Appendix B

Biological Technical Report

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HELIX Environmental Planning

Sky Canyon Sewer Main Extension Project

Biological Technical Report

August 2019 | EMW-17.21

Prepared for:

Eastern Municipal Water District
P.O. Box 8330
Perris, CA 92572

Prepared by:

HELIX Environmental Planning, Inc.
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La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

AMSL	above mean sea level
BCC	Bird of Conservation Concern
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	Riverside County
CRPR	California Rare Plant Rank
CWA	Clean Water Act
District	Eastern Municipal Water District
FESA	Endangered Species Act
GIS	Geographic Information Systems
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HELIX	HELIX Environmental Planning, Inc.
MBTA	Migratory Bird Treaty Act
MSCP	Multiple Species Conservation Program
MSHCP	Multiple Species Habitat Conservation Plan
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
Project	Sky Canyon Sewer Main Extension
PSE	Participating Special Entity
RCA	Western Riverside County Regional Conservation Authority
RCHCA	Riverside County Habitat Conservation Agency
RWQCB	Regional Water Quality Control Board

ACRONYMS AND ABBREVIATIONS (cont.)

SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WL	Watch List

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EXECUTIVE SUMMARY

At the request of Eastern Municipal Water District (District; project proponent), HELIX Environmental Planning, Inc. (HELIX) has completed a biological technical report for the Sky Canyon Sewer Main Extension Project (project), which is proposed in southwestern Riverside County (County), adjacent to the eastern boundary of the city of Murrieta. The project would generally consist of the construction of a new, approximately 6,700-linear-foot, 36-inch-diameter sewer main that would extend the existing 36-inch-diameter French Valley Sewer at Winchester Road further downstream to Murrieta Hot Springs Road.

The purpose of this report is to document the existing biological conditions within the project's study area and provide an analysis of potential impacts on 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) by the District.

HELIX conducted a general biological survey, potential jurisdictional features assessment, and burrowing owl habitat assessment in July 2018. A formal jurisdictional delineation was conducted in August 2018. Focused surveys for coastal California gnatcatcher (*Polioptila californica californica*), burrowing owl (*Athene cunicularia*), and rare plants were conducted between November 2018 and June 2019.

The project site supports three vegetation communities, including Riversidian sage scrub (including disturbed), disturbed habitat, and developed land; none of which are considered sensitive. The project supports a single potentially jurisdictional drainage feature located in the northern portion of the study area.

One special status plant species paniculate tarplant (*Deinandra paniculata*), was observed in the northern portion of the study area. Three special status animal species were observed within, or directly adjacent to, the project: Cooper's hawk (*Accipiter cooperii*), California Horned Lark (*Eremophila alpestris actia*), and coastal California gnatcatcher (*Polioptila californica californica*).

The study area supports non-wetland waters of the U.S. 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); non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; unvegetated streambed subject to the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 et seq. of California Fish and Game Code.

Potential significant impacts were identified for burrowing owl (*Athene cunicularia*), if the species is found to be present within the project area during pre-construction surveys. Potential significant impacts were also identified for nesting bird species. Three different alignment alternatives were analyzed for the project: Alignment 1B, 1C, and Shifted 1C. Implementation of Alignment 1B would impact 15.1 acres consisting of 1.1 acres of Riversidian sage scrub, 5.4 acres of disturbed habitat, and 8.6 acres of developed areas, and would impact approximately 12,432 individuals of paniculate tarplant. Implementation of Alignment 1C would impact 15.0 acres consisting of 1.1 acres of Riversidian sage scrub, 4.4 acres of disturbed habitat, and 9.5 acres of developed areas, and would impact approximately 7,510 individuals of paniculate tarplant. Implementation of Shifted Alignment 1C would impact 14.7 acres consisting of 0.6 acre of Riversidian sage scrub, 5.4 acres of disturbed habitat, and 8.7 acres of developed areas, and would impact approximately 7,952 individuals of paniculate tarplant. No sensitive

vegetation communities would be impacted by the proposed project. Impacts to paniculate tarplant would be less than significant based on the species' relatively low sensitivity and numerous recorded occurrences within the project vicinity, indicating that the species' population is relatively stable in the region.

