Appendix B

Biological Technical Report

City of Poway Treated Water Facilities & Redundant Pipeline Project (Project No. WTR0028)

Biological Technical Report

May 2026 | 00407.00035.001

Prepared for:

Kennedy/Jenks Consultants, Inc.
9665 Granite Ridge Drive, Suite 210
San Diego, CA 92123

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

This page intentionally left blank

TABLE OF CONTENTS

Section			Page
EXECUTIVE SUMMARY			ES-1
1.0	INTRODUCTION		1
	1.1	Project Location	1
	1.2	Project Description	1
		1.2.1 Project Components	2
2.0	METHODS		5
	2.1	Literature Review	5
	2.2	Biological Surveys	5
	2.3	General Biological Survey	5
	2.4	Crotch's Bumble Bee Habitat Assessment and Surveys	6
	2.5	Preliminary Jurisdictional Assessment	6
	2.6	Survey Limitations	7
	2.7	Nomenclature	7
3.0	RESULTS		7
	3.1	Regional Context	7
	3.2	General Land Uses	8
	3.3	Disturbance	8
	3.4	Topography and Soils	8
	3.5	Vegetation Communities/Land Cover Types	9
	3.6	Plants	11
	3.7	Animals	11
4.0	SENSITIVE BIOLOGICAL RESOURCES		11
	4.1	Sensitive Vegetation Communities/Habitats	11
	4.2	Special-Status Plant Species	12
		4.2.1 Special-Status Plant Species Observed	12
		4.2.2 Special-Status Plant Species with Potential to Occur	12
	4.3	Special-Status Animal Species	12
		4.3.1 Special-Status Animal Species Observed	13
		4.3.2 Special-Status Animal Species with Potential to Occur	13
	4.4	Jurisdictional Waters and Wetlands	13
	4.5	Habitat Connectivity and WIldlife Corridors	14
5.0	REGULATORY FRAMEWORK		14
	5.1	Federal	15
		5.1.1 Federal Endangered Species Act	15
		5.1.2 Migratory Bird Treaty Act	16
		5.1.3 Clean Water Act (Sections 404 and 401) and Rivers and Harbors Act	16

TABLE OF CONTENTS (cont.)

Section **Page**

5.2 State Regulations 16
5.2.1 California Environmental Quality Act 16
5.2.2 California Endangered Species Act 16
5.2.3 Native Plant Protection Act 17
5.2.4 California Fish and Game Code 17
5.2.5 Porter-Cologne Water Quality Control Act 17
5.2.6 Natural Communities Conservation Planning Act 18
5.3 City of Poway 18
5.3.1 Urban Forestry Ordinance 18
5.3.2 City of Poway Subarea HCP 18
5.4 San Diego County Water Authority 19
5.4.1 Water Authority NCCP/HCP 19

6.0 POWAY SUBAREA HCP CONSISTENCY ANALYSIS 19

6.1 General Land Use and Management Restrictions within the Poway Mitigation Area 19
6.2 Special Development Requirements 20
6.3 Compensatory Mitigation 22

7.0 ANALYSIS OF PROJECT IMPACTS 22

7.1 Criteria for Determining Impact Significance 23
7.2 Impacts to Special-Status Species 23
7.2.1 Special-Status Plant Species 23
7.2.2 Special-Status Animal Species 24
7.3 Impacts to Riparian Habitat and Sensitive Natural Communities 26
7.4 Impacts to Jurisdictional Wetlands and Waterways 27
7.5 Impacts to Wildlife Movement and Nursery Sites 28
7.6 Impacts to Local Policies and Ordinances 28
7.7 Impacts to Adopted Conservation Plans 29

8.0 MITIGATION MEASURES 29

9.0 FEDERAL CONSISTENCY ANALYSIS FOR BIOLOGICAL RESOURCES ISSUES 32

9.1 Federal Endangered Species Act, Section 7 32
9.2 Magnuson-Stevens Fishery Conservation And Management Act, Essential Fish Habitat 33
9.3 Coastal Zone Management Act 34
9.4 Migratory Bird Treaty Act 34
9.5 Protection of Wetlands 34
9.6 Wild and Scenic River Act 34

10.0 CERTIFICATION/QUALIFICATION 35

11.0 REFERENCES 36

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

A Representative Photographs
B Plant Species Observed
C Animal Species Observed or Detected
D Special-Status Plant Species with Potential to Occur
E Special-Status Animal Species with Potential to Occur
F Explanation of Status Codes
G Crotch's Bumble Bee Survey Information

LIST OF FIGURES

No.	Title	Follows Page
1	Regional Location	2
2	USGS Topography	2
3	Aerial Photograph	2
4	Regional Designations and Conserved Land	2
5	Project Components	2
6	Mapped Soils	8
7a-d	Vegetation Communities	10
8	Potential Jurisdictional Resources	14
9a-d	Vegetation Communities/Impacts	26
10	Project Avoidance of Potential Jurisdictional Resources	28

LIST OF TABLES

No.	Title	Page
1	Survey Information	6
2	Existing Vegetation Communities/Land Use Types	9
3	Vegetation Communities/Land Cover Types Impacts	27

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
APN	Assessor's Parcel Number
BCLA	Biological Core and Linkage Area
Berglund WTP	Lester J. Berglund Water Treatment Plant
BMP	Best Management Practice
BRCA	Biological Resource Core Area
CAGN	coastal California gnatcatcher
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
cfs	cubic feet per second
City	City of Poway
CML&C	cement mortar lined and coated
CMU	concrete masonry unit
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of San Diego
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
FC	federally listed candidate
FCF	Flow Control Facility
FE	federally listed endangered
FESA	Federal Endangered Species Act
Final MSCP	Final San Diego Multiple Species Conservation Program
FR	Federal Register
FT	federally listed threatened
GIS	Geographic Information Systems
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
IPaC	Information for Planning and Consultation
kW	kilowatt
LBVI	least Bell's vireo

ACRONYMS AND ABBREVIATIONS (cont.)

MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MSCP	Multiple Species Conservation Program
MWD	Municipal Water District
NCCP	Natural Communities Conservation Planning
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
Ogden	Ogden Environmental and Energy Services Company, Inc.
Porter-Cologne	State Porter-Cologne Water Quality Control Act
Poway Subarea HCP	City of Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan
project	City of Poway Treated Water Facilities & Redundant Pipeline Project
Ramona MWD	Ramona Municipal Water District
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Water Authority	San Diego County Water Authority
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

This biological resources technical report was prepared to evaluate the City of Poway (City) Treated Water Facilities & Redundant Pipeline Project (Project No. WTR0028; "project") located within the City of Poway, San Diego County, California. The project proposes installing water infrastructure improvements that would provide a treated water service connection for the City's water system. The purpose of this report is to document the existing biological conditions within the study area 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).

The study area supports eight vegetation communities or land use types, including southern willow scrub, disturbed wetland, Diegan coastal sage scrub (including disturbed phase), non-native grassland, non-native vegetation, eucalyptus woodland, disturbed habitat, and developed land. The project would result in direct impacts to 3.2 acres of habitat/land cover types, which are primarily comprised of disturbed habitat and urban/developed lands. Of the 3.2 acres of project impacts, a total of 3.1 acres would occur to non-sensitive vegetation communities comprised of non-native vegetation, eucalyptus woodland, disturbed habitat, and developed lands. Impacts to non-sensitive vegetation are not considered significant and, therefore, do not require mitigation. One sensitive vegetation community, Diegan coastal sage scrub (including disturbed), would be impacted by the proposed project. A total of 0.1 acre of Diegan coastal sage scrub (including disturbed) would be impacted; however, less than 0.1 acre (440 square feet) of these impacts would be permanent. Permanent impacts to Diegan coastal sage scrub are considered potentially significant and would require mitigation.

No special-status plant species or animal species were detected within the study area. However, the study area and the surrounding area include habitat with the potential to support special-status plant and animal species. Impacts to special-status plant species would be less than significant because of the lower sensitivity of the species with the highest potential to occur, the relatively small area of affected habitat with potential to support these species, and the preservation of habitat with potential to support these species within the immediate vicinity. Potential impacts to special-status animal species would be avoided and minimized through the implementation of appropriate mitigation measures. The project's impact footprint supports suitable nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code). If removal of nesting habitat for birds protected under the MBTA and CFG Code must occur during the general breeding season, pre-construction surveys shall be completed, and no impacts to active bird nests would be allowed.

The study area supports waters and wetlands potentially subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA, and California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 et seq. of the California Fish and Game Code. The project has been specifically designed to avoid impacts to potential jurisdictional resources by restricting project impacts to occur entirely within upland areas. Therefore, no impacts to wetlands would occur.

Implementation of avoidance and minimization measures and Best Management Practices would ensure that no inadvertent impacts occur to off-site habitat that would be avoided during construction.

Mitigation measures are proposed to mitigate potentially significant impacts to sensitive natural communities and special-status species to below a level of significance.

1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) completed this biological technical report for the City of Poway (City) Treated Water Facilities & Redundant Pipeline Project (Project No. WTR0028; "project") located within the City of Poway, San Diego County (County), California. The project proposes to install water infrastructure improvements that would provide a treated water service connection to the City's water system.

The purpose of this report is to document the existing biological resources present within the project's study area, including those with the potential to occur; identify those resources that are sensitive or with special status; provide an analysis of potential project impacts on sensitive biological resources with respect to local, state, and federal policy; and recommend mitigation to offset potential significant impacts on sensitive biological resources. This report provides the biological resources technical documentation necessary for the review of the project under the California Environmental Quality Act (CEQA) by the City and other responsible agencies for the project, and demonstrates the project's conformance with federal policy to fulfill State Water Resources Control Board (SWRCB) CEQA-Plus requirements.

1.1 PROJECT LOCATION

The project proposes to install water infrastructure improvements that would provide a treated water service connection to the City's water system. The project is located within City limits, in central San Diego County, California (Figure 1, *Regional Location*). Specifically, the project contains features within and along Espola Road from 500 feet south of Green Valley Truck Trail to Lake Poway Road and within Lake Poway Road, east from Espola Road, east to the Lester J. Berglund Water Treatment Plant (Berglund WTP), where improvements to the facilities within the Berglund WTP are proposed. The pump station and forebay tank would be located within City property (Assessor's Parcel Number [APN] 278-437-7400) along the south side of Lake Poway Road, approximately 1,100 feet east of Espola Road. The project site is located in Sections 30 and 31, Township 13 South, Range 1 West, on the U.S. Geological Survey (USGS) 7.5-minute *Escondido, California* topographic quadrangle map (Tan and Kennedy 1999; Figure 2, *USGS Topography*; Figure 3*, Aerial Photograph*).

The project site is located within the planning boundaries of the Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (Poway Subarea HCP; Ogden Environmental and Energy Services Company, Inc. [Ogden] 1996) and is partially located within areas targeted for conservation, referred to as the Poway Mitigation Area (Figure 4, *Regional Designations and Conserved Lands*). The project does not occur within U.S. Fish and Wildlife Service (USFWS) designated critical habitat.

1.2 PROJECT DESCRIPTION

Water within the City is provided through the San Diego County Water Authority's (Water Authority's) First Aqueduct and two untreated water service connections that convey water either to Lake Poway for storage or to Berglund WTP for water treatment. Berglund WTP has a design capacity of 24 million gallons per day and is the only source of drinking water for Poway. Potable water produced from Berglund WTP is conveyed to the two adjacent clearwell tanks, which function as the City's primary water storage facility. Potable water from the clearwell is delivered by pressurized gravity flow to the distribution system.

Poway also provides a backup water supply to Ramona Municipal Water District (Ramona MWD), through an agreement with the Water Authority, when the Water Authority is unable to deliver water to Ramona MWD from the RAM-3 Flow Control Facility (FCF) at the terminus of the Ramona Pipeline. For this operation, one-way flow is provided from Berglund WTP via the Water Authority's 24-inch pipeline, the Water Authority's RAM-2 FCF, and Ramona MWD's 27-inch pipeline. To enable this operation, the facilities are required to be flushed, disinfected, and tested before the delivery of water since these facilities are only used on an infrequent basis. The proposed project would construct new facilities to replace the operation of these facilities to enable two-way flow deliveries, either from Poway to Ramona MWD or from the Water Authority to Poway. In addition, the new facilities would be placed into full-time service to enable the timely delivery of water to either Poway or Ramona MWD and to eliminate wasting water from the water flushing activity.

In 2008, the City adopted a Potable Water Master Plan Update that identified a capital improvement project that would install a redundant pipeline facility to the existing 36-inch pipeline in Lake Poway Road, which delivers 100 percent of the City's water supply from Berglund WTP to the distribution system near Espola Road. The proposed project would implement this redundant pipeline facility.

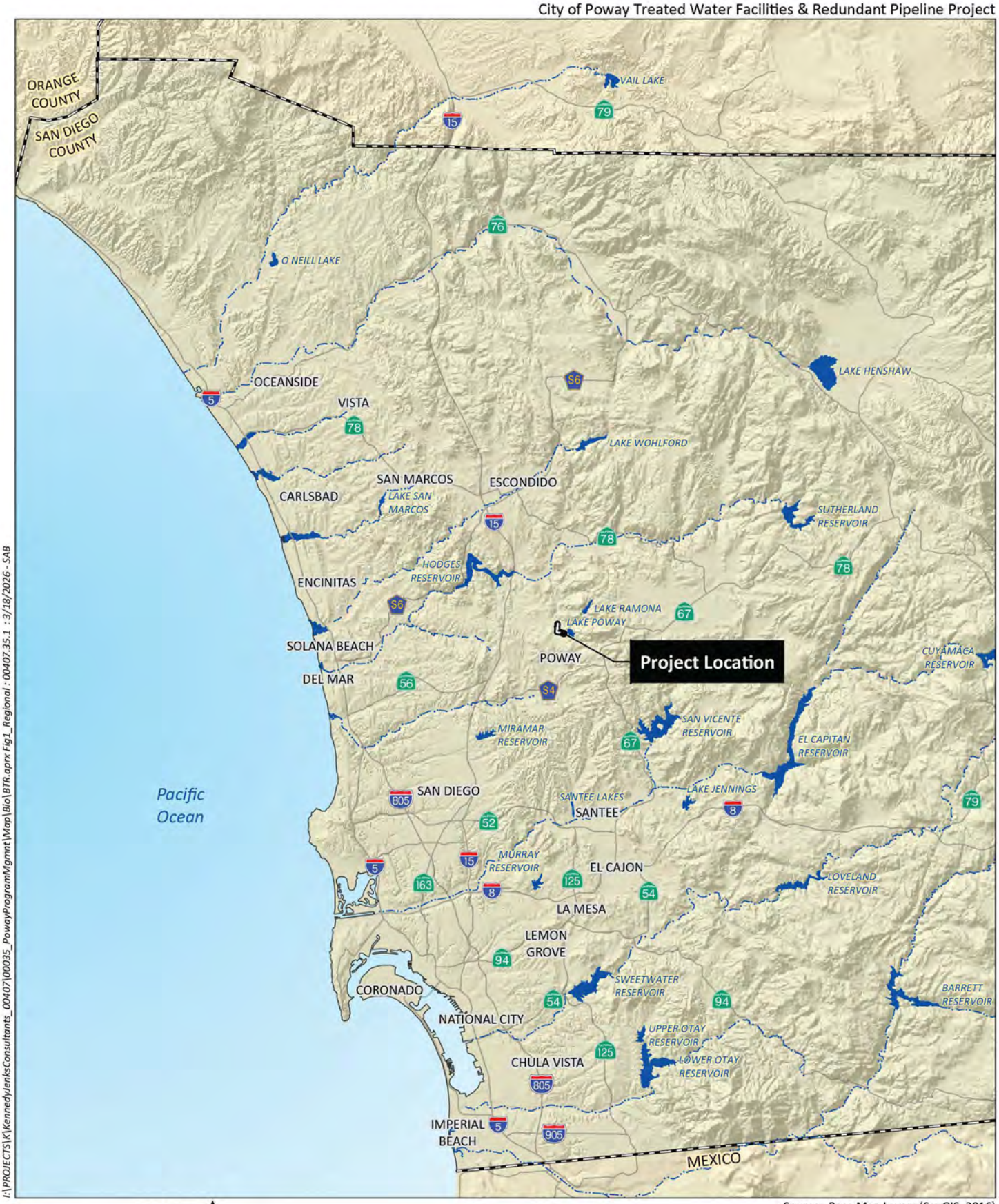
Subsequently, as part of a Settlement Agreement and Release between the City and the SWRCB Division of Drinking Water to improve the City's reliability and diversity of water supply, the City prepared a Treated Water Service Connection Facility Planning Study in conjunction with the Water Authority and a Treated Water Facilities Preliminary Design Report. In addition, an updated Treated Water Service Connection Facility Planning Study was prepared to address changes to the project, more particularly described by Alternative Nos. 3C, 3D, and 3E.

In November 2025, the City of Poway, Ramona MWD, and the Water Authority entered into a Memorandum of Understanding (MOU) to facilitate the delivery of potable water from the Water Authority to Poway and the delivery of potable water from Poway to the Ramona MWD. As part of the MOU, the entities were assigned different responsibilities for the facility improvements. The Water Authority would be responsible for abandoning the existing 24-inch and 27-inch pipelines and adding the new POW-6 FCF and associated pipeline improvements to the existing Water Authority Ramona Pipeline. These improvements would be designed, constructed, owned, and operated by the Water Authority.

The City would be responsible for the design and construction of the pump station, forebay, and associated pipelines, including the 30-inch Espola Road pipeline. The City and Water Authority components are hereby defined as the proposed project.

1.2.1 Project Components

The project proposes to construct new water facilities to replace and abandon existing water facilities and provide up to 24 cubic feet per second (cfs) of treated water to the City. Since the untreated water connection to the First Aqueduct is the only source of water to Lake Poway and Berglund WTP, the proposed project would provide a source of treated water to the City. The availability of a treated water source would also provide greater flexibility for the City to perform necessary repair and replacement work within Berglund WTP in the future. The proposed improvements are discussed in detail below, and their locations are shown on Figure 5, *Project Components*.



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig1_Regional : 00407.35.1 : 3/18/2026 - SAB

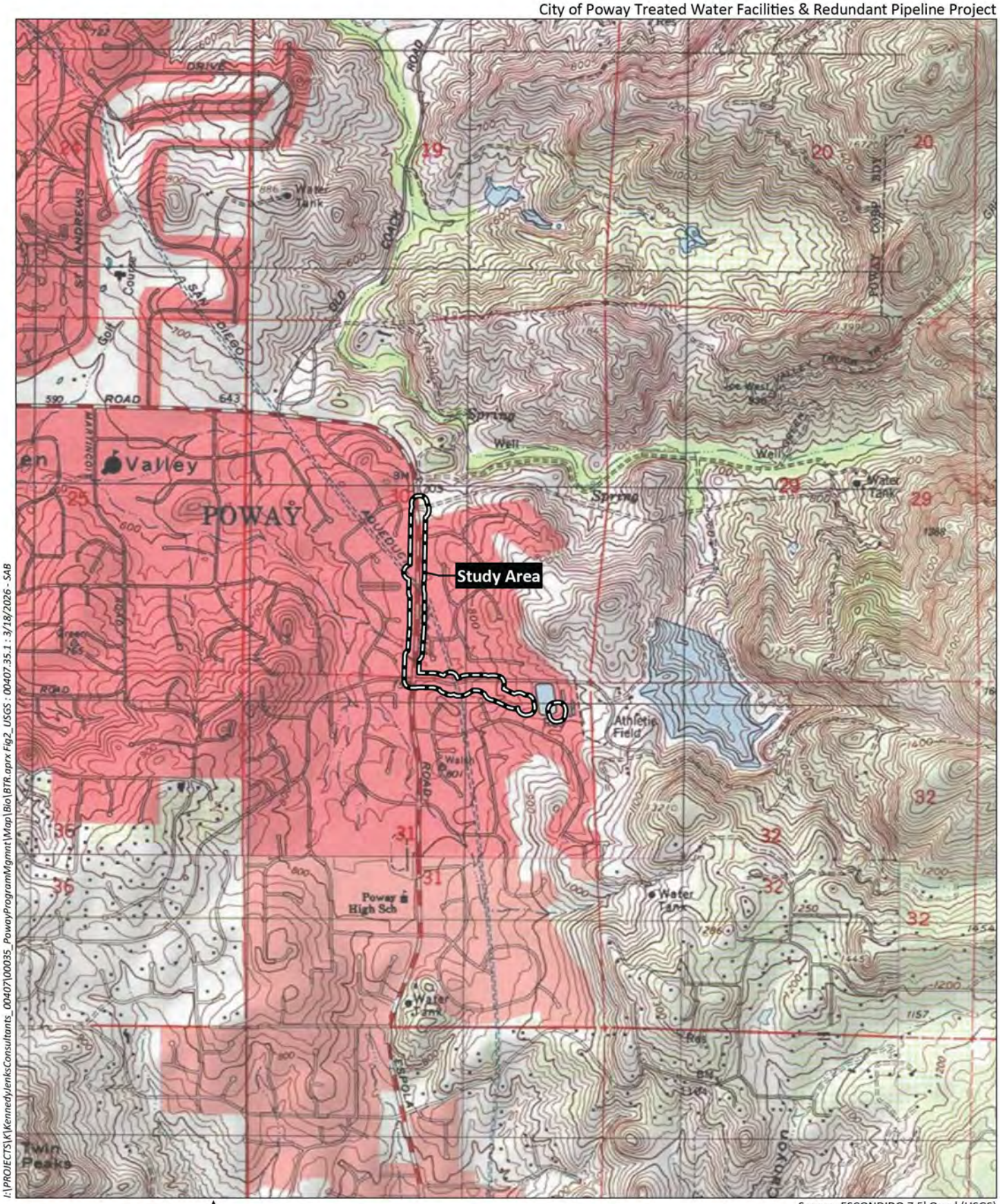
0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig2_USGS : 00407.35.1 : 3/18/2026 - SAB

Source: ESCONDIDO 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2



Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Aerial Photograph

Figure 3

City of Poway Treated Water Facilities & Redundant Pipeline Project



Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Regional Designations and Conserved Land

Figure 4

City of Poway Treated Water Facilities & Redundant Pipeline Project

New Permanent Features
Project Impact Area
Staging Area
Proposed Alignment
Existing Alignment

Espola Rd
Approx. Existing SDCWA 36" Ramona Pipeline
Green Valley Truck Trail
Approx. Existing 27" RMWD Pipeline
Water Authority POW-6 FCF
Poway Flow Control Vault
Twisted Branch Rd
Country Day Rd
Intertie Between Existing 20" and Proposed 30" Pipeline (approximate)
Approx. Existing 24" Pipeline
Windpiper Rd
Removal of Abandoned Chlorination Station Shed
Lake Poway Rd
Approximate Detention Basin
Proposed 36" Redundant Poway Pipeline
Staging Area
Pump Station Demolition
Proposed Forebay Tank
Proposed Pump Station
Summer Sage Rd
Morning Air Rd
Blue Ridge Trl
Proposed 30" Treated Water Pipeline
Approx. Existing Poway 36" Pipeline
Clearwell Tanks (under construction)
Lester J. Berglund Water Treatment Plant
Approx. Existing 36" Treated Water Pipeline
Proposed Surge Tank
Proposed Chemical Facility
Clearwell Tanks and Bypass Pipeline
Trailwind Rd

I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig5_Components : 00407.35.1 : 3/18/2026 - SAB

0 350 Feet

Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Project Components

Figure 5

New POW-6 FCF

This component of the proposed project includes the Water Authority's construction of a new FCF to provide treated water and a connection to the Water Authority's Ramona Pipeline. The POW-6 FCF would be constructed within and adjacent to the existing RAM-3 FCF footprint and would be located partially below ground. The facility would include a throttling valve, a venturi meter, and downstream and upstream isolation valves.

