Appendix C
Biological Resources Memorandum

Pacific Development Project

Biological Resources Technical Report

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Prepared for:

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ACRONYMS AND ABBREVIATIONS

BCLA	Biological Core and Linkage Area
BMP	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
City	City of San Marcos
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
COS	Conservation and Open Space
County	County of San Diego
CRPR	California Rare Plant Rank
CWA	Clean Water Act
FESA	Federal Endangered Species Act
FPA	Focused Planning Area
GIS	Geographic Information Systems
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
HMMP	Habitat Mitigation and Monitoring Plan
ITP	Incidental Take Permit
m	meter
MBTA	Migratory Bird Treaty Act
MHCP	Multiple Habitat Conservation Program
OVH	off-highway vehicle
NEPA	National Environmental Policy Act
NCCP	Natural Communities Conservation Planning
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
PMP	Preserve Management Plan

ACRONYMS AND ABBREVIATIONS (cont.)

RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VPMP	Vernal Pools Mitigation Plan
WDR	Waste Discharge Requirement

EXECUTIVE SUMMARY

This biological technical report was prepared to evaluate the proposed Pacific Development Project (proposed project). The proposed project site is located within the City of San Marcos (City), in San Diego County (County), California. The purpose of this report is to document the existing biological conditions within the project site, to analyze potential impacts to sensitive biological resources with respect to local, state, and federal regulations and policies from the proposed project, and to recommend mitigation measures for impacts to sensitive biological resources. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) by the City.

HELIX Environmental Planning, Inc. (HELIX) conducted biological surveys for the project site and immediate surrounding areas in 2018, 2020, 2021, and 2022. The purpose of these surveys was to verify whether the biological resources recorded on-site by others in 2006 and 2002 remained on the project site; to map current vegetation communities and sensitive resources; to identify sensitive species occupying the site; and to delineate potential jurisdictional aquatic resources.

Four sensitive vegetation community types occur on-site: vernal pools, Diegan coastal sage scrub (including disturbed and baccharis-dominated), native grassland (including disturbed), and non-native grassland.

Six rare plant species and one special status animal species were observed on-site during biological surveys: San Diego button-celery (*Eryngium aristulatum* var. *parishii*), thread-leaved brodiaea (*Brodiaea filifolia*), Orcutt's brodiaea (*Brodiaea orcuttii*), small-flowered morning-glory (*Convolvulus simulans*), graceful tarplant (*Holocarpha virgata* ssp. *elongata*), chaparral rein orchid (*Piperia cooperi*), and San Diego fairy shrimp (*Branchinecta sandiegonensis)*.

Aquatic resources occur on-site, reflected by two drainage features and several depressions that meet the minimum criteria to be considered potential waters of the U.S. under the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA), potential waters of the state under the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to CWA Section 401 and/or Porter-Cologne Water Quality Control Act, and potential streambed and riparian habitat under the regulatory jurisdiction of California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600-1603 of the California Fish and Game Code (CFG Code) are present on the project site.

The project site is located within the boundaries of the San Diego Multiple Habitat Conservation Program (MHCP), which was finalized and adopted by the County of San Diego in 2003. Within the MHCP, the proposed project site is within the Draft City of San Marcos Subarea Plan. The Draft San Marcos Subarea Plan has not been finalized or adopted. The site is located within the Vernal Pool Major Amendment Area in the City's Draft Subarea Plan. In the context of the MHCP, the proposed project site is located outside of the Biological Core and Linkage Area and is identified as a "Major Amendment Area". The site is not within or adjacent to any conserved lands. Although the project site was specifically excluded from the MHCP conservation areas/acreages, estimates, and requirements, the site is recognized in the MHCP to support sensitive biological resources and is targeted as an isolated preserve area for conservation and incorporation into the MHCP preserve system.

The project site is located within U.S. Fish and Wildlife Service (USFWS) designated critical habitat for three species, including the federally-listed endangered San Diego fairy shrimp, federally-listed threatened spreading navarretia, and federally-listed threatened thread-leaved brodiaea.

The Las Posas Owner LPV, LLC is the Applicant for the proposed project. In general, the project includes site grading for residential development and surrounding roadway off-site infrastructure improvements. The purpose of the project is to provide additional residential housing opportunities in the City as well as establish a perpetual biological conservation element of the site. This report analyzes the foreseeable potential impacts of the proposed project on biological resources on-site, including potential effects to special status species, sensitive natural communities/habitats, and aquatic resources. Measures to mitigate potentially significant impacts of the project are proposed herein this report, and implementation would reduce impacts to less than significant.

Consultation with the USFWS on the project is required by the Federal Endangered Species Act (FESA) for potential impacts to the federally listed species, including their critical habitat. To ensure, at a minimum, no net loss of sensitive vegetation communities and/or non-listed sensitive species by the project, mitigation measures Bio-1 through Bio-8b would be implemented, which include but are not limited to preparation and implementation of a Habitat Mitigation and Monitoring Plan (HMMP) and Preserve Management Plan (PMP). Impacts to aquatic resources under the jurisdiction of the USACE, RWQCB, and/or CDFW would be mitigated at a minimum 3:1 ratio consisting of at least 1:1 establishment/re-establishment and provided through either one or a combination of: on- or off-site permittee-responsible preservation, establishment, re-establishment, rehabilitation and/or enhancement (including implementation of the HMMP and PMP), or by purchase appropriate credits from an approved mitigation bank.

1.0 INTRODUCTION

On behalf of the Las Posas Owner LPV, LLC (Applicant), HELIX Environmental Planning, Inc. (HELIX) completed this biological resources technical report for the proposed Pacific Development project (project). The purpose of this report is to document the existing biological resources within the project, analyze potential impacts to sensitive biological resources, and provide practicable mitigation measures with respect to local, state, and federal policy. This biological resources report provides the technical documentation necessary for review under the California Environmental Quality Act (CEQA) by the City of San Marcos Development Services Department.

The project study area for this report encompasses an approximate 33.22-acre project site and surrounding areas within 50 feet. The information, analyses, and discussions in this report focus on the approximate 33.22-acre project site and immediately adjacent off-site improvements areas; additional areas within the 50-foot buffer surrounding the project site were reviewed for adjacency context only and are not discussed in detail herein.

1.1 PROJECT LOCATION

The proposed project site is located within Assessor's Parcel Number's 219-222-01-00, 219-222-02-00, 219-222-03-00, and 219-222-04-00 in the northwestern portion of San Diego County in the City of San Marcos, California (Figure 1, *Regional Location*). The site lies within Section 9, Township 12 South and Range 3 West on the U.S. Geological Survey (USGS) 7.5-minute San Marcos Quadrangle (Figure 2, *USGS Topography*). The project site is surrounded by development, bordered by La Mirada Drive to the north, South Las Posas Road to the east, Linda Vista Drive to the south, and South Pacific Street to the west (Figure 3, *Aerial Vicinity*).

The project site is located within the planning boundaries of the adopted San Diego Multiple Habitat Conservation Program (MHCP) Plan (AMEC Earth & Environmental et al. 2003) surrounded by the Draft San Marcos Subarea Plan area. The City's Draft Subarea Plan has not been completed, approved, or adopted (City of San Marcos 2001). Within the MHCP, the project site is identified on Figure 2-4 as "natural habitats outside of Biological Core and Linkage Area (BCLA)" and is recognized in Figure 3-1 Focused Planning Area (FPA) MHCP Study Area as a "Major Amendment Area." Major amendment lands are privately held properties with sensitive resources that are not included in the Subarea plan. Prior to the inclusion of these lands in the Subarea Plan, additional CEQA review is required to determine compatibility with the goals and policies of the Subarea Plan with any proposed development on those lands. The site is also located within the Vernal Pool Major Amendment Area in the City's Draft Subarea Plan (Figure 4, *Regional Context*). While the City's Draft Subarea Plan has not been approved or adopted and is advisory, the City considers the plan a policy document to guide development in the City. Project consistency with these plans is noted herein where relevant.

The project site is located within critical habitat designated by the U.S. Fish and Wildlife Service (USFWS) for the federally-listed endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*), federally-listed threatened spreading navarretia (*Navarretia fossalis*), and federally-listed threatened thread-leaved brodiaea (*Brodiaea filifolia*).

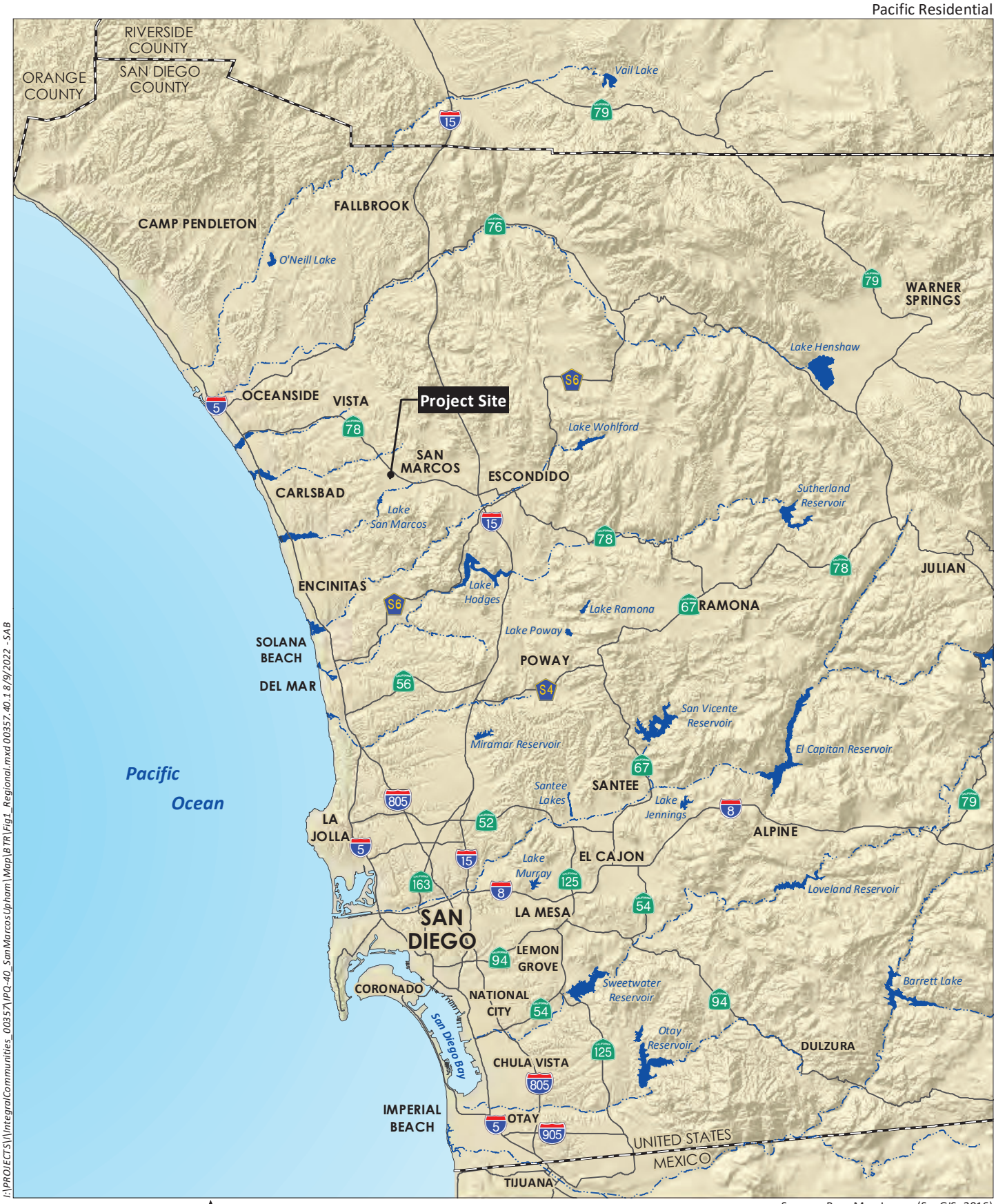
1.2 PROJECT DESCRIPTION

The project consists of residential development on undeveloped land as well as infrastructure improvements and connections to existing surrounding developed areas. The project generally includes site grading and new construction of 449 residential units, comprising a mix of apartments within a five-story podium building, three-story rowhomes, three-story villas, and affordable flats within a four-story building. The project includes a total of 927 parking spaces and 134,985 square feet of common open space area. A total of 68 of the 449 residential units (fifteen percent) would be designated as deed-restricted affordable units (alternatively, the project reserves the option to contribute to the affordable housing fund by paying the in-lieu fee). The proposed project also includes landscaping, bio-retention areas, and circulation improvements. (Figure 5, *Site Plan*). Due to the presence of sensitive biological resources on-site, primarily consisting of vernal pools as well as rare plants and animals, the project was designed to avoid such resources to the extent practicable. For example, the project development avoids vernal pools considered the highest value (i.e., vernal pool complexes and pools supporting rare species). Further, setbacks from the avoided vernal pools on-site, including their immediate watersheds, were incorporated into the design to provide a buffer from the proposed new development.

Outside of the proposed development areas, the project includes a preservation/conservation open space area where biological habitats and associated species would be preserved, restored, and managed in perpetuity. The project proposes to develop approximately 15.09 acres of the 33.22 -acre project site. The remaining approximately 17.94 acres of the 33.22-acre project site (approximately 54 percent) would be preserved and restored as a biological open space habitat conservation area. The project would have a density of approximately 13.5 dwelling units per acre (DU/AC), including the proposed open space habitat preservation/conservation area.

The project proposes a General Plan Amendment, Rezone, Specific Plan, Tentative Map, and Multi-Family Site Development Plan. The General Plan Amendment and Rezone would change the General Plan designation and Zoning from Industrial (I) to Specific Plan Area (SPA). The Specific Plan has been prepared with the intent to provide a comprehensive plan to ensure the efficient development of a new residential community. The Specific Plan serves as both a policy document and a regulatory document for the systematic implementation of the policies and goals of the General Plan. The Tentative Map presents specific lot configurations for the site. The Multi-Family Site Development Plan will configure the site for multi-family dwelling units, street configuration, infrastructure, recreational open space, and private open space.

As part of the project, additional pedestrian connectivity would be provided along three of the adjacent street frontages (i.e., off-site improvements). The project would provide a 6-foot sidewalk and Class II buffered bike lane along the project's frontage on Pacific Street; the project would provide a 12-foot urban trail (shared use path) along the project's frontage on Linda Vista Drive; and the project would also provide a 12-foot urban trail (shared use path) along the project's frontage on La Mirada Drive. In addition to the proposed sidewalk and trail connections, the project would add a bus stop and shelter with a bus turnout along South Las Posas Road adjacent to the development area and would install a 4-way traffic signal at the intersection of Linda Vista Drive and Pacific Street. Furthermore, the project would upsize approximately 1,458 feet of existing water pipe from 8 inches to 12 inches and would convert approximately 1,400 feet of existing overhead power lines to underground along La Mirada.



I:\PROJECTS\\IntegralCommunities_00357\IPQ-40_SanMarcosUpham\Map\BTR\Fig1_Regional.mxd 00357.40.1 8/9/2022 - SAB

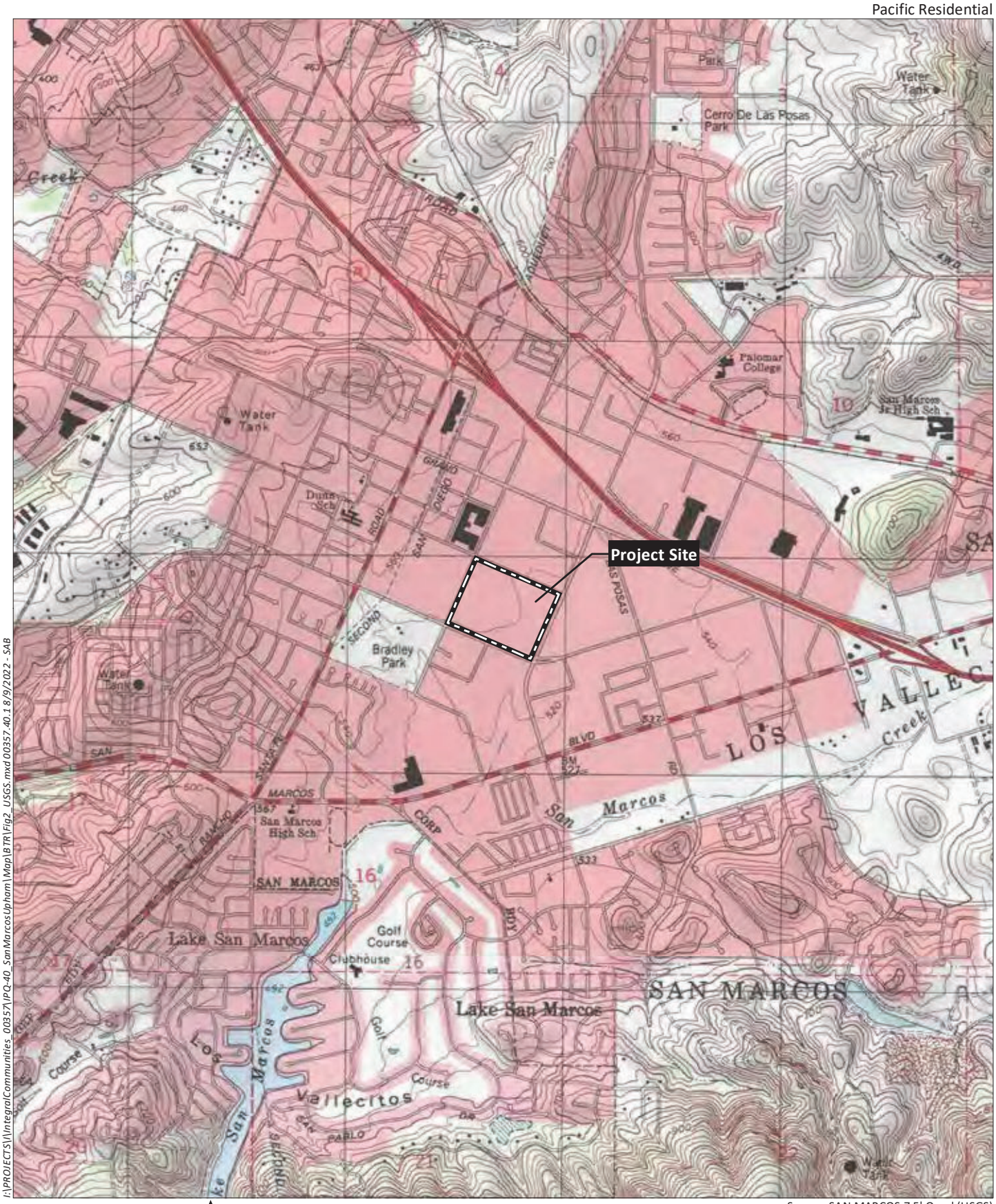
0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1



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0 2,000 Feet

Source: SAN MARCOS 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

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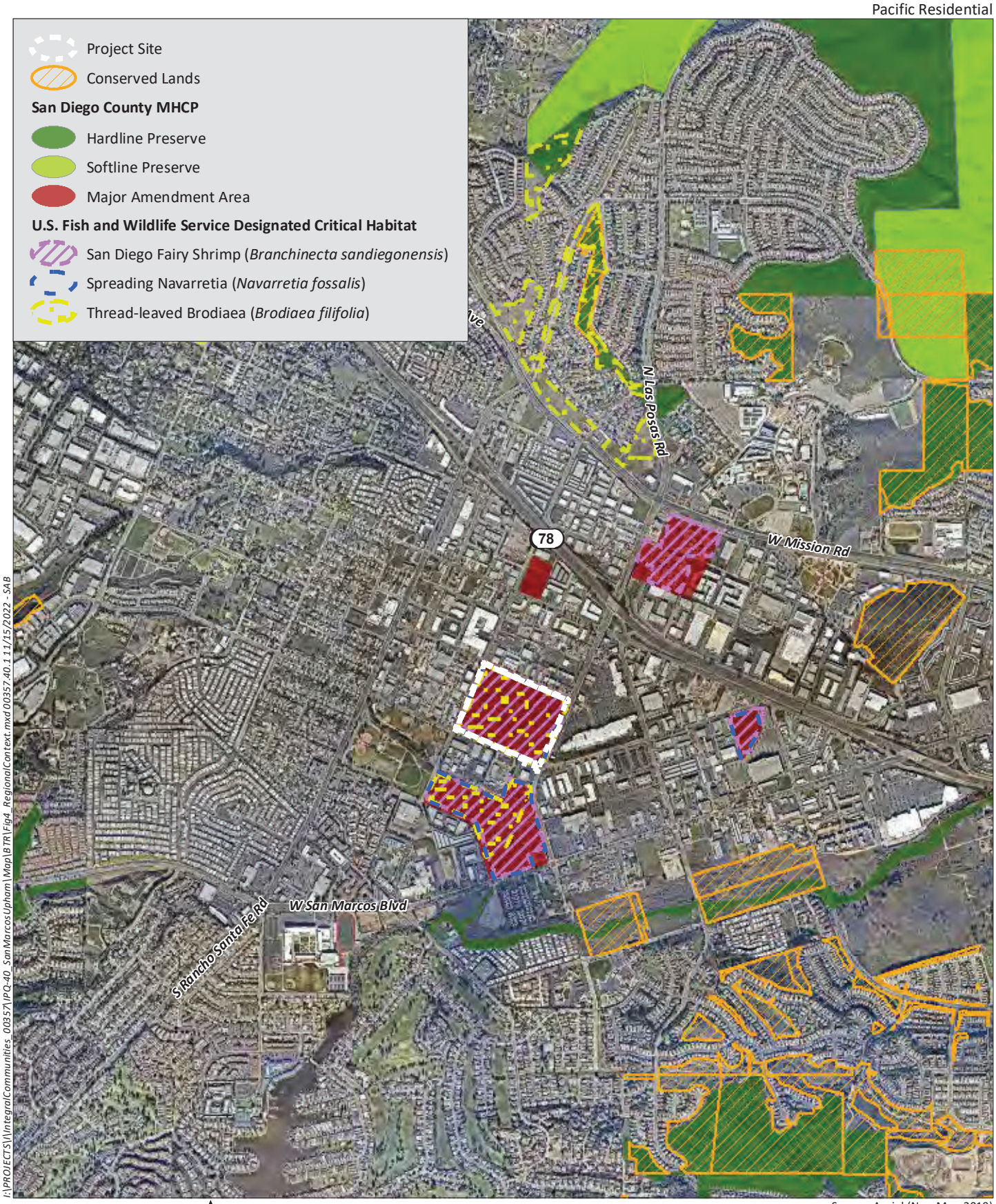
0 400 Feet

Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Aerial Vicinity

Figure 3



Source: Aerial (NearMap 2019)

HELIX Environmental Planning

Regional Context

Figure 4

Project Boundary
Off-site Improvements
Plan Lines

La Mirada Dr
S Pacific St
S Las Posas Rd
Linda Vista Dr
Ryan Dr

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0 150 Feet

Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Site Plan

Figure 5

2.0 METHODS

2.1 LITERATURE REVIEW

HELIX performed a review of relevant maps, databases, and literature pertaining to biological resources known to occur in the project vicinity. HELIX also reviewed previous biological survey information completed for the project site: *Wet Season Presence/Absence Survey for Vernal Pool Branchiopods for the Upham Parcel* (Dudek 2006) and *Upham Property/San Marcos Vernal Pools Fairy Shrimp Survey Results (RECON Number 3486B)*(RECON 2002). Recent and historical aerial imagery (Google 2022; Historical Aerials 2022; San Diego Geographic Information Source [SanGIS] 2021), topographic maps (USGS 2022), soils maps (Natural Resource Conservation Service 2019), and other maps were reviewed to obtain information on the environmental setting.