The project is located within the boundaries of the adopted Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), within Criteria Cell 6071, and within Rough Step Area 6. However, the District is not a signatory to the MSHCP and is not obtaining coverage for the project as a Participating Special Entity (PSE) through the Western Riverside County Regional Conservation Authority (RCA). Nevertheless, as demonstrated herein, the project would be consistent with the MSHCP. The project is also located within the boundaries of the adopted Habitat Conservation Plan for Stephens' kangaroo rat (*Dipodomys stephensi*), which requires payment of development fees; however, the proposed project is exempt from paying the fee in accordance with Section 10(f) of County Ordinance No. 663.

Measures related to burrowing owl, migratory nesting bird species, and avoidance and protection of jurisdictional features are proposed herein to fully mitigate potential impacts of the project. Successful implementation of these measures would mitigate potential impacts to below a level of significance.

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report presents the results of a biological resources study conducted by HELIX Environmental Planning, Inc. (HELIX) for the Eastern Municipal Water District's (District) proposed Sky Canyon Sewer Main Extension Project (project) located west of the City of Murrieta within an unincorporated portion of Riverside County (County), California (Figure 1, *Regional Location*). The study was conducted to provide the District, resource agencies, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA), and to demonstrate compliance with federal, state, and local regulations. This report describes the project site's current biological conditions, vegetation communities, and plant and wildlife species observed or detected during surveys, and identifies those resources that are sensitive. It also identifies sensitive species with potential to occur within the project site. In addition, project impacts are assessed and mitigation is proposed to offset the proposed project's unavoidable significant impacts to sensitive biological resources.

1.2 PROJECT SITE LOCATION

The approximately 38.1-acre study area is located within the community of Murrieta Hot Springs in an unincorporated portion of the County to the east of the City of Murrieta and north of the City of Temecula (Figure 1). The majority of the project alignment is within Township 7 South, Section 13, with small sections in Township 7 South, Range 3 West, Section 24, and Township 7 South, Range 2 West, Section 18, on the U.S. Geological Survey (USGS) 7.5-minute Murrieta Quadrangle (Figure 2, *USGS Topography*). The study area is located south of Hunter Road, north of Murrieta Hot Springs Road, east of Winchester Road, and west of Borel Road (Figure 3, *Aerial Photograph*). The southern portion of proposed project alignment is located along Sky Canyon Drive. The project alignment would cross or be adjacent to three parcels: Assessor's Parcel Numbers (APNs) 908-180-004, 957-320-011, and 957-330-037.

The project is located within the boundaries of the adopted Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). It is within the Southwest Area Plan with the northern portion of the proposed project alignment located within Criteria Cell 6071 (Figure 4, *MSHCP Criteria Map*); however, the District is not a signatory to the MSHCP and is not obtaining coverage for the project as a Participating Special Entity (PSE) through the Western Riverside County Regional Conservation Authority (RCA).

1.3 PROJECT DESCRIPTION

The project proposes to construct approximately 6,700 linear feet of new gravity-fed 36-inch-diameter sewer main to provide additional sewer capacity for planned development. The proposed 36-inch-diameter sewer main would extend the existing 36-inch-diameter French Valley Sewer at Winchester Road further downstream to Murrieta Hot Springs Road. The sewer main extension would start at Hunter Road, just east of Winchester Road, then run south through private easement(s), continue south on Sky Canyon Drive, and end at the intersection of Sky Canyon Drive and Murrieta Hot Springs Road. Although there are three alignment options being considered (referenced in the engineering Preliminary

Design Report and herein as Alignment 1B, 1C, and Shifted 1C), Alignment 1C has been preliminarily identified as the preferred option (Figure 3).

The proposed sewer would be located at a maximum depth of 35 feet. Construction and installation of the sewer would utilize both open cut trenching and jack-and-bore methods. If the contractor determines that rock breaking activities are required during construction, the project would use non-explosive demolition agents to fracture the bedrock with minimal disturbance.

Specific staging areas have not yet been identified; staging areas would be within developed locations along Winchester Road or within a parcel that would be acquired by the District for the project and is within areas surveyed as part of the current study.

2.0 METHODS

Project evaluation included a review of project plans, a literature review of biological resources occurring within the study area and surrounding vicinity, a general biological survey, vegetation mapping, jurisdictional delineation, and focused biological surveys. The methods used to evaluate the biological resources present on the project site are discussed in this section.