New 30-Inch Pipeline from POW-6 FCF to Lake Poway Road

This component of the project would include the construction of 3,400 feet of 30-inch pipeline between the downstream connection to the future POW-6 FCF to the intersection of Lake Poway Road and the Water Authority's First Aqueduct, which would allow for two-way flow delivery. This pipeline would replace the existing 24-inch Water Authority pipeline and the existing 27-inch Ramona pipeline; these pipelines would be abandoned in place by the Water Authority during construction of the POW-6 FCF. An isolation valve and meter vault would be constructed at the northern extent of the pipeline east of Espola Road, adjacent to the Water Authority POW-6 FCF. Up to five trees would be removed during the construction of the new vault. This pipeline would also include the installation of an underground vault connection to the existing 20-inch 865 Pressure Zone pipeline to the proposed 30-inch pipeline on the west side of Espola Road, approximately 610 feet south of Country Day Road.

New 36-inch Transmission Pipeline within Lake Poway Road to Forebay Tank/Pump Station

The project also includes the construction of 800 feet of 36-inch pipeline from the crossing of the First Aqueduct in Lake Poway Road to the new booster pump station. This pipeline would enable the flow delivery between the Water Authority and the City, as well as serving as a portion of the proposed redundant pipeline.

New Booster Pump Station

Due to the difference in elevation, a pump station would be required to transport water between the future POW-6 FCF and Berglund WTP clearwells. The site of the booster pump station would be on an existing parking lot on the south side of Lake Poway Road. The parking lot would be partially demolished, and a 1,950-square-foot (54-foot-by-36-foot) pump station building would be constructed. The building would house the booster pump station equipment, utilizing two separate interior rooms: the pump room and the electric room. The pump room would contain four vertical turbine pumps having a combined rated capacity of 24 cfs and 105 feet of total dynamic head, an electrical room, and a 450-kilowatt (kW) backup generator. The backup generator would be housed in a sound attenuation enclosure and surrounded by concrete masonry unit (CMU) walls on three sides.

Three below-ground vaults would be installed on the site to house the flow direction butterfly valves, the discharge flow meter, and the pump station isolation valves. The vaults are anticipated to be cast-in-place concrete structures with access hatches for equipment removal. Each vault would include sumps to collect any residual flows from surface runoff or the piping.

The architectural design of the pump station building is intended to blend in with the surrounding community. The design would comply with Poway's community design themes and historic and small-town character, as well as providing resiliency for wildfires. The single-story CMU building would have a

rectangular form with a sloped metal roof. Roof materials would be low-glare/reflection. Exterior walls would use natural stone colors (concrete block with integral colors), with no exterior glazing.

The proposed below-grade yard piping for the pump station consists of approximately 225 feet of 36-inch steel cement mortar lined and coated (CML&C) suction header and approximately 160 feet of 36-inch CML&C steel discharge header. Limited landscaping is currently proposed for the pump station site and along Lake Poway Road, where the pipeline construction occurs outside of the roadway limits but within the City right-of-way (ROW). Approximately 20 eucalyptus trees would be removed during construction and would not be replaced due to their high fire risk and potential for root damage to the pipeline. A 1,370-square-foot biofiltration catch basin would be installed west of the pump station.

Sufficient access would be provided to the booster pump station for major and routine maintenance. The existing driveway on the north side of the site would be retained, and the existing gate would be replaced. A secondary driveway with a gate would be constructed at the west end of the site. The proposed site layout and grading provide a 15-foot clear space around the booster pump station and forebay tank to accommodate vehicle and personnel access. The existing chain link fence on the north side of the site would be replaced by an approximately 8-foot-tall CMU wall to match the site's existing CMU walls.

New Forebay Tank

In addition to the pump station, a forebay tank would be provided directly south of the pump station to supply a consistent flow of water from the FCF to the booster pump station, while also supporting additional storage in the event of a power outage. A 297,000-gallon welded steel forebay tank would be constructed, which would be 50 feet in diameter and 20 feet in height. The base of the tanks would be at an elevation of approximately 803 feet. Additionally, 160 feet of 24-inch forebay tank overflow would convey water from the forebay tank to an existing storm drain located in the northwest corner of the parking lot.

New 36-inch Pipeline from Pump Station/Forebay Tank to Clearwells

The proposed pipeline connecting the pump station piping to the tie-in location located on the Berglund WTP southeast of the Maintenance and Operations Facility consists of approximately 660 feet of 36-inch CML&C steel pipe. This alignment would meet the yard discharge piping at the southeast corner of the pump station site and travel along the southern property line southwest of the vehicle maintenance parking lot. Around the southeast edge of the parking lot, the proposed alignment jogs slightly north through the sloped landscaping to run parallel to the stairway. At the top of the slope, the alignment would travel between the warehouse and vehicle storage until terminating at the 36-inch tee tie-in location. This pipeline would enable the flow delivery between the Water Authority and Poway, as well as serving as the final portion of the redundant pipeline.

Sodium Hypochlorite Storage & Feed Facility

A sodium hypochlorite system would be installed to boost chlorine levels in the Water Authority treated water delivered to the clearwells at the Bergland WTP. The system would store deliveries of sodium hypochlorite (12.5 percent solution) in a 5,580-gallon tank, with three metering pumps to dose the clearwell influent. Chlorine levels would be monitored in the pump station discharge pipe and downstream of the injection point to control for appropriate concentrations.

The system would require the installation of one sodium hypochlorite storage tank and three metering pumps southeast of the clearwells near an existing storage building facility. Improvements to the existing ammonia feed system would consist of installing two metering pumps.

New Surge Tank

A 5,000-gallon surge tank would be installed within the existing Operations Yard, along with associated piping and appurtenances.

Demolition of Existing Pump Station

As part of the project, the existing pump station, which is located approximately 700 feet east of the Espola Road intersection on the south side of Lake Poway Road, would be demolished. This pump station is no longer in service. Below-grade piping and conduit would be disconnected and either removed or capped and abandoned in place.

2.0 METHODS

2.1 LITERATURE REVIEW

Before conducting field surveys, HELIX conducted a thorough review of relevant maps, databases, and literature pertaining to biological resources known to occur within the project vicinity. Recent and historical aerial imagery (Google Earth 2025; NETR Online 2025), USGS topographic maps, soils maps (Natural Resources Conservation Service [NRCS] 2025a, 2025b), and other maps of the project site and vicinity were acquired and reviewed to obtain updated information on the natural environmental setting.

In addition, a query of special-status species and biological resources databases was conducted, including, but not limited to, the USFWS species records (USFWS 2025a), USFWS Information for Planning and Consultation (IPaC) system (USFWS 2025b), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2025a), Calflora database (Calflora 2025), County SanBIOS data (County 2025), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2025). The USFWS's National Wetlands Inventory (NWI) was also reviewed (USFWS 2025c).

2.2 BIOLOGICAL SURVEYS

2.3 GENERAL BIOLOGICAL SURVEY

An initial general biological survey of the project's study area was conducted on March 27, 2023, by HELIX biologist Benjamin Rosenbaum (Table 1, *Survey Information*). Subsequent biological surveys were conducted on April 27, 2023, by HELIX biologists Thomas Liddicoat and Erica Harris and on May 30, 2025, by HELIX biologist Angelica Grunloh. The study area included all proposed project components, including a 100-foot buffer. The general biological survey included mapping existing vegetation communities, identifying and mapping potential jurisdictional resources (i.e., wetlands, waters, and riparian vegetation), and evaluating the potential for other sensitive biological resources and special-status species to occur within the study area and immediate vicinity. Vegetation was mapped on a 1"=150'

scale aerial of the site in accordance with vegetation community classification from Holland (1986) and Oberbauer et al. (2008). A minimum mapping unit size of 0.10 acre was used when mapping upland habitat; 0.01 acre was used when mapping wetland and riparian habitat. The study area was surveyed on foot and with the aid of binoculars. Representative photographs of the study area were taken and are included in this report as Appendix A, *Representative Photographs*.

Table 1
SURVEY INFORMATION

Date	Personnel	Survey Type
March 27, 2023	Benjamin Rosenbaum	General Biological Survey, Vegetation Mapping
April 27, 2023	Thomas Liddicoat Erica Harris	General Biological Survey, Vegetation Mapping
May 30, 2025	Angelica Grunloh	Vegetation Mapping, Crotch's Bumble Bee Habitat Assessment
June 16, 2025	Angelica Grunloh	Crotch's Bumble Bee Survey
June 30, 2025	Angelica Grunloh	Crotch's Bumble Bee Survey
July 18, 2025	Matt Dimson	Crotch's Bumble Bee Survey

Plant and animal species observed or otherwise detected were recorded in field notebooks. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Any recorded locations of special-status species, habitat types, wetlands, and other resources were mapped and overlain onto aerial imagery using Geographic Information Systems (GIS).

2.4 CROTCH'S BUMBLE BEE HABITAT ASSESSMENT AND SURVEYS

Ms. Grunloh conducted a habitat assessment to determine the presence or absence of suitable Crotch's bumble bee (*Bombus crotchii*) habitat on and within the project area on May 30, 2025 (see Table 1). Data collected included potential foraging, nesting, and overwintering resources. The habitat assessment included a list of plant species in bloom and their percentage cover. The habitat assessment also included examining vegetation communities to determine if suitable habitat was present. HELIX's survey method is based on the CDFW *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* issued June 6, 2023, which calls for an initial Crotch's bumble bee habitat assessment followed by three bumble bee surveys.

The three surveys were spaced two to four weeks apart during the Colony Active Period (April through August) and when floral resources were present in 2025. The survey occurred within the 14.8-acre study area with a focus on the 4.6 acres of vegetated areas, meeting the recommended survey rate of no more than three acres per hour. Bumble bee species observed during the survey were identified but were not captured or handled to avoid potential take. Ms. Grunloh conducted the first and second surveys of the project site on June 16 and June 30, 2025. HELIX biologist Matt Dimson conducted the third survey on July 18, 2025 (see Table 1).

2.5 PRELIMINARY JURISDICTIONAL ASSESSMENT

A preliminary assessment of potential jurisdictional resources within the study area was completed during the general biological surveys. The assessment was conducted to identify and map any water and

wetland resources potentially subject to jurisdiction by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA) and the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and the State Porter-Cologne Water Quality Control Act (Porter-Cologne), and streambed and riparian habitat potentially subject to jurisdiction by the CDFW pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code). Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated.

2.6 SURVEY LIMITATIONS

Not all plant species would have bloomed during the survey period, and it is possible that the detection of some special-status plant species may not have been possible due to the timing of the general biological survey and variable seasonal conditions (e.g., rainfall and temperatures) that influence growth and flowering. Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. As such, the lists of plants and animal species identified during the biological survey are not necessarily comprehensive accounts of all species that utilize the study area, as species that had not yet bloomed or are nocturnal, secretive, and/or seasonally restricted may not have been observed or detected. However, those species that are of special status and have the potential to occur in the study area are still addressed in this report.

2.7 NOMENCLATURE

Nomenclature used in this report generally comes from Holland (1986), as modified by Oberbauer et al. (2008) for vegetation communities; plant names follow Jepson eFlora (2025); Pelham (2023) and Davenport (2018) for butterflies; Society for the Study of Amphibians and Reptiles (2025) for reptiles and amphibians; American Ornithological Society (2025) for birds; and Tremor et al. (2017) and Bradley et al. (2014) for mammals. Plant species status is from the CNPS Rare Plant Inventory (CNPS 2025), CDFW (2025b), and the Poway Subarea HCP. Animal species status is from CDFW (2025c) and the Poway Subarea HCP.

3.0 RESULTS

3.1 REGIONAL CONTEXT

The project is generally located within the Central Valley ecological region of San Diego County. The climate in the inland valleys and foothills of San Diego County is characterized as warm-summer Mediterranean with hot summers, with an average high temperature of 85 to 90 degrees Fahrenheit in July, and cool winters, with an average low temperature ranging from 36 to 40 degrees Fahrenheit in January (Pryde 2014).

Important biological resources in the region generally include grasslands, coastal sage scrub, chaparral, oak woodland, wetlands, and riparian habitats present within open space areas such as the Blue Sky Ecological Reserve, Lake Poway Recreation Area, Mount Woodson, Rattlesnake Canyon, Mount Beatrice, and Lower Sycamore Creek (Ogden 1996). These areas provide live-in habitat for native species, including those covered under the Poway Subarea HCP found in the region, including San Diego sagewort (*Artemisia palmeri*), rush-like bristleweed (*Xanthisma junceum*), Engelmann oak (*Quercus engelmannii*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), Blainville's (formerly San Diego or coast) horned lizard (*Phrynosoma blainvillii*), coastal California gnatcatcher (*Polioptila*

californica californica; CAGN), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and mule deer (*Odocoileus hemionus*), among others.

In the context of the Poway Subarea HCP, the extreme northeastern portion of the study area is located within the Poway Mitigation Area but is located outside of a designated Biological Core and Linkage Area (BCLA). The Poway Mitigation Area encompasses areas targeted for preservation under the Poway Subarea HCP and is subject to special development requirements and management guidelines. The northeastern portion of the study area, east of Espola Road, is located within the Poway Mitigation Area, which includes lands located at the western portion of the Blue Sky Ecological Reserve (see Figure 4). The BCLA represents portions of the Poway Mitigation Area considered most essential to maintaining biological resource values and, therefore, of highest priority for protection and management. The nearest BCLA boundary is located approximately 450 feet east of the study area in association with the Blue Sky Ecological Reserve and Lake Poway Recreation Area (see Figure 4). Lands within the Blue Sky Ecological Reserve also occur in association with the Blue Sky – Mount Woodson Cornerstone Lands as identified in the Poway Subarea HCP. Cornerstone lands are large blocks of land that are zoned for Open Space-Resource Management or are otherwise protected as biological open space.

3.2 GENERAL LAND USES

The project is generally confined to the existing roadways of Espola Road and Lake Poway Road, along with other developed areas associated with City Public Works buildings and infrastructure. However, portions of the project would occur outside of existing road ROW within disturbed areas and vegetated areas supporting both native and non-native habitats. The study area is primarily characterized by disturbed and developed areas associated with residential development and public infrastructure. Surrounding land uses include large lot, single-family residential homes to the east, west, and south; Poway High School to the southwest; recreational development to the east in association with the Lake Poway Park, including an archery range, baseball field, boat docks, and picnic areas; and open space preserves to the north and east including the Blue Sky Ecological Reserve, Lake Poway Recreation Area, and Mount Woodson.

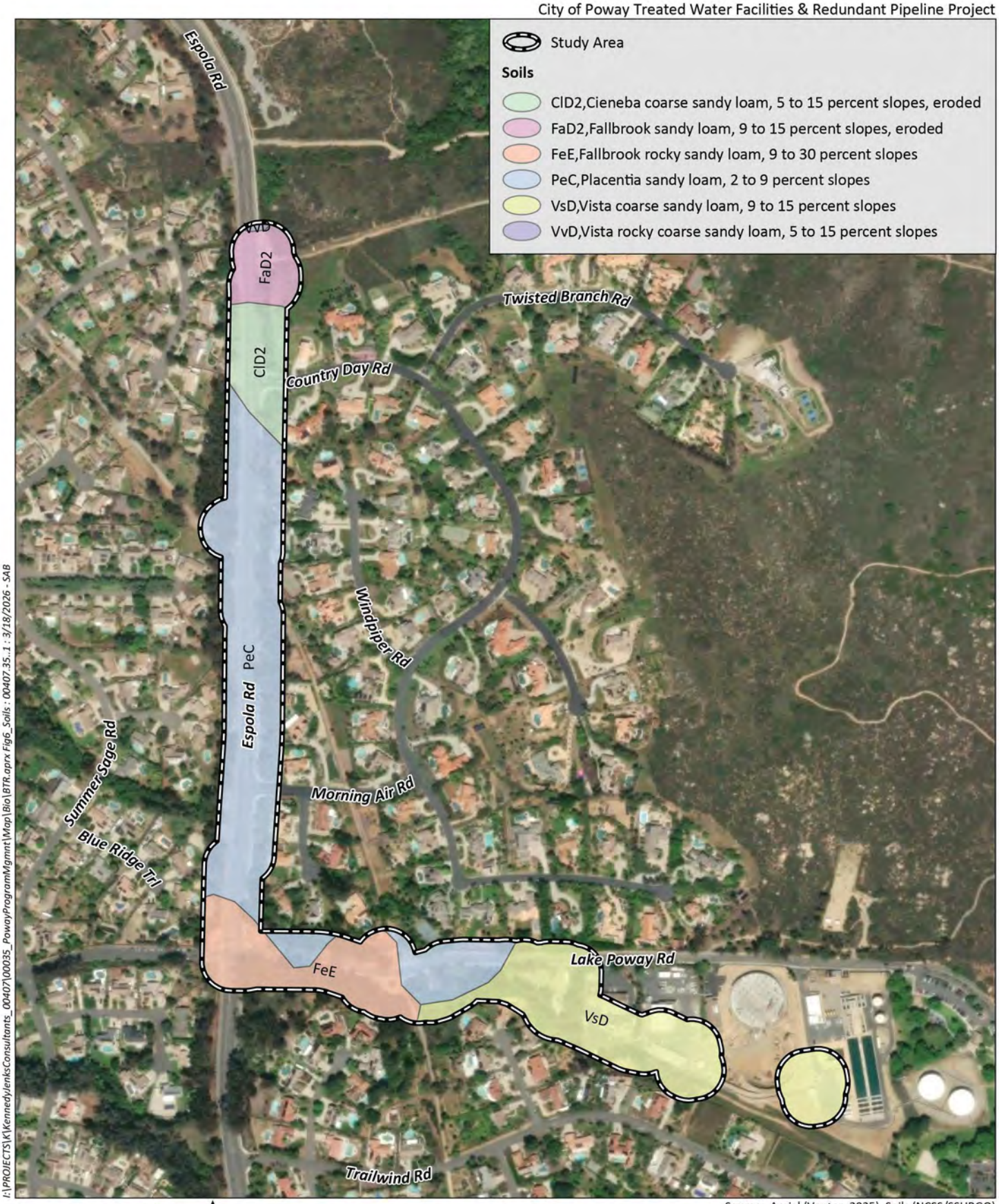
3.3 DISTURBANCE

The study area has been heavily modified by past land uses and development. Historical land uses included farming and other agricultural uses before the 1960s. Poway High School was established in 1961, and residential development of the surrounding area began in the 1960s. However, lands east and immediately west of Espola Road remained either undeveloped or used for agricultural purposes until the mid-1980s, when residential development began and continued through the mid-1990s. The dam creating Lake Poway was constructed within Warren Canyon between 1970 and 1972 with the purpose of storing and supplying water and providing the community with recreational resources.

3.4 TOPOGRAPHY AND SOILS

The study area is generally flat, gently sloping from south to north. Elevations range from approximately 676 feet above mean sea level (AMSL) near the intersection of Espola Road and Green Valley Truck Trail to 886 AMSL near the Berglund WTP along Lake Poway Road.

Six soil types are mapped within the study area (Figure 6, *Mapped Soils*): Cieneba coarse sandy loam, 5 to 15 percent slopes, eroded; Fallbrook sandy loam, 9 to 15 percent slopes, eroded; Fallbrook rocky



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig6_Soils : 00407.35..1 : 3/18/2026 - SAB

0 500 Feet

Source: Aerial (Vantor, 2025), Soils (NCSS/SSURGO)

HELIX Environmental Planning

Mapped Soils

Figure 6

sandy loam, 9 to 30 percent slopes; Placentia sandy loam, 2 to 9 percent slopes, warm MAAT, MLRA 19; Vista coarse sandy loam, 9 to 15 percent slopes; and Vista rocky coarse sandy loam, 5 to 15 percent slopes, MLRA 20. Of the soils mapped within the project area, one is considered potentially hydric: Placentia sandy loam, 2 to 9 percent slopes, warm MAAT, MLRA 19 (NRCS 2025a, 2025b).

3.5 VEGETATION COMMUNITIES/LAND COVER TYPES

A total of eight vegetation communities or land cover types occur within the study area: southern willow scrub, disturbed wetland, Diegan coastal sage scrub (including disturbed phase), non-native grassland, non-native vegetation, eucalyptus woodland, disturbed habitat, and developed land (Table 2, *Existing Vegetation Communities/Land Cover Types*; Figures 7a through 7d, *Vegetation Communities*). The numeric codes in parentheses following each vegetation community/land cover type name are from the Holland classification system (Holland 1986), as modified by Oberbauer et al. (2008).

Table 2
EXISTING VEGETATION COMMUNITIES/LAND USE TYPES

Vegetation Community/Land Cover Type[1]	Study Area Acres[2]
Wetlands	
Southern Willow Scrub (63320)	0.19
Disturbed Wetland (11200)	0.01
Wetlands Subtotal	***0.19***
Uplands	
Diegan Coastal Sage Scrub - including disturbed (32500)	0.6
Non-Native Grassland (42200)	0.4
Non-Native Vegetation (11000)	0.4
Eucalyptus Woodland (79100)	7.5
Disturbed Habitat (11300)	1.0
Developed (12000)	17.8
Uplands Subtotal	***27.6***
TOTAL	**27.79**

[1] Vegetation categories and numerical codes are from Holland (1986) and Oberbauer et al. (2008).
[2] Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01 acre; thus, totals reflect rounding.

Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by arroyo willow in association with mule fat. This vegetation community appears as a single layer; it lacks separate shrub and tree layers and generally appears as a mass of short trees or large shrubs. It occurs on loose, sandy, or fine-gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to riparian woodland or forest.

A total of 0.19 acre of southern willow scrub was mapped within the study area along an unnamed drainage south of Lake Poway Road. Dominant species include arroyo willow (*Salix lasiolepis*).

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or have undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include annual beard grass (*Polypogon monspeliensis*), bristly ox-tongue (*Helminthotheca echioides*), cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*).

A total of 0.01 acre of disturbed wetland was mapped in the study area along the unnamed drainage south of Lake Poway Road. Dominant species include umbrella plant (*Cyperus involucratus*).

Diegan Coastal Sage Scrub (Including Disturbed)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Diegan coastal sage scrub may be dominated by a variety of species depending on soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat, laurel sumac, lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). Within the project area, this vegetation community included California sagebrush, California buckwheat, bush sunflower (*Encelia californica*), and laurel sumac (*Malosma laurina*). Disturbed Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub but is sparser and has a higher proportion of non-native, annual species.

A total of 0.6 acre of Diegan coastal sage scrub, including disturbed, occurs within the study area east of Espola Road and south of Lake Poway Road. Dominant species include California buckwheat and bush sunflower.

Non-Native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* spp.), foxtail chess (*Bromus madritensis*), ripgut grass (*B. diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* spp.). Most of the introduced annual species that make up most species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to southern California. A total of 0.4 acre of non-native grassland was mapped within the study area east of Espola Road. Dominant species include red brome (*Bromus rubens*).

Non-Native Vegetation (11000)

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.] and pepper trees [*Schinus* sp.]), many of which are also used in landscaping. Dominant species within the study area include jacaranda (*Jacaranda mimosifolia*) and Mexican fan palm (*Washingtonia robusta*). A total of 0.4 acre of non-native vegetation was mapped within the study area south of Lake Poway Road.

City of Poway Treated Water Facilities & Redundant Pipeline Project

Study Area

Vegetation Communities

- Developed (12000)
- Diegan Coastal Sage Scrub (32500)
- Diegan Coastal Sage Scrub - disturbed (32500)
- Disturbed Habitat (11300)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Non-native Grassland (42200)
- Non-native Vegetation (11000)
- Southern Willow Scrub (63320)

Espola Rd

Detail Area
Figure 7b

Twisted Branch Rd

Espola Rd

Country Day Rd

Detail Area
Figure 7c

Windpiper Rd

Morning Air Rd

Blue Ridge Trl

Detail Area
Figure 7d

Lake Poway Rd

Trailwind Rd

I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig7_Veg : 00407.35.1 : 3/18/2026 - SAB

0 300 Feet

Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Vegetation Communities

Figure 7a



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig7_Veg : 00407.35.1 : 3/18/2026 - SAB

HELIX Environmental Planning

Vegetation Communities

Figure 7b



Source: Aerial (Vantor, 2025)

I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig7_Veg : 00407.35.1 : 3/18/2026 - SAB

HELIX Environmental Planning

Vegetation Communities

Figure 7c

City of Poway Treated Water Facilities & Redundant Pipeline Project

Study Area

Vegetation Communities

- Developed (12000)
- Diegan Coastal Sage Scrub (32500)
- Diegan Coastal Sage Scrub - disturbed (32500)
- Disturbed Habitat (11300)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Non-native Vegetation (11000)
- Southern Willow Scrub (63320)

Lake Poway Rd

Detail Area
Figure 7c

Trailwind Rd

I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig7_Veg : 00407.35.1 : 3/18/2026 - SAB

0 150 Feet

Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Vegetation Communities

Figure 7d

Eucalyptus Woodland (79100)

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* spp.), an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter, combined with the shading effects of the trees, limit the ability of other species to grow in the understory, thereby decreasing floristic diversity. If sufficient moisture is available, eucalyptus becomes naturalized and can reproduce and expand its cover. A total of approximately 7.5 acres of eucalyptus woodland occurs within the study area along Espola Road and Lake Poway Road.