In addition, queries of sensitive species and habitats within a two-mile radius of the project site were conducted by HELIX, including USFWS species records (USFWS 2022a), California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB; CDFW 2022a), Calflora database (Calflora 2021), SanBIOS (SanGIS 2022), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2022). A single quad search was conducted from the CNPS Electronic Inventory (CNPS 2022), and the USFWS' National Wetlands Inventory (NWI) was also reviewed (USFWS 2022b). Recorded locations of species, vegetation, habitat types, and other resources mapped were overlain onto aerial imagery using Geographic Information Systems (GIS).

2.2 BIOLOGICAL SURVEYS

2.2.1 General Biological Survey

HELIX biologist Thomas Liddicoat conducted an initial general biological survey of the project site (and immediately surrounding areas) on July 24, 2018. Additionally, HELIX biologists Jason Kurnow and Angelia Bottiani conducted a biological assessment on April 22, 2020, to verify the 2018 resources mapping and update/refine it, as appropriate. HELIX biologist Thomas Liddicoat mapped vernal pool watersheds directly in the field with a Global Positioning System (GPS) unit in September 2020. Vegetation communities were classified and mapped in accordance with Holland (1986) and Oberbauer (1996). Survey mapping utilized a 1-inch = 50-foot scale aerial map with an overlay of the project site and previous resource mapping. A GPS unit was used during the survey to record the limits of vegetation and other resources on site. Another survey of the project site was conducted on March 26, 2021, by HELIX biologist Jason Kurnow, to review the existing site conditions, evaluate the mapped vernal pools, assess the status of annual plants, and verify the biological resources mapped in 2020. HELIX biologist Amy Mattson reviewed the status of brodiaea mapping on March 18, 2021. Additionally, multiple surveys were conducted in 2022 by HELIX biologists to assess the vernal pools, verify vegetation and site conditions, assess grasslands, document and count special-status plants on-site, and to evaluate potential species and habitat mitigation (translocation, creation, restoration, enhancement, and preservation) areas on-site. These surveys of the site were conducted on February 25, March 1, March 29, March 31, May 9, May 10, May 13, April 6, July 19, August 4, and August 5, 2022.

Vegetation communities were mapped by HELIX to one-hundredth of an acre (0.01 acre). A list of all plant and animal species observed or detected within the project site was prepared. Plant species were identified in the field or later in the laboratory with the aid of voucher specimens. Animals were

identified in the field by direct visual observation with the aid of binoculars or indirectly by detection of calls, tracks, burrows, or scat.

2.2.2 Jurisdictional Delineation

During the general biological survey in July 2018, HELIX biologist Thomas Liddicoat preliminarily identified and mapped jurisdictional aquatic resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the Clean Water Act and State Porter-Cologne Water Quality Control Act (Porter-Cologne), and streambed and riparian habitat potentially subject to CDFW jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game (CFG) Code. Additionally, HELIX biologists Jason Kurnow and Angelia Bottiani performed a formal wetland delineation of the project site on April 22, 2020. Potential aquatic resources evaluated within the project site included drainage features, swales, depressions, wetland vegetation, and areas where ponding was observed.

Waters of the U.S. (USACE Jurisdiction)

Potential USACE-jurisdictional wetlands and waters of the U.S. were delineated in accordance with the Wetlands Delineation Manual (Environmental Laboratory 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008), and the Navigable Waters Protection Rule: 85 FR 22250 (USACE and USACE and Environmental Protection Agency [EPA], 2020) was also considered. The delineation was located within representative uplands and wetlands of the project site, and the mapping of drainage features was performed in the field based on the ordinary high-water mark (OHWM) and surface indications of hydrology. Five soil pits were excavated and evaluated by HELIX in 2020. Areas are determined to be potential wetland waters of the U.S. if there is a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Areas are determined to be non-wetland waters of the U.S. if there is evidence of regular surface flow (i.e., perennial or intermittent) within an OHWM, but the vegetation and/or soils criterion is not met, and the waters are immediately adjacent to wetlands or are hydrologically connected to downstream navigable waters.

No soil pits were dug in the vernal pools because hydrology and aquatic vegetation extents were evident during the survey. Due to the soil profiles and conditions that support vernal pools, the presence of hydric soils was assumed. Thus, pools found to support ponding and vernal pool aquatic indicator plant species were mapped as potential wetland waters of the U.S. In general, areas were determined to be potential wetland waters of the U.S. if there was a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Areas were determined to be non-wetland waters of the U.S. if there was evidence of regular surface flow within an OHWM, but the vegetation criterion was not met.

Waters of the State (RWQCB Jurisdiction)

Potential RWQCB-jurisdictional areas were delineated in the same manner as potential waters of the U.S. All waters of the U.S. were considered waters of the state subject to RWQCB jurisdiction pursuant to CWA Section 401. Additionally, features that support aquatic resources (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology) but are isolated (i.e., lack downstream connectivity to traditional navigable waters of the U.S.) could be subject to regulation pursuant to the State Porter-Cologne Water Quality Control Act (Porter-Cologne) and would be identified as potential RWQCB-jurisdictional waters of the state.

Streambed and Riparian Habitat (CDFW Jurisdiction)

Potential CDFW-jurisdictional streambed and riparian habitat were determined based on the presence of riparian vegetation or regular surface flow within a definable bed and bank. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Potential CDFW-jurisdictional unvegetated streambed encompasses the top-of-bank to top-of-bank width for the features within the project site. Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream.

2.2.3 Focused Species Surveys

Rare Plants

Leading up to the focused surveys, the project site was checked regularly (alongside other site surveys) to determine the peak blooming period of sensitive plants, particularly brodiaea species. Based on the evaluation of blooming observed on-site, focused spring surveys for rare plants were conducted across the project site on May 11, 13, 15, 16, and 29, 2020, during the peak blooming period of thread-leaved and Orcutt's brodiaea on-site by HELIX biologists Jason Kurnow and Angelia Bottiani. The surveys consisted of systematically walking meandering transects throughout the entire project site. At each rare plant location, the plant was identified to species based on unique flower characteristics, the number of individuals was estimated, and the location was recorded with a GPS unit. Species population densities were estimated as part of the surveys, but the focus was to determine species locations and population extents across the site.

On May 16, 2020, HELIX biologists estimated the population of thread-leaved brodiaea (*Brodiaea filifolia*). Nine 50-meter (m) transects were established throughout the site and found to support thread-leaved brodiaea during prior surveys. Along each transect, one-meter^2 (m^2) quadrats were placed at five-m intervals for a total of ten quadrats per transect. Thread-leaved brodiaea within each quadrat was counted, providing a total number/10m^2. The total number within each of the nine transects was used to determine an average number of individuals/10m^2. This average was extrapolated to determine an estimated number of individual thread-leaved brodiaea on the site within the mapped polygons. Individual locations (reflecting single plants and clusters of plants) found outside of the larger polygons were also included in the total population count. Areas supporting Orcutt's brodiaea (*Brodiaea orcuttii*) on-site were also assessed during the thread-leaved brodiaea counts, and the plant densities were found to be generally the same throughout the site; thus, the methodologies/results were employed to estimate the population of Orcutt's brodiaea on-site. Due to the relatively large area supporting Graceful tarplant (*Holocarpha virgata* ssp. *elongata*) on-site, this species was also mapped and quantified using similar methods as thread-leaved and Orcutt's brodiaea species. Following the field surveys, GPS data was analyzed, and polygons were created where appropriate to demonstrate overall distribution. Clusters and individuals of rare plants that were isolated/distant from the polygons were left as single point locations.

Rare plants were also searched for during the jurisdictional delineation discussed above, and the focused animal surveys are summarized below. Furthermore, to assess the status, locations, and quantities of rare plants relative to the 2020 surveys, HELIX biologists surveyed the site for rare plants, using the methods from May 2020, on March 26 and May 18, 2021, as well as on May 9, 10, 13, July 19,

and August 4 and 5, 2022. The results of these efforts have been compiled as part of this technical report.

Burrowing Owl

Focused surveys for burrowing owl (*Athene cunicularia*) were conducted by HELIX in 2020 in accordance with current CDFW burrowing owl survey guidelines (California Department of Fish and Game [now CDFW] 2012). Four site visits were made from March 30 through June 22, 2020, to survey potential burrowing owl habitat (i.e., grasslands, disturbed habitat, and Diegan coastal scrub communities where the shrub cover was sparse) where it occurs on the project site and 500-feet beyond. Some of the potential burrowing owl habitat (particularly the off-site area) was inspected with the aid of binoculars due to restricted access. Survey weather conditions, time of year, and time of day were appropriate for detecting burrowing owl.

The biologists slowly walked meandering transects through areas of potential habitat where it was legally accessible. Posts, rocks, and other possible perching locations, as well as mammal burrows (especially those of California ground squirrel [*Otospermophilus beecheyi*]) potentially suitable for use by burrowing owls, were inspected and mapped with a hand-held GPS unit. These burrows were specifically searched for sign of recent burrowing owl occupation, including pellets with regurgitated fur, bones, and insect parts; white wash (excrement); and feathers. In addition, structures such as concrete culverts/piles, wood debris piles, trash piles, and openings beneath cement or asphalt pavement that were present were checked for burrowing owl sign.

Coastal California Gnatcatcher

Focused surveys for the coastal California gnatcatcher were conducted by HELIX in 2020 in accordance with the *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol* (USFWS 1997) by HELIX (HELIX 2020a). The survey consisted of six site visits made from April 6 through May 11, 2020, and conducted during appropriate weather conditions and time of day for detecting coastal California gnatcatcher.

The survey area consisted of potential coastal California gnatcatcher habitat in the project site (i.e., Diegan coastal sage scrub-disturbed, and baccharis-dominated coastal sage-chaparral scrub). The survey was conducted by walking through and along the perimeter of vegetation, and birds were viewed with the aid of binoculars, where necessary. If coastal California gnatcatcher was not detected passively, a digital coastal California gnatcatcher call-prompt was briefly played. Any coastal California gnatcatcher locations were mapped on an aerial photograph map directly in the field.

Fairy Shrimp

Protocol wet season and dry season focused surveys for San Diego fairy shrimp were conducted by HELIX in 2020 in accordance with the *Survey Guidelines for the Listed Large Branchiopods* (USFWS 2017; HELIX 2020b and 2020c). Seven survey visits were conducted for the wet-season survey between March 22 and May 4, 2020, when all features on the project site were observed to be dry. During the survey, HELIX attempted to verify and identify all features previously sampled by others (i.e., Recon 2002 and Dudek 2006). If located, the extent of the feature was mapped using a hand-held GPS unit and labeled with an identification number. Based on the National Oceanic and Atmospheric Administration (NOAA)'s Escondido Station (ESCC1), located approximately 5.75 miles east of the project site, the precipitation total for the 2019-2020 rain season was 16.97 inches, which was approximately 68 percent above

average for the region. Thus, the surveys were conducted during appropriate timing to detect suitable fairy shrimp habitat and fairy shrimp on the project site.

Following the wet-season focused surveys, HELIX conducted dry season sampling within the basins detected on the project site in accordance with the USFWS protocol. Samples were collected, labeled, then cleaned and screened to detect and collect fairy shrimp cysts if present. Because San Diego fairy shrimp cannot be solely identified by cysts, HELIX also hatched cysts detected per established methods in order to obtain the identification of individual species from each basin on the project site.

2.3 SURVEY LIMITATIONS

Animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that use the project site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed. Those species that are of special status and have the potential to occur on the project site, however, are still addressed in this report.

2.4 NOMENCLATURE

Nomenclature used in this report generally comes from *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and *Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions* (Oberbauer 2008) for vegetation; Jepson eFlora (The Jepson Herbarium 2022), *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012) for plants; Society for the Study of Amphibians and Reptiles (2021) for reptiles and amphibians; and Check-list of North American Birds (American Ornithological Society 2020) for birds. Plant species status is from the Inventory of Rare and Endangered Plants of California (California Native Plant Society [CNPS] 2022), and State and federally listed endangered, threatened, and rare plants of California (CDFW 2022a). Animal species status is from State and federally listed endangered and threatened animals of California (CDFW 2022b) and Special animals list (CDFW 2022c).

3.0 EXISTING CONDITIONS

3.1 GENERAL LAND USES

The project site is primarily undeveloped and disturbed land. The southeast corner of the project site has been developed as part of Linda Vista Drive, and various utilities have been placed along S. Las Posas Road in the northeast corner of the project site. The project site is almost (within 10 feet) immediately adjacent to City roadways; existing industrial and commercial development occurs on all sides, including the Grand Plaza shopping center to the east (Figure 3).

Although undeveloped, the project site reflects a history of disturbance. A review of historical aerial imagery shows the project site and immediately surrounding areas were initially cleared/altered in 1953, and by 1964, trails surround the site on all four sides, which coincide and reflect currently existing City streets (i.e., La Mirada Drive, S. Las Posas Road, Linda Vista Road, and S. Pacific Street) (Historical Aerials 2022). Imagery captured in 1978 shows the establishment of La Mirada Drive, Linda Vista Road, and S. Pacific Street, as well as adjacent frontage development. Further, based on historical aerial imagery, a southwest to northeast direction trail is present in the central portion of the site, and areas in the

southeast and northwest parts of the project were also graded in 1978. Later in 1989, grading occurred along the eastern portion of the site as part of the installation of Las Posas Road (Historical Aerials 2022).

In general, the vegetation on-site is disturbed by an abundance of invasive and weedy plant species and unpaved roads crossing the project site, which are visible on historic aerials since 1978. Additionally, the site has been subject to ongoing unauthorized routine dumping of trash, potentially hazardous/toxic materials, and other debris, which are most evident by dump piles in the northwest, southeast, and northwestern portions of the site; trash/debris is scattered throughout the site. Furthermore, based on the prevalent tire tracks and road ruts across the site, most of the site seems to be frequently used for off-highway vehicle (OHV) recreation. Based on aerial imagery and recent biological surveys of the site since 2018, the trash/debris dumping and the OHV disturbances on-site have increased and impacted sensitive biological resources on-site (i.e., vernal pools, sensitive vegetation, and rare plants and animals, including federally listed endangered species). Additionally, during the biological surveys conducted in 2021 and 2022, potential evidence of plant harvesting/poaching (i.e., hand digging tools and small patches of shallow excavations within sensitive plant species locations) in several areas of the site were observed. Due to the relatively high level of continuous anthropogenic disturbances of the site via trash dumping and OVH recreation, the potential sensitive plant harvesting/poaching, unsanctioned community gatherings for 4th of July Holiday celebration parties and fireworks spectating, as well as the abundance of non-native invasive species, it is likely such disturbances would continue in the future and substantially result in ongoing degradation of the biological resources site.

3.2 TOPOGRAPHY AND SOILS

The project site is relatively flat (less than 10 percent slopes), ranging in elevation from approximately 527 feet above mean sea level in the southeast portion of the project area to 551 feet in the northwest corner of the project site (Figure 2). A drainage study was completed for the project site and identified potential drainage directions (Lundstrom 2022). The topography on-site suggests that the majority of the site would drain and flow in a clockwise direction; from the central-eastern portion of the site, towards the northern portion of the site, and ultimately into the southeastern portion of the site. Areas in the southern portion of the site drain south. Although the preliminary drainage study suggests drainage flow across the site, evidence of such flow was not observed throughout field surveys conducted by HELIX between 2019 and 2022. Areas of ponded water were observed scattered across the site, but no surface flow or drainage connections between these ponded areas were observed. Thus, it is presumed these ponded areas on-site fill/inundate and function independently of each other rather than cohesively.

Three soil types have been mapped on the project site according to the Natural Resource Conservation Service (NRCS) database: Las Flores loamy fine sand (LeC), 2 to 9 percent slopes; Placentia sandy loam (PeC), 2 to 9 percent slopes; and Placentia sandy loam thick surface (PfA), 0 to 2 percent slopes (NRCS 2019; Figure 6, *Soils*). According to the geotechnical study for the site, the site soils are consistent across the site (loamy sand), but for relatively small portions along the east mapped as sandy loam) (GeoTek, Inc. 2022). Further, the GeoTek report states that nearly the entire site consists of Tertiary Santiago Formation, which was observed as a dark brown/black clay near the surface.

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Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Soils

Figure 6

3.3 VEGETATION COMMUNITIES

Seven vegetation communities or habitat types occur within the project site: vernal pools, Diegan coastal sage scrub (including disturbed and baccharis-dominated), native grassland, non-native grassland, disturbed habitat, and developed (Table 1, *Existing Vegetation and Habitat Groups*; Figure 7, *Vegetation Communities*). The vegetation within the off-site improvement areas are also presented in Table 1 below and Figure 7 of this report.

Table 1
EXISTING VEGETATION AND HABITAT GROUPS [1]

VEGETATION COMMUNITY	MHCP HABITAT GROUP	PROJECT AREA (acres)	OFF-SITE IMPROVEMENTS (acres)
Wetland			
Vernal Pool (44000)	A	0.44	--
	Wetland Subtotal		**--**
Upland			
Native Grassland (42100)	B	13.61	0.01
Diegan Coastal Sage Scrub-disturbed (32500)	C	0.71	0.01
Diegan Coastal Sage Scrub-Baccharis-dominated (32530)	C	0.36	0.01
Grassland – mixed and disturbed (40000)	E	13.93	0.35
Non-native Grassland (42200)	E	3.52	0.22
Disturbed Habitat (11300)	F	0.58	0.06
Developed (12000)	F	0.07	1.22
	Upland Subtotal	***32.78***	***1.88***
	TOTAL	**33.22**	**1.88**

[1] Acres rounded to the nearest 0.01 acre.

3.3.1 Vernal Pool (44000)

Vernal pools are seasonally flooded depressions that support a highly specialized plant habitat and unique flora and fauna adapted to living in extreme dry and wet conditions. Vernal pools are associated with two important physical conditions: a subsurface hardpan or claypan that inhibits the downward percolation of water and a topography characterized by a series of low hummocks called mima mounds, and low depressions (the vernal pools), which prevents above-ground water runoff. As a result of these two physical conditions, water collects in these depressions during the rainy season. As the rainy season ends and the dry season begins, the water collected in these vernal pools gradually evaporates. As water evaporates from these pools, a gradient of low soil water availability to high soil water availability is created from the periphery of the pool margins to the center of the pool. The chemical composition of the remaining pool water becomes more concentrated as the pool water evaporates, creating a gradient of low ion concentration at the pool periphery to high ion concentration at the pool center. A temporal succession of plant species will occur at the receding pool margins, depending upon the physical and chemical microenvironmental characteristics of the pool. Vernal pools in a wet year will have a high proportion of native species that are endemic to this habitat. During these years, the exotic, ruderal species, characteristic of the non-native grasslands that occur on the surrounding mima mounds will not invade these pools, unable to tolerate the physiological conditions of the ephemeral pool. In years of scarce rainfall that is insufficient to saturate the soil and create a surface pool, the native endemic flora

will not germinate, and pools are often invaded by exotic species. Vernal pools are typically identified and separated from other wetlands by the presence of "vernal pool indicator species."

Within the project site, vernal pool indicator species were detected at many of the depressions. Typical species found in the project site within areas mapped as vernal pools include San Diego button-celery, dwarf woolly-heads (*Psilocarphus brevissimus* var. *brevissimus*), American pillwort (*Pilularia americana*), flowering-quillwort (*Triglochin scilloides*), annual hairgrass (*Deschampsia danthonioides*), pale spike-rush (*Eleocharis macrostachya*), toad rush (*Juncus bufonius*), Mexican rush (*Juncus mexicanus*), hyssop loosestrife (*Lythrum hyssopifolia*), and curly dock (*Rumex crispus*)

In addition to vernal pools, several other depressional features were identified on-site that did not support vernal pool indicator plants and were mapped within grassland vegetation and disturbed habitat; such features were considered "road ruts" or "other depressions." Road ruts represent features within or alongside dirt paths that display evidence of vehicular tire tracks, and features labeled as other depressions are those not associated/created by vehicle tracks, are not within roadways, and represent naturally occurring depressional low spots in the site topography. In total, there were 20 vernal pools, 38 road ruts, and 41 other depressions mapped on-site during biological surveys conducted for the project.

3.3.2 Diegan Coastal Sage Scrub (Including Disturbed and Baccharis Dominated; 32500)

Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina)*, and black sage (*Salvia mellifera*). Disturbed Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub but has a higher proportion (above 25 percent) of non-native species. Within the project site, Disturbed Diegan coastal sage scrub contains California buckwheat and California sagebrush, a variety of native herbs, non-native grasses, and herbaceous weeds. Baccharis-dominated Diegan coastal sage scrub is dominated by coyote brush (*Baccharis pilularis*), with lesser amounts of other typical coastal sage scrub species. This community is also located within the off-site improvement area along La Mirada Drive north of the project.

3.3.3 Grassland (40000)

Grasslands primarily consist of annual grasses and other annual herbaceous species, generally mid-height up to three feet tall. Grasslands in southern California occur in a variety of forms, such as but are not limited to mixed grassland, valley needlegrass, saltgrass, non-native, and broadleaf or artichoke thistle dominated. Percent plant cover within grasslands is typically high (at least 75 percent), and the composition of native versus non-native species varies year by year (less than 20 percent native to greater than 90 percent native), depending on site disturbances, annual rainfall, and growing season conditions. Based on surveys in 2019, 2021, and 2022 of the project site (including immediately adjacent off-site improvement areas), three subtypes or forms of grassland were identified and recorded: mixed disturbed grassland, native grassland, and non-native grassland. Areas found on-site to be an intermixed mosaic of both native and nonnative herbaceous species were mapped as mixed disturbed grassland. The species composition and plant density of mixed grassland mapped varies throughout/across the site, seems to change throughout the growing season (heavily dominated by non-native species during summer through winter), varies from year to year, and ultimately does not clearly reflect a consistent

Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Vegetation Communities

Figure 7

dominance of either native or non-native species. Below are descriptions of the other two grassland types observed on-site; native grassland and non-native grassland.

Native Grassland (42100)

Native grassland is typically a community dominated by perennial bunchgrasses such as purple needlegrass (*Stipa pulchra*) or other native grass species. Native and non-native annuals tend to occur between the perennials, often exceeding the bunchgrass in cover. Native grasslands generally occur on fine-textured soils that exclude the growth of annual exotic grass species. The percentage of native species at any one time can be quite low (Oberbauer 2008). Areas on-site found to be dominated by dense patches of purple needlegrass were mapped as native grassland. Additionally, native grasslands on-site reflect areas found during the focused rare plant surveys to be dominated by Orcutt's brodiaea (*Brodiaea orcuttii*), thread-leaved brodiaea, or chaparral brodiaea (*Brodiaea jolonensis*) were mapped as native grassland. Further, areas of the site supporting at least 20 percent native plant cover were also mapped as native grassland. Such areas are primarily comprised of common golden stars (*Bloomeria crocea*) and California blue-eyed grass (*Sisyrinchium bellum*); however, these areas also supported a high percentage of non-native annual species, including wild oats (*Avena* sp.), foxtail chess (*Bromus madritensis*), soft chess (*Bromus hordeaceus*), and Bermuda grass (*Cynodon dactylon*).

Non-Native Grassland (42200)

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs "wildflowers" (Oberbauer 2008). This grassland typically occurs on gradual slopes, with deep, fine-textured, usually clay soils. Characteristic species include wild oats, red brome (*Bromus rubens*), ripgut (*B. diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* sp.). In accordance with the MHCP definition, this vegetation community was mapped in areas supporting at least 30 percent non-native plant cover. On-site such primarily included wild oats, foxtail chess, soft chess, Bermuda grass, rattail sixweeks grass (*Festuca myuros*), and purple false brome (*Brachypodium distachyon*).