2.1 LITERATURE REVIEW

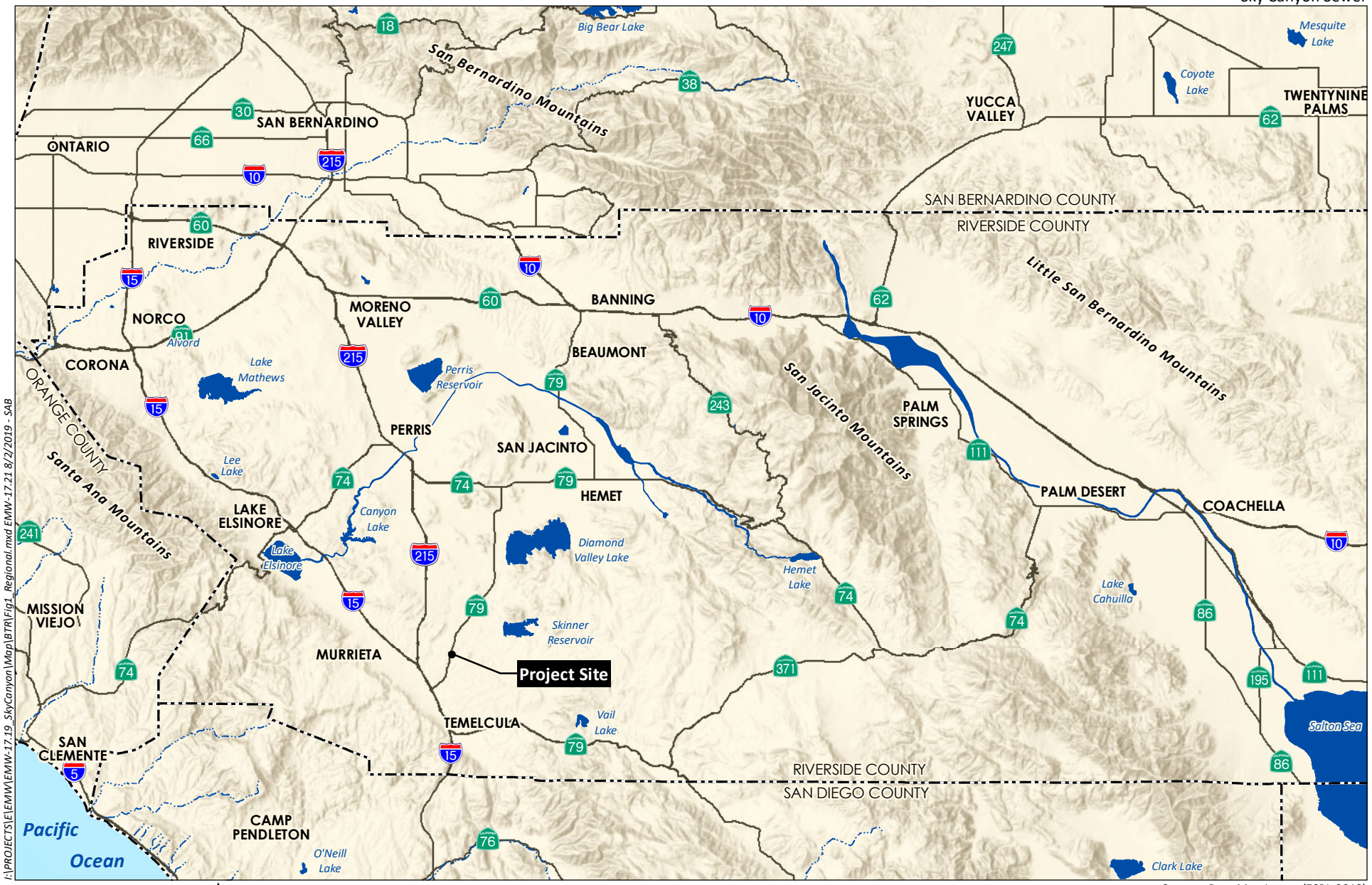
Prior to conducting biological field surveys, HELIX conducted a thorough review of relevant maps, databases, and literature pertaining to biological resources known to occur within the study area. Recent and historical aerial imagery, USGS topographic maps, soils maps (Natural Resource Conservation Service [NRCS] 2019), and other maps of the study area and vicinity were acquired and reviewed to obtain updated information on the natural environmental setting.

In addition, a query of special status species and habitats databases was conducted, including the USFWS species records (USFWS 2018a), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2018a), Calflora database (Calflora 2019), SanBIOS and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019). The USFWS' National Wetlands Inventory (NWI) was also reviewed (USFWS 2018b). Any recorded locations of species, habitat types, wetlands, and other resources were mapped and overlain onto aerial imagery using Geographic Information Systems (GIS).

