Appendix B

Biological Technical Report

HELIX Environmental Planning

Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project

Biological Technical Report

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TABLE OF CONTENTS

Section **Page**

1.0 INTRODUCTION 1

2.0 SITE AND PROJECT DESCRIPTION 1

3.0 METHODS AND LIMITATIONS 3

3.1 Literature Review 3
3.2 General Biological Survey 3
3.3 Focused Species Surveys 4
3.3.1 Western Burrowing Owl Habitat Assessment 4
3.4 Survey Limitations 4
3.5 Nomenclature 4

4.0 EXISTING CONDITIONS 4

4.1 General Land Uses 4
4.2 Disturbance 4
4.3 Topography and Soils 5
4.4 Vegetation Communities 5
4.4.1 Non-Native Vegetation 5
4.4.2 Disturbed Habitat 5
4.4.3 Developed – *Isocoma menziesii* 6
4.4.4 Developed 6
4.5 Plants 6
4.6 Animals 6
4.6.1 Invertebrates 6
4.6.2 Vertebrates 6

5.0 SENSITIVE RESOURCES 7

5.1 Sensitive Vegetation Communities 7
5.2 Special-Status Plant Species 7
5.2.1 Special-status Plant Species with Potential to Occur 7
5.3 Special-Status Animal Species 7
5.3.1 Special-status Animal Species with Potential to Occur 8
5.4 Jurisdictional Waters and Wetlands 9
5.5 Wildlife Corridors and Linkages 9

6.0 REGIONAL CONTEXT AND REGULATORY ISSUES 9

6.1 Regional Planning Context 9
6.2 Applicable Regulations 10
6.2.1 Federal Government 10
6.2.2 State of California 11

TABLE OF CONTENTS (cont.)

Section **Page**

7.0 IMPACT ANALYSIS 13

7.1 Direct Impacts 13
7.1.1 Vegetation Communities 13
7.1.2 Special-status Plant Species 13
7.1.3 Special-status Animal Species 13
7.1.4 Nesting Birds 14
7.2 Indirect Impacts 14
7.2.1 Construction Noise 14
7.2.2 Fugitive Dust 15
7.2.3 Water Quality 15
7.2.4 Errant Construction Impacts 16

8.0 MITIGATION MEASURES 16

8.1 Sensitive Vegetation Communities 16
8.2 Jurisdictional Areas 16
8.3 Sensitive Animal Species and Nesting Birds 16
8.4 Indirect Impacts 18

9.0 FEDERAL CONFORMANCE ANALYSIS FOR BIOLOGICAL RESOURCES ISSUES 19

9.1 Issue 1: Federal Endangered Species Act, Section 7 19
9.1.1 Mitigation Measures 20
9.1.2 Conclusion 20
9.2 Issue 2: Magnuson-Stevens Fishery Conservation And Management Act, Essential Fish Habitat 20
9.2.1 Mitigation Measures 20
9.2.2 Conclusion 20
9.3 Issue 3: Coastal Zone Management Act 20
9.3.1 Mitigation Measures 21
9.3.2 Conclusion 21
9.4 Issue 4: Migratory Bird Treaty Act 21
9.5 Issue 5: Protection Of Wetlands 21
9.6 Issue 6: Wild and Scenic River Act 21

10.0 CERTIFICATION/QUALIFICATION 22

11.0 REFERENCES 23

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

A Plant Species Observed
B Animal Species Observed or Detected
C Special-Status Plant Species Observed or with Potential to Occur
D Special-Status Animal Species Observed or with Potential to Occur

LIST OF FIGURES

No.	Title	Follows Page
1	Regional Location	2
2	USGS Topography	2
3	Aerial Vicinity	2
4	Draft City of Oceanside MHCP Subarea Plan Designations	2
5	Soils	6
6	Vegetation and Sensitive Resources	6
7	Vegetation and Sensitive Resources/Impacts	14

LIST OF TABLES

No.	Title	Page
1	Biological Survey	3
2	Existing Vegetation Communities/Land Cover Types	5
3	Vegetation Community Impacts	13

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ACRONYMS AND ABBREVIATIONS

AFY	acre-feet per year
AMSL	average mean sea level
BMP	Best Management Practice
BTR	Biological Technical Report
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
City	City of Oceanside
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
FC	federally listed candidate
FE	federally listed endangered
FESA	Federal Endangered Species Act
FT	federally listed threatened
HELIX	HELIX Environmental Planning, Inc.
HCP	Habitat Conservation Plan
MBGPF	Mission Basin Groundwater Purification Facility
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MHCP	Multiple Habitat Conservation Program
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NPPA	Native Plant Protection Act
RO	reverse osmosis
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAP	Subarea Plan
sf	square-foot
SR	State Route
TSRO	third stage reverse osmosis

ACRONYMS AND ABBREVIATIONS (cont.)

USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Society

1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Technical Report (BTR) for the Mission Basin Groundwater Purification Facility (MBGPF) Brine Minimization and Production Well Expansion Project (Project) located in the City of Oceanside, San Diego County, California.

The purpose of this report is to document the existing biological conditions within the project site and provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) by the City of Oceanside (City) Planning Division.

2.0 SITE AND PROJECT DESCRIPTION

The project site includes two locations, the City's existing MBGPF site and a new production well site, both in northern San Diego County in the City of Oceanside along State Route (SR) 76 (Figure 1, *Regional Location*). Both locations are situated within Section 18, Township 11 South, and Range 4 West of the U.S. Geological Survey (USGS) San Luis Rey topographic quadrangle map (Figure 2, *USGS Topography*). The MBGPF site is located at 215 Fireside Street, approximately 0.4 mile north of State Route (SR-) 76 (Figure 3, *Aerial Vicinity*). The proposed production well site is located approximately 0.5 mile south of the MBGPF, along Mission Avenue, and immediately east of the City's Fire Station No. 7, which is located at 3350 Mission Avenue (Figure 3). The proposed production well site is triangular in shape and is bordered by SR 76 to the north, Foussat Road to the west, and Mission Avenue to the southeast (Figure 3). The site occurs within the boundaries of San Diego's regional Multiple Habitat Conservation Program (MHCP) within the draft Oceanside Subarea Plan (Figure 4, *Draft City of Oceanside MHCP Subarea Plan Designations*), although it should be noted that the City has decided not to pursue adopting the Subarea Plan. The project site is currently partially developed and partially vacant, with land use and zoning designations of general commercial and limited industrial.

The project is proposed by the City to improve production and increase utilization of the existing MBGPF. The City has a water portfolio that includes local supplies extracted from the Mission Groundwater Basin (MGB) through a system of eight groundwater production wells. Water extracted from the MGB is treated using reverse osmosis (RO) processes at the City's MBGPF (previously known as the Mission Basin Desalting Facility) for distribution to local users, providing 15 percent of the City's water supply.

Currently, the MBGPF, which was constructed in 1992, has a capacity of 6.4 million gallons per day (MGD). However, the capacity is not being fully utilized, with the average production since 2002 being 3.5 MGD and peak production not exceeding 5.7 MGD, due to declining capacities at the existing well sites and overall wellfield in recent years. In addition, the current MBGPF RO process operates at a capacity of 75 percent water recovery, producing 1.5 MGD of brine (water with high salt concentrations). This brine is currently discharged to a 24-inch-diameter outfall line that conveys flow to the Pacific Ocean through the Oceanside Ocean Outfall.

With the proposed project, the City aims to increase the utilization of the existing 6.4 MGD capacity of the MBGPF to bolster its supply of locally sourced water by (1) reducing the volume of brine produced and thus increasing the amount of product water recovered at the MBGPF and (2) increasing the