Disturbed Habitat (11300)

Disturbed habitat includes areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance. Within the project area, this vegetation community included unvegetated trails and areas with evidence of past disturbances, such as vehicle parking/staging. A total of 1.0 acre of disturbed habitat occurs within the study area along Espola Road and Lake Poway Road.

Developed Land (12000)

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 within the study area consists of residential housing, landscaped areas, and paved roads. Approximately 17.8 acres of developed land occur within the study area.

3.6 PLANTS

A total of 105 plant species were observed in the study area during the 2023 and 2025 biological surveys, of which 66 (63 percent) are non-native species (Appendix B, *Plant Species Observed*).

3.7 ANIMALS

A total of 27 animal species were observed or otherwise detected in the study area during the 2023 and 2025 biological surveys, including four invertebrates, 22 birds, and one mammal (Appendix C, *Animal Species Observed or Detected*).

4.0 SENSITIVE BIOLOGICAL RESOURCES

4.1 SENSITIVE VEGETATION COMMUNITIES/HABITATS

Sensitive vegetation communities/habitat types are defined as land that 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. Vegetation communities designated as sensitive within the Poway Subarea Plan include coastal sage scrub, native grassland, oak woodland, and riparian or other wetland habitats.

Sensitive vegetation communities/habitat types mapped within the study area include southern willow scrub, disturbed wetland, Diegan coastal sage scrub (including disturbed), and non-native grassland. Impacts to sensitive habitats typically require mitigation.

Non-native vegetation, eucalyptus woodland, disturbed habitat, and developed lands do not meet the definition of sensitive habitat under CEQA. Impacts to these vegetation communities do not require mitigation.

4.2 SPECIAL-STATUS PLANT SPECIES

Special-status plant species have been afforded special status and/or recognition by the USFWS, CDFW, and Poway Subarea HCP and may also be included in the CNPS Inventory of Rare and Endangered Plants. Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be more or less abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations.

4.2.1 Special-Status Plant Species Observed

No special-status plant species were observed or detected within the study area during the 2023 or 2025 biological surveys. A list of plant species observed is included as Appendix B.

4.2.2 Special-Status Plant Species with Potential to Occur

Special-status plant species that were not observed but may have the potential to occur within the study area, based on the results of the species database searches, which were conducted within a three-mile buffer of the project, are listed in Appendix D, *Special-Status Plant Species with Potential to Occur*. An explanation of status codes is included as Appendix F, *Explanation of Status Codes*. Three additional special-status plant species were determined to have high potential to occur based on a combination of factors, including the presence of suitable soils, hydrology, and/or habitat; special-status species database occurrences within the immediate project vicinity (typically three miles); and recently reported observations made by others, including citizen science databases such as Calflora (2025) and iNaturalist (2025). Special-status plant species with high potential to occur within the study area include the following: San Diego County viguiera (*Bahiopsis laciniata*), slender pod jewelflower (*Caulanthus heterophyllus*), and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*). These species are further discussed in Appendix D. No additional species have a high potential to occur within the study area based on geographic range, elevation range, lack of suitable habitat, and/or presence of dense urban and residential development.

4.3 SPECIAL-STATUS ANIMAL SPECIES

Special-status animal species include those that have been afforded special status and/or recognition by the USFWS, CDFW, and Poway Subarea HCP. 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.

4.3.1 Special-Status Animal Species Observed

One special-status animal species was detected in the study area during the 2025 biological survey: western bluebird (*Sialia mexicana*). A list of animal species observed is included as Appendix C.

Western Bluebird (*Sialia mexicana*)
Status: --/--; County Group 2, Multiple Species Conservation Program (MSCP) Covered, Poway HCP (Group 4; habitat indicator species)
Distribution: Common year-round resident throughout California but absent from the higher mountains and eastern deserts.
Habitat(s): Breeds in open woodlands, riparian habitats, grasslands, and farmlands. Nests and roosts in cavities of trees and snags, often in holes previously created by woodpeckers, and nest boxes. Winters in a wider variety of habitats.
Status on-site: The species was present on-site within the project impact area along Lake Poway Road. The species was observed within non-native vegetation just west of the City's Public Works buildings.

4.3.2 Special-Status Animal Species with Potential to Occur

Special-status animal species that were not observed but may have the potential to occur within the study area are included in Appendix E, *Special-Status Animal Species with Potential to Occur*. An explanation of status codes is included as Appendix F. The species are grouped into invertebrates and vertebrates (fish, amphibians, reptiles, birds, and mammals) and alphabetized by scientific name. Ten special-status animal species were determined to have high potential to occur in the study area based on a combination of factors, including the presence of suitable habitat; database occurrences within the project vicinity (typically three miles but highly mobile species or those with large home ranges were evaluated accordingly); verified recent observations made by others, including citizen science databases such as eBird (2025) and iNaturalist (2025); appropriate soils; and/or known wintering and breeding ranges, based on literature. Special-status animal species with high potential to occur within the study area include the following: Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), San Diego tiger whiptail (*Aspidoscelis tigris stejnegeri*), red diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), CAGN, yellow warbler (*Setophaga petechia*), least Bell's vireo (*Vireo bellii pusillus*; LBVI), and western yellow bat (*Lasiurus xanthinus*). These species are further discussed in Appendix E. No additional species have a high potential to occur within the study area based on geographic range, elevation range, lack of suitable habitat, and/or presence of dense urban and residential development.

4.4 JURISDICTIONAL WATERS AND WETLANDS

The study area supports waterways, wetlands, and riparian habitat that would be subject to USACE, RWQCB, and/or CDFW jurisdiction. Potential jurisdictional aquatic resources within the study area include an unnamed drainage and associated southern willow scrub and disturbed wetland habitat that occur within the southern portion of the study area to the south of Lake Poway Road (Figure 8, *Potential Jurisdictional Resources*). This drainage feature conveys runoff and stormflows and enters an underground culvert beneath a dirt access and hiking trail located south of Lake Poway Road. Potential jurisdictional aquatic resources just beyond the study area include an unnamed drainage and associated southern coast live oak riparian forest habitat located north of the study area, east of Espola Road, and south of Green Valley Truck Trail. This drainage is tributary to Green Valley Creek, which flows in a northerly direction, where it eventually converges with the San Dieguito River (Figure 8).

4.5 HABITAT CONNECTIVITY AND WILDLIFE CORRIDORS

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

Regional movement corridors within the County have been identified in regional planning documents, including the Final San Diego Multiple Species Conservation Program (Final MSCP) (County 1998) and Poway Subarea HCP, which identify areas of high biological value that support sensitive biological resources and linkages that connect them together. These areas are delineated as Biological Resource Core Areas (BRCAs) in the Final MSCP and BCLAs in the Poway Subarea HCP. Though the study area does not occur within a designated BRCA or BCLA, it is located approximately 450 feet east of the nearest Poway Subarea HCP BCLA boundary, which also correlates to the Central Poway/San Vicente Reservoir/North Poway BRCA, as designated by the Final MSCP. These areas contain high-value native habitats and riparian corridors, such as Green Valley Creek, which serve as local and regional wildlife movement corridors. The BCLA/BRCA provide an important connection to other large open space preserves and are identified as an important north-south wildlife corridor in the Poway Subarea HCP that links open space areas from San Dieguito River Valley in the north to Sycamore Canyon in the south.

The study area is primarily located within existing roadways and other developed and disturbed areas and is highly constrained by surrounding development. As such, it does not contain large swaths of native habitat, dense riparian areas, or significant aquatic resources, and does not function as a local or regional wildlife linkage or movement corridor. Espola Road is a heavily traveled roadway that would create a barrier to the east-west wildlife movement in the area. Wildlife present in the region would be expected to utilize higher quality habitat located east of the study area in association with the Blue Sky Ecological Reserve and Lake Poway Recreation Area for live-in habitat and movement and dispersal activities. For these reasons, the study area does not, by itself, function as or contribute to a local movement corridor, regional wildlife corridor, or connection point to other large areas of native habitat.

5.0 REGULATORY FRAMEWORK

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 are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the City) pursuant to CEQA Guidelines. Applicable biological resource-related regulatory act(s), plan(s), and policies are discussed in the following section.

City of Poway Treated Water Facilities & Redundant Pipeline Project



Source: Aerial (Vantor, 2025)

I:\PROJECTS\KI\KennedyJenks Consultants 00407.00035 PowayProgramMgmt\Map\Bio\BTR.aprx Fig8 JD - 00407.35.1 - 3/18/2026 - SAB

HELIX Environmental Planning

Potential Jurisdictional Resources

Figure 8

5.1 FEDERAL

5.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA; 16 U.S. Code Section 1531 et seq.) and its implementing regulations (50 Code of Federal Regulations Section 402 et seq.) establish protections for fish, wildlife, and plants that are listed as threatened or endangered; provide for adding species to and removing them from the list of threatened and endangered species and designating their critical habitat; and for preparing and implementing plans for their recovery. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. Two federal wildlife agencies implement the FESA: the USFWS for terrestrial species and freshwater fish species, and the National Marine Fisheries Service (NMFS) for marine species and anadromous fish species. Once an area is designated as critical habitat pursuant to the FESA, federal agencies must consult with the USFWS and/or NMFS to ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of the critical habitat.

Sections 7 and 9 of FESA protect species listed as endangered or threatened by the USFWS or NMFS. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered "take" under the FESA. Section 9(a) of the FESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and caselaw to include actions that adversely impair or disrupt a listed species' behavioral patterns. It has been established through caselaw that habitat modification alone may constitute take, but only when the impact is likely to result in the actual killing or injury of a fish or wildlife species.

Sections 7 and 4(d) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 requires interagency consultation for any federal action that "may affect" listed species or its designated critical habitat. Federal actions, which include the issuance of a permit by a federal agency such as the USACE or provision of federal funding, which are "likely to adversely affect" listed species, require the project proponent to prepare a Biological Assessment identifying project impacts and measures to avoid and minimize impacts to listed species. Formal Section 7 consultation is complete upon issuance of a Biological Opinion by USFWS and/or NMFS. A Biological Opinion is a regulatory document that includes a determination of whether the project will cause "jeopardy" to the continued existence of listed species or "adverse modification" or destruction of designated critical habitat; terms and conditions to protect listed species; and, if applicable, an "incidental take statement" authorizing take of listed species incidental to otherwise lawful activities as specified.

When a project lacks a federal nexus and, therefore, cannot use Section 7 to obtain authorization to incidentally take listed species, a project proponent may obtain such authorization through Section 10 of the FESA. To obtain an "incidental take permit" through Section 10, a project proponent is required to prepare a Habitat Conservation Plan (HCP) specifying actions that will be taken to avoid and minimize impacts to listed species, as well as identifying compensatory mitigation to offset the impacts of authorized take to the "maximum extent practicable." Pursuant to Section 10(a), the City was issued a take permit for federally listed species covered by the adopted Poway Subarea HCP.

5.1.2 Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (Federal Register [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. In addition, the USFWS commonly places restrictions on the disturbances allowed near active raptor nests. As a regulatory requirement, the project must comply with the regulations and guidelines of the MBTA.

5.1.3 Clean Water Act (Sections 404 and 401) 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. Most development projects are permitted using Individual Permit or Nationwide Permit instruments.

Section 401 of the CWA requires that any applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. must obtain a Water Quality Certification, or a waiver thereof, from the state in which the discharge originates. In California, the SWRCB and RWQCB issue Water Quality Certifications.

5.2 STATE REGULATIONS

5.2.1 California Environmental Quality Act

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

5.2.2 California Endangered Species Act

The California Endangered Species Act (CESA; CFG Code Section 2050 et seq.) establishes protections for fish, wildlife, and plants that are listed as threatened or endangered, or are candidates for such listing, and provides for adding species to and removing them from the list of threatened and endangered species. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CDFW implements CESA.

Section 2080 of the CFG Code prohibits the unauthorized “take” of fish, wildlife, and plant species listed as candidate, threatened, or endangered under the CESA. “Take” is defined in the CFG Code as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Unlike FESA, habitat modification alone does not constitute take under CESA.

Under Section 2081(b) of the CFG Code, the CDFW may issue an Incidental Take Permit for CESA-protected species authorizing the incidental take of the species; however, the impacts must be "minimized and fully mitigated."

For species that are listed under both the FESA and CESA, the CDFW may issue a Consistency Determination under Section 2080.1 of the CFG Code authorizing take of the species if the project proponent has obtained either a Biological Opinion issued by the USFWS or NMFS (under Section 7 of the FESA) or federal incidental take permit (under Section 10 of the FESA). For a Consistency Determination to be issued, the Biological Opinion or federal incidental take permit must meet CESA standards, including the requirement to fully mitigate for impacts. The City was issued a take permit for state listed species covered by the adopted Poway Subarea Plan pursuant to Section 2081.

5.2.3 Native Plant Protection Act

Sections 1900 through 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 California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from "take."

5.2.4 California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Sections 1600 et seq. of the CFG Code require notification and, if required, a Streambed Alteration Agreement 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 notification 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.

The CFG Code provides specific protection and listing for several types of biological resources. 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.

5.2.5 Porter-Cologne Water Quality Control Act

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

5.2.6 Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003. The 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 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 federally listed species. Under the NCCP, local governments and other entities, such as the City, can take the lead in developing these NCCP plans and become the recipients of state and federal take permits. The Poway Subarea HCP is an adopted NCCP plan for the City.

5.3 CITY OF POWAY

5.3.1 Urban Forestry Ordinance

The City establishes regulations and standards for planting, trimming, and removing trees on public property and public ROWs. Tree protection, removal, and replacement standards are outlined in Chapter 12 (Streets and Sidewalks), Section 32 (Urban Forestry) of the City's Municipal Code (Ordinance 521), referred to as the Urban Forestry Ordinance. A City-issued tree removal permit is required before the removal of a public tree or a tree growing on a public ROW. Removal of a native tree from public property or a public ROW pursuant to a tree removal permit may be required to replace the tree on a one-for-one basis with a minimum size 24-inch box specimen tree of the same species as the tree removed. Native trees in the Urban Forestry Ordinance are defined as coast live oak, Engelmann oak, canyon live oak (*Quercus chrysolepis*), and California sycamore (*Platanus racemosa*). Replacement trees are required to be planted at a location approved by the Director of Public Services. If the native tree to be removed exceeds the size of a 72-inch-box specimen (approximately eight inches in diameter), two 48-inch-box specimen trees are to be used as replacements. The requirement for replacement trees may be waived or modified by the Director of Public Services.

5.3.2 City of Poway Subarea HCP

In June 1996, the USFWS, CDFW, and City adopted the Implementing Agreement for the Poway Subarea HCP. This program allows the incidental take of threatened and endangered species, as well as

regionally-sensitive species, which are conserved by it (i.e., Target Species). The Poway Subarea HCP was prepared at a time when the various NCCPs, MSCPs, and other subregional plans were under differing stages of development and environmental review and had not been officially approved or adopted. The Poway Subarea HCP was designed to be consistent with the goals, standards, and guidelines established in the subregional planning processes and with the recommended BRCAs and habitat linkages established by the Final MSCP Plan (County 1998), whose subregion includes the Poway Subarea HCP.

The Poway Subarea HCP designates regional preserves that are intended to be mostly void of development activities, while allowing the development of other areas subject to the requirements of the program. The Poway Subarea HCP identifies these areas as the "Poway Mitigation Area," which includes habitat lands identified as BRCAs in the Final MSCP Plan, and the area are included in the Final MSCP Plan's Multiple Habitat Focused Planning Area for the Poway area. The Poway Mitigation Area also includes additional lands omitted from the Final MSCP's Multiple Habitat Focused Planning Area that support significant habitat value and populations of Target Species.

5.4 SAN DIEGO COUNTY WATER AUTHORITY

5.4.1 Water Authority NCCP/HCP

The Water Authority, USFWS, CDFW, and City adopted the Implementing Agreement for the Water Authority Subregional NCCP/HCP in September 2011 (Water Authority and RECON Environmental, Inc. 2010). The Water Authority NCCP/HCP provides a comprehensive framework to protect natural resources within the Water Authority's plan area, which includes portions of western San Diego County and southwestern Riverside, where planned and future activities (e.g., Covered Activities) are anticipated to occur both within and outside of the Water Authority's service area. Covered Activities include the construction of new facilities, the expansion of existing facilities, and the operation and maintenance of existing facilities. The plan identifies the Water Authority's Preserve Area, which is comprised of six Habitat Management Areas that have been or will be established, from which mitigation credits will be used to compensate for impacts resulting from Covered Activities. The Water Authority NCCP/HCP provides the mechanism for take authority for species covered under the program (e.g., Covered Species). To ensure the protection and conservation of Covered Species, avoidance, minimization, and mitigation measures have been designed to avoid or minimize potential impacts to biological resources and to provide appropriate mitigation where impacts are unavoidable.

6.0 POWAY SUBAREA HCP CONSISTENCY ANALYSIS

Projects in the City with potential impacts on biological resources are reviewed for compliance with the Poway Subarea HCP guidelines and policies. The project's consistency with the applicable policies, guidelines, and management practices is detailed in the following section.

6.1 GENERAL LAND USE AND MANAGEMENT RESTRICTIONS WITHIN THE POWAY MITIGATION AREA

The Poway Subarea HCP restricts allowable land uses within the Poway Mitigation Area. Land uses within the Poway Mitigation Area that are considered conditionally compatible with the biological objectives of the Poway Subarea HCP include passive recreation, agricultural, grazing, low-density residential housing, utilities, transportation, and water facilities. However, for projects to be considered

conditionally compatible, they must implement the applicable land use guidelines and management practices included in Section 6.2 (Land Use and Management in Cornerstone Lands) and 6.3 (Land Use and Management in Non-Cornerstone Lands) of the Poway Subarea HCP.

The proposed project would not occur within the Poway Mitigation Area. As such, compliance with the land use guidelines and management practices is not applicable to the project.

6.2 SPECIAL DEVELOPMENT REQUIREMENTS

Special development requirements and mitigation measures are included in Section 7.3 of the Poway HCP to minimize adverse impacts and mitigate for unavoidable impacts to sensitive habitats and species. The special development requirements are divided into general and specific requirements. Special development requirements apply to public and private development projects located within the boundary of the Poway Mitigation Area. General development requirements apply to all lands within the City that contain native vegetation or natural wildlife.

The project would not occur within the Poway Mitigation Area; therefore, the special development requirements do not apply to the project. The project would result in impacts to native vegetation, including areas with the potential to support special-status species. As such, the project would be subject to the general development requirements. The project's conformance with requirements that are applicable to the project is detailed below.

- *Any proposed public of participating private development project or action that may affect or potentially affect biological resources in the City must be found to comply with the biological resource conservation goals, objectives, policies, strategies, development requirements, and mitigation requirements of the Poway Subarea HCP.*

  The proposed project conforms with the Poway Subarea HCP, as demonstrated within this report.

- *The major natural streams and tributary drainages that traverse the City shall be maintained in their natural state to enhance the movement of wildlife and to provide biological corridors between natural open space areas. The cleaning (debris removal) of these floodways and channels for flood control purposes shall be sensitive to the biological resource conservation value of the natural watercourse.*

  The proposed project would not result in impacts to natural streams or tributary drainages.

- *The siting, construction, and maintenance of rural walkways pathways trail networks, and other linear type projects such as roadways and utility corridors shall be compatible with the conservation value and function of surrounding natural habitat and the important biological resource core and linkage areas identified in the Poway Subarea HCP.*

  The proposed project consists of the construction of new pipelines and other associated water infrastructure. The project would primarily occur within the existing roadways of Espola Road and Lake Poway Road and has been designed to limit disturbance to native vegetation. The project would not result in impacts to lands designated as BCLAs.

- *The potential adverse effects of development and associated human activity (for example noise, light, and encroachment by people or domestic animals) on adjacent open space, natural habitat, biological core areas, habitat linkages, and wildlife movement corridors shall be limited as deemed necessary to preserve the integrity of these areas. In some cases, a buffer of protected natural habitat surrounding the development area may be required.*

  Temporary noise generated during the implementation of construction activities that require the use of heavy equipment could adversely and temporarily impact local wildlife potentially present within the adjacent open space area located east of Espola Road (e.g., the Blue Sky Ecological Reserve). Wildlife may temporarily avoid portions of the adjacent open space area, but the work is not expected to interfere with the overall use of the open space area based on the temporary nature of construction activities and the project footprint being confined to Espola Road. As such, the project would not result in an adverse noise impact on wildlife use of adjacent open space areas.

  No new lighting sources would be installed adjacent to open space areas. Lighting required for vault access would be used on an as-needed basis during maintenance. Construction activities are anticipated to primarily take place during daylight hours. However, if night work were to occur temporarily, artificial lighting required to complete activities would be of the lowest illumination that would help to ensure the safety of construction personnel and security of the site, and would be shielded and directed away from adjacent habitat areas.

- *The City's Grading Ordinance regulations and permit requirements for clearing and grubbing shall apply to all biological archaeological and historical resources found in the City.*

  The proposed project would conform with all applicable regulations of the City's Grading Ordinance. All required permits would be obtained before the initiation of construction activities. The project would adhere to all permit requirements and conditions.

- *The use of rip-rap in stream channels shall minimize adverse impacts to sensitive biological resources and shall be limited to the minimum area required to protect adjacent improvements and stream banks from excessive erosion.*

  The project does not propose the use of rip-rap within any stream channels.

- *Important and sensitive biological resources significant archaeological resources and historical sites shall be protected and integrated into the design of a development project where feasible.*

  The project would primarily occur within the existing roadways of Espola Road and Lake Poway Road and has been designed to limit disturbance to native vegetation. The project would not result in impacts to lands designated as BCLAs.

- *Individual specimens of trees considered locally sensitive including coast live oak, holly oak, California sycamore, and mature eucalyptus shall not be removed without the necessary approvals by the City.*

  A tree removal permit would be obtained before the removal of any locally sensitive tree species in accordance with the City's Urban Forest Ordinance.

- *Mitigation for significant impacts to biological resources shall be in accordance with the mitigation requirements of the Poway Subarea HCP.*

  The proposed project would result in direct impacts to sensitive vegetation communities comprised of less than 0.1 acre of Diegan coastal sage scrub located outside of the Poway Mitigation Area. In accordance with the mitigation requirements of the Poway Subarea HCP, the City proposes compensatory mitigation at a minimum 2:1 ratio through payment into the City's Mitigation Area Acquisition Fund.

- *Monitoring by a qualified biologist during vegetation clearing, grading, construction, and land development activities shall be required where there is the potential to impact sensitive biological resources both on and offsite.*

  Implementation of mitigation measure **BIO-6**, which requires biological monitoring, would ensure conformance with this policy.

6.3 COMPENSATORY MITIGATION

Habitat-based mitigation is required for impacts to sensitive vegetation communities located either inside or outside of the Poway Mitigation Area. Compensatory mitigation may include the (1) purchase or dedication of lands inside the Poway Mitigation Area as biological open space, or (2) payment of in lieu fees into a mitigation bank administered by the City or a land trust acting as an agent of the City. Compensatory mitigation for impacts inside or outside of the Poway Mitigation area would occur as described in Section 7.4 of the Poway Subarea HCP at the mitigation ratios specified in Section 7.4.3.

The proposed project would result in direct impacts to sensitive vegetation communities comprised of less than 0.1 acre of Diegan coastal sage scrub located outside of the Poway Mitigation Area. The City proposes compensatory mitigation at a minimum 2:1 ratio through payment into the City's Mitigation Area Acquisition Fund, which is in conformance with the requirements of the Poway Subarea HCP and implementing policies.