2.2 GENERAL BIOLOGICAL SURVEY

An initial general biological survey of the project site was conducted by HELIX biologist Erica Harris on July 27, 2018 (Table 1, *Survey Information*). Vegetation was mapped on a 1"=200' scale aerial of the site in accordance with vegetation community classification from Holland (1986) and Oberbauer (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 site were taken, with select photographs included in this report as Appendix A, *Representative Site Photographs*.

Plant and animal species observed or otherwise detected were recorded in field notebooks. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls,



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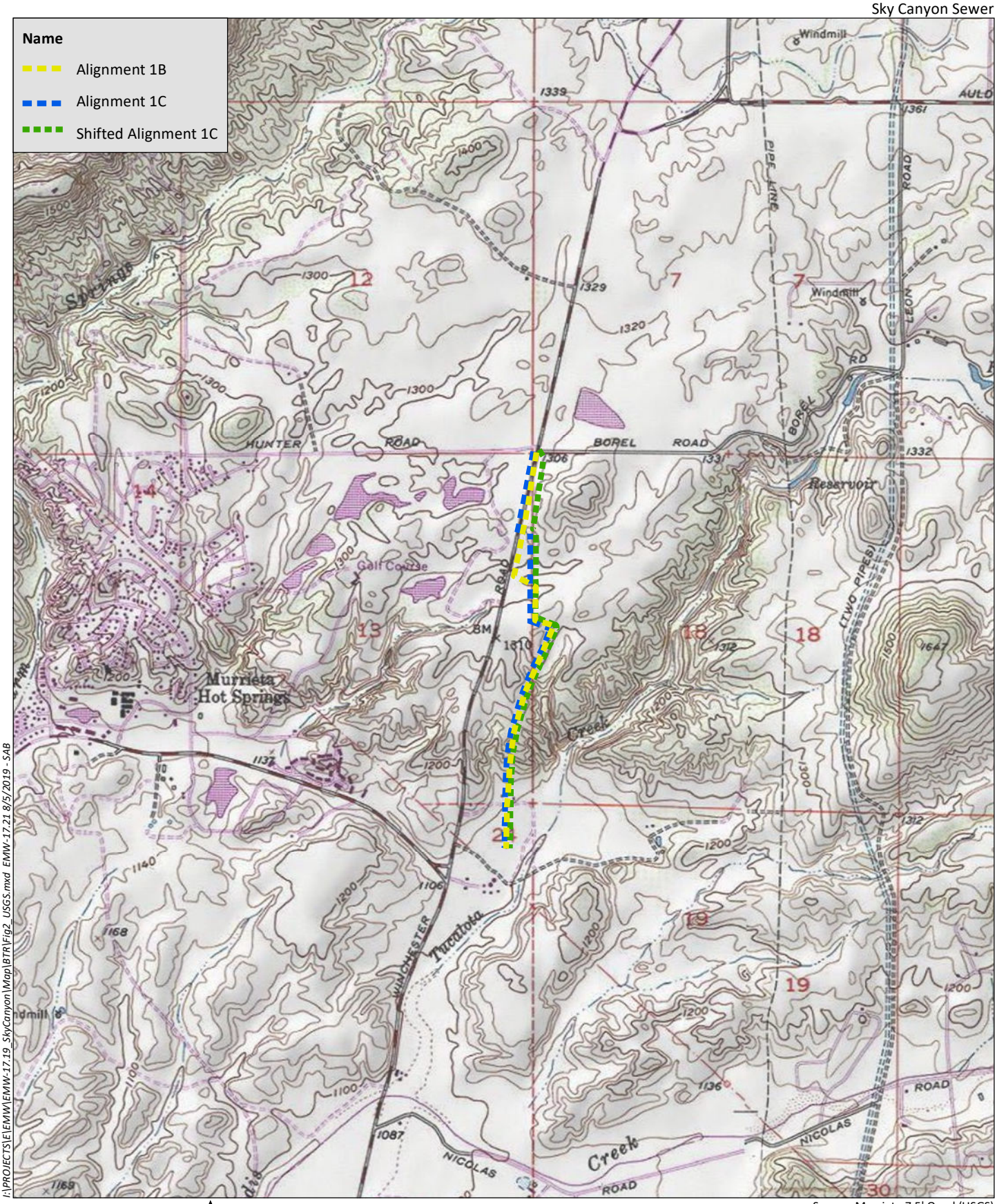
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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Source: Murrieta 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