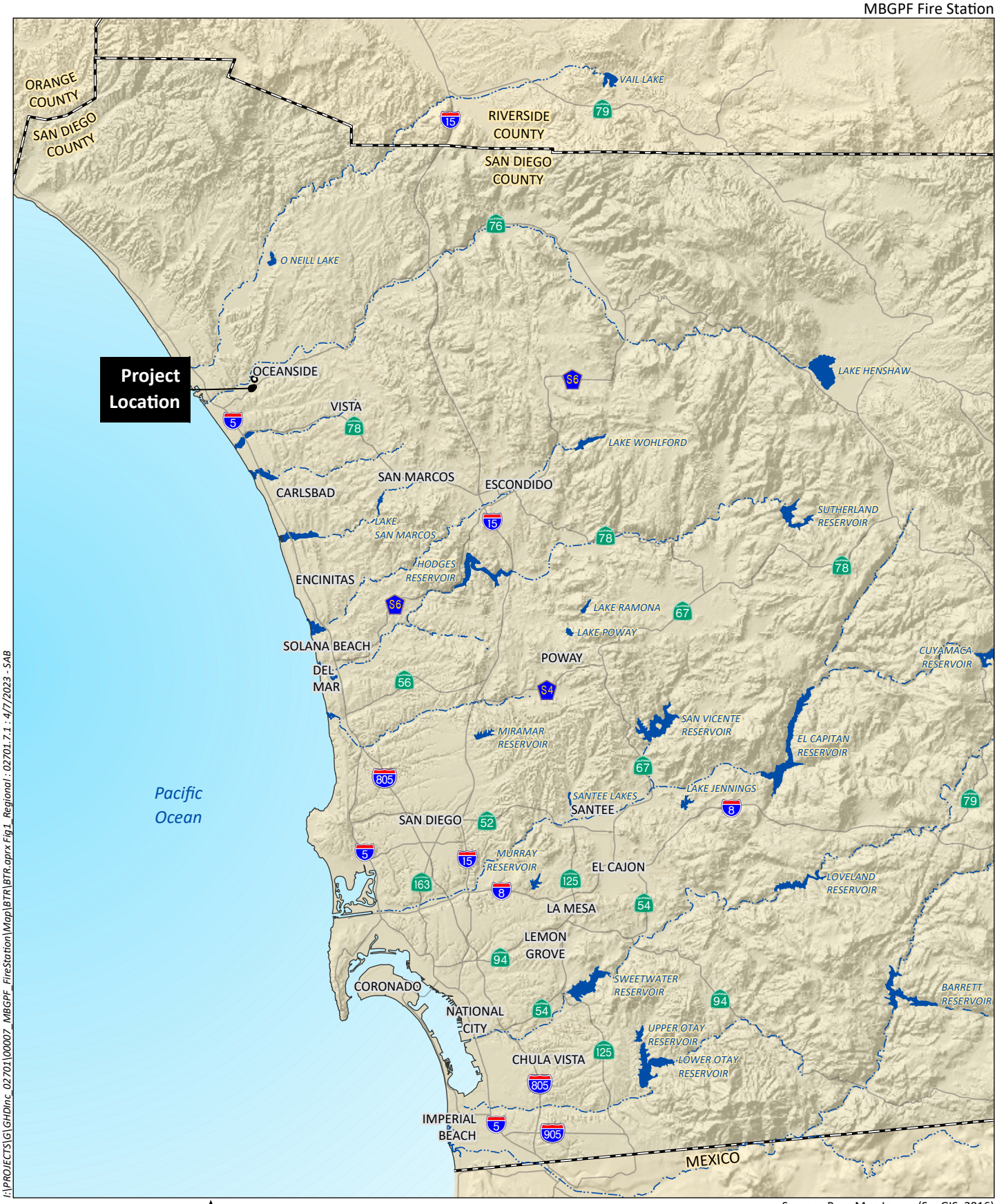
amount of groundwater supplied to the MBGPF through the installation of a new groundwater production well. The intent of the project is to increase MBGPF production by an estimated 881 acre-feet per year (AFY), including 431 AFY from the brine minimization and 450 AFY from the well expansion.

To reduce the volume of brine and increase the amount of product water recovered, the project would provide a third stage RO (TSRO) train to treat the brine from the existing primary RO train. The proposed TSRO-based brine minimization system would reclaim 40 to 50 percent of the water from the brine generated by two primary RO trains, which would be replaced and upgraded as part of the project. The new TSRO system would be fed by connecting to the primary RO train brine line ahead of the valve that feeds to the outfall line, to which the brine is currently discharged. The primary RO train brine would be treated at the TSRO system, where additional product water would be extracted. The remaining brine from the TSRO system would be returned to the brine line ahead of the valve that feeds the outfall line to be discharged to the outfall.

The equipment would be located within a new 9,000-square-foot (sf) process building that would replace the existing 3,600-sf process building at the MBGPF. The new process building would be a 150-foot by 60-foot single-story, pre-engineered steel building with a wall height of approximately 19 feet. The process building would include a main process room with the new primary RO equipment, new TSRO equipment, modified RO clean-in-place system, chemical storage area, and heating, ventilation, and air conditioning equipment; storage room; workshop area; fitness room; and motor control center that contains electrical systems and equipment. Access to the MBGPF would remain the same as the existing condition, which is provided by Heritage Street.

The new groundwater production well (Well 12) would be constructed on a City-owned parcel approximately 0.5 mile south of the MBGPF, adjacent to the City's Fire Station No. 7, near Wells 10 and 11. Well 12 would be equipped with a variable speed submersible pump, and flows would be controlled hydraulically at the MBGPF. The well piping would comprise welded steel piping, a restrained flexible coupling, air release valves, gate and check valves, shut-off valves, butterfly valves with motor operators, flow meters to monitor the well's overall production, pressure sustaining valves, pressure gauges, and controls for the pump control valves. A control panel would be installed next to the wellhead and piping. A new pipeline to convey water extracted from the well would exit the well site towards Mission Avenue, head southwest within Mission Avenue towards Foussat Road, and then connect near Well 11 to the existing network of raw water piping that feeds the MBGPF. Two drain options are currently being considered if the well needs to be flushed. One option entails the installation of approximately 1,000 linear feet of 18-inch-diameter reinforced concrete pipe within Mission Avenue, connecting the well to a storm drain located adjacent to Well 11. The second option is to drain to the adjacent on-site sewer manhole. Electrical service would be provided by an existing utility service switchboard and pad-mounted transformer at the site that serves Wells 10 and 11.

In addition to the above-mentioned well structure and associated infrastructure, the Well 12 site would include a horizontal surge tank and an emergency backup generator that would be located on concrete pads and pedestals. These components would be surrounded by an eight-foot-tall concrete masonry unit enclosure measuring 25 feet by 65 feet with one 4-foot-wide personnel entry gate and two 10-foot-wide vehicular access gates. This enclosed area would be surrounded by pavement to allow for access to the well. Primary access would be provided from Mission Avenue, with an additional egress route connected to the fire station driveway that would be used by occasional large trucks that would not be able to turn around within the well site after entering from Mission Avenue.



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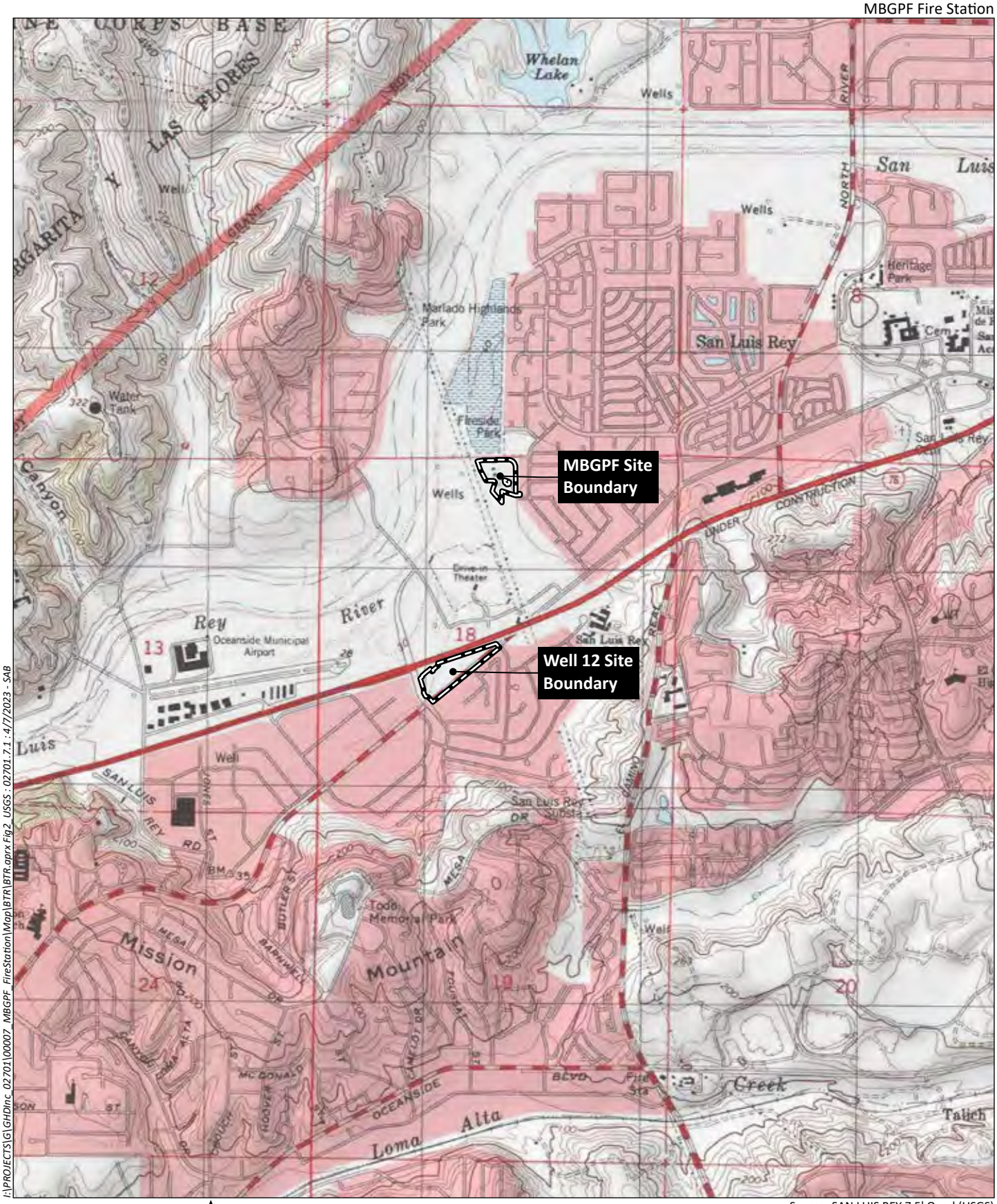
Regional Location

Figure 1



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Source: SAN LUIS REY 7.5' Quad (USGS)

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USGS Topography

Figure 2

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Source: Aerial (NearMap, 2019)

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Aerial Vicinity

Figure 3

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Draft City of Oceanside MHCP Subarea Plan Designations

Figure 4

Construction activities for upgrades to the MBGPF and installation of the new Well 12 would include site preparation, demolition of existing structures and hardscape, grading, underground utility installation, structure construction, and paving.

3.0 METHODS AND LIMITATIONS

3.1 LITERATURE REVIEW

Prior to conducting biological field surveys, HELIX conducted a review of recent aerial imagery, soil survey data (U.S. Department of Agriculture [USDA] 2022a), USGS topographic maps, U.S. Fish and Wildlife Service (USFWS) critical habitat maps (USFWS 2022a), Final MHCP plan (AMEC et al. 2003), and sensitive species information from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2022a) and USFWS database records (USFWS 2022b).

