurisdiction.

Table 2
Survey Details and Conditions

Date	Surveyor*	Time	Survey Conditions
03/16/18	EBE	11:22am–12:09pm	72°F; 30–40% cloud cover (cc), 0–3 mile per hour (mph) winds
03/23/18	EBE	8:18am–11:11am	68.8–76°F, 20–90% cc, 0–5 mph winds
03/30/18	APC, KJM, MLO	8:45am–10:34am	60–74°F, 0–% cc, 1–4 mph winds
04/06/18	AH, SC	7:45am–9:25am	58–64°F, 40–50% cc, 0–4 mph winds
04/13/18	KJM	9:35am–11:00am	67–69°F, 0% cc, 1–5 mph winds
04/20/18	KJM	9:40am–11:18am	63–69°F, 0% cc, 1–5 mph winds

* AH =Anita Hayworth; APC = Anna Cassady; EBE = Erin Bergman. MLO = Monique O'Connor; KJM = Kamarul Muri

A tape of recorded California gnatcatcher vocalizations played approximately every 50 to 100 feet was used to induce responses from potentially present gnatcatchers. If a gnatcatcher was detected, the recorded playback was terminated to minimize potential for harassment. A 100-scale (1 inch = 100 feet) aerial photograph of the study area overlaid with the vegetation and site boundaries was used to map any gnatcatchers detected. Binoculars (8 x 42 strength) were used to aid in detecting and identifying bird species. Weather conditions, time of day, and season were appropriate for the detection of gnatcatchers. Survey routes are shown in Figure 2.

Recovery Permit Coordinator

Subject: 2018 Focused California Gnatcatcher Survey Report for the Proposed Sunrise Project,
Cities of San Marcos, Escondido and County of San Diego, California

RESULTS

One adult male gnatcatcher was observed within the proposed project site over the course of the surveys (Figure 2). The gnatcatcher was observed or detected on three of the six visits. A total of 43 species of wildlife were observed during the surveys. A full list of wildlife species observed during the surveys is provided in Appendix A. Feel free to contact me at ebergman@dudek.com with questions or if you require additional information.

Sincerely,



Erin Bergman
Biologist

Att: Figure 1, Project Location Map
Figure 2, CAGN Survey Routes and Results
Appendix A, Wildlife Species Observed

cc: Anita Hayworth, Dudek

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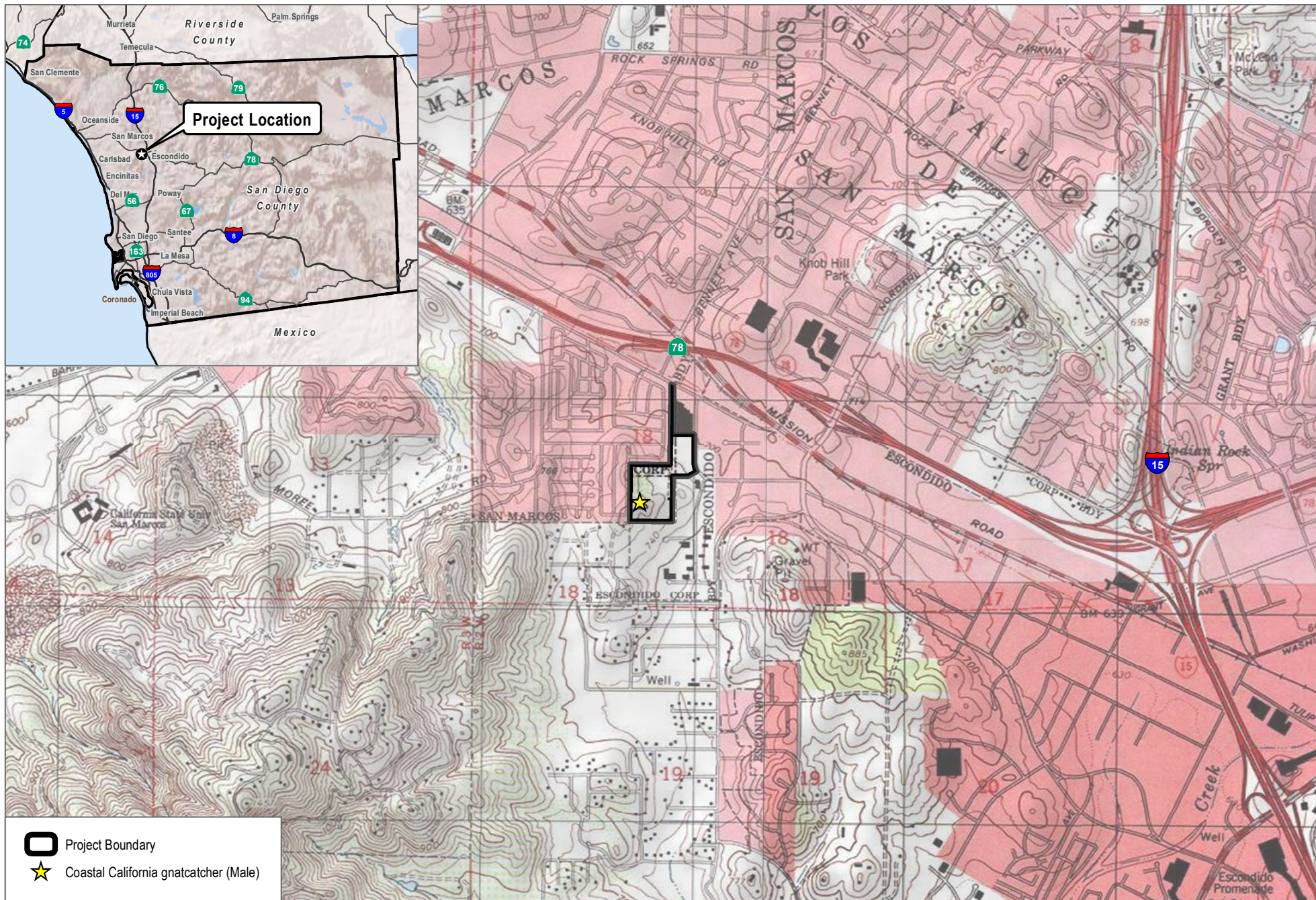
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Recovery Permit Coordinator