3.3.4 Disturbed Habitat (11300)

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. An unpaved road/trail bisects the site. Additionally, the northeast corner of the project site is characterized by bare ground and sparse annual non-native weeds. Disturbed habitat is also mapped within the off-site improvement areas northeast and southwest of the site.

3.3.5 Developed Land (12000)

Urban/developed land includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. These areas no longer support native or naturalized vegetation. Urban/developed land in the project site consists of Linda Vista Drive in the southeast corner of the site and utilities in the northeast corner of the site. Additional urban/developed land is immediately adjacent to the project site associated with the off-site improvements within La Mirada Drive, South Las Posas Road, Linda Vista Drive, and South Pacific Street.

3.4 PLANTS

A total of 73 plant species were observed within the project site during the biological surveys, of which 31 (42 percent) are non-native species (Appendix A, *Plant Species Observed*).

3.5 ANIMALS

A total of 17 animal species were observed/detected within the project site during the biological surveys, including four invertebrates, one reptile, ten bird species, and two mammal species (Appendix B, *Animal Species Observed or Detected*).

3.6 SENSITIVE RESOURCES

3.6.1 Sensitive Vegetation Communities/Habitats

Sensitive vegetation communities/habitat types are defined as land areas that support unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the State CEQA Guidelines. Additionally, sensitive vegetation communities/habitat types are those identified as habitats requiring mitigation (i.e., Habitat Groups A through E) by the MHCP.

The rarity of natural communities is also evaluated by CDFW using the NatureServe's Heritage Methodology (Faber-Langendoen et al. 2012), in which communities are given a G (global) and S (State) rank based on their degree of imperilment (as measured by rarity, trends, and threats). Communities are assigned an overall rank of 1 through 5, with 1 being considered very rare and threatened and 5 being considered demonstrably secure. Communities with a Rarity Ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable) are considered sensitive by the CDFW.

Three sensitive vegetation communities/habitat types were mapped on the project site: vernal pool, Diegan coastal sage scrub (including disturbed and baccharis-dominated), and grassland (including mixed, native, and non-native grassland). The remaining areas on the project site include disturbed habitat and urban/developed, which are not considered sensitive.

3.6.2 Special Status Plant Species

Special status plant species have been afforded special status and/or recognition by the USFWS and/or CDFW. They may also be included in the CNPS' Inventory of Rare and Endangered Plants. Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. Sensitive species are those considered unusual or limited in that they are: (1) only found in the region; (2) a local representative of a species or association of species not otherwise found in the region; or (3) severely depleted within their ranges or within the region.

Special Status Plant Species Observed

Six special status plant species were observed on-site during biological surveys conducted in 2020, 2021, and 2022. These six species are discussed below, and their locations are presented on Figure 8, *Special Status Plant Species*.

Pacific Residential

- Project Boundary
- Off-site Improvements

Special Status Plants

- Chaparral Rein-orchid (*Piperia cooperi*)
- San Diego Button-celery (*Eryngium aristulatum* var.*parishii*)
- Small-flowered Morning-glory (*Convolvulus simulans*)
- Orcutt's Brodiaea (*Brodiaea orcuttii*)
- Thread-leaved Brodiaea (*Brodiaea filifolia*)
- Graceful Tarplant (*Holocarpha virgata ssp. elongata*)
- Orcutt's Brodiaea Area (*Brodiaea orcuttii*)
- Thread-leaved Brodiaea Area (*Brodiaea filifolia*)
- Orcutt's Brodiaea (*Brodiaea orcuttii*) and Thread-leaved Brodiaea (*Brodiaea filifolia*)
- Graceful Tarplant (*Holocarpha virgata ssp. elongata*)

S Pacific St

S Los Posos Rd

Linda Vista Dr

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Source: Aerial (NearMap, 2022)

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Special Status Plant Species

Figure 8

Thread-leaved brodiaea (*Brodiaea filifolia*)
Status: Federally listed threatened. State listed endangered. CNPS Rare Plant Rank 1B.1. Proposed as a Narrow Endemic under the MHCP. A critical population of this species is identified on the project site by the MHCP.
Distribution: Interior valley regions of San Diego, Riverside, Orange, and Los Angeles counties
Habitat(s): This perennial bulbiferous herb typically blooms sometime between March and June and is often associated with vernal pools. It prefers clay soils and is known from habitats including valley grassland, foothill woodland, coastal sage scrub, and chaparral.
Presence on site: Approximately 177,723 individuals (occupying approximately 8.53 acres plus isolated/distant clusters of individuals) were cumulatively mapped throughout the project site during plant surveys conducted in 2020, 2021, and 2022.

Orcutt's brodiaea (*Brodiaea orcuttii*)
Status: CNPS Rare Plant Rank 1B.1. A critical population of this species is identified on the project site by the MHCP.
Distribution: Riverside and San Bernardino counties south to Baja California, Mexico
Habitat(s): This perennial bulbiferous herb typically blooms sometime between May and July and occurs within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. This species prefers mesic or clay soils.
Presence on site: Approximately 127,517 individuals (occupying approximately 6.10 acres plus isolated/distant clusters of individuals) were cumulatively mapped throughout the project site during plant surveys conducted in 2020, 2021, and 2022.

Small-flowered morning-glory (*Convolvulus simulans*)
Status: CNPS Rare Plant Rank 4.2.
Distribution: Scattered locations from the foothills to the coast in southern California and Baja California, Mexico. Species rare in southern California.
Habitat(s): This annual herb typically blooms sometime between March and July and can be found on clay and serpentinite seeps in openings within chaparral, coastal scrub, and native grassland.
Presence on site: Three individuals of this species were detected during plant surveys conducted in 2020 through 2022 and occur in the southwestern corner of the project site.

San Diego button-celery (*Eryngium aristulatum* var. *parishii*)
Status: Federally listed endangered. State listed endangered. CNPS Rare Plant Rank 1B.1. Proposed as a Narrow Endemic under the MHCP. A critical population of this species is identified on the project site by the MHCP.
Distribution: San Diego and Riverside counties; Baja California, Mexico
Habitat(s): This perennial herb typically blooms sometime between April and August and occurs in vernal pools or mima mound areas with vernally moist conditions, and in mesic areas on coastal scrub and native grassland.
Presence on site: Approximately 160 individuals were cumulatively mapped during plant surveys in 2020, 2021, and 2022. This species was found within four vernal pools located in the northeast, east, and west portions of the project site.

Graceful tarplant (*Holocarpha virgata* ssp*. elongata*)
Status: CNPS Rare Plant Rank 4.2.
Distribution: San Diego, Orange, and Riverside counties
Habitat(s): This annual herb typically blooms sometime between May and November and occurs in grasslands, coastal scrub, chaparral, and cismontane woodland.
Presence on site: Approximately 28,780 individuals were cumulatively mapped throughout the project site during plant surveys conducted in 2020 through 2022.

Chaparral rein orchid (*Piperia cooperi*)
Status: CNPS Rare Plant Rank 4.2.
Distribution: San Diego and Los Angeles counties, Santa Cruz Island, Santa Catalina Island; Baja California, Mexico
Habitat(s): This perennial herb typically grows on dry sites within grasslands, chaparral, and cismontane woodland.
Presence on site: One individual of this species was found in the northeastern portion of the site during plant surveys conducted in 2020 through 2022.

Special Status Plant Species with Potential to Occur

A search of CNPS and CNDDB records (two-mile radius from the project site), along with CalFlora data, was used to develop a matrix of sensitive plant species that may have the potential to occur on the project site due to the presence of suitable habitat (e.g., vegetation communities, soils, elevation, and geographic range, life form/blooming period, etc.). The matrix is presented in Appendix C, *Special Status Plant Species Observed or with Potential to Occur*, and includes 44 special status plant species, their favorable habitat conditions, and their potential to occur on the project site.

In addition to the six rare plants detected on-site during biological surveys, three additional special status plant species have been recorded on the project site by others: San Diego thornmint (*Acanthomintha ilicifolia*), spreading navarretia, and small flowered microseris (*Microseris douglasii* ssp. *platycarpha*). San Diego thornmint and spreading navarretia are reported by the MHCP as critical populations occurring on the project site; however, they have not been detected other than historical observations. These three species were not observed within the project site during biological surveys in 2018, 2020, 2021, or 2022. Because surveys for rare plants conducted for the project were performed during the blooming periods for these plant species, as well as in a year (2020) yielding above average rainfall (laalmanac 2022), these three plant species would have been observed if present on-site. Although annual rainfall in 2021 and 2022 was slightly below average according to the Los Angeles Almanac database, these three plant species would have been detected on-site, especially in 2020 if present. Further, even though rainfall in 2021 and 2022 was slightly below average, there was an increase in numbers of rare plants detected compared to the above average rainfall year in 2020. Thus, rare plant surveys conducted between 2020 and 2022 are considered an accurate estimate of rare plant distribution and population size on-site. Because there are only records of these three other sensitive plants occurring on-site, and they have not been reported as occurring since 2009 (as recent as 1991 for San Diego thornmint), the potential for these plants to occur on the project site was determined to be low (Appendix C). The remaining 35 special status plant species evaluated are not expected to occur or are presumed to be absent from the project site.

3.6.3 Special Status Animal Species

Special status animal species include those that have been afforded special status and/or recognition by the USFWS and/or CDFW. In general, the principal reason an individual taxon (species or subspecies) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

Special Status Animal Species Observed or Otherwise Detected

One special status animal species was detected on-site during the biological surveys in 2020. This species is discussed below, and occupied locations are presented on Figure 9, *Special Status Animal Species*. Watershed mapping for occupied locations is also presented on Figure 9. None of the occupied locations have a watershed that extends outside of the project site. No other special status animals have been detected during surveys for the project.

San Diego fairy shrimp (*Branchinecta sandiegonensis*)
Status: Federally listed endangered. Proposed as a Narrow Endemic under the MHCP. A critical population of this species is identified on the project site in the MHCP.
Distribution: Southern California from coastal Orange County to San Diego County
Habitat(s): This fairy shrimp is restricted to vernal pools and other ephemeral basins. It is found in seasonally astatic pools that occur in tectonic swales or earth slump basins and other areas of shallow, standing water, often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.
Presence on site: This species was observed in multiple locations (i.e., vernal pools and road ruts) throughout the project site during focused USFWS protocol surveys in 2020.

Special Status Animal Species with Potential to Occur

A search of CNDDB and USFWS records (two-mile radius from the project site) was used to develop a matrix of sensitive animal species that may have the potential to occur on-site due to the presence of suitable habitat (e.g., vegetation communities, soils, elevation, geographic range, etc.). The matrix is presented in Appendix D, *Special Status Animal Species Observed or with Potential to Occur*, and includes 37 special status animal species, their preferred habitat conditions, and potential to occur on-site.

In addition to the one sensitive animal detected on-site during the 2020 focused surveys, one other special status animal species has been observed and recorded on the project site by others: burrowing owl, which is a species of special concern. Additionally, four special status animal species were not detected during biological surveys for the project and are considered to have low potential to occur on the project site: orange-throated whiptail (*Aspidoscelis hyperythra*), Coronado skink (*Plestiodon skiltonianus interparietalis*), coastal California gnatcatcher, and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). Burrowing owl and Northwestern San Diego pocket mouse are species of special concern, orange-throated whiptail and Coronado skink are watch-list Species, and coastal California gnatcatcher is federally threatened and a state species of species concern. The remaining 31 special status animal species evaluated are not expected to occur or have no potential to occur on the project site due to the lack of suitable habitat.

Nesting Birds

Habitats within the project site could provide suitable nesting habitat for bird species, including raptors, known to occur in the region.

3.7 JURISDICTIONAL AQUATIC RESOURCES

Results of the delineation concluded potentially jurisdictional resources occur in the project site, consisting of waters of the U.S./state (including wetlands), isolated waters of the state, and streambed with riparian vegetation. On the project site, these resources are represented by drainages located in the southeast corner, and vernal pools and other seasonally ponded depressional features scattered throughout the project site. There are no potentially jurisdictional resources within the off-site improvement area of the project. A summary of the acreages is provided below in Table 2, *Potentially Jurisdictional Resources*, and spatially presented on Figure 10, *Potentially Jurisdictional Wetlands and Waters*.

Table 2
POTENTIALLY JURISDICTIONAL RESOURCES (acres)[1]

Potential Jurisdictional Resources	Resource Agency Jurisdiction			TOTAL
	USACE/RWQCB/CDFW	USACE/RWQCB	RWQCB	
Wetland				
Drainage 1 (Swale)	0.05	-		0.05
Vernal Pools	-	0.44		0.44
Subtotal	***0.05***	**0.44**		***0.49***
Non-Wetland				
Drainage 2 (Streambed)	<0.01	-		<0.01
Other Seasonally Ponded Features	-		0.02	0.02
Subtotal	***<0.01***		***0.02***	***0.02***
TOTAL	**0.05**	**0.44**	**0.02**	**0.51**

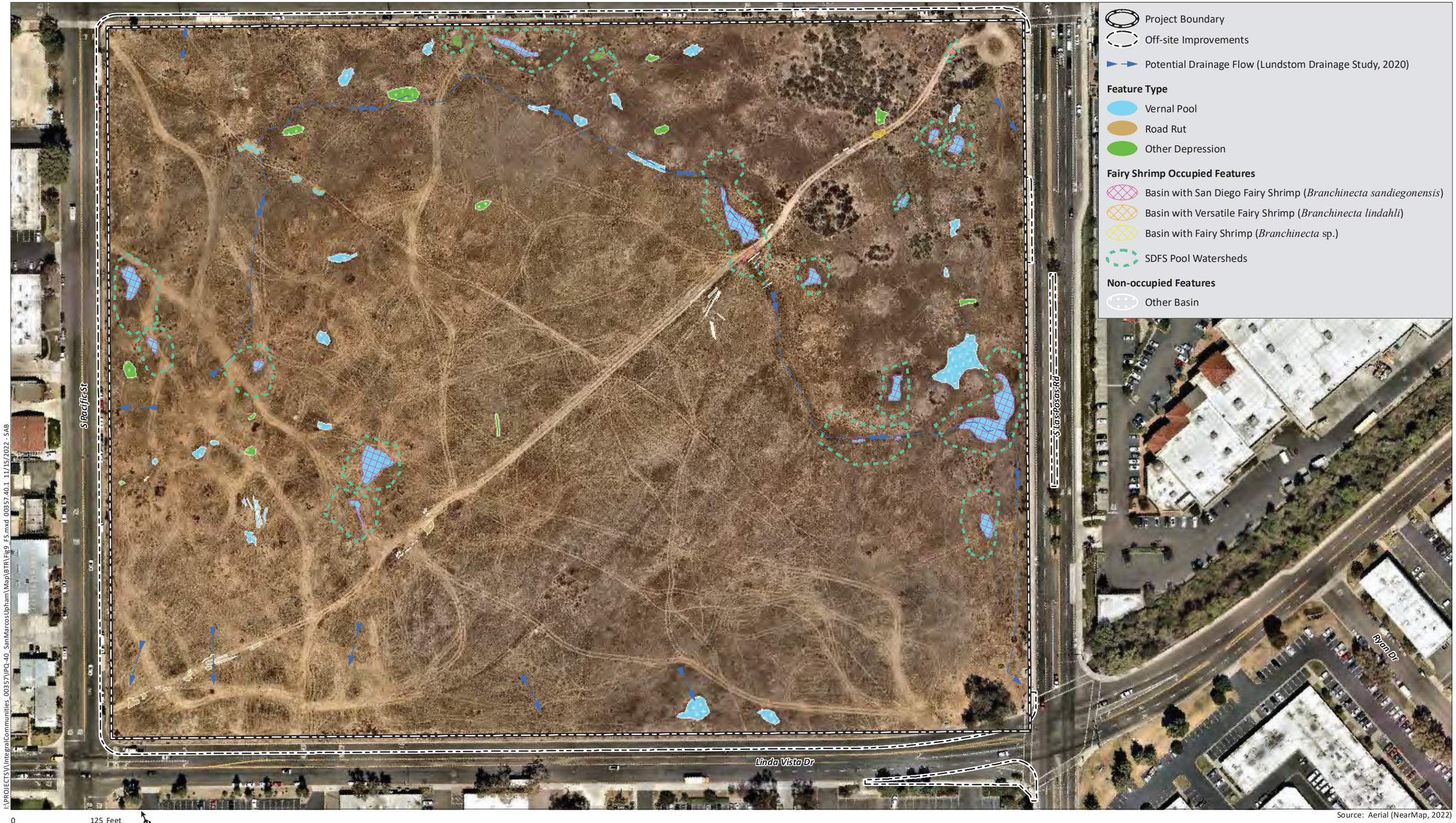
[1] Acreage rounded to the nearest 0.01.
USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

3.7.1 Wetland Waters of the U.S./State

Potential wetland waters of the U.S. identified within the project site could be subject to regulation by USACE and include the vernal pools and drainage 1. These features were found to support a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Wetland waters of the U.S. features also represent waters of the state subject to RWQCB jurisdiction pursuant to Section 401 of the CWA.

3.7.2 Non-Wetland Waters of the U.S./State

The second drainage (drainage 2) channel in the southeast corner of the project site was identified as potential non-wetland waters of the U.S. that could be subject to regulation by USACE. This feature did not support a dominance of hydrophytic vegetation and did not contain hydric soils; however, evident characteristics of flow (i.e., bed and bank, upstream and downstream culverts) were observed on-site.



Source: Aerial (NearMap, 2022)

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Special Status Animal Species

Figure 9

Pacific Residential

- Project Boundary
- Off-site Improvements
- Ordinary High Water Mark
- Sample Point
- Culvert Inlet Standpipe

Potential Jurisdictional Resources

- Wetland Waters - USACE/RWQCB
- Wetland Waters - USACE/RWQCB/CDFW
- Non-wetland Waters – USACE/RWQCB/CDFW
- Waters of the State - RWQCB

S Pacific St

S Las Posas Rd

Linda Vista Dr

1 2 3 4 5

0 135 Feet

Source: Aerial (NearMap, 2022)

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Potentially Jurisdictional Wetlands and Waters

Figure 10

The waters of the U.S. also represent waters of the state subject to RWQCB jurisdiction pursuant to Section 401 of the CWA.

3.7.3 Waters of the State

The "other ponded features" (i.e., road ruts and other seasonally ponded depressions) detected and surveyed for fairy shrimp and rare plants were found not to support hydrophytic vegetation, including vernal pool indicator plant species, and are considered potentially jurisdictional as isolated surface waters of the state subject to RWQCB jurisdiction, exclusively, pursuant to Porter-Cologne. Potential habitat considered waters of the U.S. that are determined by USACE, through a formal application, to not be under their jurisdiction would also be considered isolated waters of the state subject to RWQCB regulation under Porter-Cologne.

3.7.4 Streambed and Riparian Habitat

Potential riparian and streambed habitat under the jurisdiction of CDFW within the project site consists of the two drainages in the southeast corner of the project site. These features could be subject to the jurisdiction of CDFW pursuant to Sections 1600-1603 of the CFG Code.

3.8 WILDLIFE CORRIDOR/CORE WILDLIFE AREAS

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A corridor is a specific route that is used for the movement and migration of species and may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance.

Important corridors and linkages have been identified on a local and regional scale throughout the MHCP (AMEC Earth & Environmental et al. 2003) and adopted by the City of San Marcos General Plan (City of San Marcos 2012). The planning objectives of most corridors and linkages in western San Diego County include establishing a connection between the northern and southern regional populations of the coastal California gnatcatcher, in addition to facilitating movement and connectivity of habitat for large mammals and riparian bird species.

The project site is not identified as a wildlife corridor in the City of San Marcos General Plan. The MHCP incorporates the project site as a Major Amendment Area and is labeled as natural lands outside of a BCLA. The project site is not identified as a preserve, nor are there preserve lands located within 2,000 feet of the project site. The project site is not contiguous with any undeveloped land. Given the barrier posed by surrounding development, the site is not expected to serve as a regional wildlife corridor or substantial habitat linkage that would be used by large mammals, riparian birds, or migratory birds. The drainage features on the project site immediately flow subsurface downstream of the project site for approximately 625 feet before re-emerging/daylighting south of Linda Vista Drive and Grainger

Industrial Supply. Thus, the drainage features are unlikely to facilitate wildlife movement outside of the project site.

In summary, given that the project site location is immediately adjacent to and surrounded by existing roadways and development and the urban setting, the project site is not considered to serve as a wildlife corridor or habitat linkage for the region.

4.0 REGULATORY FRAMEWORK

Biological resources on the project site are subject to regulatory review by federal, State, and local agencies. Under CEQA, impacts associated with a proposed project are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the City of San Marcos), pursuant to CEQA Guidelines. Biological resources-related laws and regulations that apply to the project include the Federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), CWA, CEQA, California Endangered Species Act (CESA), and CFG Code.

4.1 FEDERAL

4.1.1 Federal Endangered Species Act

Administered by the USFWS, the federal ESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered take under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

Sections 7 and 4(d) of the Federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7, administered by the USFWS, describes a process of Federal interagency consultation for use when Federal actions may adversely affect listed species. A Section 7 Consultation (formal or informal) is required when there is a nexus between a listed species' use of a site and if a project is requesting a federal action, including funding. A biological assessment is required for any major construction activity if it may affect listed species. Take can be authorized via a letter of Biological Opinion, issued by the USFWS, for non-marine related listed species issues. A Section 7 Consultation could be required for potential impacts to a federally listed species.

If a project could directly or indirectly impact federally listed species and/or their critical habitat, and there is no federal action/nexus (e.g., permit, funding, ownership, etc.), the Federal Endangered Species Act requires the project proponent to consult with the USFWS under Section 10. A consultation under Section 10 of the ESA requires the submittal of an Incidental Take Permit (ITP) application and a Habitat Conservation Plan (HCP) to USFWS for evaluation of proposed project impacts. If the USFWS determines the project would have a "low effect" on listed, proposed, or candidate species and their habitats, and the project would have minor effects on other environmental resources, the USFWS would complete the consultation process and issue an ITP. If a project is determined by USFWS to have a "moderate or high effect" on listed, proposed, or candidate species and their habitats, the USFWS would require the preparation of a National Environmental Policy Act (NEPA) analysis prior to issuance of an ITP. The NEPA

analysis would include additional evaluation of the project impacts in the form of an Environmental Assessment or an Environmental Impact Statement. A Section 10 Consultation could be required if impacts to a federally listed species would occur.

Identified by the USFWS, critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat, so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat.

4.1.2 Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on the disturbance of active bird nests, including raptors, during the nesting season (generally January 15 through September 15). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

4.1.3 Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Most development projects are permitted using Individual Permit or Nationwide Permit instruments.

4.2 STATE

4.2.1 California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (i.e., impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

4.2.2 California Endangered Species Act

The CESA established that it is state policy to conserve, protect, restore, and enhance state endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may “take” plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code Section 2080.1[a]). For state-only listed species, Section 2081 of the CFG Code authorizes the CDFW to issue an Incidental Take Permit for state-listed

threatened and endangered species if specific criteria are met. The MHCP is a regional Natural Communities Conservation Plan that was granted take coverage under Section 2081 of the CESA.

4.2.3 California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of the CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

If the project could result in adverse impacts to a state-listed species that is not also federally listed, Section 2081(b) of the CFG Code provides a mechanism for CDFW to permit, on a project-specific basis, incidental take of species listed under CESA. Preparation and submittal of an ITP application with CDFW by the project proponent may be required. The application must include project details, potential project impacts, an analysis of "jeopardy" for the continued existence of the impacted species, and species-specific mitigation and avoidance measures that would fully mitigate for the project impacts.

Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds shall not be disturbed, subject to approval by CDFW and/or USFWS.