7.0 ANALYSIS OF PROJECT IMPACTS

This section describes potential direct and indirect impacts associated with the proposed project. Direct impacts immediately alter the affected biological resources such that those resources are eliminated temporarily or permanently. Direct impact areas associated with project implementation include open-cut trenching for pipeline construction, temporary use of work and staging areas, and construction of new infrastructure and ancillary facilities (i.e., operational structures or features). The majority of project impacts would be temporary (i.e., areas disturbed by open-cut trenching would be backfilled, repaved, and/or revegetated, as applicable). Indirect impacts consist of secondary effects of a project, including noise, decreased water quality (e.g., through sedimentation, urban contaminants, or accidental fuel release), fugitive dust, colonization of non-native plant species, animal behavioral changes, and night lighting. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes longer to become apparent.

7.1 CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE

The determination of significance of impacts to biological resources present or with the potential to occur was based on the sensitivity of the resource and the extent of the anticipated impacts. For certain highly sensitive resources (e.g., a federally listed species), any impact would be significant. Conversely, other resources that are of low sensitivity (e.g., species with a large, locally stable population in the County but declining elsewhere) could sustain some impact with a less-than-significant effect.

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

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

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

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

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

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

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

7.2 IMPACTS TO SPECIAL-STATUS SPECIES

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

The proposed project would primarily occur within existing roadways and other developed and disturbed areas. However, small portions of the project footprint extend into adjacent native habitat where special-status plant and animal species have the potential to occur. Potential impacts on special-status plant and animal species are discussed below.

7.2.1 Special-Status Plant Species

No special-status plant species were observed within the study area. However, three special-status plant species were determined to have high potential to occur: San Diego County viguiera (California Rare Plant Rank [CRPR] 4.3), Robinson's pepper-grass (CRPR 4.3), and slender pod jewelflower (Poway

Subarea HCP Target Species). These species have the potential to occur within Diegan coastal sage scrub present within the study area. Generally, impacts to plant species with a CNPS CRPR of 1 or 2 are considered potentially significant due to their higher sensitivity status, and the impact analysis evaluates substantial adverse effects to these species. CRPR 3 and 4 species are relatively widespread, and impacts to such species would not substantially reduce their populations in the region and are not significant. The potential effects of the proposed project on these species are discussed below.

State and/or Federally Listed Plant Species

No impacts are anticipated to occur to state or federally listed plant species, as none were documented or have the potential to occur within the project footprint.

CRPR 1 or 2 Plant Species

No impacts are anticipated to occur to CRPR 1 or 2 plant species, as none were documented or have the potential to occur within the project footprint.

CRPR 3 or 4 Plant Species

Potential project impacts to San Diego County viguiera and Robinson's pepper-grass would be less than significant, as the local long-term survival of both species would not be impacted by the implementation of the proposed project. Both species are relatively widespread and are known to occur elsewhere in the project vicinity. Furthermore, the project is not located at the periphery of the species' range or in an area where the taxon is especially uncommon, and additional habitat for the species occurs within the protected open space areas within the immediate vicinity.

Other Special-Status Plant Species

Potential project impacts to slender pod jewelflower would be considered less than significant, as the local long-term survival of the species would not be impacted by implementation of the proposed project. Slender pod jewelflower is a Target Species covered under the Poway Subarea HCP and is considered adequately protected under the Poway Subarea HCP based on the amount of preserved habitat within the Poway Mitigation Area.

7.2.2 Special-Status Animal Species

A single special-status animal species was observed within the study area: western bluebird (Poway Subarea HCP Target Species). Nine additional special-status animal species were determined to have high potential to occur: Belding's orange-throated whiptail (CDFW Watch List and Poway Subarea HCP Target Species), San Diego tiger whiptail (CDFW Species of Special Concern), red diamond rattlesnake (CDFW Species of Special Concern), CAGN (Federally listed threatened, CDFW Species of Special Concern, and Poway Subarea HCP Target Species), LBVI (State and Federally listed endangered, USFWS Bird of Conservation Concern, and Poway Subarea HCP Target Species), Cooper's hawk (CDFW Watch List and Poway Subarea HCP Target Species), southern California rufous-crowned sparrow (CDFW Watch List and Poway Subarea HCP Target Species), yellow warbler (CDFW Species of Special Concern), and western yellow bat (CDFW Species of Special Concern). The potential effects of the proposed project on these species are discussed below.

State and/or Federally Listed Animal Species

Coastal California Gnatcatcher

The project would impact less than 0.1 acre (3,450 square feet), including 0.01 acre (440 square feet) of permanent impacts, to Diegan coastal sage scrub habitat (including disturbed), with the potential to support CAGN. Project construction has the potential to impact breeding/nesting CAGN if construction activities were to occur during the CAGN breeding season (February 15 through August 15) and result in the removal of occupied CAGN habitat. Direct impacts to breeding/nesting CAGN would be considered significant and would require mitigation.

Additionally, indirect impacts to CAGN would occur if construction activities were to take place within 300 feet of occupied CAGN habitat during the gnatcatcher breeding season. Potentially significant indirect impacts to breeding/nesting CAGN would be considered significant and would require mitigation. Implementation of mitigation measure **BIO-1** would ensure that no significant direct or indirect impact occurs to breeding/nesting CAGN.

Least Bell's Vireo

The proposed project would avoid impacts to riparian habitat with the potential to support LBVI; therefore, no direct significant impact would occur to the LBVI. Indirect impacts to LBVI would occur if construction activities were to take place within 300 feet of occupied LBVI habitat during the vireo breeding season (March 15 to September 15) and were to generate noise levels greater than 60 A-weighted decibels (dBA), or exceed ambient noise levels by three decibels if greater than 60 dBA, at an active LBVI nest site. Potentially significant indirect impacts to breeding/nesting LBVI would be considered significant and would require mitigation. Implementation of mitigation measure **BIO-2** would ensure that no significant indirect impact occurs to breeding/nesting LBVI.

Crotch's Bumble Bee

The habitat assessment identified marginal Crotch's bumble bee habitat within the project study area; however, no Crotch's bumble bee individuals or nests were observed during any of the project surveys. The results of the Crotch's bumble bee habitat assessment and surveys are included in Appendix G, *Crotch's Bumble Bee Survey Information*. Impacts to Crotch's bumble bee are not anticipated during the implementation of the project.

Other Special-Status Animal Species

In addition to western bluebird being detected within the project study area, the following special-status species were determined to have high potential to occur within portions of the study area: Belding's orange-throated whiptail, San Diego tiger whiptail, red diamond rattlesnake, Cooper's hawk, southern California rufous-crowned sparrow, yellow warbler, and western yellow bat.

Belding's orange-throated whiptail, San Diego tiger whiptail, and red diamond rattlesnake have the potential to occur within Diegan coastal sage scrub habitat located east of Espola Road and south of Lake Poway Road. The proposed project would result in the temporary removal of less than 0.1 acre (3,450 square feet) of Diegan coastal sage scrub, including disturbed, with the potential to support these species. These impacts would be less than significant based on the small amount of habitat that would be impacted, few numbers of individuals that would be potentially affected, and adequate coverage of

suitable habitat for these species under the Poway Subarea HCP, including adjacent preserved lands within the Blue Sky Ecological Reserve and Lake Poway Recreation Area.

The proposed project would result in direct impacts to potential breeding habitat, including the trimming and/or removal of shrubs and trees, for the Cooper's hawk, southern California rufous-crowned sparrow, western bluebird, and yellow warbler. As a regulatory requirement, the project must comply with the regulations and guidelines of the MBTA and CFG Code. If construction activities cannot avoid the general bird nesting season (January 15 through July 31 for raptors, February 15 through August 15 for upland species, and March 15 through September 15 for riparian species), pre-construction nesting surveys and avoidance buffers of active nests would be required. Implementation of mitigation measure **BIO-3** would ensure the appropriate pre-construction surveys and avoidance measures are completed to prevent direct impacts to nesting birds, including special-status avian species. As such, the project would have a less than significant impact on Cooper's hawk, southern California rufous-crowned sparrow, western bluebird, and yellow warbler.

Western yellow bat primarily roosts on dead palm frond skirts of native and non-native fan palms (*Washingtonia* spp.). Potential roosting habitat for the species occurs within the study area as a stand of Mexican fan palm trees located along the unnamed drainage south of Lake Poway Road. The project would avoid impacts to this area and would not result in the removal of suitable habitat for the species. Therefore, no impact would occur to western yellow bat.

Implementation of mitigation measures **BIO-1** through **BIO-3** would help ensure that no significant direct or indirect impacts to special status animal species would occur during project implementation.

7.3 IMPACTS TO RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

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

The proposed project would result in direct impacts to 3.2 acres of habitat/land cover types comprised of 0.7 acre of permanent impacts and 2.5 acres of temporary impacts (Table 3, *Vegetation Communities/Land Cover Types Impacts*; Figures 9a through 9d, *Vegetation Communities/Impacts*). Of the 3.2 acres of direct impacts, 3.1 acres (97 percent) would occur to non-sensitive vegetation communities comprised of non-native vegetation, eucalyptus woodland, disturbed habitat, and developed lands. Impacts to non-sensitive vegetation communities are not considered significant and, therefore, do not require mitigation.

One sensitive vegetation community, Diegan coastal sage scrub (including disturbed), would be impacted by the project. Temporary impacts to less than 0.1 acre (3,450 square feet) of Diegan coastal sage scrub (including disturbed) would occur along Espola Road north of County Day Road, as well as in the area south of Lake Poway Road (see Figures 9a through 9d). Temporary impacts to this sensitive vegetation community are not considered significant. Permanent impacts to less than 0.1 acre (440 square feet) of Diegan coastal sage scrub would be considered significant and require mitigation. Table 3 provides a breakdown of project impacts.

City of Poway Treated Water Facilities & Redundant Pipeline Project

Espola Rd

Detail Area
Figure 9b

Twisted Branch Rd

Espola Rd

Country Day Rd

Detail Area
Figure 9c

Windpiper Rd

Morning Air Rd

Blue Ridge Trl

Detail Area
Figure 9d

Lake Poway Rd

Trailwind Rd

- Study Area
- Permanent Impact
- Temporary Impact
- Staging Area
- Culvert
- Concrete Ditch
- Stream

Vegetation Communities

- Developed (12000)
- Diegan Coastal Sage Scrub (32500)
- Diegan Coastal Sage Scrub - disturbed (32500)
- Disturbed Habitat (11300)
- Disturbed Wetland (11200)
- Eucalyptus Woodland (79100)
- Non-native Grassland (42200)
- Non-native Vegetation (11000)
- Southern Willow Scrub (63320)

I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig9_VegImps : 00407.35.1 : 3/18/2026 - SAB

0 300 Feet

Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Vegetation Communities/Impacts

Figure 9a



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig9_VegImps : 00407.35.1 : 3/18/2026 - SAB

HELIX Environmental Planning

Vegetation Communities/Impacts

Figure 9b



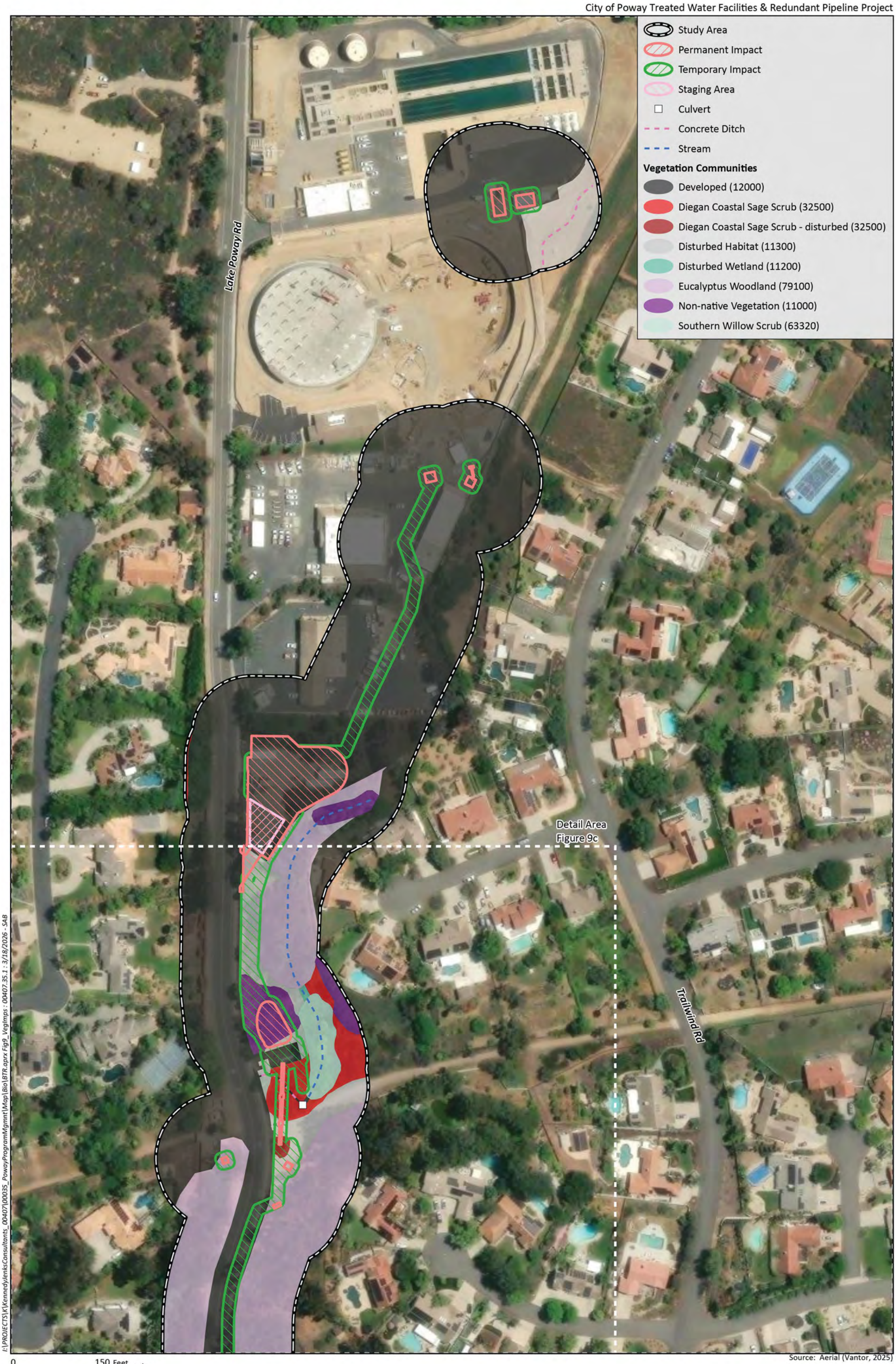
I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmt\Map\Bio\BTR.aprx Fig9_VegImps : 00407.35.1 : 3/18/2026 - SAB

HELIX Environmental Planning

Vegetation Communities/Impacts

Figure 9c

City of Poway Treated Water Facilities & Redundant Pipeline Project



I:\PROJECTS\K\KennedyJenksConsultants_00407\00035_PowayProgramMgmnt\Map\Bio\BTR.aprx Fig9_VegImps : 00407.35.1 : 3/18/2026 - SAB

0 150 Feet

Source: Aerial (Vantor, 2025)

HELIX Environmental Planning

Vegetation Communities/Impacts

Figure 9d

Table 3
VEGETATION COMMUNITIES/LAND COVER TYPES IMPACTS

Vegetation Community/ Land Cover Type	Impacts (Acres [sq.ft.])[1]			Mitigation	
	Temporary	Permanent	Total	Ratio	Total (Acres)[1]
Wetlands					
Southern Willow Scrub	--	--	**--**	3:1	--
Disturbed Wetland	--	--	**--**	3:1	--
Wetland Subtotal	--	--	**--**	--	--
Uplands					
Diegan Coastal Sage Scrub - including disturbed	<0.1 (3,450)	<0.1 (440)	**0.1**	2:1	**0.02**
Non-Native Grassland	<0.1 (296)	--	**<0.1**	0.5:1	**--**
Non-Native Vegetation	0.1	0.1	**0.2**	0:1	**--**
Eucalyptus Woodland	0.1	<0.1 (735)	**0.1**	0:1	**--**
Disturbed Habitat	0.2	<0.1 (1,350)	**0.2**	0:1	**--**
Developed	2.0	0.6	**2.6**	0:1	**--**
Upland Subtotal	**2.5**	**0.7**	**3.2**	--	**--**
TOTAL	**2.5**	**0.7**	**3.2**	--	**0.02**

[1] Upland habitats are rounded to the nearest 0.1 acre, while wetland habitats are rounded to the nearest 0.01; thus, total reflects rounding.

Potentially significant direct permanent impacts to less than 0.1 acre (440 square feet) of Diegan coastal sage scrub (including disturbed) within the project area would be reduced to a less than significant level through the implementation of mitigation measure **BIO-4**, which requires habitat-based mitigation at ratios prescribed by the Poway Subarea HCP, as summarized in Table 3.

Project construction would occur adjacent to sensitive natural communities that would be avoided by the proposed project. Inadvertent intrusion into these adjacent areas by construction vehicles, equipment, and personnel could result in additional impacts, which would be considered significant. Implementation of mitigation measures **BIO-5** and **BIO-6** would ensure that inadvertent impacts to sensitive natural communities located immediately adjacent to construction work areas are avoided.

7.4 IMPACTS TO JURISDICTIONAL WETLANDS AND WATERWAYS

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

The project has been specifically designed to avoid impacts to federally protected wetlands and other potential jurisdictional aquatic resources by restricting project components to upland areas (Figure 10, *Project Avoidance of Potential Jurisdictional Resources*). A portion of the project's impact area south of Lake Poway Road occurs just north of an unnamed drainage that supports potential jurisdictional waters, wetland, and riparian habitat (see Figure 10). The existing pump station would be demolished at this location, and a biofiltration catch basin and associated riprap outfall would be constructed. Though

the project impact footprint slightly overlaps the adjacent southern willow scrub, these impacts would occur within upland areas underneath the riparian canopy. Adjacent willow trees are rooted within the concrete-lined drainage to the south. Though overhanging branches and limbs would be trimmed as needed, no willows or associated riparian habitat would be removed. Furthermore, no ground disturbance would occur to jurisdictional waters, wetlands, or streambed habitat. Therefore, the project would avoid direct impacts to the jurisdictional areas, and no impact would occur.

Project construction would also occur adjacent to potential jurisdictional resources regulated by the USACE, RWQCB, and/or CDFW that would be avoided by the proposed project. Inadvertent intrusion into these adjacent areas by construction vehicles, equipment, and personnel could result in additional impacts, which would be considered significant. Implementation of mitigation measures **BIO-5** and **BIO-6** would ensure that inadvertent impacts to potential jurisdictional resources located immediately adjacent to construction work areas are avoided.

Potential indirect impacts on jurisdictional resources would also be prevented during construction through the successful implementation of standard Best Management Practices (BMPs) as part of the project's Storm Water Pollution Prevention Plan (SWPPP). Implementation of an SWPPP and standard construction BMPs for erosion and sediment control (e.g., preservation of existing vegetation, mulching, hydroseeding, soil binding, silt fencing, fiber rolls, gravel bag berms, sweeping, sandbag barriers, and storm drain inlet protection) and conformance with State Construction General Permit requirements, where required, would address potential indirect impacts resulting from dust, hydrology modifications, and stormwater runoff.

7.5 IMPACTS TO WILDLIFE MOVEMENT AND NURSERY SITES

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

The project would primarily occur within existing roadways and other developed and disturbed habitat located outside of designated BCLA/BRCAs that contribute to local and regional movement corridors and habitat linkages. A designated BCLA/BRCA does occur east of Espola Road in association with Blue Sky Ecological Reserve. However, the proposed project would not result in direct impacts to the BCLA/BRCA, as work activities would be confined to the roadway and other adjacent developed and disturbed areas. Adjacent construction activities may temporarily disrupt local wildlife in the area, but wildlife would be expected to move back into the area once construction activities have ceased. Therefore, the proposed project would not substantially interfere with or constrain wildlife movement through the area and would not impede access to, or the use of, native wildlife nursery sites. As such, potential impacts on wildlife movement and nursery sites would be less than significant.

7.6 IMPACTS TO LOCAL POLICIES AND ORDINANCES

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

The proposed project would occur within City-owned property and public road ROWs. As a regulatory requirement, a City-issued tree removal permit would be obtained before the removal of any trees within the project footprint. All terms and conditions of the tree removal permit would be adhered to,

City of Poway Treated Water Facilities & Redundant Pipeline Project

Study Area
Permanent Impact
Temporary Impact
Staging Area
Culvert
Concrete Ditch

Potential Waters of the U.S./Waters of the State/CDFW Streambed

Stream

CDFW Riparian Habitat

Southern Willow Scrub (63320)
Southern Coast Live Oak Riparian Forest (61630)
Disturbed Wetland (11200)

Espola Rd
Espola Rd
Country Day Rd
Espola Rd
sted Branch Rd
Windpiper Rd
Summer Sage Rd
Blue Ridge Trl
Lake Poway Rd
Trailwind Rd

0 300 Feet

Source: Aerial (Vantor, 2025)

I:\PROJECTS\KI\KennedyJenks\Consultants 00407\00035 PowayProgramMgmt\Map\Bio\BTR.aprx Fig10 JDAvoid : 00407.35.1 : 3/18/2026 - SAB

HELIX Environmental Planning

Project Avoidance of Potential Jurisdictional Resources

Figure 10

as applicable, including any requirements for the replacement of native trees (defined as coast live oak, canyon live oak, Engelmann oak, and California sycamore), if removed. As such, the project would not conflict with local policies or ordinances protecting biological resources.

7.7 IMPACTS TO ADOPTED CONSERVATION PLANS

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

The project occurs within the planning boundaries of the Poway Subarea HCP. The project would conform with the applicable guidelines, avoidance and minimization measures, and conditions of coverage for species covered under the Poway Subarea HCP, as demonstrated in Section 6.0.

The new POW-6 FCF would be constructed by the Water Authority adjacent to a Biologically Sensitive Resource Area but outside of the Preserve identified in the Water Authority NCCP/HCP. The Water Authority would implement the applicable standard minimization measures (described in Section 6.4 of the Water Authority NCCP/HCP) during project construction to avoid and minimize potential direct and indirect impacts on sensitive biological resources.

No other adopted HCP, Resource Management Plan, Special Area Management Plan, Watershed Plan, or other regional planning efforts are applicable to the project.

8.0 MITIGATION MEASURES

The following mitigation measures apply to construction activities undertaken by the City of Poway and its construction contractors. The Water Authority would implement standard minimization measures in accordance with the Water Authority NCCP/HCP as applicable.

Implementation of the following mitigation measure would ensure that potentially significant direct and indirect impacts to coastal California gnatcatcher would be reduced to less than significant:

BIO-1 **Coastal California Gnatcatcher Avoidance.** Grading or clearing of vegetation within 300 feet of suitable coastal California gnatcatcher habitat during the gnatcatcher breeding season (February 15 through August 15) shall be avoided to the extent feasible. If clearing or grading would occur within 300 feet of suitable gnatcatcher habitat during the gnatcatcher breeding season, the following measures shall be implemented:

a. A Qualified Biologist (possessing a valid Endangered Species Act Section 10[a][1][A] Recovery Permit) shall conduct protocol surveys for coastal California gnatcatcher to determine whether gnatcatchers occur within 300 feet of the proposed work area(s). If no gnatcatchers are detected, grading and clearing shall be allowed to proceed. If protocol surveys are not conducted, gnatcatchers shall be presumed to be present, and the measures below shall be implemented.

b. If gnatcatchers are detected, the Qualified Biologist will determine whether gnatcatchers are nesting within 300 feet of the proposed work area(s). If any gnatcatchers are observed nesting or displaying breeding/nesting behavior during the surveys, construction shall be postponed within 300 feet of any location at which gnatcatchers have been observed until a

Qualified Biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after August 15.

c. If construction activities within 300 feet of an active gnatcatcher nest location cannot be avoided, noise levels at the nest site shall be restricted to less than 60 A-weighted decibels (dBA), or the ambient noise levels plus 3 decibels (dB) (perceptible change threshold), whichever is greater. Noise attenuation measures (e.g., noise walls, sound blankets, etc.) shall be implemented as determined necessary by a Qualified Noise Specialist and/or Biologist, to ensure that noise levels do not exceed the restricted threshold.