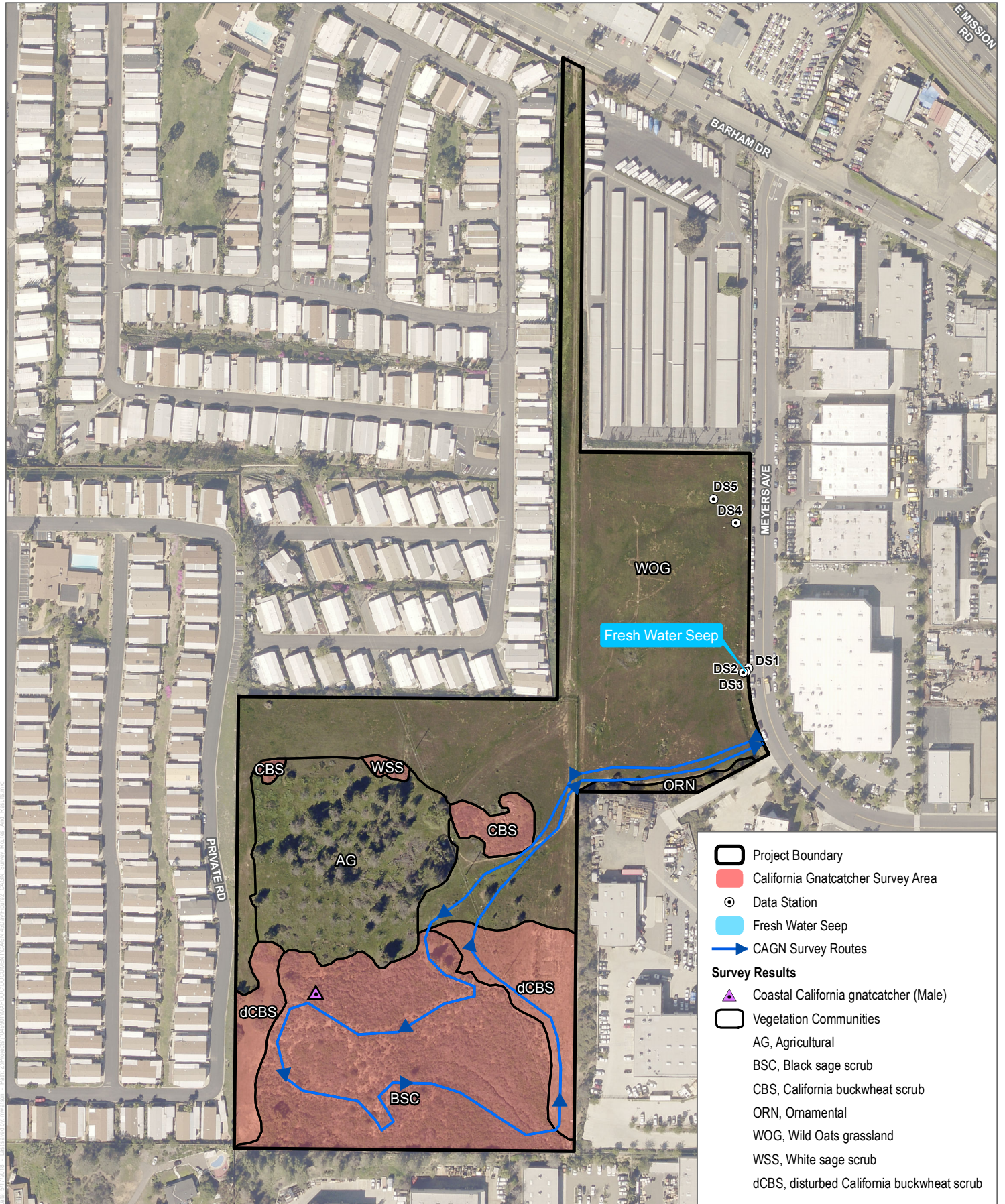
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SOURCE: USGS 7.5-Minute Series San Marcos Quadrangle