4.2.4 Porter-Cologne Water Quality Control Act

This statute regulates surface waters and wetlands within the State and is governed by the RWQCB. Features that support aquatic resources (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology), but are isolated (i.e., lack downstream connectivity to waters of the U.S.), could be subject to regulation pursuant to the State Porter-Cologne Water Quality Control Act (Porter-Cologne). Impacts to isolated wetlands and/or waters of the state require a Waste Discharge Requirement (WDR) Permit from the RWQCB.

4.2.5 Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by a species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

This voluntary program allows the state to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species and the areas that may be less important. These NCCP plans may become the basis for a state permit to take threatened and endangered species in exchange for conserving their habitat. The CDFW and USFWS worked to combine the NCCP program with the federal HCP process to provide take permits for state and federal listed species. Under the NCCP, local governments, such as the City, can take the lead in developing these NCCP plans and become the recipients of state and federal take permits. The City does not yet have an NCCP plan adopted; the Subarea Plan is still in draft form and has been since 2001 (City 2001). The MHCP was adopted in 2003 and includes the City of San Marcos; because the Subarea Plan has not been adopted, the MHCP is advisory only for guidance.

4.3 LOCAL

4.3.1 City of San Marcos - General Plan

The Conservation and Open Space (COS) Element of the City's General Plan (City 2012) provides the following policies applicable to the project site as they relate to the preservation of open space that may be beneficial to encourage the protection and preservation of environmentally sensitive species and their habitats.

Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.

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

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

- Policy COS-1.3: Continue to work with other federal, state, regional, and local agencies to implement the MHCP.

Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.

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

- Policy COS-2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat

protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.

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

Goal COS-3: Protect natural topography to preserve and enhance the natural beauty of San Marcos.

- Policy COS-3.3: Continue to work with new development and redevelopment project applicants in designing land use plans that respect the topography, landforms, view corridors, wildlife corridors, and open space that exists.

- Policy COS-3.4: Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.

Goal COS-8: Focus watershed protection, surface and groundwater quality management on sources and practices that the City has the ability to affect.

- Policy COS-8.4: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, Best Management Practices (BMPs), low impact development, hydromodification strategies consistent with the Current San Diego Regional Water Quality Control Board Municipal Stormwater National Pollutant Discharge Elimination System Permit, and all future municipal stormwater permits.

4.3.2 Multiple Habitat Conservation Program

The MHCP Subregional Plan for the northwestern portion of San Diego County encompasses the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista (AMEC 2003). Each of the seven jurisdictions within the MHCP planning area is required to implement their respective portion of the MHCP via city-wide subarea plans if they are to participate and benefit from take authorization provided through the MHCP.

A draft MHCP San Marcos Subarea Plan was prepared in 2001, and although it has not yet been approved by the USFWS and CDFW, the plan is being used as a policy document to guide development and open space design within the City. The intent of the Subarea Plan is to identify a City-wide preserve system that meets local and regional biological goals while minimizing fiscal and economic effects to the City and adverse effects on private property owners. The project site is identified as a “Major Amendment Area” and is currently not incorporated (not a part) in the MHCP or San Marcos Subarea Plan. Because the City of San Marcos has not approved or adopted its Draft Subarea Plan; the project is not subject to the requirements of the MHCP, although it is recognized herein as a guide for project site planning considerations.

5.0 PROJECT EFFECTS AND PROPOSED MITIGATION

This section provides an analysis of potential impacts (direct and indirect effects) of the project to biological resources and proposes mitigation for impacts considered significant. Direct effects (i.e., direct impacts) immediately alter the affected biological resources such that those resources are temporarily or permanently eliminated. Direct impacts for the project were quantified by overlaying the limits of project-related ground disturbance onto the biological resources map of the site. Indirect impacts are actions that are not direct removal of habitat, but rather affect the surrounding biological resources as a secondary "later" effect of the direct impacts, during project operation, causing degradation of a biological resource over time, such as increased noise, increased human presence, domesticated animals, the spread of non-native ornamental/weedy plant species, artificial lighting, which are discussed further below.

The project's limits of grading (limits of ground disturbance) are the same as the development limits and reflect the direct impacts. Project staging areas would be located within proposed development areas, and access would be from adjacent roads. Because areas within the limits of disturbance (direct impacts) would not be returned to the pre-project/construction contours or vegetation communities, there are no temporary impact areas, and the proposed project impacts are considered permanent. Potential indirect impacts as a result of the project development operation are discussed below.

Noise

The site is surrounded by existing development, including commercial and industrial activities, as well as main arterial City roadways. Due to this setting, the site and adjacent habitat are already currently exposed to urban and commercial/industrial-related noises. Ultimate buildout of the project is not expected to generate additional noise above ambient levels already adjacent to the site. Thus, no indirect impacts related to noise are anticipated.

Human Presence

Due to the commercial and industrial setting, the site is currently subject to ongoing disturbances from human presence and activities. As discussed previously, the site experiences illegal dumping of debris and trash materials continuously. Additionally, the site is regularly used for OHV recreation as well as unsanctioned community gatherings on Holidays (i.e., 4th of July celebration parties/fireworks spectating). Also, many areas of the site seem to be subject to plant harvesting. The project proposes to install security fencing, public signage, and a habitat manager, which would ensure that these existing ongoing disturbances would not continue. Additionally, the project entails the installation of a multi-use "urban trail" and new improved pathways around the perimeter of the site to provide access around the site than through the site. No promotion or public access into the biological preserve areas on-site would be provided. Ultimately, although the project is residential and would generate an increase of human presence on-site, such activities would be restricted to the developed areas only. Indirect impacts by the project operation due to increased human presence are not expected.

Domestic Animals

In similarity to the discussion of human activity above, the project site is currently subject to intrusion by domesticated animals (i.e., cat and dog pets) and is already experiencing some level of disturbance by domestic animals. For example, pets from the adjacent industrial complexes sometimes wander or are walked through the site, local residents tend to use the site as an informal off-leash dog park, and the people living in campers and cars parked along La Mirada Dr. and S. Pacific St. next to the site often allow their pets to roam the site. Such introductions and exposure to domesticated animals have the potential to harm native wildlife species and other biological resources (e.g., plants and vernal pools) on-site. Because the proposed project is residential in nature, some domestic animals could be introduced to the surrounding biological open space preserve habitat if no project design features were implemented to keep these animals out. However, the proposed project would install exclusionary fencing along the interface with development as well as surrounding the preserve areas to prohibit public use (including their pets). No entry into the biological open space preserve would be allowed, except for the designated biological preserve manager for conducting prescribed maintenance and management efforts. Overall, the project is not expected to result in an introduction of domestic predators because of the aforementioned fencing as well as the lack of residential yards associated with the project (no outdoor pets anticipated). Thus, impacts to native species or other biological resources within the open space preserve because of domestic animals from the project are not anticipated.

Exotic Plant Species

Non-native plants could colonize areas disturbed by construction or planted with development, which could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species. The project does not propose the use of non-native invasive plant species, including during construction for erosion control (i.e., hydroseed palette) or within landscaping schemes following construction. The project development does not include yards adjacent to the preserve where private landscaping or private plantings could occur. Non-native invasive plants, such as those listed in MHCP Volume 1 Table 6-1, would be prohibited from use at the project site. Project plantings for landscaping would not include non-native invasive species. Additionally, all container plants and plant materials would be inspected prior to arrival on-site/removal from the delivery truck and immediately prior to on-site installation by the landscape specialist (or biologist during habitat creation and restoration activities) for the presence of diseases, weeds, and other pests. Plants or planting materials detected with pests, weeds, or diseases will be rejected from use at the project site, per the project landscape specialist or restoration biologist, as applicable. Thus, the introduction or spread of exotic plants into adjacent biological preserve areas as a result of the project is not anticipated.

Lighting

Night lighting that extends from a developed area onto adjacent habitat (i.e., spillover) can discourage nocturnal wildlife in the habitat and provide nocturnal predators with an unnatural advantage over their prey, resulting in a potentially significant impact. The project is residential in nature, so domestic artificial lighting may be introduced to the surrounding habitat; however, the site is adjacent to existing commercial and industrial development as well as City streets; thus, it is already exposed to some level of lighting disturbance. Lighting associated with the project would be selectively placed for human

safety purposes and would be within the City streets and residential frontages. No lighting would be placed within or directed toward the adjacent proposed open space preserved by the project. Thus, potential spillover lighting impacts as a result of the project are not anticipated.

The sections below address the six issues identified by Appendix G of the State CEQA Guidelines and provide a determination of impact significance. Where applicable, mitigation, monitoring, and reporting requirements to eliminate or reduce project impacts to a less than significant level are also provided below.

5.1 CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE

The significance of impacts to the biological resources present, or with the potential to occur on the project site, was determined based upon the sensitivity of the resource and the extent of the anticipated impact. Any impact to highly sensitive resources, such as a federally listed species, would be considered significant. Conversely, other resources that are of low sensitivity (e.g., species with a large, locally stable population in the region but declining elsewhere) can sustain some impact with a less than significant effect.

According to Appendix G of the CEQA Guidelines, project impacts to biological resources would be considered significant if they would:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Issue 1)

(b) Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Issue 2)

(c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Issue 3)

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Issue 4)

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Issue 5)

(f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Issue 6)

5.2 ISSUE 1: SPECIAL-STATUS SPECIES

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

5.2.1 Impact Analysis

Less than Significant with Mitigation. Six special-status plants and one special-status animal species would be directly impacted by grading for the proposed project. These seven species are discussed further below in this section. Direct impacts could occur also during construction if activities inadvertently encroach into areas outside/beyond the authorized limits of work, generate fugitive dust create excessive noise, or cause erosion or sedimentation into adjacent areas. Direct impacts to sensitive species would be significant as described below but would be reduced to less than significant levels with the implementation work limits demarcation, pre-construction surveys, biological construction monitoring, and implementation of construction BMPs.

Indirect impacts to sensitive species (plants and animals) by the proposed project would not occur. As discussed previously in Section 5.0, potential impacts as a result of increased human presence, noise, domestic animals, the spread of non-native species, and artificial lighting are not anticipated.

Special-Status Plants

Four special-status plant species occurring on-site would be directly impacted by the project: San Diego button-celery (federally listed endangered, state listed endangered, CNPS California Rare Plant Rank [CRPR] 1B.1, proposed Narrow Endemic under the MHCP), thread-leaved brodiaea (federally listed threatened, state listed endangered, CNPS CRPR 1B.1, proposed Narrow Endemic under the MHCP), Orcutt's brodiaea (CNPS CRPR 1B.1), and graceful tarplant (CNPS CRPR 4.2)(Figure 11, *Special Status Plant Species/Impacts*). Direct impacts to chaparral rein orchid (CNPS CRPR 4.2) and small-flowered morning-glory (CNPS CRPR 4.2 species) are not expected.

Additionally, direct impacts to these plant species could also occur if project construction inadvertently extends beyond the allowed ground disturbance footprint (limits of work). However, such impacts to special status plants could be avoided through the implementation of standard BMPs during construction, in addition to measures proposed to mitigate potential direct impacts on other sensitive plant species, such as pre-construction surveys, the installation of temporary construction and/or silt fencing at the limits of work, biological construction monitoring where work limits occur adjacent to known sensitive resources, and long-term protection and management of avoided resources.

Graceful Tarplant

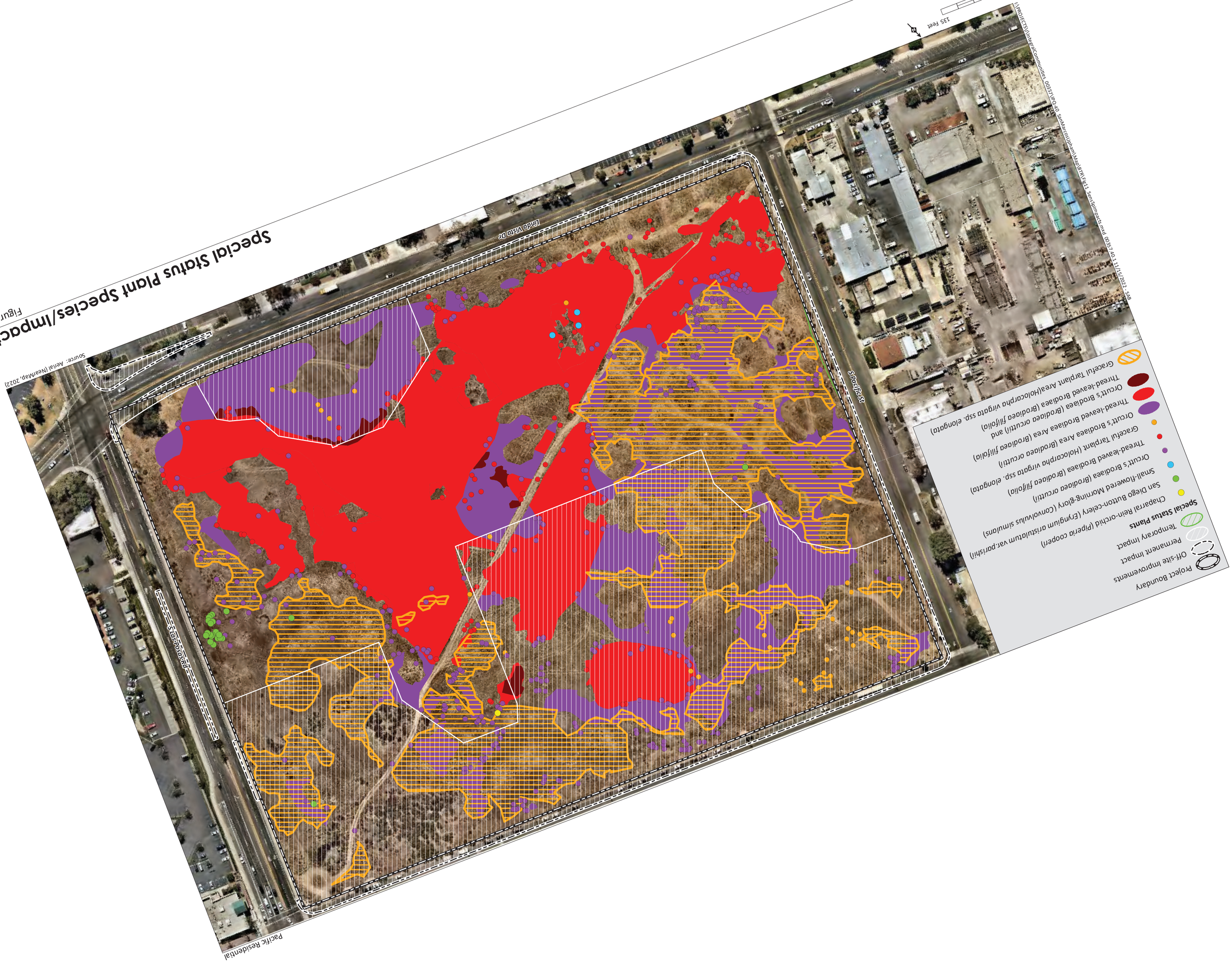
Graceful tarplant is a low-sensitivity species (CNPS CRPR 4.2), is not proposed for coverage by the MHCP, and is relatively widespread locally and regionally. Impacts to plant species with a CNPS CRPR 2 or lower are considered potentially significant. Because graceful tarplant has a CRPR of 4.2, and this species is also located within the preserved and restored open space areas of the site, and the restoration efforts discussed in the HMMP would include this species in the plant palette, impacts to this species are not expected to jeopardize its sensitivity status or long-term survival in the region. Therefore, project impacts to this species would be less than significant and would not require mitigation.

San Diego Button-Celery and Thread-leaved Brodiaea

San Diego button-celery and thread-leaved brodiaea are federally listed endangered and threatened, respectively, and are both CNPS CRPR 1B.1 plants. San Diego button-celery and thread-leaved brodiaea

Special Status Plant Species/Impacts

Figure 11



are also state listed endangered. These two species are also proposed as Narrow Endemic under the MHCP, which identifies the project site as supporting critical populations of these two species.

Approximately 33,714 individuals (19 percent) of thread-leaved brodiaea and 47 individuals of San Diego button-celery (29 percent) are located within the project footprint and would be directly impacted. Direct impacts to these two listed species are considered significant. Impacts to these two species would require consultation with USFWS through the ESA Section 7 or Section 10 processes, as well as authorization from CDFW in accordance with the CESA Section 2081 or 2080.1 of the CFG Code, as applicable.

Implementation of mitigation measures Bio-1 and Bio-3 would be required to ensure direct impacts to these species would be reduced to less than significant levels. Direct impacts/loss of occupied habitat resulting from the proposed project would be mitigated through preparation and the implementation of a Habitat Mitigation Monitoring Plan (HMMP) and/or a Preserve Management Plan (PMP) in accordance with Bio-3, Bio-7a, and Bio-7b (see discussion of Issue 2: Riparian Habitat and Sensitive Natural Communities, Section 5.3 below).

Direct impacts to these two species could also occur if appropriate avoidance and minimization measures are not implemented during construction. Such potential direct impacts could be avoided through the installation of temporary construction and/or silt fencing at the limits of work (Bio-5), biological construction monitoring where work limits occur adjacent to known sensitive resources (Bio-6), and implementation of construction BMPs.

Orcutt's Brodiaea

Direct impacts to Orcutt's brodiaea would occur as a result of construction activities within the project impact footprint. Although a non-listed species, Orcutt's brodiaea is a CNPS CRPR 1B.1 species, which carries a higher rank of sensitivity as these species are rare, are generally considered endemic to California, and their populations and range have been in decline. Additionally, the MHCP identifies the project site as supporting a critical population for this species. Direct impacts to this species, approximately 80,907 of the 127,517 individuals mapped on-site (approximately 63.4 percent), would be considered significant.

Implementation of minimization, conservation, and translocation measures prescribed by mitigation measures, Bio-1, and Bio-3 would be required to ensure impacts to this species would be reduced to less than significant levels. Direct impacts/loss of occupied habitat for this species would be mitigated by the implementation of an HMMP in accordance with Bio-3, Bio-7a, and Bio-7b (see discussion of Issue 2: Riparian Habitat and Sensitive Natural Communities, Section 5.3 below).

Direct impacts to this species could also occur if appropriate avoidance and minimization measures are not implemented during construction, including the installation of temporary construction and/or silt fencing at the limits of work (Bio-5), biological construction monitoring where work limits occur adjacent to known sensitive resources (Bio-6), and implementation construction BMPs. Perpetual protection and management of occupied habitat for this species would be provided by the implementation of a PMP as set forth in mitigation measure Bio-7b.

Special Status Animal Species

San Diego Fairy Shrimp

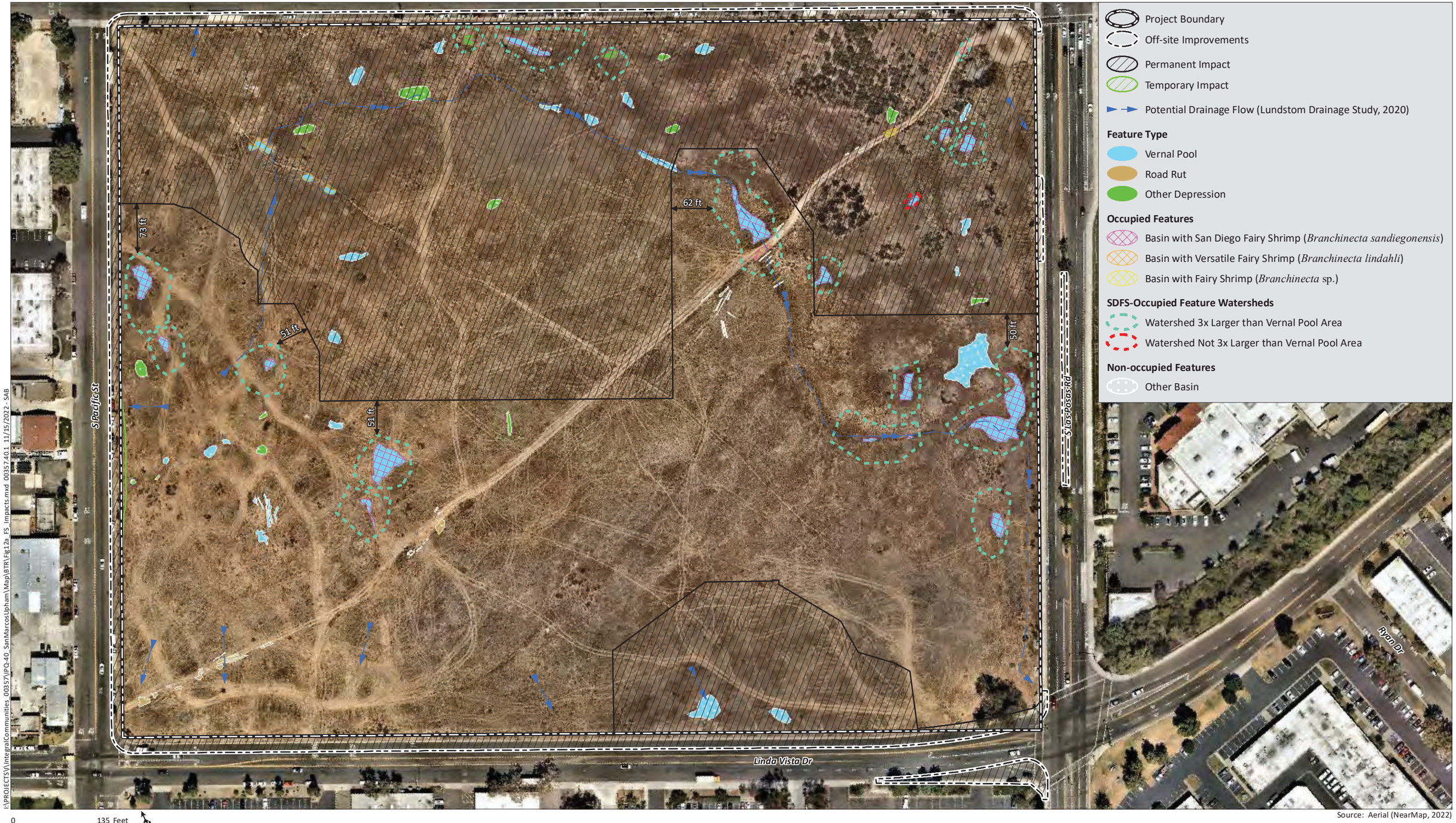
San Diego fairy shrimp is a federally listed endangered species. This species is also proposed as Narrow Endemic under the MHCP, which identifies the project site as supporting a critical population of this species. Of the 20 basins (including 18 vernal pools and two road ruts) found to support this species on-site, direct impacts would occur to eight basins (approximately 40 percent) located within the proposed project impact footprint (Figure 12a, *Special Status Animal Species/ Impacts*, and Figure 12b, *Vernal Features and Biological Value*). These eight basins occupied by San Diego fairy shrimp to be directly impacted by the project consist of seven vernal pools and one road rut, located in the northern, central, and northeastern portions of the site, respectively.

As part of the project design planning and analysis of potential impacts to San Diego fairy shrimp, an evaluation of the vernal pools and their watersheds was reviewed using on-site topography data, field mapping with GPS, and the drainage study completed for the project site (Lundstrom 2022). Potential drainage direction lines were overlaid onto the vernal pool mapping, along with the proposed project footprint, to evaluate project impacts (Figure 12). Although the project development could potentially intercept drainage flow in the northwestern portion of the site, there has been no surface evidence of drainage flow during field surveys conducted between 2019 and 2022, furthermore, upon review of historical aerial imagery, no photographs were found suggesting such surface flow or ponding connections between vernal pools exist on-site (Historical Aerials). Because of the lack of surface flow evidence and flat (<10 percent slopes) topography on-site, the surface drainage flow, if present, is suggested to be minimal. Based on field surveys conducted over multiple consecutive years (2019 through 2022) across the site as well as a review of historical aerial imagery, it is expected that the vernal pools, road ruts, other depressional features, on-site fill with water as a result of direct precipitation rather than flow connection across the site. Therefore, and furthermore, these features likely function independently of each other rather than connected together. Thus, impacts to pools in the northern portion of the site are not expected to adversely affect the remaining pools on-site to be avoided by the project and proposed for preservation by the project.