3.2 GENERAL BIOLOGICAL SURVEY

HELIX biologist Angelia Bottiani conducted a general biological survey of the existing MBGPF site on February 8, 2021, and HELIX biologist Mandy Mathews conducted a general biological survey of the proposed well site on June 20, 2022 (Table 1, *Biological Survey*). The 2022 general biological survey was completed to update the work that was originally completed by HELIX in 2021 to include the fire station component. Plant and animal species observed during the survey were noted and are presented in Appendices A and B of this report. Vegetation was mapped on a 1" = 150' scale aerial photograph. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. The locations of special-status plant and animal species incidentally observed or otherwise detected were mapped on an aerial photograph and/or using Global Positioning System technology.

Table 1
BIOLOGICAL SURVEY

Survey Date	Survey Number	Personnel	Conditions
Vegetation Mapping and Habitat Assessment – Existing MBGPF Site			
February 8, 2021	N/A	Angelia Bottiani	--
Vegetation Mapping and Habitat Assessment – Proposed Well Site			
June 20, 2022	N/A	Mandy Mathews	--

3.3 FOCUSED SPECIES SURVEYS

3.3.1 Western Burrowing Owl Habitat Assessment

HELIX biologist Mandy Mathews conducted a habitat assessment for the western burrowing owl (*Athene cunicularia hypugaea*) in 2022 in accordance with the Burrowing Owl Survey Protocol and Mitigation Guidelines (CDFW 2012). The habitat assessment area consisted of the project site plus a 500-foot buffer surrounding the project site. The habitat assessment consisted of walking through vegetation and noting burrows found within suitable habitat. Areas inaccessible on foot were viewed with the aid of binoculars. Although two burrows of suitable size were noted within the project site, these burrows were underneath or adjacent to a mat of freeway iceplant (*Carpobrotus edulis*) and were occupied by California ground squirrels (*Otospermophilus beecheyi*). Additionally, no burrowing owl sign (e.g., pellets, feathers, whitewash) was observed on-site. Therefore, burrowing owl are presumed to be absent from the project site.

3.4 SURVEY LIMITATIONS

Noted 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 utilize the project site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed.

3.5 NOMENCLATURE

Nomenclature follows Jepson eFlora (2023) and Baldwin et al. (2012) for plants, American Ornithological Society (2022) for birds, Society for the Study of Amphibians and Reptiles (2019) for reptiles, Bradley et al. (2014) for mammals, and Oberbauer (2008) for vegetation communities. Plant species status is taken from the California Native Plant Society (CNPS 2023). Animal species status is from CDFW (2022b and 2022c). Soils information was taken from the Natural Resource Conservation Service (USDA 2022).

4.0 EXISTING CONDITIONS

4.1 GENERAL LAND USES

The proposed well site is currently developed with a fire station, and areas to the east of the fire station show signs of regular maintenance. The MBGPF site is currently developed with the existing RO facilities. The project site is immediately bounded by roads and developments in all directions.

4.2 DISTURBANCE

The project sites are subject to noise disturbance from SR 76 and surrounding residential development, as well as the dumping of trash and other human access. Undeveloped portions of the project site appear subject to regular maintenance (mowing, trimming, etc.). Some portions of the site have scattered trash throughout.

4.3 TOPOGRAPHY AND SOILS

Elevations within the project sites range from approximately 25 feet above mean sea level (AMSL) to 60 feet AMSL. The project sites are generally flat. The MBGPF site is flat, whereas the proposed well site has a gradual slope downward from the north along SR 76, towards the southeast along Mission Avenue. Two soil types are mapped on the project site (Figure 5, *Soils*): Grangeville fine sandy loam (0 to 2 percent slopes) and Tujunga sand (0 to 5 percent slopes). The Grangeville soil series consists of very deep, somewhat poorly drained soils, while the Tujunga sand series consists of very deep, somewhat excessively drained soils (USDA 2022).

4.4 VEGETATION COMMUNITIES

Four vegetation communities/land cover types occur on the project site: non-native vegetation, disturbed habitat, and developed land (including *Isocoma menziesii*-dominated; [Table 2, *Existing Vegetation Communities/Land Cover Types*; Figure 6, *Vegetation and Sensitive Resources*]).

Table 2
EXISTING VEGETATION COMMUNITIES/LAND COVER TYPES

MHCP Habitat Group	Vegetation Community/ Land Cover Type	Acreage[1]
Uplands		
F	Non-native Vegetation	0.61
F	Disturbed Habitat	2.49
F	Developed – *Isocoma menziesii*	0.27
F	Developed Land	10.52
	Uplands Subtotal	**13.89**
	Total	**13.89**

[1] Habitat rounded to the nearest hundredth acre; total reflects rounding.

4.4.1 Non-Native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. Within the study area, non-native vegetation was dominated by one or more of the following species: freeway iceplant, castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), and Peruvian pepper tree. This habitat type comprises approximately 0.61 acre within the existing MBGPF site.

4.4.2 Disturbed Habitat

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.

This vegetation community dominates the majority of undeveloped portions of the project site, consisting of such non-native, invasive plant species as short-pod mustard (*Hirschfeldia incana*), yellow star-thistle (*Centaurea melitensis*), fennel (*Foeniculum vulgare*), and Italian thistle (*Carduus*

pycnocephalus). Approximately 2.49 acres of disturbed habitat occur within the project site at both locations (Figure 6).

4.4.3 Developed – *Isocoma menziesii*

A patch of this vegetation type occurs along the western portion of the site between Foussat Road and the Oceanside Fire Department Station 7 development, which is dominated by goldenbush with scattered lavender throughout (Figure 6). It appears as though this area was once landscaped exclusively with lavender but was colonized by goldenbush, a species that can vigorously grow and establish in disturbed areas. The patch of goldenbush-dominated habitat encompasses approximately 0.27 acre and was considered developed lands because it is within the landscaped area of the fire station.

4.4.4 Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained.

Developed land on the project site consists of the existing RO facility, the City of Oceanside Fire Department Station 7 and its associated landscaping, and a potentially jurisdictional concrete-lined channel that runs around the north and eastern edge of the existing RO facility (Figure 6). Developed land comprises approximately 10.52 acres.

4.5 PLANTS

A total of 49 plant species were observed during the 2022 general biological survey. Of these, 32 are non-native species (65 percent). A list of plant species observed on the project site is provided in Appendix A.

4.6 ANIMALS

The following is a brief discussion of wildlife species detected on-site. In all, 24 animal species were observed or detected during the 2022 general biological survey. Appendix B provides a list of these species.

4.6.1 Invertebrates

A total of nine invertebrate species were observed on the project site, including native butterflies such as checkered white (*Pontia protodice*), monarch (*Danaus plexippus*), and funereal duskywing (*Erynnis funeralis*). Non-native invertebrate species included Argentine ant (*Linepithema humile*) and European honeybee (*Apis mellifera*).

4.6.2 Vertebrates

Three vertebrate groups were detected during project site surveys: reptiles, birds, and mammals. Birds exhibit the highest vertebrate diversity on the project site. Bird species most commonly observed include Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), bushtit (*Psaltriparus minimus*), house finch (*Carpodacus mexicanu*s), and lesser goldfinch (*Carduelis psaltria*). Mammal species detected on the project site include desert cottontail (*Sylvilagus audubonii*), California

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Source: Aerial (NearMap, 2019)

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Soils

Figure 5

MBGPF Fire Station

Lancer Ave
Warner St
Heritage St
Fireside St
Hyatt Ave
Heritage St
Foussat Rd
Foussat St
Ocean Pl
76
Mission Ave
Frontier Dr
Flamingo Dr
Foussat St
Hacienda Dr
Tropicana Dr
Mint Pl
Copperwood Way
Dunes Pl
Foussat Rd

Project Site

Vegetation

Developed /Isocoma Menziesii

Non-native Vegetation

Disturbed Habitat

Developed

Species Observations

Monkarch

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0 250 Feet

Source: Aerial (NearMap, 2019)

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Vegetation and Sensitive Resources

Figure 6

ground squirrel, and Botta's pocket gopher (*Thomomys bottae*). Smaller rodents, such as mice and rats, also are expected to occur, as are other medium-sized mammals, such as striped skunk (*Mephitis mephitis*) and raccoon (*Procyon lotor*). Nocturnal species, such as owls and bats, could be present but were undetected during the daytime surveys.

5.0 SENSITIVE RESOURCES

5.1 SENSITIVE VEGETATION COMMUNITIES

A habitat is considered sensitive if it supports 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, or is regulated by the USFWS, U.S. Army Corps of Engineers (USACE), CDFW, or the City.

The project site does not support any sensitive vegetation communities.

5.2 SPECIAL-STATUS PLANT SPECIES

Special-status plant species include species that are listed as threatened or endangered, proposed for listing, or are candidate species by the federal (USFWS) or state (CDFW) governments; or those with a California Rare Plant Rank 1 through 4 as designated by the CNPS (CNPS 2022). Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be relatively abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations. Plant descriptions are from the Jepson eFlora (2023).

No sensitive plant species were observed on the project site during the 2021 or 2022 general biological survey. The highly disturbed nature of much of the project site, combined with the restricted presence of suitable soil types for many species, limits the potential for rare plants to occur.

5.2.1 Special-status Plant Species with Potential to Occur

A total of seven special-status plant species known from within two miles of the project site were analyzed for their potential to occur within the project site (Appendix C). No special-status plant species have a moderate or high potential to occur within the project site due to a lack of suitable soil or habitat types.