SOURCE: SANGIS 2017; USFWS 2017

APPENDIX A

*Wildlife Species Observed during the 2018 Sunrise
California Gnatcatcher Survey*

APPENDIX A
Wildlife Species Observed during the 2018 Sunrise California
Gnatcatcher Survey

BIRD

BLACKBIRDS, ORIOLES AND ALLIES

ICTERIDAE—BLACKBIRDS

Icterus bullockii—Bullock's oriole

Icterus cucullatus—hooded oriole

Sturnella neglecta—western meadowlark

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltiriparus minimus—bushtit

FALCONS

FALCONIDAE—CARACARAS AND FALCONS

Falco sparverius—American kestrel

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Spinus lawrencei—Lawrence's goldfinch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

Tyrannus verticalis—western kingbird

Tyrannus vociferans—Cassin's kingbird

HAWKS

ACCIPITRIDAE—HAWKS, KITES, EAGLES, AND ALLIES

Buteo jamaicensis—red-tailed hawk

Buteo lineatus—red-shouldered hawk

APPENDIX A (Continued)

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird
Selasphorus rufus—rufous hummingbird
Selasphorus sasin—Allen's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay
Corvus corax—common raven

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird
Toxostoma redivivum—California thrasher

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

ROADRUNNERS AND CUCKOOS

CUCULIDAE—CUCKOOS, ROADRUNNERS, AND ANIS

Geococcyx californianus—greater roadrunner

STARLINGS AND ALLIES

STURNIDAE—STARLINGS

* *Sturnus vulgaris*—European starling

SWALLOWS

HIRUNDINIDAE—SWALLOWS

Petrochelidon pyrrhonota—cliff swallow

APPENDIX A (Continued)

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—western bluebird

WOOD WARBLERS AND ALLIES

PARULIDAE—WOOD-WARBLERS

Cardellina pusilla—Wilson’s warbler

Oreothlypis celata—orange-crowned warbler

Setophaga coronata—yellow-rumped warbler

WOODPECKERS

PICIDAE—WOODPECKERS AND ALLIES

Melanerpes formicivorus—acorn woodpecker

WRENS

TROGLODYTIDAE—WRENS

Thryomanes bewickii—Bewick’s wren

WRENTITS

TIMALIIDAE—BABBLERS

Chamaea fasciata—wrentit

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow

Melospiza crissalis—California towhee

Pipilo maculatus—spotted towhee

INVERTEBRATE

BUTTERFLIES

NYMPHALIDAE—BRUSH-FOOTED BUTTERFLIES

Danaus gilippus—queen

RIODINIDAE—METALMARKS

Apodemia mormo virgulti—Behr’s metalmark

APPENDIX A (Continued)