Ultimately, the proposed project considered the vernal pool watersheds. Although the project would impact eight basins occupied by San Diego fairy shrimp, the remaining 12 basins on-site occupied by San Diego fairy shrimp (eleven vernal pools and one road rut) to be avoided by the project development, including avoidance of their corresponding watersheds plus a buffer surrounding the watershed. Further, the project also considered on-site drainage direction and would be designed in a manner to mimic the potential drainage/discharge flow point and path on-site; thus, project impacts to site drainage would be minor and considered less than significant.

Implementation of avoidance, minimization, conservation, and translocation measures prescribed by mitigation measures Bio-2 and Bio-3 would ensure project impacts to this species would be reduced to less than significant levels. Further, direct impacts to this listed species would require authorization and consultation with USFWS through the ESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or Section 2080.1 of the CFG Code (Bio-3). Direct impacts/loss of occupied habitat for this species would be mitigated by the implementation of an HMMP in accordance with Bio-3, Bio-7a, and Bio-7b (see discussion of Issue 2: Riparian Habitat and Sensitive Natural Communities, Section 5.3 below).

Pacific Residential



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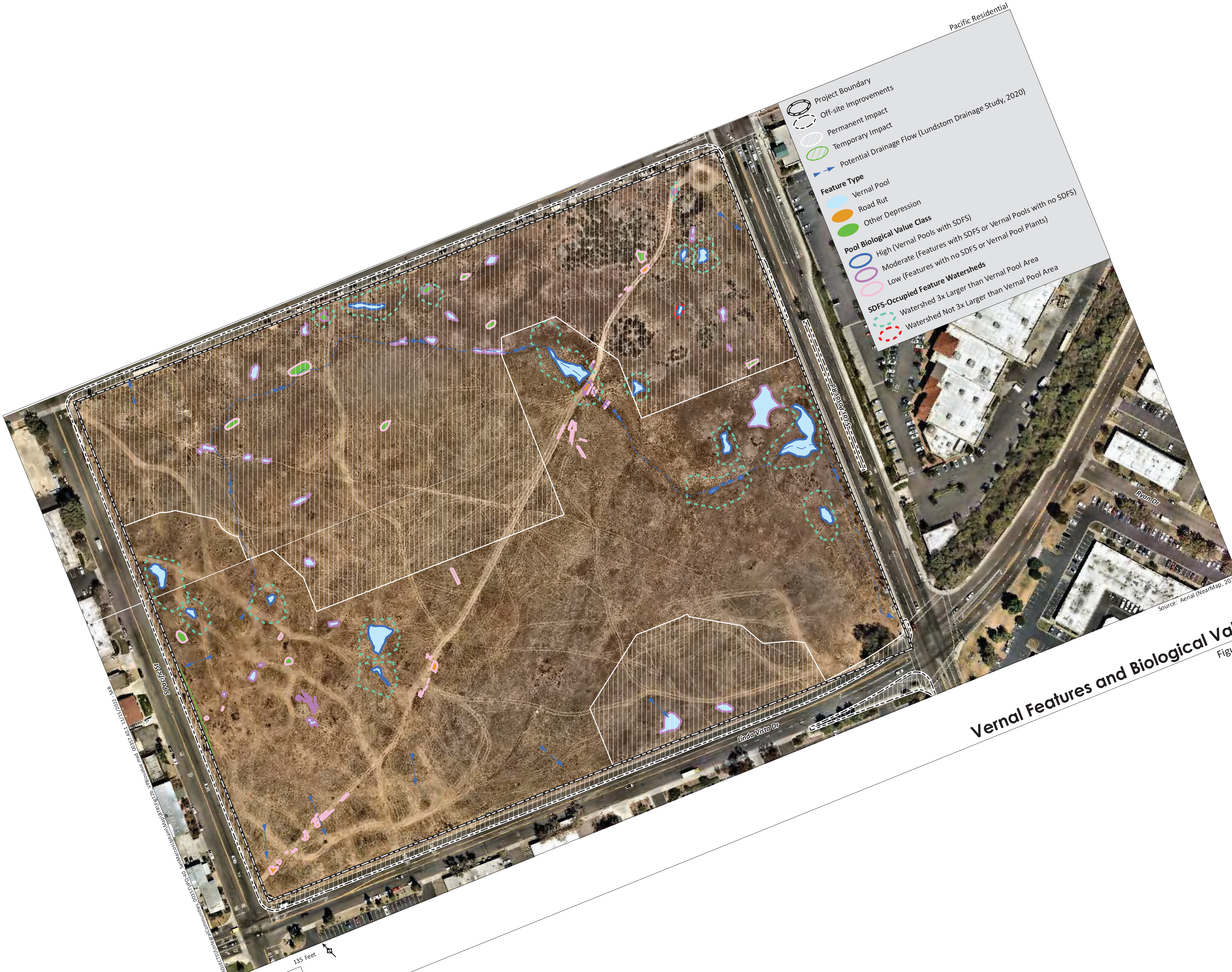
0 135 Feet

Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Special Status Animal Species/Impacts

Figure 12a


Project Boundary
Off-site Improvements
Permanent Impact
Temporary Impact
Potential Drainage Flow (Lundstom Drainage Study, 2020)
Feature Type
Vernal Pool
Road Rut
Other Depression
Pool Biological Value Class
High (Vernal Pools with SDFS)
Moderate (Features with SDFS or Vernal Pools with no SDFS)
Low (Features with no SDFS or Vernal Pool Plants)
SDFS-Occupied Feature Watersheds
Watershed 3x Larger than Vernal Pool Area
Watershed Not 3x Larger than Vernal Pool Area
S Los Posas Rd
Ryan Dr
Linda Vista Dr
S Pacific St
Source: Aerial (NearMap, 2022)
0
135 Feet

Vernal Features and Biological Value

Figure 12b

HELIX Environmental Planning

Direct impacts to this species could also occur if appropriate avoidance and minimization measures are not implemented, including measures proposed for potential direct impacts on other sensitive species, such as the installation of temporary construction and/or silt fencing at the limits of work (Bio-5), biological construction monitoring where work limits occur adjacent to known sensitive resources (Bio-6), and long-term protection and management of avoided resources through the implementation of a PMP (Bio-3 and Bio-7b and Bio-7c).

Nesting Birds

The project site contains trees, shrubs, and other vegetation that provide suitable nesting habitat for common birds, including raptors, protected under the MBTA and the CFG Code. Construction of the proposed project includes vegetation clearing, which could result in direct impacts to nesting birds if the removal or trimming of vegetation occurs during the bird nesting season (January 15 through September 15). Such impacts to nesting birds would be in violation of the MBTA and the CFG Code and would be significant, especially if the activities would impact the nesting of candidate, sensitive, or special status species. Additionally, construction activities could also result in direct impacts through disturbance to nesting from noise, dust, and physical presence, such that the disturbance results in nest abandonment or nest failure. These direct impacts would also be considered significant. Implementation of mitigation measure Bio-4 would require pre-construction surveys prior to impacts, and construction fencing, and biological monitoring measures Bio-5 and Bio-6 would reduce potentially significant impacts on nesting birds, including raptors, to less than significant levels.

USFWS Critical Habitat

Nearly the entire project site overlaps with USFWS designated critical habitat for three federally listed species, including San Diego fairy shrimp, thread-leaved brodiaea, and spreading navarretia. As mentioned earlier in this section, spreading navarretia was not detected during surveys for this species in 2020 or 2021 (CDFW 2021d). Although the project site is substantially disturbed and lacks connectivity to off-site habitat, the proposed impact footprint occurs within areas that support primary constituent habitat elements associated with these species. Therefore, the implementation of the proposed project would result in an adverse modification to critical habitat for these species, which is considered significant.

Direct impacts to USFWS critical habitat by the proposed project are considered significant. These impacts would require authorization and consultation with USFWS through the ESA Section 7 or Section 10 processes, as applicable. Implementation of minimization, conservation, and/or translocation measures would reduce impacts to less than significant. Specifically, Bio-1, Bio-2, Bio-3, Bio-5, and Bio-6 would be required, as well as the implementation of Bio-7a and Bio-7b, which would ensure direct impacts to these species would be reduced to less than significant.

5.2.2 Mitigation Measures

The following mitigation measures, Bio-1 through Bio-6, would reduce impacts to special status plants, animals, and critical habitats to a less than significant level.

Bio-1 **Rare Plant Transplant Plan.** Prior to issuance of land disturbance, clearing, grubbing, or grading permits for the project site, the project Applicant shall submit a rare plant transplant plan to the City and resource agencies (USFWS and CDFW) regarding transplanting and monitoring of special-status plants: San Diego button-celery, Orcutt's brodiaea, and thread-leaved brodiaea.

The transplant plan shall include, at minimum, methods for plant salvage, seed/bulb/corm collection, transplantation, relocation, performance standards, and maintenance and monitoring (five years) to provide for no loss of these plant species, and to achieve establishment success. Overall, San Diego button-celery, Orcutt's brodiaea, and thread-leaved brodiaea shall be translocated and/or replanted through propagation into existing suitable habitat in the on-site open space preserve near existing populations of these species and according to the conceptual mitigation plan for the project (Figure 15, *Conceptual Mitigation Plan*). The planting of these species shall also be incorporated, as applicable, into the revegetation palettes discussed in the Vernal Pools Mitigation Plan (see Bio-2). The transplant plan shall be approved by the City and resource agencies and will meet currently accepted standards for sensitive species translocation. Contingency measures, in case performance standards are not met after five years, shall be included in the plan to ensure success (i.e., no loss of these plant species) is achieved. Resource Agency verification that transplant plan success criteria has been met is required for the completion of this measure. In addition to the transplant plan, a cost estimate to implement the plan shall be provided to the City and resource agencies for approval and the project Applicant shall post/secure a bond in the amount of 120% of the approved cost estimate for financial assurance of the plan prior to any clearing, grubbing, grading or other land disturbance related to the project.

Bio-2 **Vernal Pools Mitigation Plan.** Prior to any land disturbance, clearing, grubbing, or grading permits for the project site, the project Applicant shall submit a Vernal Pools Mitigation Plan (VPMP) to the City and resource agencies, describing the creation, re-establishment, and/or restoration, as well as maintenance and monitoring (five years) of vernal pools in the mitigation plan. Vernal pool mitigation shall occur on-site within appropriate suitable habitat in the on-site open space preserve, according to the conceptual mitigation plan for the project (Figure 15). The VPMP shall include, at minimum, restoration methods, performance standards, and contingency measures if performance standards are not met. Vernal pool mitigation areas shall require agency sign-off after successful completion. If impacts to vernal pools occupied by listed San Diego fairy shrimp cannot be fully avoided, a consultation shall occur with the USFWS to obtain take authorization pursuant to FESA and as described in mitigation measure Bio-3. Measures required by the USFWS as a result of consultation shall be implemented, which may include preparation and implementation of a resource salvage plan and translocation of cysts by inoculation into existing suitable habitat within approved preserve areas or into created or restored habitat on-site (see Figure 15). Suitable habitat is located within existing depressions (found not occupied) near existing vernal pools to be preserved on-site, which is located within the Vernal Pool Major Amendment Area in the City's Draft Subarea Plan. Ultimately, the VPMP shall be approved by the City and resource agencies. In addition to the VPMP, a cost estimate to implement the plan shall be provided to the City and resource agencies for approval and the project Applicant shall post/secure a bond in the amount of 120% of the approved cost estimate for financial assurance of the plan prior to any clearing, grubbing, grading or other land disturbance related to the project.

Bio-3 **Listed Species Conservation Measures.** Prior to issuance of any land disturbance, clearing, grubbing, or grading permits for the project site, the project Applicant shall demonstrate to the City that consultation with the USFWS for adverse effects to San Diego Fairy shrimp, thread-leaved brodiaea, and San Diego button celery has occurred in accordance with Section 7 or Section 10 of the FESA, as applicable. Impacts to San Diego button celery and thread-leaved brodiaea shall also require either a Section 2080.1 Consistency Determination or a Section 2081(b) Incidental Take Permit, according to the federal action, or demonstrate to the City that

none was required. Impacts to habitat occupied by these listed species shall be compensated by the implementation of habitat-based mitigation via an HMMP and long-term conservation and management via a PMP (see mitigation measures Bio-7a and Bio-7b below).

Bio-4 **Avoidance of Nesting Birds and Raptors.** To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and the CFG Code, any project construction activities requiring the removal and/or trimming of vegetation suitable for nesting birds (including clearing, grubbing, trenching, grading, or any land disturbances) shall occur outside of the breeding season for general birds, including raptors (January 15 to September 15). The City may waive this condition, provided that the following additional avoidance measures are taken. If the construction activities cannot avoid the bird breeding season, a qualified biologist shall be retained to conduct a pre-construction nesting bird survey within seven days prior to the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the qualified biologist, then the activities shall proceed with the reassurance that no violation to the MBTA and CFG Code would occur. If an active bird nest is found by the qualified biologist, then vegetation removal and/or trimming activities at the nest location and within 300 feet for passerine birds and 500 feet for raptors shall not be allowed to occur until the qualified biologist has determined that the nest is no longer active. Buffers may be reduced only at the discretion of the qualified biologist, depending on the bird species and construction/ vegetation removal activities required in the vicinity of the active nest.

Bio-5 **Construction Work Limits Fencing.** Prior to any clearing, grubbing, or issuance of grading permits for the project site, it shall be demonstrated to the City that the approved grading boundaries and limits of work are presented on the Final Construction Drawings, including the limits of work fencing. To help ensure inadvertent/unauthorized impacts to environmentally sensitive areas outside of the approved limits of work footprint are avoided, temporary construction fencing (orange fencing or similar), including silt fencing as appropriate, shall be installed at the edges of the approved impact limits. This fencing shall be installed prior to construction and maintained for the duration of construction activity. Fencing shall be installed in a manner that does not impact sensitive species or habitats to be avoided. Prior to installation, a qualified biologist shall survey the fencing location to inspect that the fencing alignment is consistent with the Final Construction Drawings and to verify no special-status plant species occur within the fencing installation location. If special-status plants are detected, the fencing alignment shall be adjusted to avoid those plant individuals, or such plants shall be relocated into the project preserve areas to avoid their impact as a result of fence installation. Once the fencing is installed, the City and project biologist (see Bio-6) shall determine the need for additional inspections and monitoring activities throughout the duration of construction. If work occurs beyond the fenced or demarcated limits of impact, work in the affected areas shall cease until the problem has been remedied and mitigation identified satisfactory to the City and qualified biologist. All temporary construction fencing shall be removed upon completion of construction.

Bio-6 **Biological Construction Monitoring.** Prior to grading, the project Applicant shall demonstrate to the City that a qualified biologist has been retained to monitor construction activities, including monitoring of the temporary work/impact limits fencing installation (see Bio-5), which clearly delineates the edge of the approved work limits and the edges of environmentally sensitive areas that occur beyond the approved limits. The qualified biologist shall conduct a pre-construction environmental training session for construction personnel to inform them of the

sensitive biological resources in the local area and the avoidance measures in place to remain in compliance. The monitoring, at minimum, shall include inspection of construction work areas, including staging and storage areas, to confirm that activities are kept within the approved limits and that Best Management Practices are in place. The biologist shall regularly monitor construction activities throughout construction. If items of non-compliance are identified, the biologist shall notify the on-site construction superintendent immediately to discuss and implement corrective actions. Issues of non-compliance that result in additional impacts to sensitive biological resources shall be documented and provided to the City within 72 hours of identification. Mitigation for unauthorized impacts shall adhere to the applicable measures in this report.

5.2.3 Conclusion

The proposed development of the site has the potential to result in significant impacts to special status plant and animal species, including general nesting birds and raptors. However, implementation of mitigation measures Bio-1 through Bio-7b would ensure that potential impacts to special status species and their habitat are minimized and/or are reduced to below significant. Further, impacts to special status species habitat would be compensated by the implementation of habitat-based mitigation via a Habitat Mitigation and Monitoring Plan (see mitigation measures Bio-7a and Bio-7b, below).

5.3 ISSUE 2: RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

Would the project have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS?

5.3.1 Impact Analysis

Less than Significant with Mitigation. The proposed project would result in direct impacts to sensitive vegetation communities on-site, including vernal pools, Diegan coastal sage scrub (including baccharis dominated form), native grassland, non-native grassland, and mixed grassland. Sensitive communities on the project site that would be directly impacted are depicted on Figure 13, *Vegetation Communities/Impacts*, and are summarized below within Table 3, *Impacts to Sensitive Natural Communities*. In addition, potential direct impacts could also occur if construction work inadvertently extends beyond the authorized work limits where impacts to sensitive natural communities are not anticipated. Direct impacts to sensitive vegetation communities by the project would be considered significant and require mitigation. No impacts to riparian or other sensitive natural communities are expected to occur. Direct impacts to non-sensitive habitats (disturbed habitat and developed land) would also occur, but are not considered significant and, therefore, do not require mitigation.

As discussed previously in Section 5.0, potential indirect impacts as a result of increased human presence, noise, domestic animals, the spread of non-native species, and artificial lighting are not anticipated. Thus, indirect impacts to sensitive natural communities as a result of the proposed project would not occur.

Table 3
IMPACTS TO SENSITIVE NATURAL COMMUNITIES

Vegetation Community and Habitat Group[1]	PROJECT AREA (acres) [2]	OFF-SITE IMPROVEMENTS (acres)[2]
Wetland		
Vernal Pool (Group A)[3]	0.15	--
Wetland Subtotal	***0.15***	**--**
Upland		
Native Grassland – including disturbed (Group B)[4]	5.31	0.01
Diegan Coastal Sage Scrub- including disturbed and baccharis dominated (Group C)	1.07	0.02
Mixed Grassland – disturbed (Group E)[4]	5.17	0.35
Non-native Grassland (Group E)[4]	3.35	0.22
Upland Subtotal	***14.9***	***0.60***
TOTAL	**15.05**	**0.60**

[1] Groups defined by the MHCP.
[2] Acres rounded to the nearest 0.01 acre.
[3] Does not include road ruts or other depressions.
[4] Includes road ruts and other depressions. Includes 0.03-acre temporary impact along South Pacific Street.

Mitigation for direct impacts to sensitive vegetation communities identified in Table 3 would be compensated in accordance with the mitigation ratios presented in Tables 4-6 and 4-7 of the MHCP (AMEC 2003) and Section 5.2.1 of the City's Subarea Plan (City 2001). In addition, the implementation of measures to protect sensitive species (Bio-5 and Bio-6) would ensure that sensitive natural vegetation communities' areas beyond the authorized limits of work are protected during construction through the installation of temporary work/impact limits fencing (orange silt fencing or similar) and biological construction monitoring to verify the authorized impact limits are not exceeded. Mitigation measures Bio-7a and Bio-7b provide further specific requirements for how compensatory mitigation to sensitive natural communities would be implemented.

5.3.2 Mitigation Measures

Bio-7a Compensatory Mitigation for Impacts to Sensitive Natural Communities. The proposed project shall compensate for impacts to sensitive natural communities (i.e., Diegan coastal sage scrub, native grassland, non-native grassland, mixed grassland, and vernal pools) according to the ratios provided in Table 4, *Mitigation for Impacts to Sensitive Natural Communities*, below. Mitigation shall not occur at levels below the ratios described in Table 4 unless otherwise conditioned in permits and/or discretionary approvals issued by USFWS, USACE, RWQCB, and/or CDFW, as applicable.

Table 4
MITIGATION FOR IMPACTS TO SENSITIVE NATURAL COMMUNITIES

Vegetation Community and Habitat Group[1]	Impacts[2]	Mitigation Ratio[3]	Required Mitigation[2]
Wetland			
Vernal Pool (Group A)	0.15	3:1	0.45
Subtotal	***0.15***	**-**	***0.45***

Vegetation Community and Habitat Group[1]	Impacts[2]	Mitigation Ratio[3]	Required Mitigation[2]
Upland			
Native Grasslands – including disturbed (Group B)	5.32	2:1	10.64
Diegan Coastal Sage Scrub - including baccharis dominated and disturbed (Group C)	1.09	1:1	1.09
Mixed Grassland - disturbed (Group E)	5.52	0.5:1	2.76
Non-Native Grassland (Group E)	3.57	0.5:1	1.79
Subtotal	***14.84***	**-**	***16.28***
Total	**14.99**	**-**	**16.73**

[1] Groups defined by the MHCP.

[2] Acres rounded to the nearest 0.01 acre. Includes project development on-site and off-site improvements.

[3] Mitigation Ratios are consistent with those listed in Tables 4-6 and 4-7 of the MHCP (AMEC 2003) and Section 5.2.1 of the City Subarea Plan (City 2001) for lands located outside Focused Planning Areas.

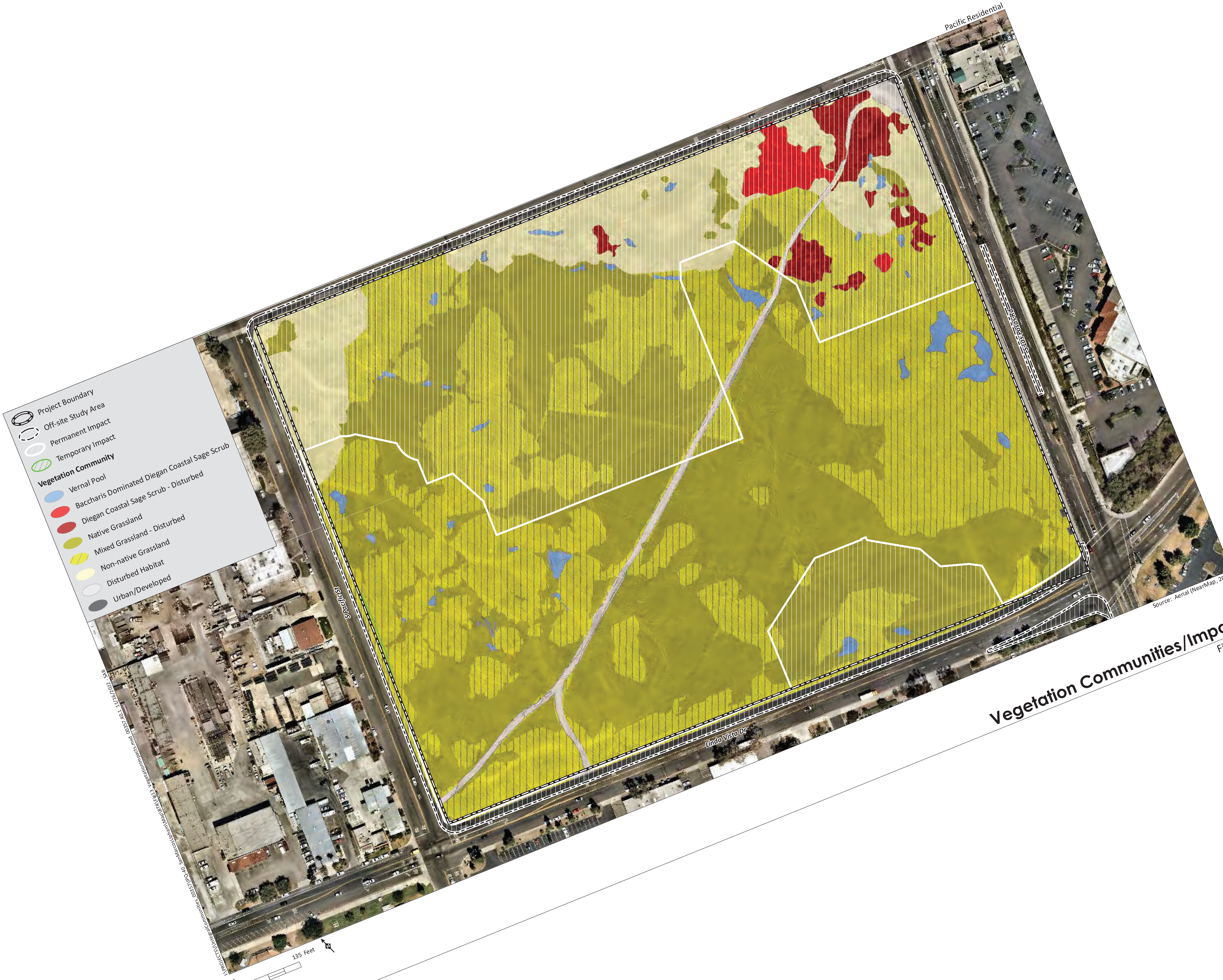
Bio-7b Compensatory Mitigation for Permanent Impacts to Sensitive Natural Communities. Prior to issuance of land disturbance, clearing, grubbing, or grading permits for the proposed project, the Applicant shall be demonstrated to the City that compensatory mitigation for direct impacts to sensitive natural communities (i.e., Diegan coastal sage scrub, native grassland, non-native grassland, mixed grassland, and vernal pools) has been adequately proposed in accordance with the ratios described in mitigation measure Bio-7a and secured through one or a combination of the following mechanisms:

- Implementation of on-site (see Figure 15) and/or off-site habitat preservation, creation, restoration, and/or enhancement; or

- Purchase of off-site conservation credits from a conservation bank in the region (such as Brook Forest Mitigation Bank, Cleveland Corridor Conservation Bank, Heights of Pala Mesa Conservation Bank, Manchester Avenue Conservation Bank, Ramona Grasslands Conservation Bank, Red Mountain Conservation Bank, or another location deemed acceptable by the City).