Implementation of the following mitigation measures would ensure that potentially significant indirect impacts to least Bell's vireo would be reduced to less than significant:

BIO-2 Least Bell's Vireo Avoidance. Grading or clearing of vegetation within 300 feet of suitable least Bell's vireo habitat during the vireo breeding season (March 15 through September 15) shall be avoided to the extent feasible. If clearing or grading would occur within 300 feet of suitable gnatcatcher habitat during the vireo breeding season, the following measures shall be implemented:

a. A Qualified Biologist shall conduct protocol surveys for least Bell's vireo to determine whether vireos occur within 300 feet of the proposed work area(s). If no vireos are detected, grading and clearing shall be allowed to proceed. If protocol surveys are not conducted, vireos shall be presumed to be present, and the measures below shall be implemented.

b. If vireos are detected, the Qualified Biologist will determine whether vireos are nesting within 300 feet of the proposed work area(s). If any vireos are observed nesting or displaying breeding/nesting behavior during the 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.

c. If construction activities within 300 feet of an active vireo nest location cannot be avoided, noise levels at the nest site shall be restricted to a one-hour average of 60 dBA or less, or the ambient noise levels plus 3 dB (perceptible change threshold), whichever is greater. Noise attenuation measures (e.g., noise walls, sound blankets, etc.) shall be implemented, as determined necessary by a Qualified Noise Specialist and/or Biologist, to ensure that noise levels do not exceed the restricted threshold.

Implementation of the following mitigation measures would ensure that potentially significant impacts to nesting birds, including but not limited to, Cooper's hawk, southern California rufous-crowned sparrow, western bluebird, and yellow warbler, would be reduced to less than significant:

BIO-3 Nesting Bird Avoidance. Grubbing or clearing of vegetation during the general bird nesting season (January 15 through July 31 for raptors, February 15 through August 15 for upland species, and March 15 through September 15 for riparian species) will be avoided to the extent feasible. If grubbing, clearing, or grading is to occur during the bird nesting season, a pre-construction survey shall be conducted by a Qualified Biologist no more than five days prior to the commencement of the activities in areas supporting suitable habitat, to determine the

presence or absence of nesting birds or raptors within the proposed area of disturbance. If it is determined at the completion of the pre-construction survey(s) that active nests are absent from the proposed area of disturbance, activities shall be allowed to proceed. If an active bird or raptor nest is confirmed to be present during the pre-construction survey, a nest avoidance buffer shall be established by the Qualified Biologist. Nest avoidance buffers shall be implemented as determined by conditions in the City of Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan, as applicable, or by a Qualified Biologist/Environmental Surveyor if no defined buffer is specified. Construction activities shall avoid any active nests until a qualified biologist has verified that the young have fledged, or the nest has otherwise become inactive.

Implementation of the following mitigation measure would ensure that potentially significant direct impacts to sensitive natural communities would be reduced to less than significant:

BIO-4 **Habitat-Based Mitigation.** Direct permanent impacts to 0.01 acre (440 square feet) of Diegan coastal sage scrub (including disturbed) habitat outside of the Poway Mitigation Area shall be mitigated at a minimum 2:1 ratio in accordance with ratios provided in Section 7.4.3 of the Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan for anticipated mitigation obligation of 0.02 acre. Mitigation shall consist of payment into the City of Poway's Mitigation Area Acquisition Fund.

Implementation of the following mitigation measures would ensure that construction activities are contained within the proposed work limits and that potentially significant direct and indirect impacts on sensitive natural communities and jurisdictional waters and wetlands located outside of the direct impact area are avoided.

BIO-5 **Temporary Construction Fencing.** Prior to construction, to help ensure inadvertent impacts to environmentally sensitive areas outside of the approved impact footprint are avoided, temporary construction fencing, including silt fencing, as appropriate and where determined necessary by the Stormwater Pollution Prevention Plan (SWPPP), shall be installed at the edges of the approved impact limits. Temporary fencing shall be installed at all locations where the project components occur adjacent to riparian habitat, sensitive natural communities, and aquatic resources, including jurisdictional waters or wetlands. A Qualified Biologist shall monitor the installation of the temporary construction fencing wherever it would abut environmentally sensitive areas. Construction activities shall be restricted to areas within the approved impact limits at all times during construction.

BIO-6 **Biological Monitoring**. A Qualified Biologist shall conduct a pre-construction environmental training session for construction personnel to inform them of the sensitive biological resources in the local area and the avoidance measures in place to remain in compliance with project approvals, and environmental permits and regulations. The biologist shall monitor all vegetation clearing and grubbing activities and monitor construction activities on a regular basis in the nest avoidance buffer (if established) and where temporary construction fencing has been installed adjacent to environmentally sensitive areas. The biologist shall have the authority to temporarily halt construction activities and make recommendations to help ensure impact minimization, compliance with the relevant provisions of all environmental permits and regulations, and that work does not take place in environmentally sensitive areas outside of approved work areas.

9.0 FEDERAL CONSISTENCY ANALYSIS FOR BIOLOGICAL RESOURCES ISSUES

9.1 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 direct impact area is largely contained within existing roadways and other developed and disturbed areas that do not contain suitable habitat for federally listed species. However, small portions of the project do occur outside of these areas and have the potential to support federally listed species within and/or adjacent to the direct impact area, including areas east of Espola Road (see Figure 9b) and south of Poway Lake Road (see Figures 9c and 9d). Potential effects of the proposed project on federally listed species are discussed in more detail below.

Critical Habitat

The project's study area does not occur within USFWS-designated critical habitat. As such, the proposed project would have no effect on any areas designated as critical habitat for federally listed species.

Federally Listed Plant Species

No federally listed endangered (FE), threatened (FT), or candidate (FC) plant species were observed within the study area or have the potential to occur within the project footprint. Six federally listed plant species were reported to occur within the project vicinity by the USFWS's IPaC: Encinitas baccharis (*Baccharis vanessae*), San Diego ambrosia (*Ambrosia pumila*), San Diego button-celery (*Eryngium aristulatum* var. *parishii*), San Diego thornmint (*Acanthomintha ilicifolia*), thread-leaved brodiaea (*Brodiaea filifolia*), and willow monardella (*Monardella viminea*). However, none of these species have the potential to occur within the project footprint, as detailed in Appendix D. Therefore, the project would have no effect on federally listed plant species.

Federally Listed Animal Species

No federally listed endangered (FE), threatened (FT), or candidate (FC) animal species were observed within the study area. Six federally listed animal species were reported to occur within the project vicinity by the USFWS's IPaC: arroyo toad (*Anaxyrus californicus*), monarch butterfly (*Danaus plexippus*), quino checkerspot butterfly (*Euphydryas editha quino*), southwestern willow flycatcher (*Empidonax traillii extimus*), CAGN, and LBVI. Arroyo toad, quino checkerspot butterfly, and southwestern willow flycatcher do not have the potential to occur within the project footprint, as detailed in Appendix E. The project would occur within or adjacent to suitable habitat for monarch butterfly, least Bell's vireo, and CAGN. Further discussion is provided below regarding the potential effects of the proposed action on these federally listed species.

- Monarch butterfly (FC – California overwintering population): Monarch butterfly has the potential to travel through and potentially breed in the study area where its host plant is present, but there are no significant overwintering populations known to occur in the project

vicinity. Furthermore, the direct impact area is largely contained within existing roadways and other developed and disturbed areas that do not contain suitable habitat for the species. As such, the project is not anticipated to result in direct impacts to wintering monarch butterflies or adversely impact the local long-term survival of the species within the region. Therefore, the project would have no effect on monarch butterfly.

- Coastal California gnatcatcher (FT): Suitable Diegan coastal sage scrub habitat for CAGN occurs within the study area east of Espola Road within Blue Sky Ecological Reserve and south of Lake Poway Road. The proposed project would result in the permanent removal of 0.01 acre (440 square feet) of Diegan coastal sage scrub located east of Espola Road and south of Lake Poway Road (see Figures 9a through 9d). The proposed project could result in direct impacts to breeding/nesting CAGN if construction activities were to occur during the gnatcatcher breeding season (February 15 to August 15) and impact occupied CAGN habitat. Additionally, indirect impacts to CAGN could occur if construction activities were to take place within 300 feet of occupied CAGN habitat during the gnatcatcher breeding season. Implementation of mitigation measure **BIO-1** above would ensure that potential adverse direct and indirect effects do not occur to CAGN. As such, the project may affect, but is not likely to adversely affect, the CAGN.

- Least Bell's vireo (FE): Suitable riparian habitat for LBVI occurs within the study area east of Espola Road within the Blue Sky Ecological Reserve. The proposed project would avoid direct impacts to potential LBVI habitat; therefore, no direct effects to the species would occur. However, project activities would occur adjacent to riparian habitat with the potential to support LBVI. Indirect impacts to LBVI could occur if construction activities were to take place within 300 feet of occupied LBVI habitat during the vireo breeding season (March 15 through September 15) and were to result in noise levels at an active LBVI nest site that exceed a one-hour average of 60 dBA, or 3 dBA over ambient noise levels if ambient noise is greater than 60 dBA. Implementation of mitigation measure **BIO-2,** above, would ensure that potential adverse indirect effects do not occur to LBVI. As such, the project may affect, but is not likely to adversely affect, the LBVI.

As discussed above, the project would have no effect on arroyo toad, monarch butterfly, quino checkerspot butterfly, or southwestern willow flycatcher, and may affect, but is not likely to adversely affect CAGN and LBVI. Implementation of mitigation measures **BIO-1** and **BIO-2** would ensure that no direct or indirect adverse effects occur to CAGN and LBVI. Therefore, the proposed project may affect, but is not likely to adversely affect, federally listed animal species, and the project would be in conformance with the FESA.

9.2 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 proposed project would be constructed within existing roadways, other developed and disturbed areas, and other 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 footprint or study area. Therefore, the proposed project would have no

adverse effect on Essential Fish Habitat and would be in conformance with the Magnuson-Stevens Fishery Conservation and Management Act.

9.3 COASTAL ZONE MANAGEMENT ACT

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

The proposed project is not located within, or adjacent to, the Coastal Zone. As such, the proposed project would have no adverse effect on any areas designated as Coastal Zone and would be in conformance with the Coastal Zone Management Act.

9.4 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 could result in the removal and trimming of trees and other vegetation during the general bird nesting season (January 15 to July 31 for raptors; February 15 to September 15 for all other avian species). Therefore, the proposed project has the potential to adversely affect nesting birds protected under the MBTA. As a regulatory requirement, the proposed project must comply with the regulations and guidelines of the MBTA and CFG Code, which include avoidance of active nests. Implementation of mitigation measures **BIO-1** through **BIO-3** would ensure the appropriate pre-construction surveys and avoidance measures are completed to prevent adverse effects on nesting birds, including federally listed species. As such, the project would result in no adverse effect on migratory birds and would be in conformance with the MBTA.

9.5 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 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. Therefore, the proposed project would have no adverse effect on wetlands and would not require a permit from the USACE.

9.6 WILD AND SCENIC RIVER ACT

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

The proposed project does not occur within or in the immediate vicinity of areas designated as Wild and Scenic River. Therefore, the proposed project would have no adverse 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.

Erica Harris*	B.S., Biology, emphasis in Zoology, San Diego State University, 2009
Sean Bohac	Certificate in GIS, San Diego Mesa College, 2003 B.S., Biology, The Evergreen State College, 1998
Katie Duffield†	B.S., Biology, California State Polytechnic University, San Luis Obispo, 2009
Angelica Grunloh	B.S., Biology, University of California, Davis, 2017
Kelsey Hall†	B.S., Wildlife Resources, University of Idaho, 2006
Thomas Liddicoat†	B.S., Biology, Emphasis in Ecology, San Diego State University, 2005
Karl Osmundson	B.S., Wildlife, Fish, and Conservation Biology, University of California, Davis, 2003
Benjamin Rosenbaum†	B.S., Biology, Emphasis in Ecology, San Diego State University, 2009

* Primary report author
† Contributing author

11.0 REFERENCES

American Ornithological Society. 2025. Checklist of North and Middle American Birds (online checklist). Retrieved from: https://checklist.americanornithology.org/taxa/.

Bradley, Robert D., L.K. Ammerman, R.J. Baker, L.C. Bradley, J.A. Cook, R.D. Dowler, C. Jones, D.J. Schmidly, F.B. Stangi, R.A. Van De Bussche, B. Wursig. 2014. Revised Checklist of North American Mammals North of Mexico. Occasional Papers, Museum of Texas Tech University.

Calflora. 2025. Available at: http://www.calflora.org/.

California Department of Fish and Wildlife (CDFW). 2025a. California Natural Diversity Database (CNDDB). RareFind Database Program, Version 5. Accessed from: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

2025b. California Natural Diversity Data Base (CNDDB). Special Vascular Plants, Bryophytes, and Lichens List. July. Retrieved from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline.

2025c. California Natural Diversity Database (CNDDB). Special Animal List. July. Retrieved from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline.

California Native Plant Society (CNPS), Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1a). California Native Plant Society, Sacramento, CA. Available at: http://www.rareplants.cnps.org/.

County of San Diego (County). 2025. SanBIOS Database. Land Use and Environment Group. Available at: http://www.sangis.org/.

1998. Final Multiple Species Conservation Program, MSCP Plan. August. Available at: https://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/SCMSCP/FinalMSCPProgramPlan.pdf.

Davenport, Ken. 2018. Lepidoptera of North America 15. Butterflies of southern California in 2018: updating Emmel and Emmel's 1973 Butterflies of southern California. Colorado State University. Department of Bioagricultural Sciences and Pest Management; C.P. Gillette Museum of Arthropod Diversity. April 20. Available at: https://mountainscholar.org/items/da5a26c4-32dd-49b4-8d20-711b67b61bbb.

eBird. 2025. The Cornell Lab of Ornithology. Available at: https://ebird.org/home.

Google Earth. 2025. Accessed from https://www.google.com/earth/about/versions/.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, 156 pp.

iNaturalist Network (iNaturalist). 2025. Available at: https://www.inaturalist.org/.

Jepson Flora Project (eds.) 2025. *Jepson eFlora*. Available at: http://ucjeps.berkeley.edu/eflora/.

Natural Resources Conservation Service (NRCS). 2025a. Web Soil Survey. United States Department of Agriculture (USDA). Available at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.Aspx.

2025b. Soil Data Access Hydric Soils List. Available at: https://www.nrcs.usda.gov/publications/query-by-ssa.html.

NETR Online. 2025. *Historic Aerials*. Nationwide Environmental Title Research, LLC. Electronic document available at: http://www.historicaerials.com.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," R. F. Holland, Ph.D., October 1986. March. Revised from 1996 and 2005. July.

Ogden Environmental and Energy Services Company, Inc. (Ogden). 1996. Poway Subarea Habitat Conservation Plan/Natural Community Conservation Plan. April. Available at: https://sdmmp.com/upload/SDMMP_Repository/0/MP391_OGDEN_1996_PowayNCCP.pdf.

Pelham, Jonathon P. 2023. A Catalogue of Butterflies of the United States and Canada. University of Florida. Florida Museum of Natural History, McGuire Center for Lepidoptera and Biodiversity; University of Washington. Burke Museum of Natural History and Culture. Revised February 23. Available at: https://www.butterfliesofamerica.com/US-Can-Cat.htm.

Pryde, Philip R. 2014. San Diego: An Introduction to the Region. Sunbelt Publications; 4th edition.

San Diego County Water Authority (Water Authority) and RECON Environmental, Inc. 2010. San Diego County Water Authority Subregional Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP). October. Available at: https://www.sdcwa.org/wp-content/uploads/2020/11/NCCP-HCP-merged.pdf.

Society for the Study of Amphibians and Reptiles. 2025. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, 9th Edition. Available at: https://ssarherps.org/publications/north-american-checklist/north-american-common-names-database/.

Tan, Siang S., and Michael P. Kennedy. 1999. Geologic Map of the Escondido 7.5' Quadrangle San Diego County, California: A Digital Database. Version 1.0. Digital database by Henry L. Hones and Kelly R. Ruppert. California Department of Conservation, California Geological Survey.

Tremor, S., D. Stokes, W. Spencer, J. Diffendorfer, H. Thomas, S. Chives, and P. Unitt. 2017. San Diego Mammal Atlas. San Diego Natural History Museum.

U.S. Fish and Wildlife Service (USFWS). 2025a. USFWS Threatened and Endangered Species Active Critical Habitat Report. Retrieved from: https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

2025b. Information for Planning and Consultation (IPaC), Available at: https://ipac.ecosphere.fws.gov/.

2025c. National 2025b. Information for Planning and Consultation (IPaC), Available at: https://ipac.ecosphere.fws.gov/.

Appendix A

Representative Photographs



Photo 1. Eucalyptus woodland and disturbed habitat west of Espola Road where the San Diego County Water Authority would construct a new flow control facility (looking west).



Photo 2. Diegan coastal sage scrub east of Espola Road near where the San Diego County Water Authority would construct a turnout facility (facing south).

G:\PROJECTS\K\KennedyJenksConsultants_00407\KJC-35_Poway Program Mgmt Services_Reports\BTR\Appendices



Photo 3. Overview of Espola Road where the City of Poway proposes to construct the new 36-inch pipeline between the flow control facility and the forebay tank/ pump station within the existing roadway (looking south).



Photo 4. Eucalyptus woodland disturbed habitat west of Espola Road where the City of Poway would construct an under vault connect to the 865 Pressure Zone pipeline from the new 36-inch pipeline on the west side of Espola Road.

G:\PROJECTS\K\KennedyJenksConsultants_00407\KJC-35_Poway Program Mgmt Services_Reports\BTR\Appendices



Photo 5. Overview of the existing pump station south of Lake Poway Road. The City of Poway would demolish the existing pump station and construct a biofiltration catch basin (looking southwest).



Photo 6. Overview of unnamed drainage and bordering Diegan coastal sage scrub south of Lake Poway Road and east of the proposed biofiltration catch basin. The City of Poway would construct the biofiltration catch basin and other project components north of the drainage. Project construction would impact Diegan coastal sage scrub habitat north of the drainage; however, the existing drainage would be avoided by project activities.

G:\PROJECTS\K\KennedyJenksConsultants_00407\KJC-35_Poway Program Mgmt Services_Reports\BTR\Appendices



Photo 7. Existing developed and disturbed areas along Lake Poway Road where the City of Poway would construction the new pipeline between the flow control facility and the forebay tank/pump station.



Photo 8. Existing developed lands south of Lake Poway Road where the City of Poway would construct a new booster pump station and forebay tank (looking south).

G:\PROJECTS\K\KennedyJenksConsultants_00407\KJC-35_Poway Program Mgmt Services_Reports\BTR\Appendices

Appendix B

Plant Species Observed

Family	Scientific Name*	Common Name	Habitat[1]
Acacia	*Acacia* sp.	willow sp.	EW
Amaranthaceae	*Amaranthus* sp.	amaranth	EW
Amaryllidaceae	*Agapanthus* sp.*	African lily	EW
Anacardiaceae	*Malosma laurina*	laurel sumac	DCSS, SCLORF, SWS, EW
	*Schinus molle**	Peruvian pepper tree	EW
	*Schinus terebinthifolia**	Brazilian pepper tree	EW
Apiaceae	*Foeniculum vulgare**	fennel	DCSS
	*Torilis arvensis**	field hedge parsley	EW
Apocynaceae	*Carissa macrocarpa**	amatungulu	EW
	Vinca sp.*	periwinkle	EW
Asparagaceae	*Hesperaloe parviflora**	red yucca	EW
	*Nerium oleander**	oleander	EW
Asteraceae	*Artemisia californica*	California sagebrush	DCSS
	Baccharis pilularis	coyote brush	DCSS
	Baccharis salicifolia	mule fat	SCLORF, SWS, DCSS
	Baccharis sarothroides	broom baccharis	DCSS, EW, SWS
	*Centaurea melitensis**	tocalote	DH
	*Dittrichia graveolens**	stinkwort	DH
	Encelia californica	bush sunflower	DCSS
	Ericameria fasciculata	Eastwood's goldenbush	DCSS, EW
	Erigeron sp.	fleabane	NNG
	*Euryops pectinatus**	golden daisy bush	EW
	Gazania sp.*	African daisies	EW
	*Hedypnois cretica**	crete weed	NNV
	Heterotheca grandiflora	telegraph weed	NNG
	Isocoma menziesii	white flowered goldenbush	DCSS, DH, NNG
	*Lactuca serriola**	prickly lettuce	NNG, DH, EW
	Pseudognaphalium biolettii	two-color rabbit-tobacco	EW
	Pseudognaphalium californicum	ladies' tobacco	DCSS
	*Senecio vulgaris**	common groundsel	NNV
	*Sonchus asper**	spiny sowthistle	EW
	*Sonchus oleraceus**	common sow-thistle	NNV, DH, EW
Arecaceae	*Washingtonia robusta**	Mexican fan palm	DW, NNV, SWS, EW
	Areca sp.*	palm sp.	EW
Bignoniaceae	*Jacaranda mimosifolia**	jacaranda	NNV
	*Tecoma capensis**	cape honeysuckle	EW
Boraginaceae	*Echium candicans**	pride of madeira	DEV
	Phacelia cicutaria	caterpillar phacelia	DCSS
Brassicaceae	*Hirschfeldia incana**	shortpod mustard	NNV
	*Raphanus sativus**	wild radish	DH
Cistaceae	*Cistus* sp.*	rockrose	EW
Cyperaceae	*Cyperus eragrostis*	tall cyperus	SWS, DW
	*Cyperus involucratus**	umbrella plant	DW, SWS
Convolvulaceae	*Calystegia macrostegia*	island morning glory	DCSS
Euphorbiaceae	*Euphorbia maculata**	spotted spurge	NNG, EW
	Euphorbia polycarpa	smallseed sandmat	DH
	*Ricinus communis**	castor bean	DCSS

Family	Scientific Name*	Common Name	Habitat[1]
Fabaceae	*Acacia redolens**	bank catclaw	EW
	Acmispon glaber	deerweed	DCSS-d
	Acmispon americanus	american bird's foot trefoil	NNG, DH, EW, DCSS
	*Ceratonia siliqua**	carob	EW
	*Medicago polymorpha**	California burclover	DH, EW
	*Melilotus indicus**	sweet clover	NNV, EW
	Rafnia p.*	rafnia	EW
Fagaceae	*Quercus agrifolia*	coast live oak	SCLORF
Geraniaceae	*Erodium botrys**	longbeak stork's bill	DH, NNG
	*Erodium cicutarium**	redstem filaree	DCSS, DCSS-d, DH
	*Erodium moschatum**	whitestem filaree	EW
	Geranium carolinianum	carolina geranium	DH, NNV
Juncaceae	*Juncus* sp.	rush	DCSS
Lamiaceae	*Salvia Rosmarinus**	Rosemary	EW
Lauraceae	*Cinnamomum camphora**	camphortree	DH, EW, NNV
Malvaceae	*Malacothamnus parishii*	Parish's bush-mallow	DH, NNV
Myrsinaceae	*Lysimachia arvensis**	scarlet pimpernel	EW
Myrtaceae	*Eucalyptus* sp.*	eucalyptus	EW, DEV
Oleaceae	*Olea europaea**	olive	EW
Onagraceae	*Camissoniopsis* sp.	evening primrose	EW
Pinaceae	*Pinus* sp.	pine tree	EW
Pittosporaceae	*Pittosporum tobira**	mock orange	EW
Platanaceae	*Platanus racemosa*	California sycamore	EW, SCLORF
Plumbaginaceae	*Limonium* sp.*	sea lavender	DEV
	*Limonium perezii**	canarian sea lavender	EW
	*Plumbago auriculata**	cape leadwort	EW
Poaceae	*Avena* sp.		NNG
	*Brachypodium distachyon**	purple false brome	NNG, DH, EW
	*Bromus diandrus**	ripgut brome	DH, NNV
	*Bromus hordeaceus**	soft chess	NNG, DH
	*Bromus madritensis**	foxtail chess	DCSS, DH, NNG, NNV EW
	*Bromus rubens**	red brome	DCSS, DCSS-d, NNG
	*Cortaderia selloana**	pampas grass	EW
	*Cynodon dactylon**	bermuda grass	DH, EW
	*Ehrharta erecta**	upright veldt grass	NNV
	*Festuca myuros**	rattail sixweeks grass	DCSS, DH, EW
	*Pennisetum setaceum**	fountaingrass	DCSS
	*Polypogon monspeliensis**	annual beard grass	DCSS
	Stipa pulchra	purple needlegrass	DCSS-d
Polygonaceae	*Eriogonum fasciculatum*	California buckwheat	DCSS, DCSS-d, DEV
	*Rumex crispus**	curly dock	DH
	Rumex sp.*	dock	DH
Rosaceae	*Cotoneaster* sp.*	hawthron	EW
	Heteromeles arbutifolia	toyon	DCSS, EW
	Prunus ilicifolia	holly-leafed cherry	EW
	Pyracantha sp.*	firethorn	EW
	*Rhaphiolepis indica**	indian hawthorn	EW

Family	Scientific Name*	Common Name	Habitat[1]
Salicaceae	*Populus fremontii*	fremont cottonwood	EW
	Salix laevigata	red willow	SWS, SCLORF
	Salix lasiandra	pacific willow	SCLORF, EW, SWS, DW
	Salix lasiolepis	arroyo willow	SWS, SCLORF, EW, DW
Scrophulariaceae	*Myoporum* sp.*	myoporum	EW
Solanaceae	*Datura wrightii*	jimsonweed	DH
Tropaeolaceae	*Nasturtium* sp.*		EW
Typhaceae	*Typha* sp.	cattail	SWS
Ulmaceae	*Ulmus parvifolia**	Chinese elm	EW
Verbenaceae	*Lantana* sp.*	shrub verbenas	EW
Vitaceae	*Vitis girdiana*	Southern California grape	SWS, DW, EW, SCLORF

* Non-native species

[1] DCSS = Diegan coastal sage scrub; DCSS-d = Diegan coastal sage scrub-disturbed; DEV = Developed; DH = Disturbed habitat; DW = Disturbed wetland; EW = Eucalyptus woodland; NNG = Non-native grassland; NNV = Non-native vegetation; SCLORF = Southern coast live oak riparian forest; SWS = Southern willow scrub.