PAPILIONIDAE—SWALLOWTAILS

Papilio zelicaon—anise swallowtail

MAMMAL

DOMESTIC

FELIDAE—CATS

* *Felis catus*—domestic cat

RATS, MICE, AND VOLES

CRICETIDAE—RATS, MICE, AND VOLES

Neotoma sp.—woodrat

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

TEIIDAE—WHIPTAIL LIZARDS

Aspidoscelis hyperythra beldingi—Belding's orange-throated whiptail

* signifies introduced (non-native) species

APPENDIX D

*Special-Status Plant Species Potential to Occur
within the Project Area*

APPENDIX D

Special-Status Plant Species Potential to Occur within the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Abronia maritima</i>	red sand- verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–330	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand-verbena	None/None/1B.1/None	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5250	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/SE/1B.1/Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay, openings/annual herb/Apr–June/30–3150	Not expected to occur. There is no suitable clay soil present.
<i>Acmispon prostratus</i>	Nuttall's acmispon	None/None/1B.1/None	Coastal dunes, Coastal scrub (sandy)/annual herb/Mar–June(July)/0–35	Not expected to occur. The site is outside of the species' known elevation range.
<i>Adolphia californica</i>	California adolphia	None/None/2B.1/Covered	Chaparral, Coastal scrub, Valley and foothill grassland; Clay/perennial deciduous shrub/Dec–May/30–2430	Not expected to occur. There is no suitable clay soil present.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None/1B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr–Oct/65–1360	Low potential to occur. There is no suitable clay soil present. This perennial herb would have been observed during focused rare plant survey.
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	FE/None/1B.1/None	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec–June/0–1200	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/None/1B.1/None	Chaparral/perennial evergreen shrub/Dec–Mar/670–2200	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Artemisia palmeri</i>	San Diego sagewort	None/None/4.2/Covered	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb)May–Sep/45–3000	Low potential to occur. This perennial deciduous shrub would have been observed during focused rare plant survey.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Asplenium vespertinum</i>	western spleenwort	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial rhizomatous herb/Feb–June/590– 3280	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/5–1510	Low potential to occur. There is no suitable clay soil present. This perennial herb would have been observed during focused rare plant survey.
<i>Atriplex pacifica</i>	South Coast saltscale	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460	Not expected to occur. The site is outside of the species' known elevation range.
<i>Atriplex parishii</i>	Parish's brittlescale	None/None/1B.1/None	Chenopod scrub, Playas, Vernal pools; alkaline/annual herb/June–Oct/80–6235	Not expected to occur. No suitable vegetation present.
<i>Baccharis vanessae</i>	Encinitas baccharis	FT/SE/1B.1/None	Chaparral (maritime), Cismontane woodland; sandstone/perennial deciduous shrub/Aug, Oct, Nov/195–2360	Low potential to occur. This perennial deciduous shrub would have been observed during focused rare plant survey.
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/None/1B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/perennial bulbiferous herb/Apr–May/160–1525	Not expected to occur. There is no suitable clay soil present.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1/Covered	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar– June/80–3675	Not expected to occur. There is no suitable clay soil present. Nearest CNDDB occurrence is approximately 3.25 miles from the project area.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None/1B.1/Covered	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools; mesic, clay/perennial bulbiferous herb/May–July/95–5550	Not expected to occur. There is no suitable clay soil present.
<i>Calochortus dunnii</i>	Dunn's mariposa lily	None/SR/1B.2/None	Closed-cone coniferous forest, Chaparral, Valley and foothill grassland; gabbroic or metavolcanic, rocky/ perennial bulbiferous herb/(Feb)Apr–June/605–6005	Low potential to occur. There is no suitable clay soil present. This perennial herb would have been observed during focused rare plant survey.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Camissoniopsis lewisii</i>	Lewis' evening-primrose	None/None/3/None	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy or clay/annual herb/Mar–May(June)/0–985	Low potential to occur. There is no suitable clay soil present. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Caulanthus simulans</i>	Payson's jewelflower	None/None/4.2/None	Chaparral, Coastal scrub; sandy, granitic/annual herb/(Feb)Mar–May(June)/295–7220	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	None/None/2B.2/Covered	Chaparral/perennial evergreen shrub/Dec–May/0–1245	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None/None/1B.1/None	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1575	Low potential to occur. There are no suitable vernal pool habitat present. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1/None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2100	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub (sandy), Coastal dunes/annual herb/Jan–Aug/0–330	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Chamaebatia australis</i>	southern mountain misery	None/None/4.2/None	Chaparral (gabbroic or metavolcanic)/perennial evergreen shrub/Nov–May/980–3345	Not expected to occur. The site is outside of the species' known elevation range.
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	FE/SE/1B.1/None	Closed-cone coniferous forest, Chaparral (maritime), Coastal scrub; sandy openings/annual herb/Mar–May/5–410	Not expected to occur. The site is outside of the species' known elevation range.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2/None	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; often clay/annual herb/Apr–July/95–5020	Not expected to occur. There is no suitable clay soil present.