Compensatory mitigation proposed on- and/or off-site through habitat, establishment, re-establishment, and/or restoration areas shall be required to prepare and implement a HMMP and a PMP, which shall be subject to City review and approval prior to issuance of any permits for the proposed project. Because the rare plant transplant plan and vernal pools mitigation plan (see Bio-1 and Bio-2 above) ultimately prescribes actions resulting in grasslands and vernal pools establishment, re-establishment, and/or restoration, such plans shall suffice as the HMMP provided the pertinent information prescribed below is incorporated.

The HMMP shall prescribe the on-/off-site mitigation actions of creation/establishment, re-establishment, restoration, and/or preservation. The HMMP shall include discussion on the location of any creation/establishment, re-establishment, restoration, and/or preservation site(s); requirements for site preparation, soil amendments, temporary irrigation, native plant palettes, installation methods, maintenance, and performance monitoring, as appropriate. The HMMP shall include graceful tarplant into the native habitat planting seed palette, where appropriate. The HMMP shall also include information pertaining to any specific rare plant translocation plans (see Bio-1) or vernal pool resources mitigation plans (see Bio-2), as applicable. The HMMP shall require that all mitigation (except for preservation areas not



Pacific Residential
Project Boundary
Off-site Study Area
Permanent Impact
Temporary Impact
Vegetation Community
Vernal Pool
Baccharis Dominated Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub - Disturbed
Native Grassland
Mixed Grassland - Disturbed
Mixed Grassland
Non-native Grassland
Disturbed Habitat
Urban/Developed
S Pacific St
S Las Posas Rd
Linda Vista Dr
Source: Aerial (NearMap, 2022)
0
135 Feet

Vegetation Communities/Impacts

Figure 13

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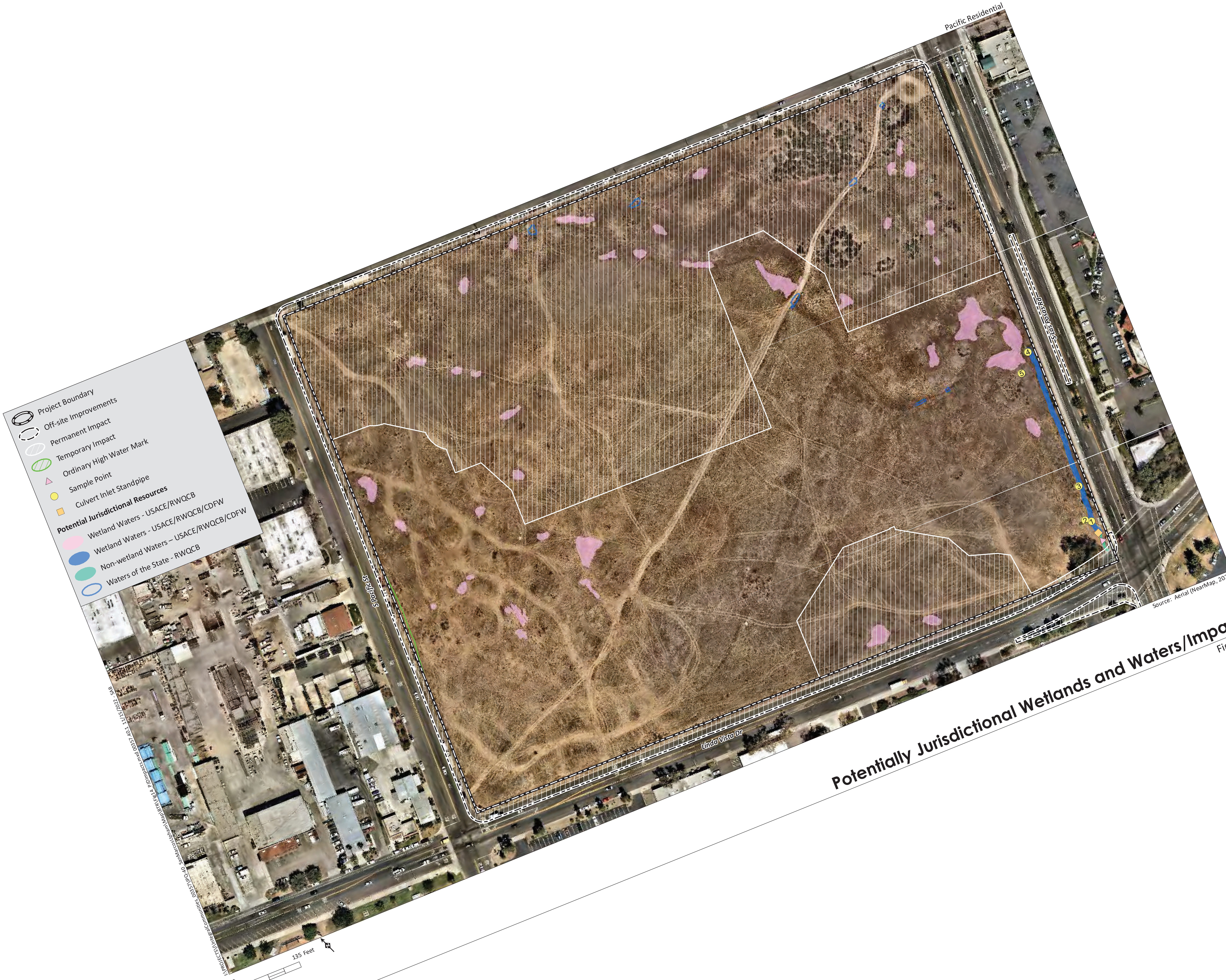

Pacific Residential
Project Boundary
Off-site Improvements
Permanent Impact
Temporary Impact
Ordinary High Water Mark
Sample Point
Culvert Inlet Standpipe
Potential Jurisdictional Resources
Wetland Waters - USACE/RWQCB
Wetland Waters - USACE/RWQCB/CDFW
Non-wetland Waters – USACE/RWQCB/CDFW
Waters of the State - RWQCB
S Pacific St
S Las Posas Rd
Linda Vista Dr
Source: Aerial (NearMap, 2022)
0
135 Feet

Potentially Jurisdictional Wetlands and Waters/Impacts

Figure 14

HELIX Environmental Planning

Pacific Residential

- Project Boundary
- Off-site Improvements
- Plan Lines
- Development Area
- Biological Preserve Area

Vegetation Community

- Native Grassland
- Mixed Grassland - Disturbed
- Non-native Grassland
- Disturbed Habitat
- Urban/Developed
- Vernal Pool

Special Status Plants

- Chaparral Rein-orchid (*Piperia cooperi*)
- San Diego Button-celery (*Eryngium aristulatum* var.*parishii*)
- Small-flowered Morning-glory (*Convolvulus simulans*)
- Orcutt's Brodiaea (*Brodiaea orcuttii*)
- Thread-leaved Brodiaea (*Brodiaea filifolia*)
- Graceful Tarplant (*Holocarpha virgata ssp. elongata*)
- Orcutt's Brodiaea Area (*Brodiaea orcuttii*)
- Thread-leaved Brodiaea Area (*Brodiaea filifolia*)
- Thread-leaved Brodiaea and Orcutt's Brodiaea
- Graceful Tarplant Area(*Holocarpha virgata ssp. elongata*)

Proposed Mitigation

- Orcutt's Brodiaea Translocation
- Orcutt's and Thread-leaved Brodiaea Translocation
- Thread-leaved Brodiaea Translocation
- Vernal Pool Creation*
- Vernal Pool Enhancement

*Includes San Diego Button Celery translocation

S Pacific St

S Las Posas Rd

Linda Vista Dr

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0 135 Feet

Source: Aerial (NearMap, 2022)

HELIX Environmental Planning

Proposed Conceptual Mitigation

Figure 15

restored) be subject to a minimum five-year performance monitoring period with specific success criteria to ensure that the impacted functions and services are restored. A protective instrument, such as a conservation easement or restrictive covenant, shall be recorded over the mitigation areas where such a protective instrument does not already exist. All the mitigation areas shall be subject to long-term management as outlined by the PMP prepared for the future development proposal.

The PMP for the proposed project site shall prescribe the on-/off-site actions of stewardship and perpetual management of the preserve areas and include at minimum: (a) the location and description of the mitigation area; final plans for the mitigation area; (b) the responsible entities for the mitigation area; (c) the management funding amount and mechanism, based on a Property Analysis Record or similar cost estimation method; (d) specific habitat and monitoring management directives such as: vegetation monitoring, sensitive species monitoring, control and treatment of non-native invasive/exotic plant species; (e) specific success criteria (f) public awareness; (g) preserve barriers or fencing management; (h) monitoring and reporting schedules; and (i) adaptive management recommendations for the preserve area. Implementation of long-term management shall be provided by a qualified entity approved by the City with experience in managing preserve lands (i.e., CDFW list of qualified entities).

Because the project proposes impacts and mitigation that involve resources regulated by the USFWS, USACE, RWQCB, and/or CDFW, the City shall also coordinate concurrence approval of the HMMP and PMP by these agencies, as appropriate.

5.3.3 Conclusion

Implementation of the proposed project would result in significant impacts to sensitive natural communities (i.e., Diegan coastal sage scrub, native grassland, non-native grassland, mixed grassland, and vernal pools). Native habitat creation/restoration/preservation of impacted habitats would fully compensate for the loss of habitat and reduce impacts to below a level of significance. With the implementation of mitigation measures Bio-7a and Bio-7b, impacts on sensitive natural communities would be reduced to less than significant.

5.4 ISSUE 3: JURISDICTIONAL WETLANDS AND WATERWAYS

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

5.4.1 Impact Analysis

Less than Significant with Mitigation. Implementation of the proposed project would affect state and federally-protected wetlands and other potential jurisdictional features. This impact would be considered significant. The proposed project would directly impact wetlands and waters under Section 404 of the CWA subject to the jurisdiction of the USACE, jurisdictional waters of the state subject to jurisdiction by the RWQCB under Section 401 of the CWA and/or under Porter-Cologne, and protected streambed and associated riparian habitat under the jurisdiction of the CDFW per Section 1602 of the CDFW Game Code (Figure 14, *Potential Jurisdictional Wetlands and Waters/Impacts*; Table 5*, Impacts to*

Jurisdictional Resources). Indirect impacts to potentially jurisdictional resources by the proposed project are not expected.

Table 5
IMPACTS TO POTENTIALLY JURISDICTIONAL RESOURCES

Potential Jurisdictional Resources	Potential Resource Agency Jurisdiction			Acres[1]
	USACE/RWQCB/CDFW	USACE/RWQCB	RWQCB	
Wetland				
Drainage 1 (Swale)	-	-	-	-
Vernal Pools	-	0.15	-	0.15
Subtotal	***-***	***0.15***	***-***	***0.15***
Non-Wetland				
Drainage 2 (Streambed)	<0.0001	-		<0.0001
Other Seasonally Ponded Features	-	-	0.01	0.01
Subtotal	***<0.0001***	***-***	***0.01***	***0.01***
TOTAL	**<0.0001**	**0.15**	**0.01**	**0.16**

[1] Areas are presented in acre(s) rounded to the nearest 0.01.
USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

As a regulatory requirement, the proposed project must notify and obtain necessary permits from the resource agencies responsible, including the USACE, RWQCB, and/or CDFW, as applicable. Implementation of measures Bio-8a and Bio-8b would ensure that the appropriate permits are obtained and that the impact is compensated in accordance with the USACE, RWQCB, and/or CDFW requirements, as applicable. Implementation of required construction BMPs, in combination with mitigation measures Bio-5 and Bio-6 to protect sensitive species, would ensure that construction activities are regularly monitored, are contained within the proposed work limits, and that no additional impacts (including indirect impacts) to adjacent jurisdictional resources occur.

5.4.2 Mitigation Measures

Bio-8a **Regulatory Permitting.** Prior to impacts to jurisdictional resources by the proposed project, the Applicant shall make a sufficient demonstration to the City that regulatory permits from the USACE, RWQCB, and or CDFW have been issued as applicable or are not required.

Bio-8b **Compensatory Mitigation for Impacts to Jurisdictional Resources.** Impacts to jurisdictional resources under the regulation of USACE, RWQCB, and/or CDFW that result from the proposed project shall be mitigated at a 3:1 ratio consisting of a minimum 1:1 creation/establishment/re-establishment, subject to regulatory permitting requirements of the USACE, RWQCB, and or CDFW, as applicable (Bio-8a). Mitigation shall be provided through one or a combination of the following mechanisms below:

- Purchase of preservation, establishment, re-establishment, rehabilitation, and/or enhancement credits from a mitigation bank (such as the Brook Forest Mitigation Bank, Ramona Grasslands Conservation Bank, San Luis Rey Mitigation Bank, or another bank) approved by the USACE, RWQCB, and CDFW as applicable.
- Implementation of permittee-responsible preservation, creation/establishment, re-establishment, restoration, rehabilitation, and/or enhancement at an on- or off-site

location approved by the USACE, RWQCB, and/or CDFW as applicable. Permittee-responsible mitigation proposed on- and/or off-site shall be required to prepare and implement an HMMP and a PMP (see Bio-7b), which shall be subject to the USACE, RWQCB, and/or CDFW review and approval prior to implementation. The HMMP shall prescribe the on-/off-site mitigation actions proposed, and the PMP shall provide the parameters for stewardship and perpetual management.

5.4.3 Conclusion

Implementing the proposed project would result in significant impacts to protected jurisdictional resources under potential regulation by USACE, RWQCB, and or CDFW. The proposed project would be required to secure the necessary regulatory permits prior to impacts per mitigation measure Bio-8a. It is anticipated that a 404 permit from the USACE, a 401 Certification from the RWQCB, and a 1602 agreement from CDFW would be needed. If the wetlands or waters on-site are ruled non-jurisdictional by USACE, it is anticipated that a WDR Permit from RWQCB and a 1602 agreement from CDFW would be required. Mitigation measure Bio-8b proposes mitigation that would compensate for impacts to jurisdictional resources, such that impacts would be reduced to below a level of significance.

5.5 ISSUE 4: WILDLIFE MOVEMENT AND NURSERY SITES

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established native resident or migratory corridors, or impede the use of native wildlife nursery sites?

5.5.1 Impact Analysis

No Impact. The proposed project would not interfere with wildlife movement or nursery functions. The project site does not provide fish habitat. The site is entirely bounded by existing development, is not contiguous with native habitats, and is outside of areas where wildlife movement opportunities occur (along undeveloped open space habitat corridors). Areas of the site may be used by smaller urban-adapted mammal species and bird species, but such areas are not considered refuge as a wildlife corridor or habitat linkage.

The project site is identified by the MHCP to support a critical population of one animal species, San Diego fairy shrimp, which was found during biological studies to occur in several vernal pools located across the project site. However, San Diego fairy shrimp is strictly found in ephemeral/vernal pools or other seasonally ponded habitats and is essentially non-mobile. Based on the analysis above, development on the project site would not interfere or impede with wildlife movement, corridors, or nursery sites. No impacts would occur; therefore, no mitigation is required or proposed.

5.5.2 Mitigation Measures

No mitigation is required.

5.5.3 Conclusion

Implementing the proposed project would not interfere with the movement of any fish or wildlife species or with corridors, and would not impede the use of a native wildlife nursery site. No impacts would occur, and no mitigation is required.

5.6 ISSUE 5: LOCAL POLICIES AND ORDINANCES

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

5.6.1 Impact Analysis

No Impact. The proposed project would be required to comply with City policies and ordinances. The City does not have a local tree preservation policy or other policies or ordinances specifically protecting biological resources. However, the Conservation and Open Space Element of the City's General Plan (2012) includes goals and policies that encourage the protection of sensitive species and their habitats. The project would be compliant with applicable policies; for example, the project Applicant is working/consulting with the federal, state, and local agencies, the project would preserve mature trees on-site, and the project would provide conservation open space on-site for the protection of environmental value and sensitive biological habitats. Thus, no impact to local policies or ordinances regarding the protection of biological resources would occur.

5.6.2 Mitigation Measures

No mitigation is required.

5.6.3 Conclusion

Implementing the proposed project would not conflict with local policies or ordinances protecting biological resources. No impact would occur, and no mitigation is required.

5.7 ISSUE 6: ADOPTED CONSERVATION PLANS

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.7.1 Issue 6 Impact Analysis

Less Than Significant with Mitigation. The project site is recognized for future incorporation in the MHCP and corresponding Draft San Marcos Subarea Plan. Because the project site is not incorporated, the draft policies and guidelines of the Draft San Marcos Subarea Plan are currently not applicable to the proposed project. Further, the Draft San Marcos Subarea Plan has not been adopted and remains in draft form since 2001; therefore, the project would not be in conflict with an adopted habitat conservation plan. Nonetheless, the implementation of the proposed project would not preclude or prevent finalizing and adoption of the Draft San Marcos Subarea Plan because the conservation estimates/requirements exclude the project site, and its adoption is not reliant on incorporating the project site as open space or protected habitat.

The proposed project would also not conflict with the provisions of the MHCP. The project site is located within a "Major Amendment Area" by the MHCP, is targeted in the MHCP as a high priority for conservation, and is identified to be a critical location for the conservation of vernal pools and other associated MHCP narrow endemic species. Critical populations of MHCP species (including narrow endemic species) are identified as occurring on the project site and within the proposed project impact footprint. According to the MHCP, even though the project site is surrounded by development and is a relatively small "postage-stamp" size, the narrow endemic species on-site would be presumed to persist with proper conservation mechanisms and management. However, the MHCP specifically excluded the project site from the MHCP conservation areas, estimates, and requirements, and assumes land acquisition and conservation planning for the project site would occur at a later date in cooperation with willing landowners; such as during approvals and development of the proposed project.

According to the MHCP Narrow Endemic Species and Critical Population Policies (MHCP Volume II Appendix D), known locations of narrow endemic species, including their critical populations, should be substantially conserved, and impacts should be avoided to the maximum extent practicable. This is generally interpreted as requiring avoidance of impacts to the degree practicable, without precluding reasonable use of a property. Avoidance and minimization measures should factor in various biological requirements, such as buffer widths and other species considerations. The MHCP also distinguishes avoidance and minimization measures for impacts to narrow endemic species located inside of FPAs versus impacts in areas outside of FPAs. Per Figures 2-4 and 3-1 of the MHCP, the project site is outside of the BCLA and is a Major Amendment Area.

Narrow endemic populations identified in the MHCP as "Critical" must be either totally avoided or avoided to the maximum extent practicable without precluding economic or productive use of the property. If the project Applicant is able to demonstrate to the satisfaction of the City that species avoidance would hinder economic or productive use of a property, impacts would likely be restricted to a maximum of five percent gross cumulative loss of the critical population or occupied habitat acreage as most appropriate for the species (MHCP Volume II Appendix D). In some rare cases, no take of individuals, populations, or habitat of high-priority critical endemic species would be allowed until a certain regional conservation threshold has been achieved in support of species recovery.

The project site is designated as a Major Amendment Area in the MHCP, and the policies therein are not required; however, such policies were considered to guide the proposed project development and conservation area on the project site. The proposed project would impact three MHCP narrow endemic species on-site, including San Diego fairy shrimp, San Diego button celery, and thread-leaved brodiaea. Details on impacts to narrow endemic species, including critical populations, are provided in Section 5.2.1 of this report. Although the project site is a Major Amendment Area in the MHCP and biological resources on-site are excluded from the MHCP conservation estimates/requirements, the MHCP is used as a guide for species conservation on-site. The proposed development was designed to minimize impacts to MHCP narrow endemic species and critical populations of such species on the project site to the extent practicable, which would be subject to review and approval by the City, USFWS, and/or CDFW, as applicable.

The proposed project would comply with minimum standards and mitigation ratios required by the MHCP, as set forth in mitigation measures Bio-1 through Bio-8b. Compliance with mitigation measures Bio-1 through Bio-8b in this report would ensure that the proposed project would reduce impacts, including impacts to Narrow Endemic Species, to less than significant. Overall, implementation of the proposed project would not preclude or prevent finalizing and/or adoption of the City's draft Subarea

Plan under the MHCP. Proposed impacts would be less than significant, with implementation of mitigation.

5.7.2 Mitigation Measures

Compliance with existing regulations, in addition to the implementation of mitigation measures Bio-1 through Bio-8b, would reduce significant effects to below a significant level.

5.7.3 Conclusion

Without mitigation, the proposed project would result in significant impacts to sensitive biological resources addressed under the MHCP. Implementation of mitigation measures Bio-1 through Bio-8b prescribed herein would ensure the project effects are reduced to less than significant. Further, the project site is within a Major Amendment Area of the MHCP; thus, implementation of the project would require additional approval and regulatory permitting by the resource agencies to ensure the protection of sensitive biological resources, including resources identified in the MHCP and draft San Marcos Subarea Plan. Therefore, and overall, the project is not expected to result in conflicts with the draft San Marcos Subarea Plan or the MHCP.