5.3 SPECIAL-STATUS ANIMAL SPECIES

Special-status animal species include those that have been afforded special-status and/or recognition by the USFWS, CDFW, and/or the City. 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 with the potential to occur are presented in Appendix D.

One special-status animal species was observed or detected on the project site during the 2022 general biological survey: monarch butterfly.

Monarch (*Danaus plexippus*)
Status: FC[1]/Special Animal
The monarch butterfly is found from southern Canada south through the United States into Central and South America. The species breeds in areas that have a suitable abundance of their host plant, milkweed (*Asclepias* sp.). The population west of the Rocky Mountains migrates to, and overwinters along, the coast of central and southern California into Baja Mexico (Tuskes and Brower 1978). The species inhabits a wide variety of open habitats, including fields, meadows, marshes, and roadsides, and roosts on wind-protected tree groves (such as eucalyptus, Monterey pine [*Pinus radiata*], cypress [*Hesperocyparis* sp.]), with nectar and water sources nearby. While the monarch does not currently have formal legal protection, populations are declining, and the USFWS is currently reviewing a petition to list this species under the federal Endangered Species Act. CDFW also tracks the known communal overwintering sites for this species.

One individual was observed flying through the site during the 2022 general biological survey in the central portion of the project site within disturbed habitat (Figure 6). This individual was observed during the summer; the project site is not expected to support important overwintering habitat for this species. The project site also lacks milkweed, the host plant for breeding.

5.3.1 Special-status Animal Species with Potential to Occur

A total of 23 special-status animal species known from within two miles of the project were analyzed for their potential to occur within the project site (Appendix D). Of these, two species that were not observed during the 2022 general biological survey have a high or moderate potential to occur on-site: least Bell's vireo (*Vireo bellii pusillus*) and Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*). No other special-status animal species have a moderate or high potential to occur due to the lack of suitable habitat and a lack of connectivity to habitat areas/urbanized nature of the project setting.

Least Bell's Vireo (*Vireo bellii pusillus*)
Status: FE/SE
Least Bell's vireo is a federal and state endangered species found throughout much of San Diego County during the breeding season. It also occurs in smaller numbers in foothills and mountains. Breeding habitat consists of early to 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 are required for nesting and foraging. Dominant species within breeding habitat include cottonwood and willows with mule fat, oaks (*Quercus* sp.), and sycamore (*Platanus* sp.). This species can be tolerant of the presence of non-native species such as saltcedar.

Although this species was not observed during the general biological surveys, least Bell's vireo is known to breed immediately north of the existing RO facility within the San Luis Rey River corridor. No habitat known to support this species occurs within the project site.

Belding's Orange-Throated Whiptail (*Aspidoscelis hyperythra beldingi*)
Status: --/WL
Belding's orange-throated whiptail is found within the southwestern portion of California in southern San Bernardino, western Riverside, Orange, and San Diego Counties on the western slopes of the Peninsular ranges below 3,500 feet. Suitable habitat includes coastal sage scrub, chaparral, juniper

[1] Federal Candidate Species

woodland, oak woodland, and grasslands, along with alluvial fan scrub and riparian areas. The occurrence of the species is typically correlated with the presence of perennial plants to provide a food base for its major food source, termites.

Although this species was not observed during the general biological surveys, suitable habitat, including perennial plants, occurs to support this species.

5.4 JURISDICTIONAL WATERS AND WETLANDS

Jurisdictional waters and wetlands include those resources subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the federal Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, or CDFW pursuant to Sections 1600 *et seq*. of the California Fish and Game (CFG) Code.

Based on the results of the general biological survey, and the review of aerial imagery and historic disturbances on the property, there are no potentially jurisdictional resources regulated by the USACE, RWQCB, and/or CDFW within the project boundary.

5.5 WILDLIFE CORRIDORS AND LINKAGES

The project site is not part of a regional wildlife corridor or linkage. The proposed well site is surrounded by roads and development on all sides and is not shown as a Biological Core and Linkage Area on Figure 2-4 of the regional MHCP plan (AMEC et al. 2003). The MBGPF site is adjacent to development to the east, a powerline corridor and vacant land to the south and west, with a construction site beyond the powerlines to the west, and park land to the north. While wildlife could use the powerline corridors and portions of the site to travel through the area, they would be unlikely to pass through the developed portion of the site where improvements are proposed.

6.0 REGIONAL CONTEXT AND REGULATORY ISSUES

6.1 REGIONAL PLANNING CONTEXT

The project site was evaluated for its overall biological quality and regional importance under the MHCP Subarea Plan (Figure 4). Per review of the regional MHCP Plan, the site is mapped as developed per MHCP Figure 2-3 Composite Habitat Value; is not part of a biological core and/or linkage area; is not within proposed hardline or softline conservation lands as shown on MHCP Figure 3-1 Focused Planning Area; and is outside of the general area identified for core gnatcatcher conservation (AMEC et al. 2003). The site does not have regional importance under the MHCP, and its overall biological quality is low because it is a small site that is mostly developed and disturbed, and the proposed well site is surrounded on all sides by existing developments and roadways. The site is mapped as Wildlife Corridor Planning Zone, and the MBGPF site is adjacent to a powerline corridor identified as a hardline preserve by the draft Subarea Plan, with a portion of the site mapped as Designated Preserves (Figure 4). However, the portion of the site where improvements are proposed is developed and does not function as wildlife habitat or a wildlife corridor.

Although the site was not identified as having importance for preserve design or facilitating wildlife movement per the regional MHCP, small, isolated stands of natural vegetation communities can still play a role in supporting ecosystem functions on a smaller scale by providing patches of wildlife habitat for common species, including foraging and nesting resources for urban-adapted birds, nectaring resources for butterflies, and temporary refuge for urban-adapted mammals such as cottontail rabbits and raccoons.

6.2 APPLICABLE REGULATIONS

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

6.2.1 Federal Government

Federal Endangered Species Act

Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species, in which case, 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 (formal or informal) is required when there is a nexus between endangered species' use of a site and there is an associated federal action for a proposed impact (e.g., the USACE would initiate a Section 7 consultation with the USFWS for impacts proposed to USACE jurisdictional areas that may also affect listed species or their critical habitat). Critical habitat designations affect only Federal agency actions or federally funded or permitted activities. Critical habitat designations do not affect activities by private landowners if there is no Federal "nexus"—that is, no Federal funding or authorization. Section 10(a) allows the issuance of permits for incidental take of endangered or threatened species with the preparation of a Habitat Conservation Plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

The western half of the MBGPF site is USFWS-designated critical habitat for the least Bell's vireo (federally and state-listed endangered), and a narrow strip of critical habitat for coastal California gnatcatcher (federally threatened; *Polioptila californica californica*) critical habitat crosses the western portion of the MBGPF site (USFWS 2022a). No federally listed species are known to occur on the project site, although least Bell's vireo is known to occur within riparian habitat along the San Luis Rey River. The project site lacks suitable coastal sage scrub habitat to support the coastal California gnatcatcher. Any impacts to federally listed as threatened or endangered species are considered a "take" and require permitting with federal agencies under the existing federal regulations.

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 during the nesting season (generally February 1 to August 31). In addition, the USFWS commonly places restrictions on the disturbances allowed near active raptor nests.

Clean Water Act and Rivers and Harbors 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. A California RWQCB Section 401 Water Quality Certification must also be obtained before any authorization from the USACE is received.

6.2.2 State of California

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 (or 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.

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 CFG 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.

As noted above, the least Bell’s vireo is a state-listed endangered species, and indirect noise impacts to the species would require conformance with the CESA. For this project, mitigation measures are proposed to avoid indirect noise impacts to listed birds. If the project were to significantly impact state-listed species, conformance would be expected to occur through the issuance of a Section 2080.1 consistency determination by the CDFW.

Potential impacts to two sensitive lizards, orange-throated whiptail (CDFW watch list) and coastal whiptail (California species of special concern), would not require permitting. Impacts to these species would not be significant, as these species are highly mobile and should be able to move into adjacent habitat during construction, and habitat mitigation would compensate for losses to a small amount of habitat.

Native Plant Protection Act

Sections 1900–1913 of the CFG Code (Native Plant Protection Act; NPPA) direct the CDFW to carry out the state legislature's intent to "…preserve, protect, and enhance endangered or rare native plants of this state." The NPPA gives the CFG Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take.

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.

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 will not be disturbed, subject to approval by CDFW and/or USFWS.

Natural Communities Conservation Planning Act

The 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 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 have an adopted MHCP Subarea Plan;

thus, take authorization under the NCCP program/MHCP regional plan for proposed covered species is not currently available for projects within the City of Oceanside.

7.0 IMPACT ANALYSIS

The proposed project involves the installation of a pipeline and well and the expansion of the existing RO facility. Construction of the project would result in minor impacts to sensitive upland vegetation communities (Figure 7, *Vegetation and Sensitive Resources/Impacts*).

7.1 DIRECT IMPACTS

7.1.1 Vegetation Communities

Direct impacts from the development of the project total 13.89 acres to non-sensitive vegetation communities (Table 3, *Vegetation Community Impacts*). No impacts to sensitive wetland or upland communities would occur.

Table 3
VEGETATION COMMUNITY IMPACTS[1]

MHCP Habitat Group	Vegetation Community	Impacts (Acres[1])
Non-Sensitive Vegetation Communities		
F	Non-native vegetation	0.61
F	Disturbed habitat	2.49
F	Developed – *Isocoma menziesii*	0.27
F	Developed land	10.52
	Subtotal Non-sensitive Uplands:	**13.89**
	Total	**13.89**

[1] Habitat rounded to the nearest hundredth acre; total reflects rounding.