Sky Canyon Sewer

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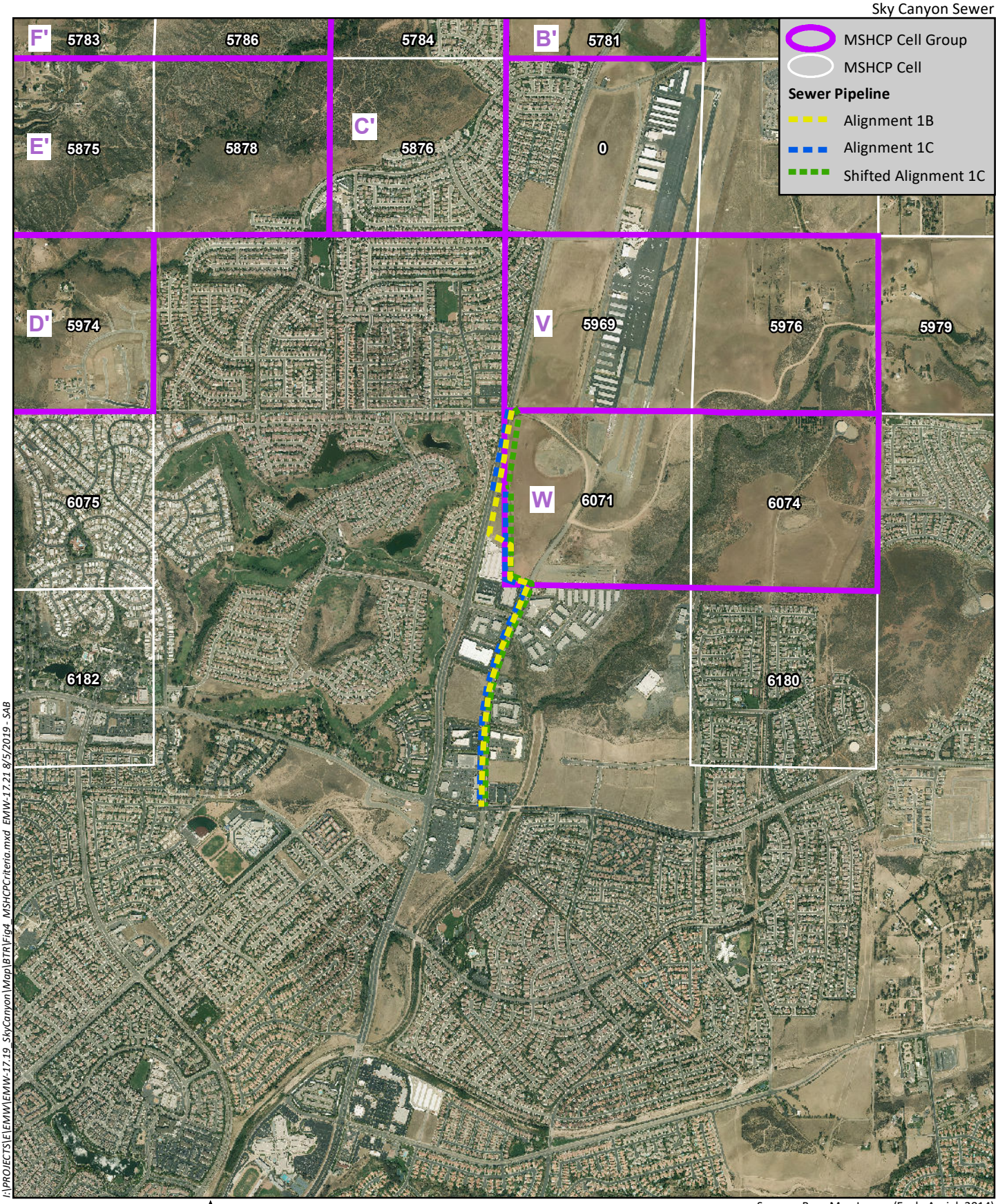
Source: Aerial (Nearmap 7/2019)

HELIX Environmental Planning

Aerial Photograph

Figure 3



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Source: Base Map Layers (Eagle Aerial, 2014)

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MSHCP Criteria Map

Figure 4

burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. The locations of special status plant and animal species incidentally observed or otherwise detected were mapped. The project site was examined for evidence of potential jurisdictional waters and wetlands, including vernal pools.