6.0 CERTIFICATION/QUALIFICATION

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Appendix A

Plant Species Observed

Family	Scientific Name*,†	Common Name	Habitat[1]
Dicots			
Apiaceae	*Eryngium aristulatum* var. *parishii+*	San Diego button-celery	VP
	*Foeniculum vulgare**	fennel	NNG, DH
Asteraceae	*Ambrosia psilostachya*	ragweed	NNG, VP
	Artemisia californica	California sagebrush	DCSS-B, DCSS-D, NG
	Baccharis pilularis	coyote brush	DCSS-B, NNG, DH
	Baccharis salicifolia ssp. *salicifolia*	mule fat	VP
	Carduus pycnocephalus ssp. *pycnocephalus**	Italian thistle	NNG, DH
	*Centaurea melitensis**	tocalote	NNG, DCSS-B, DCSS-D
	Corethrogyne filaginifolia	common sandaster	DCSS-B, DCSS-D
	*Dittrichia graveolens**	stinkwort	NNG
	Deinandra sp.	tarplant	VP
	*Grindelia squarrosa**	curlycup gumweed	NNG
	*Helminthotheca echioides**	bristly ox-tongue	NNG
	Isocoma menziesii	goldenbush	NNG, NG
	*Lactuca serriola**	prickly lettuce	NNG
	*Logfia gallica**	narrow-leaf filago	NNG
	Malacothrix glabrata	desert dandelion	NNG
	Osmadenia tenella	osmadenia	DCSS-B, DCSS-D
	Pseudognaphalium canescens	Wright's cudweed	NNG
	Psilocarphus brevissimus var. *brevissimus*	dwarf woolly-heads	VP
	*Sonchus asper**	prickly sowthistle	NNG, DCSS-B, DCSS-D
	*Sonchus oleraceus**	Common sow thistle	NNG
	Uropappus lindleyi	silver puffs	NNG
Brassicaceae	*Brassica nigra**	black mustard	NNG, DH
	*Sisymbrium irio**	London rocket	VP
Caryophyllaceae	*Silene gallica**	common catchfly	DCSS-B, DCSS-D
Chenopodiaceae	*Atriplex semibaccata**	Australian saltbush	NNG
Convolvulaceae	*Convolvulus simulans+*	Small-flowered morning-glory	NNG
	Cressa truxillensis	alkali weed	NNG
Euphorbiaceae	*Croton setiger*	dove weed	NNG
	*Euphorbia peplus**	petty spurge	NNG, DH
Fabaceae	*Acmispon glaber*	deerweed	DCSS-B, DCSS-D
	Acmispon strigosus	Bishop's lotus	DCSS-B, DCSS-D
	*Melilotus indicus**	annual yellow sweetclover	NNG, DCSS-B, DCSS-D
Gentianaceae	*Zeltnera exaltata*	tall centaury	NNG, VP
Geraniaceae	*Erodium botrys**	long-beak filaree	DCSS-B, DCSS-D, DH
	*Erodium cicutarium**	redstem filaree	NNG, DCSS-B, DCSS-D, VP, DH
Lythraceae	*Lythrum hyssopifolia**	hyssop loosestrife	VP
Marsileaceae	*Pilularia americana*	American pillwort	VP
Myrsinaceae	*Lysimachia arvensis**	scarlet pimpernel	NNG, DCSS-B, DCSS-D, VP
Onagraceae	*Epilobium* sp.	willowherb	VP

Family	Scientific Name*,†	Common Name	Habitat[1]
Orobanchaceae	*Castilleja exserta*	purple owl's clover	VP
Plantaginaceae	*Plantago erecta*	dwarf plantain	VP
	Plantago ovata	desert plantain	VP
Polygonaceae	*Eriogonum fasciculatum*	California buckwheat	DCSS-B, DCSS-D
	*Rumex crispus**	curly dock	NNG, VP
Monocots			
Cyperaceae	*Eleocharis macrostachya*	pale spike-rush	VP
Iridaceae	*Sisyrinchium bellum*	Western blue-eyed-grass	NNG
Juncaceae	*Juncus bufonius*	toad rush	VP
	Juncus mexicanus	Mexican rush	VP
Juncaginaceae	*Triglochin scilloides*	flowering-quillwort	VP
Liliaceae	*Calochortus splendens*	splendid mariposa	NNG
	Calochortus weedii	intermediate mariposa lily	NNG
Orchidaceae	*Piperia cooperi+*	chaparral rein-orchid	NNG
Poaceae	*Alopecurus* sp.	foxtail	NNG
	*Avena fatua**	wildoats	NNG, DCSS-B, DCSS-D, VP
	*Brachypodium distachyon**	purple false brome	NNG, VP, NG
	*Bromus diandrus**	ripgut brome	NNG, DCSS-B, DCSS-D, NG
	*Bromus hordeaceus**	soft chess	NNG, VP, NG
	*Bromus madritensis**	foxtail chess	NNG
	*Cynodon dactylon**	Bermuda grass	NNG, VP
	Deschampsia danthonioides	annual hairgrass	VP
	Distichlis spicata	salt grass	NNG
	*Festuca myuros**	rattail sixweeks grass	NNG
	*Festuca perennis**	Italian rye grass	NNG
	*Pennisetum clandestinum**	kikuyu grass	VP
	Phalaris sp.	canarygrass	NNG
	*Polypogon monspeliensis**	annual beard grass	VP
	Stipa pulchra	purple needle grass	NNG, DCSS-B, DCSS-D, NG
Themidaceae	*Bloomeria crocea*	common goldenstar	NNG
	Brodiaea filifolia+	thread-leaved brodiaea	NNG
	Brodiaea jolonensis	mesa brodiaea	NNG
	Brodiaea orcuttii+	Orcutt's brodiaea	NNG

* Non-Native Species

† Special Status Species

[1] DCSS-B= Diegan coastal sage scrub-baccharis dominated; DCSS-D=Diegan coastal sage scrub-disturbed; DH=Disturbed habitat; NG=Native grassland; NNG=Non-native grassland; VP=Vernal pool.

Appendix B

Animal Species Observed or Detected

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Crustaceans			
Anostraca	Branchinectidae	*Branchinecta lindahli*	versatile fairy shrimp
		Branchinecta sandiegonensis†	San Diego fairy shrimp
-	-	*Ostracoda*	ostracods
Butterflies			
Lepidoptera	Nymphalidae	*Junonia coenia*	common buckeye
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	*Uta stansburiana*	side-blotched lizard
Birds			
Apodiformes	Trochilidae	*Calypte anna*	Anna's Hummingbird
Columbiformes	Columbidae	*Zenaida macroura*	Mourning Dove
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Corvidae	*Corvus corax*	Common Raven
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Passerellidae	*Zonotrichia leucophrys*	White-crowned Sparrow
	Tyrannidae	*Sayornis nigricans*	Black Phoebe
		Sayornis saya	Say's Phoebe
Mammals			
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail rabbit
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

† Special Status Species

Appendix C

Special Status Plant Species Observed or with Potential to Occur

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
San Diego thornmint *(Acanthomintha ilicifolia)*	FT/SE CRPR 1B.1 MHCP Covered NE Critical Population	Annual herb. Occurs in chaparral, coastal scrub, valley, and foothill grassland vernal pools supported by clay soils. Elevation: below 3,281 feet (1,000 meters). Flowering period: April–June.	**Low.** Suitable vernal pools present in the project site, although the site is not mapped as having clay soils. There is a historical record (1991) of this species in the project site, but the species was not detected during project surveys in 2018, 2020, 2021, or 2022.
Nuttall's lotus (*Acmispon prostratus*)	--/-- CRPR 1B.1 MHCP Covered NE	Annual herb. Found in the coastal regions of southern California and Baja California. Habitats include coastal dunes, coastal scrub with sandy soils, and disturbed areas. Elevation: below 33 feet (10 meters). Flowering Period: March-June.	**Not Expected.** Coastal sage scrub with sandy soils present in the project site, but the project site occurs outside of the known elevation for the species. Also, species would have been detected during focused surveys.
California adolphia (*Adolphia californica*)	--/-- CRPR 2B.1	Perennial shrub. Most often found in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks on clay soils. Elevation: below 1,312 feet (400 meters). Flowering period: December-April.	**Presumed Absent.** Suitable coastal sage scrub habitat present in the project site, but this perennial shrub would have been observed during biological surveys and was not detected.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CRPR 1B.1 MHCP Covered NE	Perennial herb. Occurs on sandy loam or clay, sometimes alkaline, soils within grasslands, dry drainages, stream floodplain terraces, and vernal pool margins. Also occurs on slopes, disturbed places, and in coastal sage scrub or chaparral. Elevation: 65-1,360 feet (20-415 meters). Flowering period: April-October.	**Presumed Absent.** Suitable vernal pool habitat present in the project site, but this perennial species would have been observed during surveys and was not detected.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE/-- CRPR 1B.1 MHCP Covered NE	Perennial shrub. Found within Relatively open, coastal chaparral. At occasional inland sites it occurs in denser mixed chaparral vegetation. Elevation: below 1,200 feet (365 meters). Flowering Period: December-June.	**Presumed Absent.** Coastal scrub present in the project site, but this perennial shrub would have been observed during surveys and was not detected.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
San Diego sagewort (*Artemisia palmeri*)	--/-- CRPR 4.2	Medium shrub. Occurs along streams in coastal sage scrub and chaparral. Identifiable from leaves year round. Elevation: below 3,000 feet (914 meters). Flowering period: May-September.	**Presumed Absent.** Suitable coastal sage scrub habitat present in the project site, but this perennial shrub would have been observed during surveys and was not detected.
Western spleenwort (*Asplenium vespertinum*)	--/-- CRPR 4.2	Perennial rhizomatous herb. Occurs in chaparral, cismontane woodland, and coastal scrub along rocky bluffs. Found along the coastal regions. Elevation: 590-3,280 feet (180-1,000 meters). Flowering period: February-June.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but the project site is outside of the known elevation for the species. This perennial species would have been observed during surveys and was not detected.
Encinitas baccharis (*Baccharis vanessae*)	FT/SE CRPR 1B.1 MHCP Covered NE	Perennial shrub. Grows on sandstone within chaparral, maritime chaparral, woodlands, and Torrey-pine forest understory. Elevation: 196-2,400 feet (60-720 meters). Flowering period: August-December.	**Presumed Absent.** Coastal scrub present in the project site, but this perennial shrub would have been observed during surveys and was not detected.
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CRPR 1B.1 NE Critical Population	Perennial bulbiferous herb. Often associated with vernal pools and known from habitats including valley grassland, foothill woodland, coastal sage scrub, and chaparral. Species prefers clay soils. Elevation: 82-2,821 feet (25-860 meters). Flowering period: March-June.	**Present.** This species was mapped throughout the project site during surveys conducted in 2020, 2021, and 2022. The number of individuals throughout the project site was estimated as 177,723 plants. The number of individuals within the impact footprint was estimated as 33,873. Critical Habitat for this species occurs in the project site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CRPR 1B.1 Critical Population	Perennial bulbiferous herb. Occurs within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Prefers mesic or clay soils. Elevation: 98-5,550 feet (30-1,692 meters). Flowering period: May to July.	**Present.** This species was mapped throughout the project site during surveys conducted in 2020, 2021, and 2022. The number of individuals throughout the project site was estimated as 127,517 plants. The number of individuals within the impact footprint was estimated as 80,461.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	--/-- CRPR 2B.2 MHCP Covered	Perennial shrub. Found on rocky slopes within chaparral, particularly southern maritime chaparral. Elevation: below 1,148 feet (350 meters). Flowering period: December-May.	**Presumed Absent.** Coastal scrub present in the project site, but this perennial shrub would have been observed during surveys and was not detected.
Southern tarplant (*Centromadia parryi* ssp. *australis*)	--/-- CRPR 1B.1	Annual herb. Found at the margins of salt marshes, vernally mesic areas within grasslands, and vernal pools. Found in the coastal regions. Elevation: below 1,575 feet (480 meters). Flowering Period: May-November.	**Not Expected.** Grassland and vernal pool habitats present in the project site, but species would have been detected during focused surveys.
Southern mountain misery (*Chamaebatia australis*)	--/-- CRPR 4.2	Perennial shrub. Occurs in chaparral on gabbroic or metavolcanics soils. Elevation: 980-3,350 feet (300-1,020 meters). Flowering Period: November-May.	**Presumed Absent.** Suitable habitat not present in the project site and the project site is outside of the known elevation for the species. This perennial shrub would have been observed during surveys and was not detected.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE/SE CRPR 1B.1 MHCP Covered NE	Annual herb. Found in sandy openings of coastal sage scrub, chaparral, and coniferous forests. Elevation: below 410 feet (125 meters). Flowering period: March-May.	**Not Expected:** Suitable coastal sage scrub, grassland, and sandy soils present in the project site, but the project site occurs outside of the known elevation for the species. The species would have been observed during focused surveys.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	--/-- CRPR 1B.2 MHCP Covered	Perennial shrub. Occurs in chaparral and cismontane woodland. Elevation: 328-1,804 feet (100-550 meters). Flowering period: May-June.	**Presumed Absent.** Suitable habitats do not occur in the project site. This perennial shrub would have been observed during surveys.
Small-flowered morning-glory (*Convolvulus simulans*)	--/-- CRPR 4.2	Annual herb. Occurs on clay and serpentinite seeps in openings within chaparral, coastal scrub, and native grassland. Elevation: 98–2,871 feet (30-875 meters). Flowering period: March–July.	**Present.** Three individuals of this species were mapped within the southwest portion of the project site during surveys between 2020 and 2022. However, no individuals are within the project impact footprint; thus, no impacts to this species are expected.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	--/-- CRPR 1B.1 MHCP Covered NE	Perennial herb. Found on sandy soils and disturbed areas within southern maritime chaparral, coastal sage scrub, and coastal bluffs. Elevation: below 492 feet (150 meters). Flowering Period: May-September.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but the project site is outside of the known elevation for the species. This perennial species would have been observed during surveys.
Paniculate tarplant (*Deinandra paniculata*)	--/-- CRPR 4.2	Annual herb. Occurs in vernally mesic areas, sometimes sandy soils, in coastal scrub, valley and foothill grassland, and vernal pools with sandy soil. Found along the coastal regions. Elevation: 80-3,100 feet (25-940 meters). Flowering Period: March-December.	**Not Expected.** Coastal sage scrub, grassland, and vernal pools present in the project site, but species would have been detected during focused surveys.
Western dichondra (*Dichondra occidentalis*)	--/-- CRPR 4.2	Perennial rhizomatous herb. Occurs on dry, sandy banks in coastal sage scrub, chaparral, or southern oak woodland. Often proliferates on recently burned slopes. Elevation: below 1,706 feet (520 meters). Flowering period: March-July.	**Presumed Absent.** Suitable coastal sage scrub and sandy soils present in the project site, but this perennial species would have been observed during surveys.
Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*)	--/-- CRPR 1B.1 NE	Perennial herb succulent. Grows on open, rocky slopes, often on serpentine or clay dominated soils in coastal sage scrub and valley grassland communities. Found along the coast. Elevation: 15-1,475 feet (5-450 meters). Flowering period: April-June.	**Presumed Absent.** Suitable coastal sage scrub and grassland present in the project site, but this perennial species would have been observed during surveys.
Variegated dudleya (*Dudleya variegata*)	--/-- CRPR 1B.2 NE	Perennial herb succulent. Occurs on clay soils of dry hillsides and mesas within chaparral, valley grassland, foothill woodland and coastal sage scrub communities. Elevation: 5-1,905 feet (3-580 meters). Flowering period: April-June.	**Presumed Absent.** Suitable coastal sage scrub and grassland present in the project site, but this perennial species would have been observed during surveys.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CRPR 1B.1 NE Critical Population	Perennial herb. Occurs in vernal pools or mima mound areas with vernally moist conditions, and in mesic areas on coastal scrub and native grassland. Elevation: below 1,640 feet (500 meters). Flowering period: Apr - August.	**Present.** Approximately 160 individuals were mapped in three general areas of the project site during surveys conducted in 2020, 2021, and 2022. Forty-seven individuals were observed within the impact footprint.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Cliff spurge (*Euphorbia misera*)	--/-- CRPR 2B.2 MHCP Covered	Perennial shrub. Occurs on rocky soils and coastal bluffs in coastal sage scrub and Mojavean desert scrub. Elevation below 1,640 feet (500 meters). Flowering period: December-August.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but this perennial shrub would have been observed during surveys.
San Diego barrel cactus (*Ferocactus viridescens*)	--/-- CRPR 2B.1 MHCP Covered	Perennial (stem succulent) shrub. Grows in sandy to rocky areas within chaparral, valley grassland and coastal sage scrub communities. Elevation: 33-492 feet (10-150 meters). Flowering period: May-June.	**Presumed Absent.** Suitable coastal sage scrub and grassland present in the project site, but this perennial shrub would have been observed during surveys.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CRPR 4.2	Annual herb. Clay soils in annual grasslands and coastal sage scrub. Elevation: below 3,300 feet (1,005 meters). Flowering period: March-May.	**Not Expected.** Suitable grassland and coastal sage scrub habitat present in the project site, but clay soils are not mapped and the species would have been detected during focused surveys.
Orcutt's hazardia (*Hazardia orcuttii*)	--/ST CNPS List 1B.1 MHCP Covered NE	Perennial shrub. Found in open chaparral with chamise. At the one known U.S. site, soils are mapped as loamy alluvial land of the Huerhuero complex. Elevation: sea-level to 330 feet (100 meters). Flowering period: August-October.	**Presumed Absent.** Suitable chaparral habitat does not occur in the project site. This perennial shrub would have been observed during surveys.
Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	--/-- CRPR 4.2	Annual herb. Occurs in grasslands, coastal scrub, chaparral, and cismontane woodland. Found along the southern coast of California and Peninsular Ranges. Elevation: 195-3,600 feet (60-1,100 meters). Flowering period: May-November.	**Present.** Approximately 28,780 individuals of this species were observed scattered throughout the project site during surveys in 2021 and 2022 , .
Vernal barley (*Hordeum intercedens*)	--/-- CRPR 3.2	Annual herb. Occurs in coastal dunes, coastal scrub, native grassland (saline flats and depressions), and vernal pools. Elevation: below 1,640 feet (500 meters). Flowering period March–June.	**Not Expected.** Coastal sage scrub, grassland, and vernal pools present in the project site, but species would have been detected during focused surveys.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Ramona horkelia (*Horkelia truncata*)	--/-- CRPR 1B.3	Perennial herb. Occurs on clay and gabbroic soils within chaparral and woodlands. Elevation: 1,310-4,265 feet (400-1,300 meters). Flowering period: May-June.	**Presumed Absent.** Suitable habitats do not occur in the project site, and the project site is outside of the known elevation for the species. This perennial species would have been observed during surveys.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	--/-- CRPR 1B.2	Shrub. Occurs in chaparral and sandy coastal sage scrub, often in disturbed areas. Elevation: below 656 feet (200 meters). Flowering period April-November.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but this perennial shrub would have been observed during surveys.
San Diego marsh-elder (*Iva hayesiana*)	--/-- CRPR 2B.2 MHCP Covered	Perennial herb. Occurs preferentially in creeks of intermittent streambeds. Typically, the riparian canopy is open, allowing substantial sunlight to reach this marsh-elder. Sandy alluvial embankments with cobbles are frequently utilized. May occur in a variety of wetland/riparian areas. Elevation: generally below 984 feet (300 meters). Occasionally below 2,953 feet (900 meters). Flowering period: March-October.	**Presumed Absent.** Suitable habitats do not occur in the project site. This perennial species would have been observed during surveys.
Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	--/-- CRPR 4.2	Perennial herb. Occurs in alkaline meadows and seeps, coastal salt marshes, and coastal dunes. Elevation: below 984 feet (300 meters). Flowering period: May–August.	**Presumed Absent.** Suitable habitats do not occur in the project site. This perennial species would have been observed during surveys.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	--/-- CRPR 4.3	Annual herb. Occurs in openings in chaparral and coastal scrub. Typically found in relatively dry, exposed locales. Elevation: below 9,186 feet (2,800 meters). Flowering period January–July.	**Not Expected.** Suitable coastal sage scrub present in the project site, but the species would have been observed during focused surveys.
Small flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	--/-- CRPR 4.2	Annual herb. Found on clay soils within coastal sage scrub, woodlands, and grasslands. Often near vernal pools or serpentine outcrops. Found within Los Angeles, Orange, Riverside, and San Diego Counties and the Channel Islands. Flowering period: March to May. Elevation: 49 to 3,510 feet (15 to 1,070 meters).	**Low.** Coastal sage scrub and grassland near vernal pools present in the project site, and there is a historic observation from 2006, but species not detected during project surveys in 2020, 2021, or 2022.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	--/-- CRPR 1B.2	Perennial herb. Occurs on rocky, granitic slopes or hilltops within chaparral and woodlands. Elevation: 980-5,165 feet (300-1,575 meters). Flowering period: June-August.	**Presumed Absent.** Suitable habitats do not occur in the project site. This perennial species would have been observed during surveys.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CRPR 3.1 MHCP Covered NE	Annual herb. Occurs in alkaline vernal pools in native grassland. Elevation: 65–2,100 feet (213-640 meters). Flowering period: March–June.	**Not Expected.** Suitable vernal pools and grassland present in the project site, but the species would have been observed during focused surveys.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CRPR 1B.1 MHCP Covered NE Critical Population	Annual herb. Occurs in vernal pools in chenopod scrub, marshes and swamps, and playas. Elevation: 98–4,265 feet (30-1,300 meters). Flowering period: April–June.	**Low.** Suitable vernal pool habitat present in the project site, and there are historic observations, but species not detected during project surveys in 2020, 2021, or 2022. Critical Habitat for this species occurs in the project site.
California Orcutt grass (*Orcuttia californica*)	FE/SE CRPR 1B.1 MHCP Covered NE	Annual herb. Occurs in vernal pools. Seriously threatened by agriculture, development, non-native plants, grazing, and vehicles. Elevation: below 2,297 feet (700 meters). Flowering April–August.	**Not Expected.** Suitable vernal pool habitat present in the project site, but the species would have been observed during focused surveys.
Torrey pine (*Pinus torreyana* ssp. *torreyana*)	--/-- CRPR 1B.2 MHCP Covered	Perennial evergreen tree. Occurs within closed cone coniferous forest and chaparral atop sandstone soils. Elevation: 98-430 feet (29-131 meters).	**Presumed Absent.** Suitable habitats do not occur in the project site. This perennial tree would have been observed during surveys.
Chaparral rein orchid (*Piperia cooperi*)	--/-- CRPR 4.2	Perennial herb. Typically grows on dry sites within grasslands, chaparral, and cismontane woodland. Found along the coast, San Gabriel and San Jacinto Mountains, Peninsular Ranges of southern California and the Channel Islands. Elevation: 50-5,200 feet (15-1,585 meters). Flowering period: March-June.	**Present.** One individual was observed in the northeastern side of the project site during the rare plant survey in 2020. The individual is located within the impact footprint.
Delta woolly marbles (*Psilocarphus brevissimus* var. *multiflorus*)	--/-- CRPR 4.2	Annual herb. Typically grows in vernal pools and flats. Elevation: 33-1,640 feet (10-500 meters). Flowering period: May-June.	**Not Expected.** Suitable vernal pool habitat present in the project site, but the species would have been observed during focused surveys.

Species Name	Status	Habit, Ecology and Life History	Potential to Occur
Nuttall's scrub oak (*Quercus dumosa*)	--/-- CRPR 1B.1 MHCP Covered	Perennial shrub. Occurs on sandy or clay loam soils near the coast within coastal scrub, chaparral, cismontane woodland, and riparian woodland. Elevation: below 656 feet (200 meters). Flowering period: March-May.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but this perennial shrub would have been observed during surveys**.**
Engelmann oak (*Quercus engelmannii*)	--/-- CRPR 4.2 MHCP Covered	Perennial deciduous tree. Occurs in oak woodland, chaparral, riparian woodland, native grassland. Elevation: below 4,265 feet (1,300 meters). Flowering period: March–June.	**Presumed Absent.** Suitable grassland present in the project site, but this perennial tree would have been observed during surveys.
Parry's tetracoccus (*Tetracoccus dioicus*)	--/-- CRPR 1B.2 MHCP Covered	Perennial shrub. Occurs on dry slopes within coastal sage scrub and chaparral. Usually, conditions are quite xeric with only limited annual growth. Elevation: 540-3,280 feet (165-1,000 meters). Flowering period: April-May.	**Presumed Absent.** Suitable coastal sage scrub present in the project site, but this perennial shrub would have been observed during surveys.

[1] Listing codes as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; CE = Candidate Endangered; R = Rare

CRPR = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either rare or extinct elsewhere; 1B – rare, threatened, or endangered in California and elsewhere; 2A – presumed extirpated in California, but more common elsewhere; 2B – rare, threatened, or endangered in California, but more common elsewhere; 3 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

MHCP Covered: Proposed as a Covered Species under the Draft North County Multiple Habitat Conservation Program (MHCP). NE = Listed as a Narrow Endemic Species under the Draft North County Species MHCP.