Impacts to non-sensitive vegetation communities are not considered significant. No mitigation is required for impacts to non-native vegetation, disturbed habitat, or developed land (including the goldenbush-dominated landscaped area) on the project site.

7.1.2 Special-status Plant Species

No sensitive plant species were identified during the 2021 or 2022 general biological surveys, and no other sensitive plant species have a high potential to occur on the project site; therefore, no significant impacts to sensitive plant species are anticipated.

7.1.3 Special-status Animal Species

The project would not have a significant impact on monarch butterfly, a Federal candidate and CDFW-special interest species, as the project site is not expected to support important overwintering habitat for this species given the lack of large stands of eucalyptus woodland on-site. Monarch butterfly is known to utilize many habitat types and locations during the non-wintering season and is frequently observed in developed or landscaped areas as well as more rural sites. Two other sensitive species, least

Bell's vireo and Belding's orange-throated whiptail, have a moderate and high potential to occur within 500 feet of the project site, respectively. As Belding's orange-throated whiptail is highly mobile and project impacts are small in scale, no significant impacts to this species are anticipated. No direct impacts are anticipated to occur to least Bell's vireo or their nesting habitat; however, indirect impacts could occur to this species if construction occurs during the breeding season (March 15 through September 15).

7.1.4 Nesting Birds

Existing vegetation within the project site that would be removed by the project provides potential nesting habitat for some bird species. Nesting birds are protected under the federal MBTA and CFG Code. If the project were to begin construction during the nesting season (generally February 15 to August 31 for most birds and January 15 through July 15 for raptors), a potentially significant impact could occur to nesting birds or raptors. Thus, mitigation measures would be implemented to avoid direct impacts to nesting birds, including raptors, protected by the MBTA and CFG Code, as discussed in Section 8.0.

7.2 INDIRECT IMPACTS

Indirect impacts consist of secondary effects to biological resources that occur over short or long periods of time due to the implementation of a project. Although biological resources may not initially be directly impacted, over time, they may be affected indirectly due to the relative proximity of development. While the magnitude of an indirect impact may be the same as that of a direct impact, the effect usually takes longer to become apparent. The extent of indirect construction impacts varies, but in general, potential indirect impacts are considered significant where they occur to sensitive animals (i.e., nesting raptors) or to sensitive vegetation communities such as Diegan coastal sage scrub and wetland/riparian habitats.

Examples of types of construction and post-construction indirect impacts include adverse effects on water quality, the introduction of non-native plant species, human intrusion/edge effects, construction noise effects on wildlife, construction-generated dust, night lighting effects on wildlife, errant construction impacts into sensitive habitats outside the approved project footprint, and brush management in native habitats. Of these, construction noise, fugitive dust, water quality, and errant construction impacts are the only indirect impacts with the potential to result in significant impacts from the implementation of the proposed project. They are further discussed below in Sections 7.2.1 through 7.2.4.

As the project site is already partially developed and situated within an urbanized area with existing lighting, human encroachment, and non-native plant species, the implementation of the proposed project would not result in adverse impacts from night lighting during construction, human intrusion/edge effects, or non-native plant species. The project also would not require brush management.

7.2.1 Construction Noise

Construction-related noise from such sources as trenching and grading could be a temporary impact to wildlife. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from construction activities, which could lead to reduced reproductive success and

Source: Aerial (NearMap, 2019)

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HELIX Environmental Planning

Vegetation and Sensitive Resources/Impacts

Figure 7

increased mortality. These indirect impacts would be considered significant if state- or federally-listed species or nesting raptors, were affected.

Construction noise and its impact on nesting birds are dependent on the equipment used and the type of work being completed. In addition, topography, line-of-sight, and proximity all can influence noise levels from construction equipment. Construction-related noise impacts to least Bell's vireo are potentially significant. The least Bell's vireo is generally thought to be more sensitive to noise than other species. For this report, a threshold limit of a 60 dBA or higher hourly average of construction-generated noise impacts to least Bell's vireo habitat during the breeding season would be considered significant. The breeding season for the least Bell's vireo is March 15 through September 15.

Raptors and their nests are protected from direct take by the federal MBTA. The eucalyptus and tamarisk trees on the project site have the potential to support tree-raptor nests. An impact from construction noise or dust, for example, to an active raptor nest would be considered significant if it affects a raptor's ability to complete its breeding cycle. Generally, any construction activity occurring within 500 feet of an active raptor nest would constitute a significant effect. Mitigation measures would be implemented to reduce potential impacts to nesting raptors to less than significant, see Section 8.0.

7.2.2 Fugitive Dust

If not managed effectively, fugitive dust produced by construction could disperse into native habitat outside the impact area. The resulting dust covering could, in turn, reduce native plant productivity, displacing native vegetation, reducing diversity, and affecting wildlife dependent on the vegetation. To avoid indirect impacts to plants and wildlife from fugitive dust the project would implement standard air quality control measures to effectively reduce emissions during construction, as required by the grading permit. The control measures may include, but are not limited to, the application of soil stabilizers (water) to disturbed areas, termination of soil disturbance during high wind events, and covering material stockpiles. Because active construction areas and unpaved surfaces would be watered and controlled pursuant to grading permit requirements to minimize dust generation, fugitive dust impacts on biological resources would be less than significant, and no project-specific mitigation measure is required.

7.2.3 Water Quality

Water quality within the native habitats on the project site could be adversely affected by potential surface runoff and sedimentation during construction. Decreased water quality from these sources could adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these riparian resources on or downstream of the site. Degraded surface water quality has the potential to be a significant impact during construction. Additionally, the use of petroleum products during construction (i.e., fuels, oils, lubricants) could potentially contaminate surface water and adversely affect biological resources on or downstream of the project site.

The project will comply with storm water regulations and implement best management practices during construction to control runoff from the project site, and will ensure that the use of petroleum projects (i.e., fuels, oils, and lubricants) are properly managed to avoid contamination of surface or ground water. Because the project is too small to require a Stormwater Pollution Prevention Plan, a mitigation measure is included herein to ensure that water quality impacts to biological resources during construction would be less than significant (see Section 8.0).

7.2.4 Errant Construction Impacts

Native habitat outside the project footprint could be inadvertently impacted during construction if not adequately identified for the construction personnel. If inadvertent impacts to native habitat outside of the project limits were to occur, a potentially significant impact could result depending on the extent of the impact. Mitigation measures, as discussed in Section 8.0, would be implemented to ensure errant construction impacts do not occur.

8.0 MITIGATION MEASURES

The mitigation measures proposed in this section are for significant impacts to sensitive biological resources as defined and discussed in Section 7.0 of this report. To help ensure that all of the mitigation measures are followed, a biologist shall regularly monitor construction activities.

8.1 SENSITIVE VEGETATION COMMUNITIES

Because there are no proposed impacts to sensitive vegetation communities, no mitigation is required.

8.2 JURISDICTIONAL AREAS

Because there are no proposed impacts to potentially jurisdictional areas, no mitigation is required.

8.3 SENSITIVE ANIMAL SPECIES AND NESTING BIRDS

Impact 8.3.1.a The proposed project could result in direct impacts to nesting raptors or migratory birds, if removal of suitable habitat is conducted during the species' breeding season (i.e., January 15 through July 15 for raptors and February 15 to August 31 for general nesting birds).

MM 8.3.1.a In order to avoid violation of the federal MBTA and California Fish and Game Code, construction activities such as grubbing or clearing of vegetation shall occur outside of the general avian breeding season (January 15 to July 15 for raptors and February 15 to August 31 for general nesting birds). If grubbing or clearing must occur during the general avian breeding season within 300 feet of general nesting bird habitat or 500 feet of nesting raptor habitat, a Qualified Biologist shall conduct a pre-construction nesting bird survey no more than three days prior to the commencement of the activities to determine if active bird nests are present on or near the construction and/or staging areas (including a 100-foot buffer) Survey results shall be submitted to the City. If there are no nesting birds (including nest building or other breeding/nesting behavior) within this area, clearing and grubbing shall be allowed to proceed. If grubbing and/or clearing activities are delayed or suspended for more than seven days during the breeding season, surveys shall be repeated prior to re-initiating work. If active nests or nesting birds are observed during pre-construction surveys, a suitable avoidance buffer from the nests shall be determined by the Qualified Biologist based on species, location, and extent and type of planned construction activity. The Qualified Biologist shall flag buffers around the active nest buffers, and clearing and grubbing activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged,

with results submitted to the City. Should removal of suitable nesting habitat (i.e., trees and vegetation) be required, it shall be conducted outside of the breeding bird season to avoid impacts to nesting birds.

Impact 8.3.1.b Construction noise impacts to least Bell's vireo habitat during the breeding season that meet or exceed 60 dBA hourly average or ambient levels (whichever is greater) could indirectly affect nesting success.

MM 8.3.1.b If construction activities are scheduled to occur during the least Bell's vireo breeding season (March 15 through September 15), a Qualified Biologist shall conduct pre-construction surveys to determine the presence or absence of this species within 300 feet of work. The final survey shall not be completed more than three days prior to the beginning of construction, clearing, grubbing, or grading activities. If it is determined at the completion of pre-construction surveys that active nests belonging to this species are absent within 300 feet of construction, construction shall be allowed to proceed. If any vireos are observed nesting or displaying breeding/nesting behavior during the pre-construction surveys, construction shall be postponed within 300 feet of any location at which vireos have been observed until a Qualified Biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after September 15.