Appendix C

Animal Species Observed or Detected

Taxon		Scientific Name	Common Name
Order	**Family**		
INVERTEBRATES			
Coleoptera	Coccinellidae	*Coccinellidae* sp.	Ladybug
Hymenoptera	Apidae	*Apis* sp.	Honeybee
Lepidoptera	Papilionidae	*Papilio rutulus*	Western tiger swallowtail
	Pieridae	*Phoebis sennae*	Cloudless sulphur
VERTEBRATES			
Birds			
Accipitriformes	Accipitridae	*Buteo lineatus*	Red-shouldered Hawk
Apodiformes	Trochilidae	*Selasphorus sasin*	Allen's Hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer
Columbiformes	Columbidae	*Zenaida macroura*	Mourning Dove
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Cardinalidae	*Pheucticus melanocephalus*	Black-headed Grosbeak
	Corvidae	*Corvus brachyrhynchos*	American Crow
		Corvus corax	Common Raven
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
	Icteridae	*Icterus cucullatus*	Hooded Oriole
	Mimidae	*Mimus polyglottos*	Northern mockingbird
	Parulidae	*Leiothlypis celata*	Orange-crowned Warbler
	Passerellidae	*Melospiza melodia*	Song Sparrow
		Melozone crissalis	California Towhee
		Pipilo maculatus	Spotted Towhee
	Ptiliogonatidae	*Phainopepla nitens*	Phainopepla
	Sittidae	*Sitta carolinensis*	White-breasted Nuthatch
	Sylviidae	*Chamaea fasciata*	Wrentit
	Troglodytidae	*Thryomanes bewickii*	Bewick's Wren
	Turdidae	*Sialia mexicana*[†]	Western Bluebird
Piciformes	Picidae	*Dryobates nuttallii*	Nuttall's Woodpecker
MAMMALS			
Rodentia	Sciuridae	*Marmotini* sp.	Ground squirrel

[†] Special-status species.

Appendix D

Special-Status Plant Species with Potential to Occur

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Acanthomintha ilicifolia	San Diego thornmint	FT/CE CRPR 1B.1 Poway HCP SDCWA NCCP/HCP	Annual herb. Typically grows on clay soils within chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Found in San Diego County. Flowering period: April to June. Elevation: below 30 to 3,150 feet (10 to 960 meters).	**None**. The study area lacks suitable clay soils typically associated with the species. Furthermore, there are no reported occurrences within the project vicinity. The closest record of the species is a historical occurrence located over three miles from the project along San Dieguito Creek.
Adolphia californica	California adolphia	--/-- CRPR 2B.1 SDCWA NCCP/HCP	Perennial shrub. Most often found in coastal scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks on clay soils. Found in San Diego County. Flowering period: December to May. Elevation: 30 to 2,430 feet (10 to 740 meters).	**None.** The study area lacks suitable clay soils typically associated with the species. Furthermore, there are no reported occurrences within the project vicinity. The closest recent record of the species is located over three miles from the project to the west of Pomerado Road at Battle Mountain.
Ambrosia pumila	San Diego ambrosia	FE/-- CRPR 1B.1 Poway HCP SDCWA NCCP/HCP	Perennial herb. Occurs on sandy loam or clay, sometimes alkaline, soils within grasslands, dry drainages, stream floodplain terraces, and vernal pool margins. Also occurs on slopes, disturbed places, and in coastal sage scrub or chaparral. Found in Riverside and San Diego counties. Flowering period: April to October. Elevation: 65 to 1,360 feet (20 to 415 meters).	**Low.** Though potentially suitable habitat occurs within the study area, the project is primarily located within existing roadways and other developed and disturbed areas immediately adjacent. Furthermore, there are no reported occurrences within the project vicinity. The closest recent record of the species is located over three miles from the project at Lake Hodges.
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/-- CRPR 1B.1	Perennial shrub. Occurs within relatively open, coastal chaparral and maritime chaparral on sandy soils. At occasional inland sites it occurs in denser mixed chaparral vegetation. Found in San Diego County. Flowering Period: December to June. Elevation: below 1,200 feet (365 meters).	**None**. Suitable chaparral habitat does not occur within the study area. Most reported occurrences are located further west along the coast.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Artemisia palmeri	San Diego sagewort	--/-- CRPR 4.2	Perennial herb. Typically found along stream courses, often beneath riparian woodland, on sandy and mesic soils. May occur in coast live oak woodland, coastal sage scrub, and southern mixed chaparral. Found in San Diego County. Flowering period: June to October. Elevation: 50 to 3,000 feet (15 to 915 meters).	**Moderate.** Potentially suitable riparian habitat occurs within the study area along the unnamed drainage south of Lake Poway Road and reported occurrences within the project vicinity occur within Blue Sky Ecological Reserve and around Lake Poway. However, this drainage is partially concreted and dominated by non-native vegetation.
Asplenium vespertinum	Western spleenwort	--/-- CRPR 4.2	Perennial rhizomatous herb. Occurs in chaparral, cismontane woodland, and coastal scrub along rocky bluffs, often at the base of overhanging boulders. Found from Ventura County south San Diego County and east to San Bernardino and Riverside counties. Flowering period: February to June. Elevation: 590 to 3,280 feet (180 to 1,000 meters).	**Low**. Suitable boulders and other rocky areas do not occur within the study area. Reported records of the species occur further south of the project and are limited to historical records from the late 1800s and 1930s.
Atriplex coulteri	Coulter's saltbush	--/-- CRPR 1B.2	Perennial herb. Occurs on alkaline or clay soils within coastal dunes, coastal bluffs, coastal sage scrub, and grasslands. Found along the coastal regions from Santa Luis Obispo County south to San Diego County, western portions of San Bernardino and Riverside counties, and the Channel Islands. Flowering period: March to October. Elevation: below 1,510 feet (460 meters).	**Low**. Suitable alkaline and clay soils are not mapped within the study area. No reported records occur within the project vicinity. The closest record is located over four miles southwest near Chicarita Creek in Sabre Springs.
Baccharis vanessae	Encinitas baccharis	FT/SE CRRP 1B.1 Poway HCP SDCWA NCCP/HCP	Perennial shrub. Grows on sandstone within chaparral, maritime chaparral, woodlands, and Torrey-pine forest understory. Found in San Diego County. Flowering period: August to December. Elevation: 195 to 2,360 feet (60 to 720 meters).	**Low**. Suitable sandstone soils are not mapped within the study area. Reported occurrences of the species occur east of the project at Mount Woodson.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Bahiopsis laciniata	San Diego County viguiera	--/-- CRPR 4.3	Perennial shrub. Occurs on a variety of soil types within coastal sage scrub in San Diego County. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Found along the coastal regions from Ventura County south to San Diego County and western Riverside County. Flowering period: February to August. Elevation: 295 to 2,461 feet (90 to 750 meters).	**High.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway Road, and there are iNaturalist observations of the species in the vicinity around Lake Poway.
Berberis nevinii	Nevin's barberry	FE/SE CRPR 1B.1 NE	Perennial evergreen shrub. Occurs in chaparral, cismontane woodland, coastal scrub, and riparian scrub on sandy or gravelly soils. Found in Los Angeles, San Bernardino, Riverside, and San Diego counties. Flowering period: March to June. Elevation: 225 to 2,705 feet (70 to 825 meters).	**Low.** While there is suitable coastal and riparian scrub occur within the study area and there is only one occurance within five miles of the study area on iNaturalist and the species is located within the Kumeyaay-Ipai Interprative Center.
Bloomeria clevelandii	San Diego goldenstar	--/-- CRPR 1B.1 Poway HCP SDCWA NCCP/HCP	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. Found in Riverside and San Diego counties. Flowering period: April to May. Elevation: 160 to 1,525 feet (50 to 465 meters).	**Low**. Suitable clay soils and vernal pool habitat typically associated with the species do not occur within the study area. There are no reported occurrences of the species within the project vicinity.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE CRPR 1B.1 SDCWA NCCP/HCP	Perennial herb. Often associated with vernal pools. Also occurs within playas, grasslands, coastal scrub, openings in chaparral, and cismontane woodland; often on clay soils. Found in Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties. Flowering period: March to June. Elevation: 80 to 3,675 feet (25 to 1,120 meters).	**Low**. Suitable vernal pool habitat typically associated with the species does not occur within the study area. There are no reported occurrences of the species within the project vicinity.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Brodiaea orcuttii	Orcutt's brodiaea	--/-- CRPR 1B.1 Poway HCP SDCWA NCCP/HCP	Perennial bulbiferous herb. Occurs within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Prefers mesic or clay soils. Found in Riverside San Diego counties. Flowering period: May to July. Elevation: 98 to 5,550 feet (30 to 1,692 meters).	**Low**. Suitable clay soils typically associated with the species do not occur within the study area. There are no reported occurrences of the species within the project vicinity.
Calandrinia breweri	Brewer's calandrinia	--/-- CRPR 4.2	Annual herb. Occurs within chaparral or coastal scrub on sandy or loamy soil, disturbed sites, and after burns. Found along the central and southern coast; North Coast, South Coast, western Transverse, and Peninsular Ranges; San Gabriel, San Bernardino, and San Jacinto mountains; Sierra Nevada and western foothills; and the Channel Islands. Flowering Period: January to June. Elevation: 30 to 4,000 feet (10 to 1,220 meters).	**Moderate**. Suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road; however, there are no reported occurrences within the project vicinity. The closet report of the species is located over 3.2 miles east of the project at Iron Mountain.
Caulanthus heterophyllus	slender pod jewelflower	--/-- Poway HCP	Annual herb. Grows on dry sites within open coastal scrub and chaparral. Often occurs in burned and disturbed areas. Found along the coast of southern California; South Coast, western Transverse, and Peninsular Ranges; San Gabriel and San Bernardino mountains; and the Channel Islands. Flowering period: March to May. Elevation: below 4,600 feet (1,400 meters).	**High**. Suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road. Reported occurrences within the project vicinity occur to the east within the Blue Sky Ecological Reserve and around Lake Poway.
Ceanothus verrucosus	wart-stemmed ceanothus	--/-- CRPR 2B.2	Perennial shrub. Found on rocky slopes within chaparral, particularly southern maritime chaparral. Found in Riverside and San Diego counties. Flowering period: December to May. Elevation: below 1,245 feet (380 meters).	**None**. Suitable chaparral habitat does not occur within the study area.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Centromadia parryi ssp. *australis*	Southern tarplant	--/-- CRPR 1B.1 SDCWA NCCP/HCP	Annual herb. Found at the margins of salt marshes, vernally mesic areas within grasslands, and vernal pools. Found in the coastal regional from Santa Barbara County south to San Diego County and the Channel Islands. Flowering Period: May to November. Elevation: below 1,575 feet (480 meters).	**Low**. Suitable habitat does not occur within the study area and there are no reported occurrences of the species in the project vicinity.
Centromadia pungens ssp. *laevis*	smooth tarplant	--/-- CRPR 1B.1 SDCWA NCCP/HCP	Annual herb. Occurs on alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. Found in San Bernardino, Los Angeles, Riverside, and San Diego counties. Flowering Period: April to September. Elevation: below 2,100 feet (640 meters).	**Low**. Though suitable riparian habitat occurs within the study area, alkaline soils are not mapped within the study area and there are no reported occurrences of the species in the project vicinity.
Chamaebatia australis	Southern mountain misery	--/-- CRPR 4.2	Perennial shrub. Occurs in chaparral on gabbroic or metavolcanics soils. Found in Los Angeles and San Diego Counties. Blooms November to May. Elevation: 980 to 3,350 feet (300 to 1,020 meters).	**None**. Suitable chaparral habitat and soils do not occur within the study area and there are no reported occurrences of the species in the project vicinity.
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	--/-- CRPR 1B.2	Annual herb. Occurs in chaparral, coastal scrub, and native grassland, often on clay soils. Found within Orange, Riverside, San Bernardino, and San Diego counties. Flowering period: April to July. Elevation: 95 to 5,020 feet (30 to 1,530 meters).	**Low**. Suitable clay soils are not mapped within the study area and there are no reported occurrences of the species in the project vicinity.
Clarkia delicata	delicate clarkia	--/-- CRPR 1B.2	Annual herb. Occurs in shaded areas or the periphery of oak woodlands and cismontane chaparral, often on gabbroic soils. Found in San Diego County. Flowering period: April to June. Elevation: 770 to 3,280 feet (235 to 1,000 meters).	**Low.** Though reported occurrences of the species occur to the east within Blue Sky Ecological Reserve, gabbroic soils typically associated with the species are not mapped within the study area.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	--/-- CRPR 1B.2 Poway HCP	Perennial shrub. Occurs in chaparral and cismontane woodland. Found in Santa Barbara, Orange, Riverside, and San Diego counties. Flowering period: April to June. Elevation: 95 to 2,590 feet (30 to 790 meters).	**Low**. Suitable habitat does not occur within the study area and there are no reported occurrences within the project vicinity.
Convolvulus simulans	small-flowered morning-glory	--/-- CRPR 4.2	Annual herb. Occurs on clay soils and serpentinite seeps in openings within chaparral, coastal scrub, and native grassland. Found within the San Francisco Bay area, San Joaquin Valley, western Sierra Nevada foothills, along the coast of southern California, the Channel Islands, and the western Transverse and Peninsular Ranges. Flowering period: April to June. Elevation: 95 to 2,430 feet (30 to 740 meters).	**Low**. Suitable clay soils and serpentinite seeps do not occur within the study area and there are no reported occurrences within the project vicinity.
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	--/-- CRPR 1B.1	Perennial herb. Occurs within grasslands, coastal bluff scrub, coastal scrub, and chaparral of San Diego County. Flowering period: June to September. Elevation: 5 to 375 feet (3 to 115 meters).	**Low**. Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, there are no reported occurrences within the project vicinity.
Dichondra occidentalis	Western dichondra	--/-- CRPR 4.2	Perennial herb. Occurs within grasslands, coastal sage scrub, chaparral, and oak woodlands among rocks and shrubs. Often proliferates on recently burned slopes. Found along the coastal regions from San Luis Obispo County south to San Diego County. Flowering period: March to July. Elevation: 165 to 1,640 feet (50 to 500 meters).	**Moderate.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, there are no reported occurrences within the project vicinity. The closest record of the species is located over four miles south of the project near Scripps Poway Parkway and Community Road.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Dudleya variegata	variegated dudleya	--/-- CRPR 1B.2 Poway HCP SDCWA NCCP/HCP	Perennial herb succulent. Occurs on clay soils of dry hillsides and mesas within chaparral, valley grassland, foothill woodland and coastal sage scrub communities. Found in San Diego County. Flowering period: April to June. Elevation: 5 to 1,905 feet (3 to 580 meters).	**Low**. Suitable clay soils are not mapped within the study area and there are no reported occurrences within the project vicinity.
Dudleya viscida	sticky dudleya	--/-- CRPR 1B.2 SDCWA NCCP/HCP	Perennial herb. Occurs in rocky areas within coastal bluffs, coastal sage scrub, chaparral, and woodlands. Grows primarily on very steep north-facing slopes. Found in Orange, Riverside, and San Diego counties. Flowering period: May to June. Elevation: 30 to 1,805 feet (10 to 550 meters).	**Low.** Though suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway the habitat lacks rocky areas typically associated within the species. There are no reported occurrences within the project vicinity.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	--/-- CRPR 2B.1 Poway HCP	Perennial Shrub. Grows in mesic areas within coastal sage scrub and chaparral in San Diego County. Flowering period: September to November. Elevation: 95 to 1,960 feet (30 to 600 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, there are no reported occurrences within the project vicinity. The closest record of the species is located over 7.5 miles southwest of the project in Canyon Hills Open Space.
Eriodictyon sessilifolium	sessile-leaved yerba santa	--/-- CRPR 1B.2	Perennial shrub. Occurs within coastal sage scrub in San Diego County. Flowering period: July. Elevation: 560 feet (170 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, there are no reported occurrences within the project vicinity. The closest record of the species is located over six miles north of the project near the San Diego Zoo Safari Park.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE CRPR 1B.1 SDCWA NCCP/HCP	Annual or perennial herb. Grows in vernal pools and other mesic areas, such as marshes. Found in Los Angeles, Orange, Riverside, and San Diego counties. Flowering period: April to June. Elevation: 65 to 2,035 feet (20 to 620 meters).	**None.** Suitable vernal pool and marsh habitat does not occur within the study area.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Ferocactus viridescens	San Diego barrel cactus	--/-- CRPR 2B.1 Poway HCP SDCWA NCCP/HCP	Perennial (stem succulent) shrub. Grows in sandy to rocky areas within chaparral, valley grassland and coastal sage scrub communities. Found in San Diego County. Flowering period: May to June. Elevation: 5 to 492 feet (3 to 450 meters).	**Moderate.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, these areas lack rocky areas typically associated with the species. Several iNaturalist observations occur further south of the study area within undeveloped and open space areas.
Geothallus tuberosus	Campbell's liverwort	--/-- CRPR 1B.1	Liverwort. Grows in vernal pools and mesic areas of coastal scrub. Found in Riverside and San Diego counties. Flowering period: none. Elevation: 30 to 1,970 feet (10 to 600 meters).	**None.** Suitable vernal pool habitat does not occur within the study area and there are no reported occurrences within the project vicinity.
Githopsis diffusa ssp. *filicaulis*	Mission Canyon bluecup	--/-- CRPR 3.1 Poway HCP	Annual herb. Grows in mesic and disturbed areas within chaparral. Found in Riverside and San Diego counties. Flowering period: April to June. Elevation: 1,475 to 2,300 feet (450 to 700 meters).	**None.** Suitable chaparral habitat does not occur within the study area and there are no reported occurrences within the project vicinity.
Grindelia hallii	San Diego gumplant	--/-- CRPR 1B.2	Perennial herb. Typically occurs with sunny openings of chaparral and lower montane coniferous forests. Also grows in meadows and seeps. Prefers very wet locales in early spring, although such places usually dry quickly as spring turns to summer. Found in San Diego County. Flowering Period: May to October. Elevation: 605 to 5,725 feet (185 to 1,745 meters).	**Low.** Suitable chaparral, coniferous forest, and meadow habitat do not occur within the study area and there are no reported occurrences within the project vicinity. The closest record of the species is located over four miles south near Sycamore Canyon.
Harpagonella palmeri	Palmer's grapplinghook	--/-- CRPR 4.2	Annual herb. Grows on clay soils within openings of grasslands, coastal sage scrub, and chaparral. Found in Los Angeles, Orange, San Diego, and Riverside counties. Flowering Period: March to May. Elevation: 65 to 3,135 feet (20 to 955 meters).	**Low.** Suitable clay soils are not mapped within the study area and there are no reported occurrences within the project vicinity. The closest record of the species is located over four miles south near Sycamore Canyon.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Holocarpha virgata ssp. *elongata*	graceful tarplant	--/-- CRPR 4.2	Annual herb. Occurs in grasslands. Found along the southern coast of California and Peninsular Ranges. Flowering period: May to November. Elevation: 195 to 3,600 feet (60 to 1,100 meters).	**Low**. Limited grassland habitat occurs within the study area and there are no recent reported occurrences within the project vicinity. The closest record of the species is located over four miles south of the project near Scripps Poway Parkway and Community Road.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	--/-- CRPR 1B.2 County List A	Perennial shrub. Occurs in sandy soil and disturbed areas on the inland side of dunes, hillsides, and arroyos within coastal sage scrub and chaparral. Found along the coast of southern California, Peninsular Ranges, and Channel Islands. Flowering period: July to November. Elevation: below 656 feet (200 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway; however, there are no recent reported occurrences within the project vicinity. The closest record is located over 4.8 miles west of the project within Black Mountain Open Space Park.
Iva hayesiana	San Diego marsh-elder	--/-- CRPR 2B.2 Poway HCP SDCWA NCCP/HCP	Perennial herb. Found in alkaline flats, depressions, and streambanks within wetland habitats in San Diego County. Flowering period: April to October. Elevation: 30 to 1,640 feet (10 to 500 meters).	**Low.** Potentially suitable habitat occurs within the study area along the unnamed drainage south of Lake Poway Road; however, this drainage is partially concreted and dominated by non-native vegetation. There are no reported occurrences within the project vicinity. The closest record is located over 3.2 miles north along San Dieguito River.
Juncus acutus ssp. *leopoldii*	Southwestern spiny rush	--/-- CRPR 4.2	Perennial herb. Occurs in moist saline places including freshwater marshes, salt marshes, and alkaline seeps. Found along the coastal regions from San Luis Obispo County south to San Diego County. Flowering period: May to June. Elevation: below 984 feet (300 meters).	**Low.** Potentially suitable habitat occurs within the study area along the unnamed drainage south of Lake Poway Road; however, this drainage is partially concreted and dominated by non-native vegetation. There are no reported occurrences within the project vicinity. The closest record is located over 3.2 miles north along San Dieguito River.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Lathyrus splendens	pride-of-California	--/-- CRPR 4.3	Perennial herb. Found within chaparral. Found along the coast and Peninsular Ranges of southern California. Flowering period: March to June. Elevation: 650 to 5,000 feet (200 to 1,525 meters).	**None.** Suitable chaparral habitat does not occur within the study area and there are no reported occurrences within the project vicinity.
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	--/-- CRPR 4.3	Annual herb. Grows in openings of sage scrub and chaparral at the coastal and foothill elevations throughout California. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy. Also, found in disturbed areas. Flowering period: March to June. Elevation: below 9,186 feet (2,800 meters).	**High.** Suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, and a reported occurrence of the species occurs to the east at Lake Poway.
Monardella viminea	willowy monardella	FE/SE CRPR 1B.1 Poway HCP SDCWA NCCP/HCP	Perennial herb. Associated with riparian scrub, usually at sandy locales in seasonally dry washes. Generally, there is no canopy cover and river cobbles may lie in close proximity. Found in San Diego County. Flowering period: June to August. Elevation: 160 to 740 feet (50 to 225 meters).	**Low**. Suitable sandy dry washes do not occur within the study area and there is no recent occurrence of the species within the project vicinity. The most recent closest report of the species is located over six miles south within Sycamore Canyon.
Myosurus minimus ssp. *apus*	little mousetail	--/-- CRPR 3.1	Annual herb. Occurs in alkaline vernal pools within native grassland. Flowering period: March to June. Found within San Joaquin Valley south to San Diego County and east to western Riverside and San Bernardino counties. Elevation: 65 to 2,100 feet (20 to 640 meters).	**None.** Suitable vernal pool habitat does not occur within the study area.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Navarretia fossalis	spreading navarretia	FT/-- CRPR 1B.1 SDCWA NCCP/HCP	Annual herb. Occurs in vernal pools, vernal swales, roadside depressions, playas, marshes and swamps, and chenopod scrub. Population size is strongly correlated with rainfall. Depth of pool appears to be a significant factor as this species is rarely found in shallow pools. Found in the Mojave Desert, desert mountains, Channel Islands, and the Transverse and Peninsular Ranges. Flowering period: April to June. Elevation: 98 to 4,265 feet (30 to 1,300 meters).	**None.** Vernal pools or other suitable habitat do not occur within the study area and there are no reported occurrences in the project vicinity.
Ophioglossum californicum	California adder's-tongue	--/-- CRPR 4.2	Perennial herb. Grows on the marginals of vernal pools and mesic areas within grasslands and chaparral. Found within the Sacramento and San Joaquin Valleys, Sierra Nevada and Peninsular Ranges, and along the central and southern coasts. Flowering period: January to June. Elevation: 195 to 1,725 feet (60 to 525 meters)	**None.** Vernal pools or other suitable habitat do not occur within the study area and there are no reported occurrences in the project vicinity.
Pentachaeta aurea ssp. *aurea*	golden-rayed pentachaeta	--/-- CRPR 4.2	Annual herb. Occurs in grassy areas within coastal scrub, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland. Found within Riverside and San Diego counties. Flowering period: March to July. Elevation: 260 to 6,100 feet (80 and 1,850 meters).	**Low**. Limited grassland habitat occurs within the project site to the east of Espola Road, and there are no reported occurrences in the project vicinity.
Pogogyne abramsii	San Diego mesa mint	FE/SE CRPR 1B.1	Annual herb. Occurs within vernal pools of San Diego County. Flowering period: March to July. Elevation: 295 and 665 feet (90 to 200 meters).	**None.** Suitable vernal pool habitat does not occur within the study area and there are no reported occurrences in the project vicinity.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Quercus dumosa	Nuttall's scrub oak	--/-- CRPR 1B.1 SDCWA NCCP/HCP	Perennial shrub. Occurs on sandy or clay loam soils near the coast within coastal scrub, chaparral, cismontane woodland, and riparian woodland. Found along the coast, San Jacinto Mountains, and Peninsular Ranges of southern California. Flowering period: March to May. Elevation: below 1,310 feet (400 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road; however, there are no reported occurrences within the project vicinity. The closet record of the species is located over six miles south within Sycamore Canyon.
Quercus engelmannii	Engelmann oak	--/-- CRPR 4.2	Perennial tree. Occurs on slopes and foothills within grasslands, chaparral, oak woodland, and riparian woodlands. Found from Los Angeles County south to San Diego County, western Riverside and San Bernardino counties, and the Channel Islands. Flowering period: March to June. Elevation: 160 to 4,300 feet (50 to 1,300 meters).	**Low.** Suitable riparian woodland habitat within the study area is limited to a small patch to the east of Espola Road within the Blue Sky Ecological Reserve. The closest recent occurrence of the species is located over three miles east at Mount Woodson. This conspicuous tree species would most likely have been observed if present.
Salvia munzii	Munz's sage	--/-- CRPR 2B.2 SDCWA NCCP/HCP	Perennial shrub. Occurs within chaparral and coastal scrub of San Diego County. Flowering period: February to April. Elevation: 370 and 3,500 feet (115 to 1,065 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway Road; however, there are no reported occurrences within the project vicinity. The closet record of the species is over six miles west of the project at the western portion of Lake Hodges. Most observations of the species are located in the southern portion of the County near Otay Lakes.
Selaginella cinerascens	ashy spike-moss	--/-- CRPR 4.1	Perennial herb. Grows in sunny spots or under shrubs within coastal sage scrub and chaparral. Often associated with "red clay" soils. Found in coastal regions from southern Los Angeles County south to San Diego County. Flowering period: none. Elevation: below 1,804 feet (550 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway Road, but red clay soils are not present. The closet record of the species is located over four miles west around Lake Hodges.