Critical Population: A critical population of this species is identified in the project site in the Draft North County MHCP (AMEC Earth & Environmental et al. 2003).

[2] Potential to Occur is assessed as follows: **None**: There are no present or historical records of the species occurring on or in the immediate vicinity (i.e. as defined by the 2 mile

Appendix D

Special Status Animal Species Observed or with Potential to Occur

Species Name	Status	Habitat Associations	Potential to Occur
INVERTEBRATES			
Fairy Shrimp			
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE/-- NE Critical Population	Restricted to vernal pools and other ephemeral basin in southern California from coastal Orange County to San Diego County. Found in seasonally astatic pools that occur in tectonic swales or earth slump basins and other areas of shallow, standing water often in patches of grassland and agriculture interspersed in coastal sage scrub and chaparral.	**Present.** This species was observed in the project site during current and previous surveys. Critical Habitat for this species occurs in the project site. Twenty basins were found to be occupied by this species during surveys in 2020. Ten basins supporting this species are within the proposed project impact footprint.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE/-- MHCP Covered NE	In California, occurs from Los Angeles County south to coastal San Diego County, and east to western Riverside County. Found in deep seasonal vernal pools, ephemeral ponds, stock ponds, and other human modified depressions at least 30 centimeters deep. Associated with grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation.	**Not Expected.** Suitable vernal pool habitat occurs in the project site; however, pools on-site are very shallow (less and 20cm deep) and this species has not been recorded in the immediate vicinity of the project site. This species was not detected during previous surveys or recent focused surveys in 2020.
Insects			
Oblivious tiger beetle (*Cicindela latesignata obliviosa*)	--/-- NE	Occurs along the coast of southern California occupying salt marshes, mud flats, and other estuarine habitats, usually near beaches.	**None.** Suitable coastal salt marsh, mud flat, and estuarine habitat not present in the project site.
Harbison's dun skipper (*Euphyes vestris harbisoni*)	--/-- MHCP Covered NE	Occurs in the foothills of northern and southern San Diego County, extreme western Riverside County, and southern Orange County. Prefers oak woodlands but is also found within chaparral or riparian areas that have narrow canyons or drainages where the species host plant, San Diego sedge (*Carex spissa*), is found. Generalist feeder with a preference for milkweeds and thistle. Nectaring resources include morning glory (*Calystegia macrostegia tenuifolia*), red thistle (*Cirsium occidentale*), loosestrife (*Lythrum californicum*), and less frequently golden yarrow (*Eriophyllum confertiflorum*) and black mustard (*Brassica nigra*).	**Not Expected.** No oak woodland, chaparral, or riparian areas occur in the project site, and the species host plant was not detected during project surveys.

Species Name	Status	Habitat Associations	Potential to Occur
Salt marsh skipper (*Panoquina errans*)	--/-- MHCP Covered	Occurs along coastal southern California. Inhabits salt marshes that contain its larval host plant salt grass (*Distichlis spicata)*. May be observed on ocean bluffs, salt marshes, or open areas along the ocean.	**Not Expected.** No salt marsh occurs in the project site.
VERTEBRATES			
Amphibians			
Western spadefoot toad (*Spea hammondii*)	--/SSC MHCP Covered	Suitable upland habitats include coastal sage scrub, chaparral, and grasslands. Most common in grasslands with vernal pools or mixed grassland-coastal sage scrub areas. Breeds in temporary pools formed by heavy rains, but also found in riparian habitats with suitable water resources. Breeding pools must lack exotic predators such fish, bullfrogs, and crayfish for the species to successfully reproduce. Estivates in burrows within upland habitats adjacent to potential breeding sites.	**Not Expected.** Suitable grassland with vernal pools and mixed grassland-coastal sage scrub habitats present in the project site. However, there are no records of this species occurring on-site, was not detected during focused surveys in 2020, and has limited mobility to travel to the site from off-site habitats (nearest record of species is over two miles away).
Reptiles			
Orange-throated whiptail (*Aspidoscelis hyperythra*)	--/WL MHCP Covered	Suitable habitat includes coastal sage scrub, chaparral, juniper woodland, oak woodland, and grasslands along with alluvial fan scrub and riparian areas. Occurrence of the species correlated with the presence perennial plants (such as California buckwheat [*Eriogonum fasciculatum*], California sagebrush [*Artemisia californica*], black sage [*Salvia mellifera*], or chaparral) to provide a food base for its major food source, termites.	**Low.** Coastal sage scrub and grassland habitats present in the project site substantially disturbed. There are no records of this species occurring on-site, the species was not detected during biological surveys in 2018,2020, 2021, or 2022 and has limited mobility to travel to the site from off-site habitats (nearest record of species is approximately 2-miles away).
Northwestern pond turtle (*Actinemys* [*Emys*] *marmorata*)	--/SSC MHCP Covered	Almost entirely aquatic; occurs in ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Requires basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometers (0.3 miles) from water for egg-laying.	**None.** Suitable perennially wet habitat not present in the project site. The project site is entirely surrounded by development (no contiguous native habitats) and would unlikely serve as upland egg-laying habitat.

Species Name	Status	Habitat Associations	Potential to Occur
Coronado skink (*Plestiodon skiltonianus interparietalis*)	--/WL	Occurs in coastal and inland portions of southern San Diego County; though can occur up into Riverside County where it intergrades with Skilton's skink (*Plestiodon skiltonianus skiltonianus*). Suitable habitats include grassland, woodlands, pine forests, and chaparral, especially in open sunny areas such as clearings and edges of creeks or rivers. Prefers rocky areas near streams with lots of vegetation but can also be found in areas away from water. Occasionally seen foraging in leaf litter but more commonly found underneath surface objects, such as bark or rocks, where it lives in extensive burrows.	**Low.** Coastal sage scrub and grasslands present in the project site, but preferred rocky stream edges do not occur. There are no records of this species occurring on-site, the species was not detected during biological surveys in 2018, 2020, 2021, or 2022 and has limited mobility to travel to the site from off-site habitats (nearest record of species is approximately 2-miles away).
Birds			
Cooper's hawk (*Accipiter cooperii*)	--/WL MHCP Covered	Occurs in oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests. Relatively common bird in urban San Diego County.	**Not Expected.** Suitable woodland and stands of trees are not present in the project site. This species may forage in the project site, but suitable breeding habitat not present. This species has not been recorded in the immediate vicinity of the project site and was not detected during project surveys.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	--/WL MHCP Covered	Generally found on moderate to steep slopes vegetated with grassland, coastal sage scrub, and chaparral. Prefer areas with California sagebrush with of coastal sage scrub or chaparral. Also occurs on steep slopes where rock outcrops are present.	**Not Expected.** Coastal sage scrub and grasslands present in the project site, but are substantially disturbed and do not occur on moderate to steep slopes. There are no records of this species occurring on-site, the species was not detected during biological surveys in 2018, 2020, 2021, or 2022 and has limited mobility to travel to the site from off-site habitats (nearest record of species is approximately 2-miles away).

Species Name	Status	Habitat Associations	Potential to Occur
Bell's sparrow (*Artemisiospiza belli belli*)	BCC/WL MHCP Covered	Non-migratory year-round resident on the coastal ranges of California and western slopes of the central Sierra Nevada mountains. Occurs year-round in southern California. Breeds in dry coastal sage scrub and chaparral, desert scrub, and similar other open, scrubby habitats. In foothill chaparral, tends toward younger, less dense stands that are recovering from recent fires; less common in older, taller stands that have remained unburned.	**Not Expected.** Coastal sage present in the project site, but are substantially disturbed and do not occur on moderate to steep slopes. There are no records of this species occurring on-site, the species was not detected during biological surveys in 2018, 2020, 2021, or 2022 and has limited mobility to travel to the site from off-site habitats (nearest record of species is approximately 3-miles away).
Burrowing owl (*Athene cunicularia*)	BCC/SSC	Found from central California east to the Mojave Desert and south to coastal San Diego County. Primarily a grassland species that prefers areas with level to gentle topography and well-drained soils. Also occupies agricultural areas, vacant lots, and pastures. Requires underground burrows for nesting and roosting that are typically dug by other species such as the California ground squirrel (*Spermophilus beecheyi*). Will also utilize natural rock cavities, debris piles, culverts, and pipes for nesting and roosting.	**Low.** Suitable grassland habitat occurs in the project site; this species was recorded on the eastern side of the project site in 1991 but was not detected during focused project surveys in 2020.
Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	BCC/SSC MHCP Covered NE	One of seven subspecies occurring restricted to southern California from southern Orange County and San Diego County. Occupies native scrub vegetation with thickets of mature cacti consisting of cholla (*Cylindropuntia* spp.) or prickly-pear cactus (*Opuntia littoralis*). Cacti must be tall enough to support and protect the bird's nest (typically 3 feet or more in height). Surrounding vegetation usually consists of coastal sage scrub habitat with shrubs normally below the level of nest placement.	**None.** Suitable cactus thickets are not present in the project site.
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT, BCC/SSC MHCP Covered	Chiefly found on sea coasts, but also occur in open flats near brackish or saline lakes, lagoons, seasonal water courses, salt-works, and depressions. Usually prefer sand, silt, or dry mud with even surface, avoiding rocky or broken ground. This species exhibits breeding site fidelity.	**None.** Suitable coastal beach and sandy shoreline habitat not present in the project site.

Species Name	Status	Habitat Associations	Potential to Occur
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE MHCP Covered	In California, breeds from the central portion of the state in Owens Valley (Inyo County) south to San Diego County. Riparian obligates that breed in relatively dense riparian habitats along rivers, streams, or other wetlands where surface water is present, or soils are very saturated. Breeding habitat can consist of monotypic stands of willows, a mixture of native broadleaf trees and shrubs, monotypic stands of exotics such as tamarisk (*Tamarix* spp.) or Russian olive (*Elaeagnus angustifolia*), or mixture of native broadleaf trees and shrubs with exotics. Restricted in San Diego County to two modest colonies at San Luis Rey River and Santa Margarita River, with a few scattered pairs.	**Not Expected.** Suitable riparian habitat not present in the project site. The species could potentially disperse across the project site from Lake Hodges and Buena Vista Creek, but suitable habitat for residence or breeding does not occur.
American peregrine falcon (*Falco peregrinus anatum*)	BCC/FP MHCP Covered	In California, breeds, and winters throughout the state except for desert areas. Active nesting sites are known from along the coast north of Santa Barbara, in the Sierra Nevada, and other mountains of northern California. Few nest sites are known anecdotally for southern California mostly at coastal estuaries and inland oases. Inhabits a large variety of open habitats including marshes, grasslands, coastlines, and woodlands. Typically nest on cliff faces in remote rugged sites where adequate food is available nearby, but the species can also be found in urbanized areas nesting on man-made structures.	**Not Expected.** Suitable grasslands present in the project site, but is relatively small for foraging given the site is entirely isolated and surrounded by development. Also, cliff faces and structures for breeding do not occur on-site. There are no records of this species occurring on-site, the species was not detected during biological surveys in 2018, 2020, 2021, or 2022; the nearest record of species is approximately 27-miles away.
Yellow-breasted chat (*Icteria virens*)	--/SSC MHCP Covered	In California, occurs as a migrant and summer resident breeding from the coastal regions in northern California, east of the Cascades, and throughout the central and southern portions of the state. Breeds in early successional riparian habitats with well-developed shrub layer and an open canopy nesting on the borders of streams, creeks, rivers, and marshes.	**Not Expected.** Suitable riparian habitat not present in the project site. The species could potentially disperse across the project site from Escondido Creek and Buena Vista Creek, but suitable habitat for residence or breeding does not occur.

Species Name	Status	Habitat Associations	Potential to Occur
Osprey (*Pandion haliaetus*)	--/WL MHCP Covered	Within California, breeding populations reside in the Cascade and Sierra Nevada Ranges, though small numbers of the species also breed within San Diego County. Although widely seen on the coast, rare transients can occur in the interior portions of southern California. Restricted to large water bodies such as rivers, lakes, and reservoirs supporting fish with suitable nesting habitat such as rocky pinnacles or large trees and snags. Build their large nests, often in dead tops of older trees and man-made structures.	**Not Expected.** Suitable bodies of water not present in the project site. The species could potentially disperse across the project site, but suitable habitat for residence or breeding does not occur.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	--/SE MHCP Covered	Generally found in salt marshes. Nests on the ground in natural depression or scrape, primarily in pickleweed habitat at the higher levels of the marsh, above the reach of the highest spring tides.	**None.** Suitable marsh habitat or pickleweed not present in the project site.
Large-billed savannah sparrow (*Passerculus sandwichensis rostratus*)	--/SSC MHCP Covered	Non-breeding visitor of southern California occurring in small pockets along the coast from San Luis Obispo County south to San Diego County, and east at the Salton Sea in Imperial County. Wintering habitat almost entirely restricted to shorelines occurring at beaches and salt marshes and can be numerous along constructed seawalls and rocky shoreline outcroppings. At Salton Sea, found in low halophytic scrub, dominated by iodine bush (*Allenrolfea occidentalis*) and saltbush (*Atriplex* spp.), and in introduced stands of young tamarisk.	**None.** Suitable shoreline habitats not present in the project site.
California brown pelican (*Pelecanus occidentalis californicus*)	--/FP MHCP Covered	Found year-round in estuarine, marine subtidal, and marine pelagic waters along the California coast. Rare to uncommon visitor at the Salton Sea in Imperial County from July to September. Nests on undisturbed islands adjacent to marine fishing areas. Rests on water or inaccessible rocks offshore or on the mainland, but also uses mudflats, sandy beaches, wharfs, and jetties.	**Not Expected.** Suitable coastal habitat not present in the project site. The species could potentially disperse across the project site from the coast to the Salton Sea, but suitable habitat for residence or breeding does not occur.

Species Name	Status	Habitat Associations	Potential to Occur
White-faced ibis (*Plegadis chihi*)	--/WL MHCP Covered	Uncommon summer resident in sections of southern California, rare visitor in the Central Valley, and local wintering visitor along coast. Prefers to feed in fresh emergent wetlands, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland. In San Diego County, two nesting colonies have been documented at Guajome Lake and at a pond along the San Luis Rey River located near Keys Canyon.	**Not Expected.** Seasonally wet features are present in the project site; however, are not large enough in size to support this species. This species could forage in the project site, but suitable breeding habitat not present. There are no records of this species occurring on-site, this species has not been recorded in the immediate vicinity of the project site (nearest record approximately 10 miles away) and was not detected during project surveys.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC MHCP Covered	Typically occurs in arid, open sage scrub habitats on gently slopes hillsides to relatively flat areas at elevations below 3,000 feet. The composition of sage scrub in which gnatcatchers are found varies; however, California sagebrush is at least present as dominant or co-dominant species. The species is mostly absent from areas dominated by black sage, white sage (*Salvia apiana*), or lemonadeberry (*Rhus integrifolia*), though the species may occur more regularly in inland regions dominated by black sage.	**Low.** Coastal sage scrub present in the project site, but disturbed and limited in size. There are no records of this species occurring on-site, this species has been recorded in the vicinity (approximately 1-mile) from the project site but was not detected during focused project surveys in 2020 . Additionally, the habitat on-site is marginal/limited and there is no suitable habitat immediately surrounding or contiguous to the site.
Light-footed Ridgway's rail (*Rallus obsoletus levipes*)	FE/SE, FP MHCP Covered	Occurs in coastal marshes, lagoons and maritime environments with dense vegetation and shallow waters.	**None.** Suitable marsh and maritime habitats do not occur in the project site.
Western bluebird (*Sialia mexicana*)	--/-- MHCP Covered	Common year-round resident throughout California but absent from the higher mountains and eastern deserts. Breeds in open woodlands, riparian habitats, grasslands, and farmlands. Nests and roosts in cavities of trees and snags, often in holes previously created by woodpeckers, and nest boxes. Winters in a wider variety of habitats.	**Not Expected.** Suitable grassland present in the project site. This species may forage in the project site, but suitable breeding habitat not present. This species was not detected during project surveys.

Species Name	Status	Habitat Associations	Potential to Occur
California least tern (*Sternula antillarum browni*)	FE/SE, FP MHCP Covered	Nest in colonies on relatively open beaches kept free of vegetation by natural scouring from tidal action. Found along the Pacific Coast of California.	**Not Expected.** No open beach habitat occurs in the project site.
Elegant tern (*Thalasseus elegans*)	--/WL	Migrates along the coastal regions of California with three known breeding colonies located in the extreme southwestern portion of the state: Los Angeles harbor (Los Angeles County), Bolsa Chica Ecological Reserve (Orange County), and San Diego Bay (San Diego County). Nests on generally low, flat, and sandy areas with little vegetation. Found in bays, harbors, estuaries, and inshore coastal waters. Rarely found inland.	**Not Expected.** No coastal wetland habitat or inshore coastal waters occur in the project site.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE MHCP Covered	Found in mid-successional riparian habitat, often where flowing water is present, but also found in dry watercourses within the desert. A structurally diverse canopy and dense shrub cover is required for nesting and foraging. Dominant species within breeding habitat includes cottonwood and willows with mule fat (*Baccharis salicifolia*), oaks (*Quercus* spp.), and sycamore (*Platanus racemosa*), and mesquite (*Prosopis glandulosa*) and arrowweed (*Pluchea sericea*) within desert habitats. The species can be tolerant of the presence of non-native species such as tamarisk.	**Not Expected.** Suitable riparian habitat not present in the project site. The species could potentially disperse across the project site from San Marcos Creek and Twin Oaks Golf Course, but suitable habitat for residence or breeding does not occur, and species was not detected during project surveys.
Mammals			
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/SSC MHCP Covered	Inhabits coastal sage scrub, grasslands, and chaparral communities, and generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates. Forage for seeds from California sagebrush, California buckwheat, lemonade berry, and grasses under shrub and tree canopies, or around rock crevices.	**Low.** Coastal sage scrub and grasslands present in the project site, but no gravelly or rocky soils occur in the project site. There are no records of this species occurring on-site, this species has not been recorded in the immediate vicinity of the project site (nearest record is approximately 3-miles away), and species was not detected during project surveys.

Species Name	Status	Habitat Associations	Potential to Occur
Townsend's big-eared bat (*Corynorhinus townsendii*)	--/SSC	Occurs throughout California but distribution is strongly correlated with the availability of caves and cave-like roosting habitat. Found in a variety of habitats with presence of caves or cave-like structures (such as buildings). In San Diego County, presumed absent from coastal areas being found more commonly in historic mining districts and boulder-strewn regions (i.e., Escondido, Lakeside, Dulzura, Jacumba, etc.).	**Not Expected.** This species may forage in the project site, but suitable caves or other structures for breeding/roosting habitat not present.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST MHCP Covered	Occurs in southern California within the San Jacinto Valley, western Riverside County, and southwestern San Bernardino County, and northwestern San Diego County at elevations between 180 to 4,100 feet. Inhabits native to open grasslands and sparse coastal sage scrub (less than 30 percent cover) on relatively flat or gently sloping ground. Dominant species include native and non-native herbaceous species such as filaree (*Erodium* spp.), non-native grasses (*Bromus* ssp.), California sagebrush, and California buckwheat.	**Not Expected.** Marginally suitable grassland and coastal sage scrub habitats occur in the project site. The habitat in the project site supports dense cover and higher than typically preferred by this species. There are no records of this species occurring on-site, this species has not been recorded in the immediate vicinity of the project site (nearest record is approximately 10-miles away) and was not detected during project surveys.
Mountain lion (*Felis concolor*)	--/-- MHCP Covered	Uncommon permanent resident found throughout California in nearly all habitats, expect xeric regions of Mojave and Colorado Deserts. Requires extensive riparian vegetation and brushy habitats with interspersed irregular terrain, rocky outcrops, and tree or brush edges. Main prey is mule deer.	**Not Expected.** Suitable riparian and shrubby habitats are not present in the project site. The site does not support the wide ranging and expansive habitats needed to support this species. The site is surrounded by development with no adjoining native habitats. There are no records of this species in the project vicinity.

Species Name	Status	Habitat Associations	Potential to Occur
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/SSC MHCP Covered	Occurs along the coastal regions of southern California. Found in arid regions preferring grasslands, agricultural fields, and sparse scrub. Typically absent from areas with high-grass or dense brush, such as closed-canopy chaparral, primarily occupying short-grass and open scrub habitats.	**Not Expected.** Suitable grassland and sparse scrub habitats occur in the project site; however, there are no records of this species occurring on-site, this species has not been recorded in the immediate vicinity of the project site (nearest record is approximately 4-miles away), and species was not detected during project surveys.
Southern mule deer (*Odocoileus hemionus fuliginata*)	--/-- MHCP Covered	Found throughout California lacking from only completely urbanized areas and the desert floor. Distribution determined by vegetation type, water availability, and quality and quantity of foraging habitat. Inhabits a wide array of habitats from grasslands, meadows, coastal sage scrub, chaparral, riparian and montane forests. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.	**Not Expected.** Suitable cover not present in the project site. There are no records of this species within 1-mile of the site, and the project site is surrounded by development with no adjoining native habitats.
Pacific pocket mouse (*Perognathus longimembris pacificus*)	FE/SSC NE	Occurs on fine-grained, sandy, or gravelly substrates in coastal strand, coastal dunes, river alluvium, and coastal sage scrub growing on marine terraces.	**Not Expected.** No suitable coastal or riverine habitats occur in the project site. Coastal sage scrub occurring in the project site is substantially disturbed and does not occur on marine terraces. This species is known to only occur in a few remaining locations immediately along the coastline. This species has not been recorded in the vicinity of the project site (nearest record is approximately 8 miles away) and species was not detected during project surveys.

Species Name	Status	Habitat Associations	Potential to Occur
American badger (*Taxidea taxus*)	--/SSC	Uncommon, permanent resident found through California, except for the extreme north coast areas. Associated with large blocks of undeveloped land composed of open valleys, alluvial fans, meadows, grasslands, and sandy desert. Dens function as sites for resting and parturition. Friable, easily crumbled soils are important for denning.	**Not Expected.** The project site does not support the wide ranging and expansive habitats needed to support this species. The project site is surrounded by development with no adjoining native habitats. There is a historic record of the species in the project site with no corresponding date and was likely prior to surrounding development. No evidence of this species was detected during project surveys.

[1] Listing codes are as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; CE = Candidate Endangered; R = Rare; BCC = Federal Bird of Conservation Concern; SSC = State Species of Special Concern; FP = State Fully Protected; WL = Watch List

MHCP Covered: Proposed as a Covered Species under the Draft North County Multiple Habitat Conservation Program (MHCP). NE = Listed as a Narrow Endemic Species under the Draft North County Species MHCP.

Critical Population: A critical population of this species is identified in the project site in the Draft North County MHCP (AMEC Earth & Environmental et al. 2003).

[2] Potential to Occur is assessed as follows: **None**: Species is so limited to a particular habitat that it cannot disperse on its own, and habitat suitable for its establishment and survival does not occur in the project site; **Not Expected**: There are no present or historical records of the species occurring on or in the immediate vicinity of the project site. The species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur; **Low**: Suitable habitat is present in the project site and there is a historical record of the species in the project vicinity, but no sign of the species was observed during surveys. Existing conditions such as elevation, species composition, density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, and/or isolation may substantially reduce the possibility that the species may occur; **Moderate:** Diagnostic habitats associated with the species occur on or adjacent to the project site, but there is not a recorded occurrence of the species within the immediate vicinity. Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity; **High**: Suitable habitat associated with the species occurs in the project site and the species has been recorded recently on or near the project site, but was not observed during biological surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the project site.