Should construction need to proceed within 300 feet of nesting vireo during the breeding season, a monitoring plan shall be prepared by a Qualified Biologist for approval by the City, CDFW, and USFWS (collectively, the "Wildlife Agencies"). The monitoring plan shall include the following tasks:

- Weekly reports (including photographs of impact areas) submitted to the City and Wildlife Agencies during project construction within 300 feet of suitable vireo nesting habitat. The weekly reports shall document that authorized vegetation impacts were not exceeded, as well as general compliance with all project conditions.
- A noise study conducted by a Qualified Acoustician prior to construction activity during the breeding season to determine the ambient noise level at occupied vireo habitat. If the ambient noise level exceeds an hourly average of 60 dBA, the ambient noise level shall be used as the threshold for noise generated by the project's construction activities. Otherwise, a 60 dBA hourly average shall be used. Construction-generated noise shall not exceed the applicable noise threshold. If the acoustician and biologist determine that the threshold is being exceeded, construction shall cease and the Qualified Biologist and City shall coordinate with the Wildlife Agencies to identify and implement measures to cease the exceedance (e.g., reduce the noise level to the ambient level or 60 dBA [whichever is greater] adjacent to habitat occupied by least Bell's vireo through the use of sound walls and/or other measures approved by the Wildlife Agencies). Violations shall be reported to the Wildlife Agencies within 24 hours of occurrence.
- Preparation of a final report by the Qualified Biologist to be submitted to the City and Wildlife Agencies within 60 days of project completion. The final report shall include as-built construction drawings with an overlay of upland habitat that was impacted or preserved, photographs of upland areas to be preserved,

and other relevant summary information documenting that authorized upland habitat impacts were not exceeded and that general compliance with all project conditions occurred. The City Planner and City Engineer shall verify the implementation of this mitigation measure.

Impact 8.3.1.c The project could result in direct or indirect impacts to nesting raptors if clearing, grubbing, or grading were to occur within 500 feet of an active raptor nest.

MM 8.3.1.c If construction activities (including vegetation removal) are proposed during the raptor breeding season (generally January 15 through July 15), one pre-construction survey shall be conducted within the project site and a 100-foot buffer by a Qualified Biologist no more than one week prior to commencement of activities to look for active raptor nests. If none are found, no further mitigation shall be required. If an active nest is found, monitoring shall be conducted by the Qualified Biologist to ensure that all construction activities remain at least 500 feet from all active raptor nests. The Qualified Biologist shall also determine when the nest becomes inactive and construction activity can move closer to the nest site. The mapped pre-construction survey results shall be submitted to the Wildlife Agencies for review and approval prior to the initiation of vegetation removal from the site. The City shall submit the final plans for the construction of the project to the Wildlife Agencies for approval at least seven days prior to the initiation of project impacts. The plans shall include photographs depicting the fenced limits of impact, as well as all areas on site that are to be avoided during project construction. The City Planner and City Engineer shall verify the implementation of this mitigation measure.

8.4 INDIRECT IMPACTS

Impact 2 As discussed in Section 7.2.3, degraded surface water quality has the potential to be a significant impact during construction. Additionally, the use of petroleum products during construction (i.e., fuels, oils, lubricants) could potentially contaminate surface water and adversely affect biological resources on the project site.

MM 8.4.1a Potential impacts from degraded surface water quality shall be minimized to the maximum extent practicable by using Best Management Practices (BMPs) for erosion/sedimentation control during construction. These BMPs may include, but are not limited to, the use of a bonded fiber matrix, straw mulch, or erosion control blankets/mats to prevent erosion, and/or the installation of such items as silt fences or fiber rolls to catch eroded material before it can reach the adjacent off-site riparian area.

Potential impacts from equipment maintenance, staging, and dispensing of petroleum products and/or coolant during construction shall be minimized by adding or changing such products, if necessary, only within a designated construction staging area, within the existing disturbed areas, and conducted in such a manner as to prevent runoff from entering potentially jurisdictional waters. The addition or change of such products shall occur over plastic tarps, which, if contaminated, shall be disposed of in a safe and legal manner. Contractor equipment shall be checked for leaks prior to operation and

repaired as necessary. Furthermore, BMPs such as those listed above for erosion/sedimentation control shall also be used at the staging areas.

Impact 3 As discussed in Section 7.2.4, construction could result in the accidental removal of native vegetation outside the project impact area.

MM 8.4.1b The construction and construction staging area limits shall be clearly delineated with orange construction fencing and/or silt fencing, or staking and fiber rolls to ensure that construction activity remains within the defined limits of work and does not impact native habitat outside of the designated work area. A Qualified Biologist shall attend a pre-construction meeting and inspect the delineated work areas prior to the initiation of vegetation clearing/grading and during regularly scheduled construction monitoring visits.

9.0 FEDERAL CONFORMANCE ANALYSIS FOR BIOLOGICAL RESOURCES ISSUES

9.1 ISSUE 1: FEDERAL ENDANGERED SPECIES ACT, SECTION 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on site, in the surrounding area, or in the service area?

The project site is situated mainly on disturbed land and developed land and is located outside any recognized wildlife corridor or linkage. The western half of the MBGPF site is USFWS-designated critical habitat for the federally listed endangered least Bell's vireo, and a narrow strip of critical habitat for the federally threatened coastal California gnatcatcher crosses the western portion of the MBGPF site; however, no suitable habitat for either species occurs within the MBGPF site. Project impacts are restricted to the existing development footprint; therefore, the proposed action would have no effect on critical habitat.

The project has been located approximately 250 feet from suitable habitat for the federally listed least Bell's vireo and over 500 feet from suitable habitat for the federally listed coastal California gnatcatcher. No impacts or take of least Bell's vireo, coastal California gnatcatcher, or their respective suitable habitats are proposed or authorized without additional consultation with the USFWS and CDFW.

Further discussion is provided below regarding the potential effects of the proposed action on federally-listed species.

Federally-Listed Plant Species. No federally-listed endangered (FE), threatened (FT), or candidate (FC) plant species are known or have the potential to occur in the vicinity of the project site. Therefore, the project would have no effect on federally-listed plant species.

Federally-Listed Animal Species. In total, one FE animal species is known to occur in the vicinity of the project site (Appendix D):

- Least Bell's vireo; FE

The project would have no effect on suitable habitat for the least Bell's vireo; however, without mitigation, construction noise could indirectly affect nesting success. Therefore, mitigation measures **8.3.1.a and 8.3.1.b** include site protection and biological monitoring measures that would ensure that no effect on this species occurs. With the listed work restrictions in place, take of individual members of the species is highly unlikely to occur as a result of project-related activities, and the project is not likely to adversely affect the least Bell's vireo.

9.1.1 Mitigation Measures

With the implementation of Mitigation Measures **8.3.1.a and 8.3.1.b**, the proposed action would have no adverse effect on federally listed species or their critical habitat, and the project would be in conformance with the ESA.

9.1.2 Conclusion

If unmitigated, project implementation may affect federally listed species and critical habitat; however, implementation of mitigation measures **8.3.1.a and 8.3.1.b** would ensure that the project has no adverse effect.

9.2 ISSUE 2: MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT, ESSENTIAL FISH HABITAT

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat?

The project would be constructed within upland areas that lack marine resources and Essential Fish Habitat regulated under the Magnuson-Stevens Fishery Conservation and Management Act. No Essential Fish Habitat occurs in the immediate vicinity of the project site. Therefore, the project would have no effect on Essential Fish Habitat and would be in conformance with the Magnuson-Stevens Fishery Conservation and Management Act.

9.2.1 Mitigation Measures

No mitigation is required.

9.2.2 Conclusion

The project would have no direct or indirect effect on essential fish habitat.

9.3 ISSUE 3: COASTAL ZONE MANAGEMENT ACT

Is any portion of the project site located within the coastal zone?

The project site is not located within the Coastal Zone. Therefore, the project would have no effect on any areas designated as Coastal Zone and would be in conformance with the Coastal Zone Management Act.

9.3.1 Mitigation Measures

No mitigation is required.

9.3.2 Conclusion

The project would have no direct or indirect effect on areas designated as Coastal Zone.

9.4 ISSUE 4: MIGRATORY BIRD TREATY ACT

Will the project affect protected migratory birds that are known, or have a potential, to occur on site, in the surrounding area, or in the service area?

Construction of the proposed project may result in the removal or trimming of trees and other vegetation during the general avian nesting season (January 15 to July 15 for raptors and February 15 to August 31 for general nesting birds) and, therefore, would have the potential to adversely affect nesting birds protected under the MBTA. Implementation of mitigation measure **8.3.1.a** would ensure the appropriate pre-construction surveys and avoidance measures are completed to prevent adverse effects on nesting birds. With the implementation of mitigation measure **8.3.1.a**, the project would result in no effect on migratory birds and would be in conformance with the MBTA.

9.5 ISSUE 5: PROTECTION OF WETLANDS

Does any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the United States Army Corps of Engineers?

The entire project would be constructed entirely within upland areas that do not support wetlands or other waters of the U.S. subject to the regulatory jurisdiction of the USACE; none occur within the project boundaries. Therefore, the project would have no effect on wetlands and would not require a permit from the USACE.

9.6 ISSUE 6: WILD AND SCENIC RIVER ACT

Is any portion of the project located within a wild and scenic river?

None of the proposed project components are planned on or in the immediate vicinity of areas designated as Wild and Scenic River. Therefore, the proposed project would have no effect on any areas designated as Wild and Scenic River and would be in conformance with the Wild and Scenic Rivers Act.

10.0 CERTIFICATION/QUALIFICATION

The following individuals contributed to the fieldwork and/or preparation of this report.