In addition to the general biological surveys, HELIX conducted a formal jurisdictional delineation, rare plant surveys, habitat assessment for burrowing owl (*Athene cunicularia*), and protocol-level surveys for burrowing owl and coastal California gnatcatcher (*Polioptila californica californica*). Table 1 provides a summary of biological surveys conducted for the project.

Table 1
SURVEY INFORMATION

Date	Personnel	Survey Type	Survey Details[1]
2018			
July 27	Erica Harris	General biological survey, vegetation community/habitat type mapping, basic wetland mapping	Not recorded
August 16	Robert Hogenauer	Formal jurisdictional delineation	Not recorded
November 20	Erica Harris[2]	Coastal California Gnatcatcher Survey #1	Start/End: 0730-0900; 49-57°F; wind 0-1 mph; 0% cloud cover
December 4	Katie Bellon[2]	Coastal California Gnatcatcher Survey #2	Start/End: 0900-1015; 53-61°F; wind 1-7 mph; 20-60% cloud cover
December 18	Katie Bellon[2]	Coastal California Gnatcatcher Survey #3	Start/End: 0915-1030; 54-58°F; wind 1-3 mph; 5-100% cloud cover
2019			
January 2	Katie Bellon[2]	Coastal California Gnatcatcher Survey #4	Start/End: 0900-1020; 41-50°F; wind 1-6 mph; 0% cloud cover
January 18	Tara Baxter[3]	Coastal California Gnatcatcher Survey #5	Start/End: 0900-1030; 55-58°F; wind 0-2 mph; 100% cloud cover
February 1	Katie Bellon[2]	Coastal California Gnatcatcher Survey #6	Start/End: 0845-0950; 53°F; wind 2-4 mph; 15-40% cloud cover
February 15	Katie Bellon[2]	Coastal California Gnatcatcher Survey #7	Start/End: 0845-1000; 52-54°F; wind 1-3 mph; 5-15% cloud cover
March 1	Katie Bellon[2]	Coastal California Gnatcatcher Survey #8	Start/End: 0900-1010; 59°F; wind 1-5 mph; 100% cloud cover
March 15	Erica Harris[2]	Coastal California Gnatcatcher Survey #9	Start/End: 0900-1015; 55-59°F; wind 1-5 mph; 100% cloud cover
April 8	Robert Hogenauer, Dane van Tamelen	Burrowing Owl Survey #1 Rare Plant Survey (Spring)	Start/End: 0610-0820; 54-64°F; wind 0-3 mph; 10-30% cloud cover
April 29	Dane van Tamelen	Burrowing Owl Survey #2	Start/End: 0610-0750; 55°F; wind 3-5 mph; 100% cloud cover
May 20	Dane van Tamelen	Burrowing Owl Survey #3	Start/End: 0700-0740; 51-52°F; wind 3-5 mph; 70-75% cloud cover
June 18	Dan van Tamelen	Burrowing Owl Survey #4 Rare Plant Survey (Summer)	Start/End: 0640-0740; 59-60°F; wind 3-5 mph; 100% cloud cover

[1] Weather conditions included for focused animal surveys.
[2] USFWS Permit TE-778195-13
[3] USFWS Permit TE-87004B-0

2.3 RARE PLANT SURVEY

HELIX biologists surveyed the study area for rare plant species during the spring on April 8, 2019. An additional survey for late-blooming species was conducted in the summer on June 18, 2019. The rare plant survey area included areas where proposed activities would occur outside of the existing road right-of-way. Special status plant species include species that are listed as threatened or endangered by the USFWS or the CDFW, and those with a California Rare Plant Rank (CRPR) 1 through 4 as designated by the CNPS. The surveys were conducted on foot and included 100 percent visual coverage of the study area. Special status plant species encountered were mapped using a hand-held Global Positioning System (GPS) unit and/or on an aerial photograph. HELIX also looked for special status plant species opportunistically during other surveys and recorded their numbers and locations when encountered.

2.4 BURROWING OWL SURVEY

A focused survey for burrowing owl was conducted between April 8 and June 18, 2019 (Table 1). The survey consisted of four breeding season (February 1 to August 31) surveys that were performed in accordance with the current CDFW's survey guidelines (formerly California Department of Fish and Game [CDFG] 2012). The surveys were spaced at least three weeks apart, with at least one survey conducted between February 15 and April 15 and one survey conducted between June 15 and July 15.