Scientific Name	Common Name	Status[1]	Habit, Ecology, and Life History	Potential to Occur[2]
Senecio aphanactis	chaparral ragwort	--/-- CRPR 2B.2	Annual herb. Occurs on alkali flats and dry, open, rocky areas within grasslands, coastal scrub, and cismontane woodland. Found along the coastal regions from San Francisco Bay south to San Diego County and eastern Riverside and San Bernardino counties. Flowering period: February to May. Elevation: 45 to 2,625 feet (15 to 800 meters).	**Low.** Suitable alkali flats and rocky areas do not occur within the study area and there are no reported occurrences within the project vicinity.
Sphaerocarpos drewiae	bottle liverwort	--/-- CRPR 1B.1	Liverwort. Occurs in the opening of coastal scrub and chaparral within Riverside and San Diego counties. Flowering period: none. Elevation: 295 to 1,970 feet (90 to 600 meters).	**Low.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway Road; however, there are no reported occurrences within the project vicinity.
Stemodia durantifolia	purple stemodia	--/-- CRPR 4.2	Perennial herb. Grows on wet sand or rocks and drying streambeds within riparian habitats. Found in the San Jacinto Mountains and Peninsular Ranges of southern California and Sonoran Desert. Flowering period: year-round. Elevation: 590 to 985 feet (180 to 300 meters).	**Low**. Potentially suitable habitat within the study area is limited to the unnamed drainage south of Lake Poway Road. However, the drainage is partially concreted and dominated by non-native vegetation. The closest record of the species is over six miles west of the project at the downstream end of Lake Hodges.
Xanthisma junceum	rush-like bristleweed	--/-- CRPR 4.3	Perennial herb. Grows on dry hillsides within coastal sage scrub and chaparral. Found in San Diego County. Flowering period: May to January. Elevation: 785 to 3,280 feet (240 to 1,000 meters).	**Moderate.** Suitable coastal sage scrub habitat occurs within the study area east of Espola Road and south of Lake Poway Road; however, these areas are relatively flat. The closet record of the species is located approximately 1.5 miles east of the project in association with a steep hillside just west of Lake Ramona.

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

CRPR = California Native Plant Society California 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 – plants for which more information needed (review list); 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

Poway HCP: covered species under the Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan; SDCWA NCCP/HCP: covered species under the San Diego County Water Authority (SDCWA) Subregional Natural Community Conservation Plan/Habitat Conservation Plan; NE = Narrow Endemic Species

[2] Potential to Occur is assessed as follows – **None:** There are no recent or historical records of the species occurring on or in the immediate vicinity (within 5 miles) of the study area and the diagnostic habitats and soils associated with the species do not occur on or in the immediate vicinity of the study area; **Low:** Suitable habitat is present in the study area and a recent or historical record of the species occurs in the immediate vicinity (within 5 miles) but existing conditions such as elevation, soils, density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, and/or isolation reduce the possibility that the species may occur; **Moderate:** The diagnostic habitats associated with the species occur on or in the immediate vicinity of the study area but there is not a recorded occurrence of the species within the immediate vicinity, or recorded occurrences are limited to historical records. Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity; **High:** Suitable habitat occurs in the study area and the species has been recorded recently on or in the immediate vicinity but the species was not observed during project surveys; **Presumed Absent:** Species would be visible all year and would have been observed if present; **Present:** The species was observed within the study area during biological surveys for the project.

Appendix E

Special-Status Animal Species with Potential to Occur

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
INVERTEBRATES				
Bombus crotchii	Crotch's Bumble Bee	--/SCE	Found throughout southwestern California from the Central Valley south to the U.S./Mexico border. Inhabits open grasslands and scrub habitats. Primarily nests underground and forages on a wide variety of flowers, but a short tongue renders it best suited to open flowers with short corollas. Most commonly observed on flowering species in the Fabaceae, Asteraceae, and Lamiaceae families. Occurrence has also been linked to habitats containing *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia* genera.	**Moderate.** The species may nest and forage in Diegan coastal sage scrub habitats within the study area. Eucalyptus woodland habitat may provide supplemental foraging resources. However, Diegan coastal sage scrub areas are small, accounting for less than one acre across the study area.
Danaus plexippus	Monarch Butterfly	FC/-- (Pop. 1 - California overwintering population)	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*], and cypress [*Hesperocyparis* sp.]), with nectar and water sources nearby. Breeds in areas that have a suitable abundance of the species' larval host plant, milkweed (*Asclepias* sp.).	**Moderate.** The species has potential to travel through and potentially breed in the study area where its host plant is present, but there are no significant overwintering populations known to occur in the project vicinity.
Euphydryas editha quino	Quino Checkerspot Butterfly	FE/-- Poway HCP SDCWA NCCP/HCP	Occurs in California from western Riverside County southwards to southern San Diego County. Inhabits open and sparsely vegetated areas that contain larval host plant species (principally dot-seed plantain [*Plantago erecta*], woolly plantain [*Plantago patagonia*] but also Coulter's snapdragon [*Antirrhinum coulterianum*], Chinese houses [*Collinsia* spp.], and rigid bird's beak [*Cordylanthus rigidus*]) and nectar sources. Often found on rounded hilltops, ridgelines, and occasionally rocky	**None.** The project is primarily comprised of existing roadways and other developed and disturbed areas that lack suitable habitat to support the species. Furthermore, the study area is located outside the U.S. Fish and Wildlife Service's recommended survey area for the species. The closest documented occurrences of the species are located over four miles northwest of the

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			outcrops. Occurs within a wide range of open-canopied habitats including vernal pools, sage scrub, chaparral, grassland, and open oak and juniper woodland communities.	project at Lake Hodges and are limited to historical occurrences from the 1980s or earlier.
VERTEBRATES				
Amphibians				
Anaxyrus californicus	Arroyo Toad	FE/SSC Poway HCP SDCWA NCCP/HCP	Inhabits low gradient, medium to large streams and rivers with intermittent and perennial flow in coastal and desert drainages of central and southern California. Breeding habitat specialists that require slow-moving streams composed of sandy soils with sandy streamside terraces. In some areas, may occupy first-order streams, although most populations inhabit second-sixth-order streams that have extensive braided channels and sediment deposits of sand, gravel, or pebbles that are occasionally redistributed by flooding. Utilizes shallow pools (at least 1-inch deep) for breeding, egg-laying, and tadpole development. Vulnerable to habitat destruction and alteration due to changes in hydrology, including construction of dams and water diversions, and further impacted by the presence of non-native predators such as American bullfrog (*Lithobates catesbeianus*).	**None**. Suitable stream habitat with sandy soils and terraces does not occur within the study area. The closest documented occurrence of the species is located approximately 4.2 miles north of the project along the upper portion of San Dieguito River.
Spea hammondii	Western Spadefoot Toad	--/SSC SDCWA NCCP/HCP	Occurs from northern California southward to San Diego County, west of the Sierra Nevada at elevations below 4,500 feet. Terrestrial species requiring temporary pools for breeding. Suitable upland habitats include coastal sage scrub, chaparral, and grasslands. Most common in grasslands with vernal pools or mixed grassland-coastal sage scrub areas. Breeds in temporary pools formed by heavy rains but may also be found in riparian habitats with suitable water resources.	**Low.** The species preferred habitat, temporary pools, was not detected within the study area but potentially suitable aquatic habitat does occur along an unnamed drainage located south of Lake Poway Road. However, this area is surrounded by residential development and the closest reported occurrence is located approximately 2.9 miles east of the study area near Mount Woodson.

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			Breeding pools must lack exotic predators such fish, bullfrogs, and crayfish for the species to successfully reproduce. Estivates in burrows within upland habitats adjacent to potential breeding sites.	
Reptiles				
Actinemys pallida	Southwestern Pond Turtle	FPT/-- SSC Poway HCP MSCP Covered NE	In California, includes all pond turtle populations inhabiting the central Coast Range south from the middle of Monterey Bay to San Diego County. Mostly occurs in major coast-facing drainages at elevations below 5,000 feet, including the Mojave River (San Bernardino County) and Andreas Canyon (Riverside County). Habitat generalist that occurs within many types of aquatic habitats from freshwater to brackish environments and permanent to intermittent waterbodies. Inhabits creeks, slow moving rivers, marshes, ponds, lakes, reservoirs, vernal pools, canals, and even sewage treatment plants. Prefers habitats with slow flowing water, particularly where basking sites (such as rocks, downed logs, or emergent vegetation), deep water retreats, and egg laying areas are readily available. Leaves water and travels to surrounding upland habitats to nest, over-winter, and aestivate.	**Low.** The species preferred habitat of aquatic environments, freshwater to brackish, with permanent to intermittent waterbodies is not within the study area. While the study area is adjacent to Lake Poway, which may have potential suitable habitat. However, the nearest observation to the study area is Lake Hodges, which is approximately five miles northwest of the study area.
Arizona elegans occidentalis	California Glossy Snake	--/SSC	Occurs along the coastal regions of California from San Francisco south to San Diego County; though it is absent along the central coast. Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas and areas with soils loose enough for easy burrowing.	**Low.** The project is primarily located within the developed and disturbed areas that lack suitable habitat to support the species. Potentially suitable habitat within the study area is limited to open space areas associated with Blue Sky Ecological Reserve. Reported occurrences within the project vicinity area limited to

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
				specimen collections from the 1930s and 1960s.
Aspidoscelis hyperythra beldingi	Belding's Orange-throated Whiptail	--/WL Poway HCP SDCWA NCCP/HCP	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 at elevations 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. Species occurrence is correlated with the presence of perennial plants which provide a food base for its major food source, termites.	**High.** Potentially suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, and there are numerous occurrences of the species within the project vicinity.
Aspidoscelis tigris stejnegeri	San Diego Tiger Whiptail	--/SSC SDCWA NCCP/HCP	Occurs along the coastal region of southern California from San Luis Obispo south to San Diego County. Inhabits a wide variety of habitats, primarily in hot and dry open areas with sparse vegetation, from sea level up to 4,900 feet. Suitable habitat includes coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas with sandy or gravelly substrates.	**High.** Potentially suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, and there are several iNaturalist occurrences of the species within the Blue Sky Ecological Reserve and around Lake Poway.
Crotalus ruber	Red Diamond Rattlesnake	--/SSC SDCWA NCCP/HCP	Occurs in southwestern California from San Bernardino County south to San Diego County at elevations below 5,000 feet. Has a wide tolerance for varying environments including the desert, dense foothill chaparral, warm inland mesas and valleys, and cool coastal zones. Most commonly found near heavy brush with large rocky microhabitats. Chamise and red shank chaparral associations may offer better structural habitat for refuges and food resources.	**High.** Potentially suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, and there are several iNaturalist occurrences of the species within the Blue Sky Ecological Reserve and around Lake Poway.
Diadophis punctatus similis	San Diego Ring-Necked Snake	--/-- SDCWA NCCP/HCP	This subspecies is found mainly along the coast to the west of the mountain and desert regions of San Diego County, and in extreme	**Moderate**. Suitable habitat within the study area occurs east of Espola Road within the Blue Sky Ecological Reserve

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			southwestern Riverside County. Prefers moist habitats and is often found near intermittent streams. Suitable habitat includes wet meadows, rocky hillsides, farmland, grassland, chaparral, mixed coniferous forests, and woodlands. Usually found under the cover of rocks, wood, boards and other surface debris, but occasionally seen moving on the surface on cloudy days, dusk, or at night.	and south of Lake Poway Road along an unnamed intermittent stream. However, reported occurrences of the species in the project vicinity are limited to a specimen collection from the 1930s.
Lichanura orcutti	Rosy Boa	--/-- SDCWA NCCP/HCP	Occurs within southern California from Los Angeles County south to San Diego County, from the coast east towards the Mojave and Colorado deserts; though absent from most of Imperial County. Inhabits arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas. Common in riparian areas but does not require permanent water.	**Moderate.** Potentially suitable habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, however, these areas lack rocky microhabitats typically associated with the species. There are iNaturalist occurrences of the species within the Blue Sky Ecological Reserve and around Lake Poway.
Phrynosoma blainvillii (formerly P. coronatum blainvilli)	Blainville's (formerly San Diego or Coast) Horned Lizard	--/SSC Poway HCP SDCWA NCCP/HCP	In California, predominately occurs from Kern County south to San Diego County, west of the desert at elevations below 8,000 feet. Inhabits a wide variety of vegetation types including sagebrush scrub, chaparral, grasslands, forests, and woodlands but is restricted to areas with suitable sandy, loose soils with open areas for basking. Diet primarily composed of native harvester ants (*Pogonmyrmex* spp.) and are generally excluded from areas invaded by Argentine ants (*Linepithema humile*).	**Moderate.** Potentially suitable habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, and there are documented occurrences within the project vicinity. However, the project primarily occurs within existing roadways and immediately adjacent areas that lack suitable sandy soils associated with the species.
Plestiodon skiltonianus interparietalis	Coronado Skink	--/WL SDCWA NCCP/HCP	Occurs in coastal and inland portions of southern San Diego County; though can occur up into Riverside County where it intergrades with Skilton's skink (*Plestiodon skiltonianus skiltonianus*). Suitable habitats include grassland, woodlands, pine forests, and chaparral, especially in open sunny areas such	**Moderate.** Potentially suitable habitat within the study area occurs to the east of Espola Road and south of Lake Poway Road. However, the study area lacks rocky stream areas typically associated with the species. The unnamed drainage south of Lake

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			as clearings and edges of creeks or rivers. Prefers rocky areas near streams with lots of vegetation but can also be found in areas away from water. Occasionally seen foraging in leaf litter but more commonly found underneath surface objects, such as bark or rocks, where it lives in extensive burrows.	Poway Road is partially concreted and dominated by non-native vegetation. Documented occurrences within the project vicinity are located approximately 1.5 miles southeast near Twin Peaks.
Thamnophis hammondii	Two-striped Garter Snake	--/SSC	Found in California from Monterey County south along the coast to San Diego County at elevations below 7,000 feet. Commonly inhabits perennial and intermittent streams with rocky beds bordered by riparian habitats dominated by willows (*Salix* spp.) and other dense vegetation. Has also been found in stock ponds, and other artificially created aquatic habitats, if bordered by dense vegetation and potential prey, such as amphibians and fish, are present.	**Low.** An unnamed drainage occurs within the study area south of Lake Poway Road. However, the drainage is partially concreted, dominated by non-native vegetation, and lacks rocky areas associated with the species. Documented occurrences of the species within the project vicinity consist of a voucher specimen from the 1920s located approximately two miles west of the project.
Birds				
Accipiter cooperii	Cooper's Hawk	--/WL Poway HCP	In California, breeds from Siskiyou County south to San Diego County and eastwards to Owens Valley at elevations below 9,000 feet. Inhabits forests, riparian areas, and more recently suburban and urban areas. Nests within dense woodlands and forests and isolated trees in open areas.	**High.** Suitable riparian habitat and other woodlands occur within the project area, and there are numerous eBird sightings of the species within the vicinity.
Agelaius tricolor	Tricolored Blackbird	BCC/ST, SSC SDCWA NCCP/HCP	Highly colonial, nomadic species occurring as a year-round resident of California from Sonoma County to San Diego County. 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.; *Scirpus* ssp.), though also utilizes willow (*Salix* spp.), blackberries (*Rubus* spp.), thistles	**None.** Suitable freshwater marsh habitat does not occur within the study area. There are no documented breeding colonies within project vicinity.

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			Cirsium and *Centaurea* spp.), nettles (*Urtica* sp.), and agricultural crops. Forages in grasslands and cropland habitats adjacent to breeding areas.	
Aimophila ruficeps canescens	Southern California Rufous-crowned Sparrow	--/WL Poway HCP SDCWA NCCP/HCP	Year-round resident of southwestern California occurring from Santa Barbara County south to San Diego County at elevations below 5,000 feet. Generally found on moderate to steep slopes vegetated with grassland, coastal sage scrub, and chaparral. Prefers areas with California sagebrush (*Artemisia californica*) but generally absent from areas with dense stands of coastal sage scrub.	**High.** Suitable coastal sage scrub and sloped areas occur within the study area east of Espola Road in association with the Blue Sky Ecological Reserve. There are several eBird sightings of the species reported within project vicinity at Blue Sky Ecological Reserve and around Lake Poway.
Ammodramus savannarum	Grasshopper Sparrow	--/SSC Poway HCP SDCWA NCCP/HCP	Occurs west of the Cascade and Sierra Nevada Ranges from Mendocino County south to San Diego County at elevations below 5,000 feet. Prefers moderately open grasslands and prairies with scattered shrubs, generally avoiding grasslands with extensive shrub cover.	**Low.** Limited non-native grassland occurs within the study area to the east of Espola Road. No documented occurrences of the species occur within the immediate vicinity. Reported occurrences are located further north near Lake Hodges and east near the Ramona Grassland Preserve.
Aquila chrysaetos	Golden Eagle	--/FP, WL Poway HCP	Uncommon year-round resident and migrant throughout California, except the center of the Central Valley. More common in southern California than in northern regions. Inhabits a variety of habitats over rugged terrain. Nests on cliffs or trees. Forages over plains, grasslands, and low and open shrublands including chaparral and coastal sage scrub. Typically absent from heavily forested areas or on the immediate coast, and almost never detected in urbanized environments.	**Low.** Documented occurrences and eBird sightings occur near Lake Poway and further east near Mount Woodson and Iron Mountain. However, the study area lacks suitable breeding habitat for the species and is located within residential development.
Artemisiospiza belli belli	Bell's Sparrow	BCC/WL Poway HCP SDCWA NCCP/HCP	Non-migratory year-round resident on the coastal ranges of California and western slopes of the central Sierra Nevada mountains. Occurs year-round in southern California.	**Moderate**. Suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road in association with the Blue Sky Ecological Reserve.

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			Breeds in dry coastal sage scrub and chaparral, desert scrub, and similar other open, scrubby habitats. In foothill chaparral, tends toward younger, less dense stands that are recovering from recent fires; less common in older, taller stands that have remained unburned.	However, there are few reported occurrences of the species in the project vicinity with the closet location occurring approximately 2.8 miles north of the project just east of Lake Hodges.
Elanus leucurus	White-tailed Kite	--/FP	Year-round resident of California residing along the coasts and valleys west of the Sierra Nevada foothills and southeast deserts; 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 often associated with agricultural areas. Breeds in riparian areas adjacent to open spaces nesting in isolated trees or relatively large stands.	**Moderate.** Multiple eBird sightings are reported further east of the project within the Blue Sky Ecological Reserve and around Lake Poway. However, limited suitable riparian habitat occurs within the study area.
Empidonax traillii extimus	Southwestern Willow Flycatcher	FE/SE Poway HCP SDCWA NCCP/HCP	In California, breeds from the central portion of the state in Owens Valley (Inyo County) south to San Diego County. Restricted in San Diego County to two modest colonies at San Luis Rey River and Santa Margarita River, with a few scattered pairs. 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* spp.), 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.	**Low.** Limited riparian habitat occurs within the study area. The last recorded breeding occurrence of the species in the vicinity is from 1998 and located over 3.2 miles north along San Dieguito River just east of Lake Hodges. Breeding pairs are not anticipated to occur within or adjacent to the project based on the limited riparian habitat available, lack of recent observations, and declining status of the species within the region.
Icteria virens	Yellow-breasted Chat	--/SSC SDCWA NCCP/HCP	In California, occurs as a migrant and summer resident breeding from the coastal regions in northern California, east of the Cascades, and throughout the central and southern portions	**Moderate.** Multiple eBird sightings are reported further east of the project within the Blue Sky Ecological Reserve and around Lake Poway. However,

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			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.	limited suitable riparian habitat occurs within the study area.
Polioptila californica californica	Coastal California Gnatcatcher	FT/SSC Poway HCP SDCWA NCCP/HCP	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 occurs in arid, open sage scrub habitats on gently slopes hillsides to relatively flat areas at elevations below 3,000 feet. Composition of sage scrub in which gnatcatchers are found varies though California sagebrush (*Artemisia californica*) present as dominant or co-dominant species. Mostly absent from areas dominated by black sage (*Salvia mellifera*), white sage (*Salvia apiana*), or lemonade berry (*Rhus integrifolia*), though may occur more regularly in inland regions dominated by black sage.	**High.** Suitable coastal sage scrub occurs within the study area to the east of Espola Road within the Blue Sky Ecological Reserve and to the south of Lake Poway Road, and here are numerous documented occurrences of the species within the Blue Sky Ecological Reserve and around Lake Poway.
Sialia mexicana	Western Bluebird	--/-- Poway HCP	Common year-round resident throughout California but absent from the higher mountains and eastern deserts. Breeds in open woodlands, riparian habitats, grasslands, and farmlands. Nests and roosts in cavities of trees and snags, often in holes previously created by woodpeckers, and nest boxes. Winters in a wider variety of habitats.	**Present**. Suitable riparian habitat and woodland habitat occurs within the study area and species was observed within the study area during the 2025 survey.
Setophaga petechia	Yellow Warbler	--/SSC SDCWA NCCP/HCP	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	**High.** There are reported eBird sightings of the species east of the project within the Blue Sky Ecological Reserve and suitable riparian habitat occurs within the study area.