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Appendix A

Plant Species Observed

Family	Scientific Name*,†	Common Name	Status[1]
Monocots			
Asparagaceae	*Agave attenuata**	foxtail agave	--
Cyperaceae	*Cyperus eragrostis*	tall flatsedge	--
Iridaceae	*Dietes bicolor**	African iris	--
Poaceae	*Bromus diandrus**	common ripgut grass	--
	*Bromus madritensis**	foxtail chess	--
	Digitaria sp.*	crab grass	--
	*Erharta erecta**	panic veldtgrass	--
	*Polypogon monspeliensis**	annual beardgrass	--
Dicots			
Aizoaceae	*Carpobrotus edulis**	freeway iceplant	--
Apiaceae	*Foeniculum vulgare**	fennel	--
Asteraceae	*Ambrosia psilostachya*	western ragweed	--
	Baccharis pilularis	coyote brush	--
	Baccharis salicifolia	mule fat	--
	*Carduus pycnocephalus**	Italian thistle	--
	*Centaurea melitensis**	tocalote	--
	Erigeron canadensis	Canada horseweed	--
	*Glebionis coronaria**	garland daisy	--
	*Helichrysum luteoalbum**	Jersey cudweed	--
	*Helminthotheca echioides**	bristly ox-tongue	--
	Heterotheca grandiflora	telegraph weed	--
	Isocoma menziesii	goldenbush	--
	Pseudognaphalium biolettii	bicolor cudweed	--
	*Sonchus asper**	prickly sow thistle	--
Boraginaceae	*Heliotropium curassavicum*	salt heliotrope	--
	*Hirschfeldia incana**	short-pod mustard	--
Chenopodiaceae	*Salsola tragus**	Russian thistle	--
	*Cistus criticus**	pink rock-rose	--
Fabaceae	*Acacia redolens**	bank catclaw	--
	Acmispon glaber	deerweed	--
	*Medicago polymorpha**	burclover	--
	*Melilotus albus**	white sweet clover	--
Fagaceae	*Quercus agrifolia*	coast live oak	--
Lamiaceae	*Lavandula angustifolia**	lavender	--
	*Marrubium vulgare**	horehound	--
	Salvia mellifera	black sage	--
Myrsinaceae	*Lysimachia* [=*Anagallis*] *arvensis**	scarlet pimpernel	--
Myrtaceae	*Eucalyptus cladocalyx**	sugar gum	--
Phrymaceae	*Diplacus aurantiacus*	sticky monkeyflower	--
Platanaceae	*Platanus racemosa*	western sycamore	--
Polygonaceae	*Eriogonum fasciculatum*	California buckwheat	--
	*Rumex crispus**	curly dock	--
Scrophulariaceae	*Myoporum parvifolium**	creeping myoporum	--
Solanaceae	*Datura wrightii*	jimson weed	--
	*Nicotiana glauca**	tree tobacco	--
Styracaceae	*Styrax japonicus**	Japanese snowball	--

Family	Scientific Name*,†	Common Name	Status[1]
Tamaricaceae	*Tamarix ramosissima**	saltcedar	--
Verbenaceae	*Lantana camara**	common lantana	--
	*Lantana montevidensis**	trailing lantana	--
	Verbena lasiostachys	western vervain	--

* Non-native Species

† Special Status Species

1 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.

Appendix B

Animal Species Observed or Detected

Taxon		Scientific Name†	Common Name	Status[1]
Order	**Family**			
INVERTEBRATES				
Araneae	Araneidae	*Argiope argentata*	silver argiope	--
Hymenoptera	Apidae	*Apis mellifera*	European honeybee	--
	Formicidae	*Linepithema humile*	Argentine ant	--
	Pompilidae	*Pepsis* sp.	tarantula hawk	--
Lepidoptera	Hesperiidae	*Erynnis funeralis*	funereal duskywing	--
		Hylephila phyleus	fiery skipper	--
	Lycaenidae	*Icaricia acmon*	Acmon blue	--
	Nymphalidae	*Danaus plexippus*†	monarch	FC/Special Animal
	Pieridae	*Pontia protodice*	checkered white	--
VERTEBRATES				
Reptiles				
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard	--
Birds				
Apodiformes	Apodidae	*Aeronautes saxatalis*	white-throated swift	--
	Trochilidae	*Calypte anna*	Anna's hummingbird	--
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit	--
	Corvidae	*Corvus brachyrhynchos*	American crow	--
	Fringillidae	*Haemorhous mexicanus*	house finch	--
		Spinus psaltria	lesser goldfinch	--
	Icteridae	*Icterus cucullatus*	hooded oriole	--
	Passeridae	*Passer domesticus*	house sparrow	--
	Sturnidae	*Sturnus vulgaris*	European starling	--
	Tyrannidae	*Sayornis nigricans*	black phoebe	--
		Tyrannus vociferans	Cassin's kingbird	--
Mammals				
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail	--
Rodentia	Geomyidae	*Thomomys bottae*	Botta's pocket gopher	--
	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel	--

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

† Special Status Species

Appendix C

Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CRPR 1B.1	Small perennial herb. Occurs on loam or clay soils. Found in native grassland, valley bottoms, dry drainages, stream floodplain terraces, and vernal pool margins. Also, can occur on slopes, disturbed places, and in coastal sage scrub or chaparral. Flowering period: April to July. Elevation: 164 to 1,969 feet (50 to 600 meters).	**Low**. Although reported approximately half a mile from the site, this species was not observed during HELIX surveys. Furthermore, the project site occurs outside of the expected elevation range for this species.
South coast saltscale (*Atriplex pacifica*)	--/-- CRPR 1B.2	Annual herb. Found coastally on dunes and within playas in alkali sinks, sage scrub and wetland riparian communities. Flowering period: March to October. Elevation: below 984 feet (300 meters).	**Low.** This species was not observed during HELIX surveys and no historical observations are recorded within or near the project site. Dunes and playas within alkali sinks do not occur within the project site. The only historical observation within two miles of the project site is from an 1881 parish collection.
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT/SE CRPR 1B.1	Perennial bulbiferous herb. Occurs in valley grasslands and coastal scrub, particularly near mima mound topography or in the vicinity of vernal pools, on clay soils. Flowering period: March to June. Elevation: below 82 to 2,821 feet (25 to 860 meters).	**Low.** This species was not observed during HELIX surveys and no historical observations are recorded within the project site. The project site lacks suitable clay soils or vernal pools to support this species.
Robinson's pepper-grass (*Lepidium virginicum* spp. *menziesii*)	--/-- CRPR 1B.1	Annual herb. Occurs in open, poorly drained flats, depressions, waterway banks and beds, grassland, disturbed sites. Flowering period: April to September. Elevation: 295 to 1,640 feet (90 to 500 meters).	**Not Expected.** This species was not observed during HELIX surveys and no historical observations are recorded within the project site. The project site lacks suitable habitat and occurs outside of the known elevation range for this species.
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. Flowering period: April to June. Elevation: 98 to 2,871 feet (30 to 875 meters).	**Low.** This species was not observed during HELIX surveys. The project site lacks suitable clay soils to support this species.

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
Cliff spurge (*Euphorbia misera*)	--/-- CRPR 2B.2	Shrub. Found on coastal bluffs and rocky slopes within coastal sage scrub communities. Flowering period: January to August. Elevation: below 1,640 feet (500 meters).	**Not Expected.** This species was not observed during HELIX surveys and no historical observations are recorded within or near the project site. Coastal bluffs and rocky slopes do not occur within the project site. Historical observations occur adjacent to the Sprinter Light Rail route in Oceanside, but the exact location is unknown, and it is assumed the population has been severely impacted. This perennial shrub species would likely have been observed if present.
Mud nama (*Nama stenocarpa*)	--/-- CRPR 2B.2	Annual herb. Occurs in intermittently wet areas, streambanks, and muddy lake edges. Flowering period: March to October. Elevation: below 2,657 feet (810 meters).	**Low.** Not observed during 2022 HELIX survey and no historical observations are recorded within or near the project site. The project site lacks suitable wet areas to support this species.

[1] 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.

[2] Potential to Occur is assessed as follows. **None**: Species is either sessile (i.e. plants) or 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**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur in the project site; **Low**: Suitable habitat is present in the project site but no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs in the project site and the species has been recorded recently on or near the project site, but was not observed during project surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the project site; **Presumed Absent**: Species would be visible all year and would have been observed if present.