The biologists slowly walked meandering transects no greater than 20 meters apart through all areas of potential habitat on site (i.e., open Riversidian sage scrub and disturbed habitat) visually searching for potential burrows, burrowing owl sign, and burrowing owl individuals with the aid of binoculars. Fence posts, rocks, and other possible perching locations, as well as mammal burrows (especially those of California ground squirrel [*Otospermophilus beecheyi*]) potentially suitable for use by burrowing owls were inspected. Burrows were specifically searched for sign of recent burrowing owl occupation including pellets with regurgitated fur, bones, and insect parts; white wash (excrement); and feathers. In addition, structures such as concrete culverts/piles, wood debris piles, trash piles, and openings beneath cement or asphalt pavement that were present were checked for burrowing owl sign.

2.5 COASTAL CALIFORNIA GNATCATCHER SURVEYS

The District is not a participating agency in the Natural Community Conservation Planning program. For non-participating agencies, the USFWS requires that a minimum of nine surveys be conducted, at least two weeks apart, during the period between July 1 and March 14 (USFWS 1997). The surveys were initiated during the non-breeding season (July 1 to March 14) but extended into the breeding season (March 15 to June 30) since surveys were rescheduled due to inclement weather. The surveys were conducted by permitted HELIX biologists Erica Harris and Katie Bellon (TE-778195-13) and independent biologist Tara Baxter (TE-87004B-0; Table 1). The survey covered all potential coastal California gnatcatcher habitat, which was composed entirely of Riversidian sage scrub. The surveys were conducted by walking along the edges of, as well as within, suitable coastal California gnatcatcher habitat. All surveys were conducted with binoculars to aid in bird detection. Recorded coastal California gnatcatcher vocalizations were played sparingly and only if other means of detection had failed. If a gnatcatcher was detected before playing recorded vocalizations, the recordings were not played. Once coastal California gnatcatchers were initially detected in an area, use of playback was discontinued.

2.6 PRELIMINARY ASSESSMENT OF JURISDICTIONAL FEATURES

Prior to beginning fieldwork, aerial photographs (1 inch=100 feet scale), topographic maps (1 inch=100 feet scale), USGS quadrangle maps, and NWI maps (USFWS 2018b) were reviewed to assist in determining the presence or absence of potential jurisdictional waters and wetlands in the study area. A preliminary assessment of the potential jurisdictional waters was conducted during the July 27, 2018 site visit by HELIX biologist Erica Harris and a formal jurisdictional assessment was conducted by HELIX biologist Robert Hogenauer on August 16, 2018 (Table 1). The assessments were conducted to identify and map any water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, and streambed and riparian habitat potentially subject to CDFW jurisdiction 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.

2.6.1 Waters of the U.S.

Potential USACE-jurisdictional waters of the U.S. were delineated using three criteria (vegetation, hydrology, and soils) established for wetland delineations as described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (USACE 2008a). Other references included the Clean Water Rule (USACE and U.S. Environmental Protection Agency [USEPA] 2015).

Areas were determined to be potential non-wetland waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank), but either the vegetation or soils criterion was not met. Jurisdictional limits for these areas were measured according to the presence of a discernible ordinary high water mark (OHWM), which is defined in 33 CFR Section 329.11 as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas." The USACE has issued further guidance on the OHWM (Riley 2005; USACE 2008b), which also was considered in this jurisdictional assessment.

2.6.2 Waters of the State

Potential RWQCB-jurisdictional waters of the State were delineated in the same manner as potential waters of the U.S. All waters of the U.S. were considered waters of the State subject to RWQCB jurisdiction pursuant to CWA Section 401. Where features were determined to be geographically isolated, they were considered isolated waters of the State subject to RWQCB jurisdiction pursuant to Porter-Cologne.

2.6.3 Streambed and Riparian Habitat

Potential CDFW-jurisdictional streambed and riparian habitat were determined based on the presence of riparian vegetation or regular surface flow within a measurable bed and bank. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other

aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Potential CDFW-jurisdictional unvegetated streambed encompasses the top-of-slope to top-of-slope width for the features within the project site. Vegetated streambed includes all riparian shrub or tree canopy extending within or beyond the banks of features within the project site.