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			breeds in montane shrub and conifer forests in higher elevation areas.	
Vireo bellii pusillus	Least Bell's Vireo	FE, BCC/SE Poway HCP SDCWA NCCP/HCP	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, 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 (*Populus* spp.) and willows (*Salix* spp.) with mule fat (*Baccharis salicifolia*), oaks (*Quercus* ssp.), and sycamore (*Platanus racemosa*), and mesquite (*Prosopis* spp.) and arrowweed (*Pluchea sericea*) within desert habitats. Can be tolerant of the presence of non-native species such as tamarisk (*Tamarix* spp.).	**High.** Potentially suitable riparian habitat occurs within the study area. Reported occurrences within the vicinity primarily occur approximately 3.2 miles north along San Dieguito Creek just east of Lake Hodges, though there is an occurrence one mile north near Maderas Golf Club.
Mammals				
Chaetodipus fallax fallax	Northwestern San Diego Pocket Mouse	--/SSC Poway HCP SDCWA NCCP/HCP	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.	**Low.** Though coastal sage scrub habitat occurs within the project site, there are records of the species in the project vicinity. The closet reported occurrence is located approximately 6.2 miles north at the San Diego Zoo Safari Park.
Corynorhinus townsendii pallescens	Townsend's Big-eared Bat	--/SSC Poway HCP	Occurs throughout California but distribution is strongly correlated with the availability of caves and cave-like roosting habitat. Found in a variety of habitats with presence of caves or	**Low**. The species preferred roosting habitat does not occur within the study area. The closest reported occurrence

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			cave-like structures (such as buildings). In San Diego County, presumed absent from coastal areas being found more commonly in historic mining districts and boulder-strewn regions (i.e., Escondido, Lakeside, Dulzura, Jacumba, etc.).	of the species is located approximately 3.5 miles south near Garden Road.
Eumops perotis californicus	Western Mastiff Bat	--/SSC Poway HCP	In California, 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.	**Low.** The species preferred roosting habitat does not occur within the study area. The closest reported occurrence of the species is located approximately 3.3 miles south near Mount Woodson.
Lasiurus xanthinus	Western Yellow Bat	--/SSC	Occurs from southern California through southern Nevada, western Arizona, and southern New Mexico. Found in Los Angeles, San Bernardino, and San Diego Counties of California. In San Diego, commonly found in Anza Borrego Desert but is also established west of the desert within rural to suburban areas including Escondido, Vista, Ramona, Lakeside, El Cajon, and La Mesa. Roosts primarily on dead palm frond skirts of native and non-native fan palms (*Washingtonia* spp.) but has also been observed in cottonwoods and yuccas (*Yucca* spp.; *Hesperoyucca* ssp.). Occurs within a variety of habitats where palms are present including desert riparian, desert washes, palm oasis, cottonwood-willow riparian forest, and developed areas.	**High.** Potential roosting habitat occurs within the study area as a stand of Mexican fan palm trees located along the unnamed drainage south of Lake Poway Road, and there are several reported occurrences within the project vicinity.
Neotoma bryanti (formerly lepida) intermedia	San Diego Bryant's (formerly desert) Woodrat	--/SSC SDCWA NCCP/HCP	Occurs along the coastal regions of California being found as far north as San Luis Obispo County, south to San Diego County, and in the western portions of San Bernardino and Riverside Counties. Inhabits a variety of shrub	**Moderate.** Potentially suitable coastal sage scrub habitat occurs within the study area to the east of Espola Road and south of Lake Poway Road, however, these areas lack rocky

Scientific Name	Common Name	Status[1]	Habitat Associations	Potential to Occur[2]
			and desert habitats such as coastal sagebrush scrub, chaparral, pinyon-juniper woodland, and Joshua tree woodland among others. Often associated with rock outcroppings, boulders, cacti patches, and areas with dense understories. Construct dens used for shelter, food storage, and nesting around rock outcroppings and cacti using various materials such as twigs, sticks, and other debris.	microhabitat and cacti patches typically associated with the species. There are several documented occurrences of the species in the project vicinity within the Blue Sky Ecological Reserve and around Lake Poway.
Nyctinomops femorosaccus	Pocketed Free-tailed Bat	--/SSC	Rare in California occurring from Los Angeles County eastwards to San Bernardino County, and southwards to San Diego County. Closely associated with their preferred roosting habitats consisting of vertical cliffs, quarries, and rocky outcrops. Sometimes roosts under tiled roofs and observed utilizing bat boxes. Habitat generalists foraging in grasslands, shrublands, riparian areas, oak woodlands, forests, meadows, and ponds favoring larger water bodies for drinking.	**Moderate.** The species preferred roosting habitat does not occur within the study area, though the species could potentially utilize houses and other roofed structures for roosting. The closest reported occurrence of the species is located approximately 3.5 miles south near Garden Road.
Odocoileus hemionus	Mule Deer	--/-- Poway HCP SDCWA NCCP/HCP	Found throughout California lacking from only completely urbanized areas and the desert floor. Distribution is determined by vegetation type, water availability, and quality and quantity of foraging habitat. Inhabits a wide array of habitats from grasslands, meadows, coastal sage scrub, chaparral, riparian and montane forests. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.	**Moderate**. The project is primary located within existing roadways and other developed or disturbed areas that lack suitable habitat to support the species. However, suitable habitat and large open space areas occur to the east within the Blue Sky Ecological Reserve and around Lake Poway. The species may occasionally occur within the study area but would generally avoid the area based on existing roadways and development.

[1] Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SSC = State of California Species of Special Concern.

Poway HCP: species covered under the City of Poway Subarea Habitat Conservation Plan/Natural Communities Conservation Plan; SDCWA NCCP/HCP: species covered under the San Diego County Water Authority (SDCWA) Subregional Natural Community Conservation Plan/Habitat Conservation Plan; NE = Narrow Endemic Species

[2] Potential to Occur is assessed as follows – **None**: The study area is located outside of the species known range and distribution, the species is so limited to a particular habitat that it cannot disperse on its own, and/or habitat suitable for species establishment and survival does not occur in the study area; **Not Expected**: There are no recent or historical records of the species occurring on or in the immediate vicinity (within three miles) of the study area and the suitable habitats associated with the species do not occur on or adjacent to the study area. The species moves freely and might disperse through or across the study area, but suitable habitats for residence or breeding do not occur; **Low**: There is a recent or historical record of the species on or in the immediate vicinity of the study area (within three miles) and potentially suitable habitats associated with the species occur in or adjacent to the study area, but existing conditions such as elevation, species composition, density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, and/or isolation may substantially reduce the possibility that the species may occur; **Moderate:** Suitable habitats associated with the species occur on or adjacent to the study area but there is not a documented occurrence of the species within the immediate vicinity (within three miles), or recorded occurrences are limited to historical records. Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity; **High**: Suitable habitats associated with the species occur in the study area and the species has been recently recorded on or in the immediate vicinity (within three miles) of the study area; **Present**: The species was observed in or adjacent to the study area during biological surveys or during a previous survey.

Appendix F

Explanation of Status Codes

FEDERAL AND STATE CODES

U.S. Fish and Wildlife Service (USFWS)

BCC Bird of Conservation Concern
FC Federal candidate species
FE Federally listed endangered
FT Federally listed threatened
FPE Federally proposed endangered
FPT Federally proposed threatened

Birds of Conservation Concern (BCC)

The primary legal authority for Birds of Conservation Concern (2021) is the Fish and Wildlife Conservation Act of 1980 (FWCA), as amended. Other authorities include the Endangered Species Act, Fish and Wildlife Act (1956) and 16 United States Code §701. A FWCA 1988 amendment (Public Law 100-653, Title VIII) requires the Secretary of the Interior through the USFWS to "identify species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." The 2008 BCC report is the most recent effort by the USFWS to carry out this proactive conservation mandate.

The BCC report aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the USFWS's highest conservation priorities and draw attention to species in need of conservation action. The USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. Birds of Conservation Concern 2021 lists are available online at https://www.fws.gov/media/birds-conservation-concern-2021.

California Department of Fish and Wildlife (CDFW)

SCE State candidate for listing as endangered
SCT State candidate for listing as threatened
SE State listed endangered
SR State listed rare
ST State listed threatened
SSC State species of special concern
WL Watch List
FP Fully Protected species refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.
Special Animal Refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Database regardless of legal or protection status.

California Environmental Quality Act (CEQA)

For plants with no current federal or state legal standing, "CEQA" refers to the fact that, under the Act, impacts to species may be found significant under certain circumstances (e.g., the species are regionally sensitive and/or are protected by a local policy, ordinance, or habitat conservation plan; or the impact involves interference with certain movements or migrations, with wildlife corridors or with nursery sites).

San Diego County Water Authority Subregional Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP)

Covered Species

Species covered under the San Diego County Water Authority (Water Authority) NCCP/HCP whose conservation and management are provided for by the NCCP/HCP and for which limited take is authorized by the Wildlife Agencies.

Narrow Endemic (NE) Species

Narrow endemic species are native species that are highly restricted by their habitat requirements, range, and/or other ecological factors. Specific measures to ensure that impacts to these resources are avoided to the maximum extent practicable are included in the NCCP/HCP.

City of Poway Subarea Habitat Conservation Plan/Natural Community Conservation Plan (HCP)

Target Species

Species known or potentially occurring in the City of Poway Subarea HCP region that are listed as threatened or endangered by federal or state agencies or are likely to be listed in the future. They are also non-sensitive species that are considered indicators of habitat quality or are otherwise important for preserve design.

OTHER CODES AND ABBREVIATIONS

California Native Plant Society California Rare Plant Rank (CRPR) Codes

Lists

1A = Presumed extirpated in California and either rare or extinct elsewhere. Eligible for state listing.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2A = Presumed extirpated in California but common elsewhere. Eligible for state listing.

2B = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Review List: Plants about which more information is needed. Some eligible for state listing.

4 = Watch List: Plants of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 = Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

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

.3 = Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

A “CA Endemic” entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

Appendix G

Crotch's Bumble Bee Survey Information

Methods

HELIX Environmental Planning, Inc. (HELIX) conducted focused surveys for Crotch's bumble bee (*Bombus crotchii*; CBB) (Table 1, *HELIX Survey Information*). The habitat assessment included mapping the vegetation on-site in accordance with vegetation community classification from Holland (1986) and Oberbauer et al. (2008), determining the species composition within vegetation communities, and collecting a list of flowering species. HELIX's survey method is based on the California Department of Fish and Wildlife (CDFW) *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* issued June 6, 2023, which calls for an initial Crotch's bumble bee habitat assessment followed by three bumble bee surveys. The three surveys were spaced two to four weeks apart during the Colony Active Period (April through August) and when floral resources were present in 2025. The survey focused on suitable habitat within the study area, which comprised approximately 4.7 acres, and met the recommended survey rate of no more than three acres per hour. Bumble bee species observed during the survey were identified, but were not captured or handled to avoid potential take. If detected, Crotch's bumble bee location and observation details were to be documented, with photographs, and confirmed by University of California, Riverside, bumble bee expert Dr. Douglas Yanega.

Table 1
HELIX SURVEY INFORMATION

Survey Date	Personnel	Survey Conditions[1]	Purpose	Results
5/30/2025	Angelica Grunloh	0930am, 69°F, wind 3-5 mph, 70% clouds 0300pm, 86°F, wind 3-8 mph, 25% clouds	Crotch's bumble bee (*Bombus crotchii*) habitat assessment	Suitable habitat present
6/16/2025	Angelica Grunloh	0900am, 73°F, wind 0-3 mph, 0% clouds 1115 am, 82°F, wind 3-5 mph, 0% clouds	Crotch's bumble bee first survey	Negative
6/30/2025	Angelica Grunloh	0945am, 78°F, wind 3-5 mph, 0% clouds 0100pm, 85°F, wind 3-5 mph, 0% clouds	Crotch's bumble bee second survey	Negative
7/18/2025	Matt Dimson	0900am, 68°F, wind 0-1 mph, 100% clouds 1245pm, 80°F, wind 5-7 mph, 0% clouds	Crotch's bumble bee third survey	Negative

[1] F = Fahrenheit, mph = miles per hour

SURVEY RESULTS

Bee species observed during the survey effort were honey bee (*Apis mellifera*) and yellow-faced bumble bee (*Bombus vosnesenskii*). CBB or CBB nests were not detected during the survey effort and are presumed to be absent from the project site (see the Biological Technical Report [BTR] Figures 9a-c).

The CBB survey is valid until the start of the next CBB flight season and expires on April 1, 2026. This survey report presents a negative finding for CBB individuals and CBB nest sites within the project site, and no further pre-construction survey efforts are necessary before April 1, 2026. If groundbreaking activities do not start within the project site until after April 1, 2026, protocol CBB surveys may need to be repeated based on the current guidance for CBB at that time.

Habitat Assessment Results

Crotch's bumble bee inhabits open grasslands and scrub habitats. It primarily nests underground and forages on a wide variety of flowers, but a short tongue renders it best suited to open flowers with short corollas. In Southern California, it is most commonly observed on flowering species in the Asclepias, Astragalus, Chaenactis, Eschscholzia, Lupinus, Phacelia, and Salvia genera. Species in these genera did not individually account for more than two percent cover in any vegetation community. However, other preferred and potential foraging sources were abundant throughout Diegan coastal sage scrub, eucalyptus woodland, and non-native vegetation areas of the study area. California buckwheat (*Eriogonum fasciculatum*) and deerweed (*Acmispon glaber*), which are common nectar sources for the species, accounted for 38 percent and three percent cover in the Diegan coastal sage scrub area, respectively. Other potential nectaring sources were abundant in the herb and shrub layers of eucalyptus woodland and non-native vegetation communities, including ornamental rock rose, pride of Madeira, plumbago, nasturtium, sea lavender, and others. Although these species are not specifically associated with Crotch's bumble bee, they share the open floral anatomy and short corollas of preferred nectar sources. As non-native ornamentals, these species are not characteristic of natural habitats for Crotch's bumble bee, although they may provide supplemental foraging resources for bees nesting in adjacent Diegan coastal sage scrub habitats also present in the study area.

Nectaring and nesting resources were absent from developed areas and disturbed habitat, which included roads, buildings, and cleared lots surrounding Lake Poway infrastructure (BTR Figures 9a through 9c).

Table 2
SPECIES COMPOSITION BY MAPPED ALLIANCE

Scientific Name[1]	Common Name	Percent Cover[2]
Diegan Coastal Sage Scrub		
Eriogonum fasciculatum	**California buckwheat**	**38**
Encelia californica	bush sunflower	18
Artemisia californica	coastal sage brush	18
Malosma laurina	laurel sumac	12
Baccharis salicifolia	mule fat	4
Acmispon glaber	**deerweed**	**3**
*Foeniculum vulgare**	fennel	2
Eucalyptus Woodland		
Eucalyptus sp.*	eucalyptus	25
Cistus sp.*	ornamental rock rose	18
*Limonium perezii**	canarian sea lavender	6
Acacia sp.*	acacia	5
*Tecoma capensis**	cape honeysuckle	5
Malosma laurina	laurel sumac	4
*Rhaphioleips indica**	Indian hawthorn	4
Cotoneaster sp. *	cotoneaster	4
*Echium candicans**	pride of Madeira	3
Baccharis pilularis	coyote brush	3
Pinus sp.*	pine	3
*Lantana camara**	lantana	2
*Acacia redolens**	bank catclaw	3

Scientific Name[1]	Common Name	Percent Cover[2]
Heteromeles arbutifolia	toyon	2
Acmispon americanus	**American bird's foot trefoil**	**2**
*Cinnamomum camphora**	camphortree	2
Salix lasiolepis	arroyo willow	2
*Washingtonia robusta**	mexican fan palm	2
Coast Live Oak Woodland		
Quercus agrifolia	coast live oak	40
Salix lasiandra	pacific willow	35
Salix laevigata	polished willow	25
Malosma laurina	laurel sumac	18
Platanus racemosa	California sycamore	5
Baccharis salicifolia	mule fat	2
Vitis girdiana	Southern California grape	2
Non-Native Grassland		
*Bromus madritensis**	foxtail chess	60
Avena sp. *	wild oat	12
*Hirschfeldia incana**	mustard	7
Isocoma menziesii	white flowered goldenbush	4
*Brachypodium distachyon**	purple false brome	3
Acmispon americanus	**American bird's foot trefoil**	**2**
*Bromus hordeaceus**	soft chess	2
Disturbed Habitat		
*Bromus madritensis**	foxtail chess	20
*Cinnamomum camphora**	camphortree	18
*Brachypodium distachyon**	purple false brome	10
*Ehrharta erecta**	upright veldt grass	10
*Bromus diandrus**	ripgut brome	6
*Lactuca serriola**	prickly lettuce	6
*Cynodon dactylon**	bermuda grass	5
*Malva parviflora**	cheese weed	4
*Medicago polymorpha**	California burclover	4
*Sonchus oleraceus**	sow thistle	3
Amaranthus sp.*	amaranth	2
*Bromus hordeaceus**	soft chess	2
*Dittrichia graveolens**	stinkwort	2
Eucalyptus sp. *	eucalyptus	2
Euphorbia polycarpa	smallseed sandmat	2
*Festuca myuros**	rattail sixweeks grass	2
Non-Native Vegetation		
*Jacaranda mimosifolia**	black poui	40
*Cinnamomum camphora**	camphortree	15
Eucalyptus sp. *	eucalyptus	5
*Bromus madritensis**	foxtail chess	4
*Lactuca serriola**	prickly lettuce	3
*Bromus diandrus**	ripgut brome	2
*Ehrharta erecta**	upright veldt grass	2
Geranium carolinianum	carolina geranium	2
*Hedypnois cretica**	crete weed	2
*Sonchus oleraceus**	sow thistle	2

Scientific Name[1]	Common Name	Percent Cover[2]
Southern Willow Scrub		
Salix lasiandra	pacific willow	40
*Washingtonia robusta**	mexican fan palm	25
Quercus agrifolia	coast live oak	20
Malosma laurina	laurel sumac	10
Baccharis salicifolia	mule fat	5
Vitis girdiana	Southern California grape	5
Baccharis sarothroides	broom baccharis	3
Cyperus eragrostis	tall cyperus	2
Disturbed Wetland		
Cyperus eragrostis	tall cyperus	30
*Washingtonia robusta**	mexican fan palm	20
Salix lasiandra	pacific willow	65
Vitis girdiana	Southern California grape	15

[1] Plants in genera most commonly associated with Crotch's bumble bee (Acmispon, Antirrhinum, Asclepias, Astragalus, Chaenactis, Cirsium, Clarkia, Cordylanthus, Dendromecon, Ehrendorferia, Eriogonum, Eschscholzia, Euthamia, Hypericum, Keckiella, Lantana, Lupinus, Monardella, Phacelia, Salvia, Trichostema, and Vicia) shown in **bold**.

[2] Table includes plant species observed at two percent cover or greater.

[3] The Artemisia californica-Salvia mellifera Association includes both Diegan coastal sage scrub and disturbed Diegan coastal sage scrub areas. Percentages are shown for Diegan coastal sage scrub first and disturbed Diegan coastal sage scrub second.

Table 3
FLOWERING PLANTS BY SURVEY

Scientific Name	Common Name	Survey Numbers in Bloom[1]
Acmispon glaber	**deerweed**	**HA, 1, 2, 3**
Acmispon americanus	**American bird's foot trefoil**	**HA, 1**
*Agapanthus praecox**	African lily	HA, 1, 2
Baccharis salicifolia	mule fat	HA, 1
Calystegia macrostegia	island morning glory	HA, 1, 2
Camissoniopsis bistorta	California sun cup	HA
*Carissa macrocarpa**	natal plum	HA, 1, 2
*Carpobrotus edulis**	iceplant	HA
Centaurea melitensis	tocalote	1
Cistus sp.*	ornamental rock rose	HA, 1, 2
Cotoneaster sp.*	cotoneaster	HA, 1
*Cynara cardunculus**	Artichoke thistle	1, 2
*Cynodon dactylon**	bermuda grass	HA
Datura wrightii	Jimsonweed	1
*Echium candicans**	pride of madeira	HA, 1, 2
Encelia californica	bush sunflower	HA, 1, 2
Eriogonum fasciculatum	**California buckwheat**	**HA, 1, 2, 3**
*Erodium cicutarium**	red-stem filaree	1, 2
*Erodium moschatum**	whitestem filaree	HA
*Euryops pectinatus**	golden daisy bush	HA, 1
*Gazania linearis**	gazania	HA, 1, 2
*Hedypnois cretica**	crete weed	1

Scientific Name	Common Name	Survey Numbers in Bloom[1]
Heliotropium curassavicum	salt heliotrope	1
*Hesperoaloe parviflorum**	red yucca	1
*Hirschfeldia incana**	mustard	HA, 1, 2, 3
*Jacaranda mimosifolia**	black poui	1, 2
*Lantana camara**	lantana	HA, 1, 2
*Limonium perezii**	canarian sea lavender	HA, 1, 2, 3
*Lysimachia arvensis**	scarlet pimpernel	HA, 1, 2
Malosma laurina	laurel sumac	HA, 1, 2, 3
*Medicago polymorpha**	California burclover	HA
*Melilotus indicus**	annual yellow sweetclover	HA
*Melaleuca nesophila**	showy honey myrtle	1
*Myoporum parvifolium**	slender myoporum	HA, 1
*Nerium oleander**	oleander	HA, 1
Oenothera elata	Evening primrose	1
*Olea europaea**	olive	HA
Phacelia cicutaria	**caterpillar phacelia**	**HA**
*Pittosporum tobira**	Japanese cheese bush	HA, 1, 2
*Plumbago auriculata**	cape leadwort	HA, 1, 2
Pseudognaphalium biolettii	two-color rabbit-tobacco	HA, 1
Pseudognaphalium californicum	ladies' tobacco	HA, 1
*Raphanus sativus**	wild radish	1
*Rosmarinus officinalis**	rosemary	HA, 1, 2
*Sonchus asper**	spiny sowthistle	HA
*Sonchus oleraceus**	sow thistle	HA, 1, 2
*Tecoma capensis**	cape honeysuckle	HA, 1, 2
*Torilis arvensis**	field hedge parsley	HA, 1, 2
*Tropaeolum majus**	garden nasturtium	HA, 1, 2

† Special status species

* Non-native species

[1] HA = Habitat Assessment

[2] Plants in genera most commonly associated with Crotch's bumble bee (*Acmispon, Antirrhinum, Asclepias, Astragalus, Chaenactis, Cirsium, Clarkia, Cordylanthus, Dendromecon, Ehrendorferia, Eriogonum, Eschscholzia, Euthamia, Hypericum, Keckiella, Lantana, Lupinus, Monardella, Phacelia*, *Salvia Trichostema,* and *Vicia*) shown in **bold**.