Appendix D

Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Invertebrates			
Monarch (*Danaus plexippus*)	FC/Special Animal	The population west of the Rocky Mountains migrates to, and overwinters, along the coast of central and southern California. Inhabits a wide variety of open habitats including fields, meadows, marshes, and roadsides and roosting on wind-protected tree groves (such as eucalyptus [*Eucalyptus* spp.], Monterey pine [*Pinus radiata*], cypress [*Hesperocyparis* sp.]), with nectar and water sources nearby. Breeds in areas that have a suitable abundance of their host plant, milkweed (*Asclepias* sp.).	**Present.** One individual was observed flying through the site during the HELIX surveys within disturbed habitat in the central portion of the project site. However, the site does not support wind-protected tree groves for roosting or milkweed for breeding.
Vertebrates			
Reptiles			
Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*)	--/WL	Found within the southwestern portion of California in southern San Bernardino, western Riverside, Orange, and San Diego Counties on the western slopes of the Peninsular ranges below 3,500 feet. 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 of perennial plants (such as California buckwheat, California sagebrush, black sage, or chaparral) to provide a food base for its major food source, termites.	**Moderate.** This species was not observed during the HELIX surveys. Suitable habitat including coastal sage scrub and disturbed habitat occurs within the project site, in addition to presence of perennial plants such as coyote brush, California buckwheat, and black sage.
South coast garter snake (*Thamnophis sirtalis*)	--/SSC	Typically found in woodlands, grasslands, coniferous forests, and scrublands near water. Found in the coastal plain from Ventura County to San Diego County, from sea level to about 850 m.	**Low**. This species was not observed during the HELIX surveys. The project site lacks suitable habitat to support this species.
Birds			
Cooper's hawk (*Accipiter cooperii*)	--/WL	In California, the species breeds from Siskiyou County south to San Diego County and east to the Owens Valley at elevations below 9,000 feet. Inhabits forests, riparian areas, and more recently suburban and urban areas nesting within dense woodlands and forests and isolated trees in open areas.	**Low.** This species was not observed during the HELIX surveys. Marginally suitable habitat for nesting exists along the edges of the property; however, these trees occur immediately adjacent to busy roadways and may not be selected for nesting.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Tricolored blackbird (*Agelaius tricolor*)	BCC/SCE, SSC	Highly colonial, nomadic species occurring as a year-round resident of California from Sonoma County to San Diego. Common locally in the Central Valley and sporadically throughout the State. Breeds in dense colonies. Breeding habitat typically characterized by emergent freshwater marsh dominated by tall, dense cattails (*Typha* spp.) and bulrush (*Schoenoplectus* spp.), though the species also utilizes willows (*Salix* spp.), blackberries (*Rubus* spp.), thistles (*Cirsium* and *Centaurea* spp.), nettles (*Urtica* sp.), and agricultural crops. Forages in grasslands and cropland habitats adjacent to breeding areas.	**Not Expected**. This species was not observed during the HELIX surveys. Previously documented colonies within two miles of the project site were mapped in 1932, and the colonies are currently presumed to be extirpated from the area. Furthermore, the project site lacks suitable habitat to support this species.
Swainson's hawk (*Buteo swainsoni*)	BCC/ST	Nests in riparian woodland and forages over grassland. Once a common species in San Diego County, now a rare migrant, observed primarily in Borrego Valley. Species no longer nests in southern California (Unitt 2004).	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable habitat and this species is unlikely to occur on site given its rarity in San Diego County.
Northern harrier (*Circus cyaneus hudsonius*)	--/SSC	Occurs as a year-round resident in California. Inhabits open areas including wetlands, marshes, marshy meadows, grasslands, riparian woodlands, desert scrub, and pastures and agricultural areas. Breeding populations in southern California from Ventura County to San Diego County are highly fragmented with many local populations extirpated mostly likely as a result of habitat loss and degradation. Nests on the ground in wetlands and uplands within patches of dense, often tall, vegetation in undisturbed areas.	**Low**. This species was not observed during the HELIX surveys. The site lacks suitable grassland or marsh habitat to support this species.
White-tailed kite (*Elanus leucurus*)	--/FP	Year-long resident of California residing along the coasts and valleys west of the Sierra Nevada foothills and southeast deserts, though the species has also been documented breeding in arid regions east of the Sierra Nevada and within Imperial County. Inhabits low elevation grasslands, wetlands, oak woodlands, open woodlands, and is associated with agricultural areas. Breeds in riparian areas adjacent to open spaces nesting in isolate trees or relatively large stands.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable low elevation grasslands and wetlands adjacent to open spaces for nesting in isolated trees.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/SE	Breeds in southern California, Arizona, New Mexico, southwestern Colorado, and extreme southern portions of Nevada and Utah. 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 (*Salix* ssp.), 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.** This species was not observed during the HELIX surveys. The project site lacks suitable habitat to support this species.
Peregrine falcon (*Falco peregrinus*)	BCC/FP	In California, the species breeds and winters throughout the State, except for desert areas. Very uncommon breeding resident and uncommon as a migrant. Active nesting sites of this species within California 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.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable habitat to support foraging and lacks suitable nesting structures.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Yellow-breasted chat (*Icteria virens*)	--/SSC	Occurs throughout North America from Canada south to Baja California and Mexico. Breeds from southern British Columbia south to Baja California and winters in southern Baja California and south Texas south to Mexico and Panama. In California, the species 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.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable riparian habitat to support this species.
White-faced ibis (*Plegadis chihi*)	--/WL	Uncommon summer resident in sections of southern California and a rare visitor in the Central Valley. 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 documented at Guajome Lake and at a pond along the San Luis Rey located near Keys Canyon (southwest of the I-15 and SR-76 intersection).	**Not Expected.** This species was not observed during the HELIX surveys. The project site lacks suitable wetland habitat, pastures, or croplands to support this species.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT/SSC	Year-round resident of California occurring from Ventura County south to San Diego County, and east to the western portions of San Bernardino and Riverside Counties. Typically occur 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, or lemonadeberry, though the species may occur more regularly in inland regions dominated by black sage.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable coastal sage scrub habitat to support this species.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Light-footed Ridgway's rail (*Rallus obsoletus levipes*)	FE/SE, FP	One of six recognized subspecies occurring as a resident in coastal salt marshes and lagoons from Santa Barbara County south to Baja California. The species is found primarily in tall, dense cordgrass (*Spartina foliosa*) and occasionally pickleweed (*Salicornia pacifica*) in the low marsh zone. Also found in freshwater marshes in winter.	**Not Expected.** This species was not observed during the HELIX surveys. The project site lacks suitable coastal salt marsh or lagoon habitat to support this species.
Yellow warbler (*Setophaga petechia*)	BCC/SSC	Common to locally abundant species breeding throughout California at elevations below 8,500 feet, excluding most of the Mojave Desert, and all of the Colorado Desert. Breeds in riparian areas dominated by willows (*Salix* spp.) and cottonwoods (*Populus* spp.), near rivers, streams, lakes, and wet meadows. Also breeds in montane shrub and conifer forests in higher elevation areas.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable riparian habitat to support this species.
California least tern (*Sterna antillarum browni*)	FE/SE, FP	Occurs locally along California coastal regions breeding in colonies from San Francisco Bay south to San Diego County. Wintering areas in unknown areas of South America. Nests on relatively bare or sparsely vegetation beaches and mudflats near water. Forage in the bays and estuaries near their colonies, on the ocean near shore, and at inland lakes in the coastal lowland.	**Not Expected**. This species was not observed during the HELIX surveys. The project site is situated inland lacking suitable coastal and nesting habitats where the species is most commonly found.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Least Bell's vireo (*Vireo bellii pusillus*)	FE/SE	Breeds within California and northern Baja California, wintering in southern Baja California. In California, breeds along the coast and western edge of the Mojave Desert from Santa Barbara County south to San Diego County, and east to Inyo County, San Bernardino, and Riverside Counties. Breeding habitat consists of early to 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, oaks, and sycamore, 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.	**High.** Although this species was not observed during the HELIX surveys, it has been documented immediately north of the project site. However, the project footprint lacks suitable riparian habitat to support this species.
Mammals			
Pallid bat (*Antrozous pallidus*)	--/SSC	Locally commonly found at low elevations in California. Associated with arid and open habitats including grasslands, shrublands, woodlands, and forests, often with open water nearby. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts in caves, crevices, mines, and occasionally hollow trees and buildings. Appears to be intolerant of most human disturbances, being mostly absent from urban and suburban areas.	**Not Expected.** This species was not observed during the HELIX surveys. Suitable roosting locations above the ground on vertical cliffs, rock outcrops, caves, or tall buildings do not occur within the project site.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	--/SSC	Occurs throughout southwestern California from western Riverside County to northern Baja California at elevations below 6,000 feet. 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.	**Not Expected.** This species was not observed during the HELIX surveys. Suitable habitat, including coastal sage scrub and grasslands, is not present on the project site.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST	Found in sparsely vegetated annual grassland and sage scrub communities with loose, friable, well-drained soil.	**Not Expected.** This species was not observed during the HELIX surveys. Suitable habitat that includes sparsely vegetated annual grassland or sage scrub communities does not occur within the project site. Populations within two miles are assumed extirpated (last documented in 1985) due to residential and commercial development.
Western mastiff bat (*Eumops perotis californicus*)	--/SSC	In California, the species occurs from Monterey County to San Diego County from the coast eastward to the Colorado Desert. Found in open, semi-arid to arid habitats including coastal and desert scrub, grasslands, woodlands, and palm oases. Prefers to roost in high situations above the ground on vertical cliffs, rock quarries, outcrops of fractured boulders, and occasionally tall buildings.	**Not Expected.** This species was not observed during the HELIX surveys. Suitable roosting locations above the ground on vertical cliffs, rock outcrops, or tall buildings do not occur within the project site.
San Diego black-tailed jackrabbit (*Lepus californicus*)	--/SSC	Occurs along the coastal regions of southern California south to northern Baja 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.	**Low.** This species was not observed during the HELIX surveys. The project site lacks suitable grassland or sparse scrub to support this species, and is in an urbanized setting.

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Yuma myotis (*Myotis yumanensis*)	--/--	Widespread in California but uncommon in the Mojave and Colorado Deserts, except in the mountain ranges bordering Colorado River Valley. Found in a variety of habitats including juniper and riparian woodlands, riparian forests, and desert regions where bodies of water (i.e., rivers, streams, ponds, lakes, etc.) are present. Closely associated with water which it uses for foraging and sources of drinking water. Roosts in caves, attics, buildings, mines, underneath bridges, and other similar structures.	**Low.** This species was not observed during the HELIX surveys. Suitable roosting locations in caves, buildings, mines, or underneath bridges that are adjacent to larger bodies of water do not occur within the project site.

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

[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**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur in the project site; **Low**: Suitable habitat is present in the project site but no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs in the project site and the species has been recorded recently on or near the project site, but was not observed during project surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the project site.