<i>Cistanthe maritima</i>	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; sandy/annual herb/(Feb)Mar–June(Aug)/15–985	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Clarkia delicata</i>	delicate clarkia	None/None/1B.2/None	Chaparral, Cismontane woodland; often gabbroic/annual herb/Apr–June/770–3280	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/None/1B.2/Covered	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/95–2590	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/4.2/None	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2430	Not expected to occur. There is no suitable clay soil present.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/None/1B.1/None	Coastal bluff scrub, Chaparral, Coastal scrub/perennial herb/June–Sep/5–375	Not expected to occur. The site is outside of the species' known elevation range.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/None/1B.1/None	Coastal bluff scrub, Chaparral (maritime, openings), Coastal scrub; sandy/perennial herb/May, July, Aug, Sep/45–490	Not expected to occur. The site is outside of the species' known elevation range.
<i>Cryptantha wigginsii</i>	Wiggins' cryptantha	None/None/1B.2/None	Coastal scrub; often clay/annual herb/Feb–June/65–900	Not expected to occur. There is no suitable clay soil present.
<i>Deinandra paniculata</i>	paniculate tarplant	None/None/4.2/None	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernal mesic, sometimes sandy/annual herb/(Mar)Apr–Nov/80–3085	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Dichondra occidentalis</i>	western dichondra	None/None/4.2/Covered	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial rhizomatous herb/(Jan)Mar–July/160–1640	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Dudleya alainae</i>	Banner dudleya	None/None/3.2/None	Chaparral, Lower montane coniferous forest, Sonoran desert scrub; rocky/perennial herb/Apr–July/2425–3935	Not expected to occur. The site is outside of the species' known elevation range.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	None/None/1B.1/None	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/15–1475	Low potential to occur. There is no suitable clay soil present. This perennial herb would have been observed during focused rare plant survey.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	None/None/1B.2/None	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb/Apr–July/45–2590	Not expected to occur. There is no suitable clay soil present.
<i>Dudleya variegata</i>	variegated dudleya	None/None/1B.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/perennial herb/Apr–June/5–1905	Not expected to occur. There is no suitable clay soil present.
<i>Dudleya viscida</i>	sticky dudleya	None/None/1B.2/None	Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial herb/May–June/30–1805	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	None/None/1B.1/None	Chaparral, Coastal scrub; mesic/perennial evergreen shrub/(July)Sep–Nov/95–1970	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/SE/1B.1/Covered	Coastal scrub, Valley and foothill grassland, Vernal pools; mesic/annual / perennial herb/Apr–June/65–2035	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Eryngium pendletonense</i>	Pendleton button-celery	None/None/1B.1/None	Coastal bluff scrub, Valley and foothill grassland, Vernal pools; clay, vernal mesic/perennial herb/Apr–June(July)/45–360	Not expected to occur. There is no suitable clay soil present and the site is outside of the species' known elevation range.
<i>Erysimum ammophilum</i>	sand-loving wallflower	None/None/1B.2/None	Chaparral (maritime), Coastal dunes, Coastal scrub; sandy, openings/perennial herb/Feb–June/0–195	Not expected to occur. The site is outside of the species' known elevation range.
<i>Erythranthe diffusa</i>	Palomar monkeyflower	None/None/4.3/None	Chaparral, Lower montane coniferous forest; sandy or gravelly/annual herb/Apr–June/4000–6005	Not expected to occur. The site is outside of the species' known elevation range.
<i>Euphorbia misera</i>	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug(Oct)/30–1640	Low potential to occur. This perennial shrub would have been observed during focused rare plant survey.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/None/2B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/perennial stem succulent/May–June/5–1475	Low potential to occur. This perennial stem succulent would have been observed during focused rare plant survey.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None/4.2/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay; open grassy areas within shrubland/annual herb/Mar–May/65–3135	Not expected to occur. There is no suitable clay soil present.
<i>Hazardia orcuttii</i>	Orcutt's hazardia	None/ST/1B.1/None	Chaparral (maritime), Coastal scrub; often clay/perennial evergreen shrub/Aug–Oct/260–280	Not expected to occur. The site is outside of the species' known elevation range.
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	None/None/1B.1/None	Chaparral (coastal), Coastal dunes, Coastal scrub/perennial herb/Mar–Dec/0–4020	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May–Nov/195–3610	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Hordeum intercedens</i>	vernal barley	None/None/3.2/None	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/annual herb/Mar–June/15–3280	Low potential to occur. There is no suitable vernal pool habitat present. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/None/1B.1/None	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2655	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Horkelia truncata</i>	Ramona horkelia	None/None/1B.3/None	Chaparral, Cismontane woodland; clay, gabbroic/perennial herb/May–June/1310–4265	Not expected to occur. There is no suitable clay soil present and the site is outside of the species' known elevation range.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None/1B.2/None	Chaparral, Coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/30–445	Not expected to occur. The site is outside of the species' known elevation range.
<i>Iva hayesiana</i>	San Diego marsh-elder	None/None/2B.2/Covered	Marshes and swamps, Playas/perennial herb/Apr–Oct/30–1640	Not expected to occur. No suitable vegetation present.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	None/None/4.2/Covered	Coastal dunes (mesic), Meadows and seeps (alkaline seeps), Marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar)May–June/5–2955	Not expected to occur. No suitable vegetation present.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None/None/1B.1/None	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/0–4005	Not expected to occur. No suitable vegetation present.
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/None/1B.2/None	Closed-cone coniferous forest, Chaparral, Cismontane woodland/perennial shrub/Apr–July/1705–4495	Not expected to occur. The site is outside of the species' known elevation range.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None/4.3/None	Chaparral, Coastal scrub/annual herb/Jan–July/0–2905	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Leptosyne maritima</i>	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub/perennial herb/Mar–May/15–490	Not expected to occur. The site is outside of the species' known elevation range.
<i>Lycium californicum</i>	California box-thorn	None/None/4.2/None	Coastal bluff scrub, Coastal scrub/perennial shrub/(Dec)Mar, June, July, Aug/15–490	Not expected to occur. The site is outside of the species' known elevation range.
<i>Microseris douglasii</i> ssp. <i>platycarpa</i>	small-flowered microseris	None/None/4.2/None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/annual herb/Mar–May/45–3510	Not expected to occur. There is no suitable clay soil present.
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	intermediate monardella	None/None/1B.3/None	Chaparral, Cismontane woodland, Lower montane coniferous forest (sometimes); Usually understory/perennial rhizomatous herb/Apr–Sep/1310–4100	Not expected to occur. The site is outside of the species' known elevation range.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	None/None/1B.2/None	Chaparral, Cismontane woodland/perennial rhizomatous herb/June–Aug/980–5165	Not expected to occur. The site is outside of the species' known elevation range.
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	None/None/3.1/None	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2100	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Nama stenocarpa</i>	mud nama	None/None/2B.2/None	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan–July/15–1640	Not expected to occur. No suitable vegetation present.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1/Covered	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/95–2150	Not expected to occur. No suitable vegetation present.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–330	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
<i>Nemacaulis denudata</i> var. <i>gracilis</i>	slender cottonheads	None/None/2B.2/None	Coastal dunes, Desert dunes, Sonoran desert scrub/annual herb/(Mar)Apr–May/-160–1310	Not expected to occur. No suitable vegetation present.
<i>Nolina cismontana</i>	chaparral nolina	None/None/1B.2/None	Chaparral, Coastal scrub; sandstone or gabbro/perennial evergreen shrub/(Mar)May–July/455–4185	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE/1B.1/None	Vernal pools/annual herb/Apr–Aug/45–2165	Not expected to occur. No suitable vegetation present.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub; sandy/perennial herb (parasitic)/Apr–Oct/5–1000	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/annual herb/Mar–July/260–6070	Low potential to occur. Species was absent during focused rare plant survey conducted between the species' blooming period.
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	None/None/3.2/None	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	None/None/1B.2/None	Closed-cone coniferous forest, Chaparral; Sandstone/perennial evergreen tree/N.A./95–525	Not expected to occur. There is no suitable sandstone present and the site is outside of the species' known elevation range.
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/SE/1B.1/None	Vernal pools/annual herb/Mar–July/295–655	Not expected to occur. No suitable vegetation present.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/None/2B.2/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6890	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	Delta woolly-marbles	None/None/4.2/None	Vernal pools/annual herb/May–June/30–1640	Not expected to occur. No suitable vegetation present.
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/None/1B.1/None	Closed-cone coniferous forest, Chaparral, Coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr(May–Aug)/45–1310	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Quercus engelmannii</i>	Engelmann oak	None/None/4.2/Covered	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4265	Low potential to occur. This perennial deciduous tree would have been observed during focused rare plant survey.
<i>Salvia munzii</i>	Munz's sage	None/None/2B.2/None	Chaparral, Coastal scrub/perennial evergreen shrub/Feb–Apr/375–3495	Low potential to occur. This perennial evergreen shrub would have been observed during focused rare plant survey.
<i>Selaginella cinerascens</i>	ashy spike-moss	None/None/4.1/Covered	Chaparral, Coastal scrub/perennial rhizomatous herb/N.A./65–2100	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2/None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5020	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Stemodia durantifolia</i>	purple stemodia	None/None/2B.1/None	Sonoran desert scrub (often mesic, sandy)/perennial herb/(Jan)Apr, June, Aug, Sep, Oct, Dec/590–985	Not expected to occur. No suitable vegetation present.
<i>Stipa diegoensis</i>	San Diego County needle grass	None/None/4.2/None	Chaparral, Coastal scrub; rocky, often mesic/perennial herb/Feb–June/30–2625	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.
<i>Suaeda esteroa</i>	estuary seablite	None/None/1B.2/None	Marshes and swamps (coastal salt)/perennial herb/(May)July–Oct(Jan)/0–15	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.

APPENDIX D (Continued)

Scientific Name	Common Name	Status (Federal/State/CRPR/Draft San Marcos MHCP Subarea Plan)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	None/None/1B.2/Covered	Chaparral, Coastal scrub/perennial deciduous shrub/Apr–May/540–3280	Low potential to occur. This perennial deciduous shrub would have been observed during focused rare plant survey.
<i>Viguiera laciniata</i>	San Diego County viguiera	None/None/4.3/None	Chaparral, Coastal scrub/perennial shrub/Feb– June(Aug)/195–2460	Low potential to occur. This perennial shrub would have been observed during focused rare plant survey.
<i>Xanthisma junceum</i>	rush-like bristleweed	None/None/4.3/None	Chaparral, Coastal scrub/perennial herb/May– Jan/785–3280	Low potential to occur. This perennial herb would have been observed during focused rare plant survey.

APPENDIX E

*Special-Status Wildlife Species Potential to Occur
within the Project Area*

APPENDIX E

Special-Status Wildlife Species Potential to Occur within the Project Area

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Amphibians</i>				
<i>Anaxyrus californicus</i>	arroyo toad	FE/SSC/Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable vegetation or wetlands present.
<i>Spea hammondi</i>	western spadefoot	None/SSC/None	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley-foothill woodlands, pastures, and other agriculture	Low potential to occur. Some suitable habitat in grassland however there is on-site mowing that reduces the suitability of this habitat.
<i>Reptiles</i>				
<i>Actinemys marmorata</i>	western pond turtle	None/SSC/Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable vegetation present.
<i>Anniella stebbinsi</i>	southern California legless lizard	None/SSC/None	Coastal dunes, stabilized dunes, beaches, dry washes, valley-foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Low potential to occur. Suitable scrub and loose soils present, but lack of sparse vegetation reduces the suitability and the site is small and previously used for agriculture.
<i>Arizona elegans occidentalis</i>	California glossy snake	None/SSC/None	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. No suitable habitat or soils present.
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/WL/Covered	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood	Present. This species was observed during the coastal California Gnatcatcher focused surveys.
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC/None	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Low potential to occur. Some suitable woodland and scrub areas but with dense vegetation.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Crotalus ruber</i>	red diamondback rattlesnake	None/SSC/None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Moderate potential to occur. Suitable scrub and woodland habitat present but with increased disturbance due to human presence.
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	None/SSC/Covered	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley-foothill hardwood, conifer, riparian, pine-cypress, juniper, and annual grassland habitats	Low potential to occur. Suitable scrub and grassland habitat present, but with limited sandy soils or open areas due to non-native plant cover.
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None/SSC/None	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Low potential to occur. Suitable shrub vegetation present but regular disturbance from machinery and people reduces suitability.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC/None	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Not expected to occur. No suitable vegetation present.
<i>Thamnophis sirtalis</i> ssp. (Coastal plain from Ventura Co. to San Diego Co., from sea level to about 850 m.)	south coast garter snake	None/SSC/None	Marsh and upland habitats near permanent water and riparian vegetation	Not expected to occur. No suitable vegetation present.
<i>Birds</i>				
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL/Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Moderate potential to occur due to presence of suitable nesting trees. Currently crows are nesting in the trees and that may preclude use of the site for nesting. Cooper's hawk could use the site for foraging.
<i>Agelaius tricolor</i> (nesting colony)	tricolored blackbird	BCC/PSE, SSC/Covered	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation present.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	None/WL/Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Moderate potential to occur. Abundant scrub present with a small rocky patch and grassy areas, however disturbance reduces the suitability for special status species.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Ammodramus savannarum</i>	grasshopper sparrow	None/None/Covered	Nests and forages exclusively in grasslands with some bare ground	Low potential to occur. Suitable grassland habitat present but heavy human disturbance and regular disking activities reduce suitability.
<i>Aquila chrysaetos</i> (nesting and wintering)	golden eagle	BCC/FP, WL/None	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Low potential to occur while foraging due to presence of shrublands and open areas. No potential to occur while nesting due to lack of nest terrain.
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	BCC/WL/Covered	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Low potential to occur. Limited amount of suitable dense scrub vegetation present.
<i>Athene cunicularia</i> (burrow sites and some wintering sites)	burrowing owl	BCC/SSC/None	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Low potential to occur. Suitable grassland habitat present but reduced suitability due to disturbance from human use of the site and routine mowing.
<i>Buteo swainsoni</i> (nesting)	Swainson's hawk	BCC/ST/None	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. The site is outside of the species' known geographic range.
<i>Campylorhynchus brunneicapillus sandiegensis</i> (San Diego and Orange Counties only)	coastal cactus wren	BCC/SSC/None	Southern cactus scrub patches	Not expected to occur due to lack of cactus habitat.
<i>Charadrius alexandrinus nivosus</i> (nesting)	western snowy plover	FT, BCC/SSC/None	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable vegetation present and too far inland.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Circus hudsonius</i> (nesting)	northern harrier	None/SSC/Covered	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Not expected to occur. The site is outside of the species' known geographic range for breeding and there is no suitable vegetation present. The grassland could function as foraging for the species however the site is too small and there is disturbance from human use that would preclude foraging.
<i>Coccyzus americanus occidentalis</i> (nesting)	western yellow-billed cuckoo	FT, BCC/SE/None	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable vegetation present.
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP/None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Low potential to occur. Trees are present near open grasslands however grasslands are mowed regularly; reduced suitability due to small area.
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FE/SE/Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable vegetation present.
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC/None	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable riparian woodland habitat present.
<i>Ixobrychus exilis</i> (nesting)	least bittern	BCC/SSC/None	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	Not expected to occur. No suitable vegetation present.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	BCC/ST, FP/None	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation present.
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	None/SE/None	Nests and forages in coastal saltmarsh dominated by pickleweed (<i>Salicornia</i> spp.)	Not expected to occur. No suitable vegetation present and location is too far inland.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Plegadis chihi</i> (nesting colony)	white-faced ibis	None/WL/Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. No suitable vegetation present.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT/SSC/Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Present. This species was observed during the coastal California Gnatcatcher focused surveys.
<i>Rallus obsoletus levipes</i>	Ridgway's rail	FE/SE, FP/None	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable vegetation present.
<i>Riparia riparia</i> (nesting)	bank swallow	None/ST/None	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. The site is outside of the species' known geographic range for nesting and there is no suitable riparian sandy bank habitat present.
<i>Setophaga petechia</i> (nesting)	yellow warbler	BCC/SSC/None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation present.
<i>Sternula antillarum browni</i> (nesting colony)	California least tern	FE/SE, FP/None	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable vegetation present.
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FE/SE/Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation present.
<i>Fishes</i>				
<i>Eucyclogobius newberryi</i>	tidewater goby	FE/SSC/None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. No suitable vegetation present.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Gila orcuttii</i>	arroyo chub	None/SSC/None	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. No suitable vegetation present.
<i>Mammals</i>				
<i>Antrozous pallidus</i>	pallid bat	None/SSC/None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. Suitable open, dry shrublands and grasslands present with potential roosting buildings nearby. No roost potential onsite.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC/None	Open habitat, coastal scrub, chaparral, oak woodland, chamise chaparral, mixed-conifer habitats; disturbance specialist; 0 to 3,000 feet above mean sea level	Low potential to occur. Suitable scrub and disturbed habitat present.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC/Covered	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon-juniper, and annual grassland	Moderate potential to occur. Suitable scrub and grasslands but no suitable desert habitats present.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC/None	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon-juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable vegetation present.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None/SSC/None	Mesic habitats characterized by coniferous and deciduous forests and riparian habitat, but also xeric areas; roosts in limestone caves and lava tubes, man-made structures, and tunnels	Low potential to occur. Xeric areas present but minimal roosting habitat.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/ST/None	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Low potential to occur. Suitable habitat present but no records in San Marcos and high disturbance present.
<i>Eumops perotis californicus</i>	western mastiff bat	None/SSC/None	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Low potential to occur. Open foraging habitat present but minimal nearby roosting habitat.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Lasiurus xanthinus</i>	western yellow bat	None/SSC/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. No suitable vegetation present.
<i>Leptonycteris yerbabuenae</i>	lesser long-nosed bat	FE/None/None	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands	Not expected to occur. The site is outside of the species' known geographic range.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/SSC/Covered	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Low potential to occur. Suitable habitat is present however isolation from other habitats and habitat disturbance from human use reduces suitability.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/SSC/None	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. Site is located too far west for the occurrence of this species.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/SSC/None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. No suitable vegetation present.
<i>Nyctinomops macrotis</i>	big free-tailed bat	None/SSC/None	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable vegetation present.
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE/SSC/Covered	fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur. No suitable habitat present.
<i>Taxidea taxus</i>	American badger	None/SSC/None	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Low potential to occur. Suitable vegetation and soils present; however isolation from other habitats and habitat disturbance from human use reduces suitability.
<i>Invertebrates</i>				
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/None/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Not expected to occur. No suitable pool habitat present.
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/None/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable pool habitat present.

APPENDIX E (Continued)

Scientific Name	Common Name	Status (Federal/State/Draft San Marcos MHCO Subarea Plan)	Habitat	Potential to Occur
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/None/None	Coastal sage scrub and chaparral with open areas and clay soils suitable for host plant growth, including dot-seed plantain (<i>Plantago erecta</i>), woolly plantain (<i>Plantago patagonica</i>), white snapdragon (<i>Antirrhinum coulterianum</i>), thread-leaved bird's beak (<i>Cordylanthus rigidus</i>), purple owl's clover (<i>Castilleja exserta</i>), and southern Chinese houses (<i>Collinsia concolor</i>)	Not expected to occur. No suitable habitat or host plants present. The project site is not within the 2014 protocol Quino checkerspot butterfly survey area.
<i>Euphyes vestris harbisoni</i>	Harbison dun skipper	None/None/Covered	Freshwater seeps or springs in chaparral and riparian drainages with the San Diego sedge (<i>Carex spissa</i>) host plant	Not expected to occur. No suitable habitat or host plants present.
<i>Lycaena hermes</i>	hermes copper butterfly	None/None/Covered	Slopes, hillsides, and canyon bottoms with chaparral and coastal sage scrub habitats containing redberry (<i>Rhamnus crocea</i> , larval food source) and buckwheat (<i>Eriogonum fasciculatum</i> , nectar source)	Not expected to occur. No <i>Rhamnus crocea</i> host plants present.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/None/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. No suitable pool habitat present.