2.7 SURVEY LIMITATIONS

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

2.8 NOMENCLATURE

Nomenclature used in this report generally comes from Holland (1986) and Oberbauer (2008) for vegetation; Jepson eFlora (2019) and Baldwin et al. (2012) for plants; North American Butterfly Association (2019) for butterflies; Society for the Study of Amphibians and Reptiles (2019) for reptiles and amphibians; American Ornithological Society (2019) for birds; and Bradley et al. (2014) for mammals. Plant species status is from the CNPS Rare Plant Inventory (2019) and CDFW (2019). Animal species status is from the CDFW (2018b).

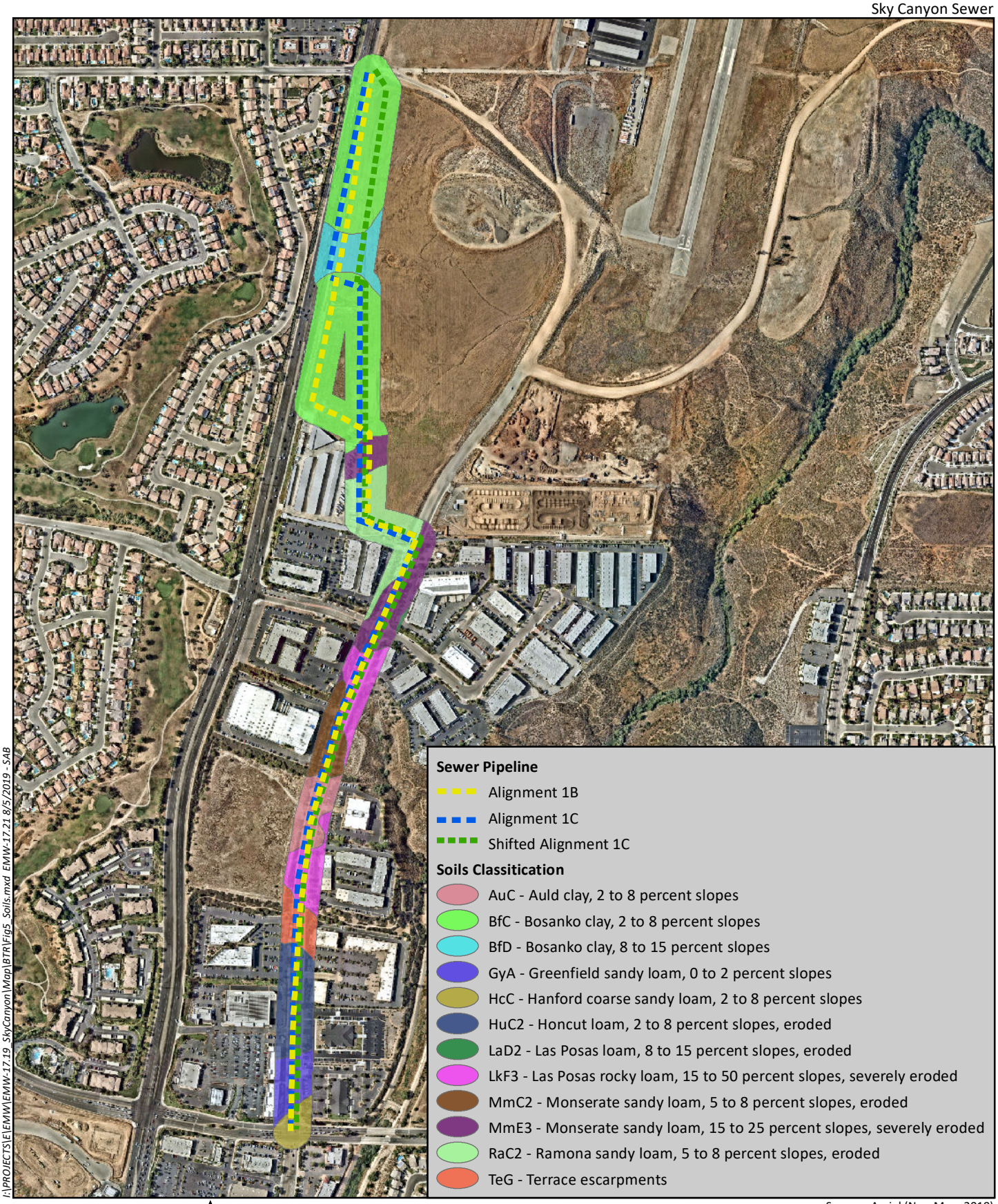
3.0 RESULTS

3.1 ENVIRONMENTAL SETTING

The project is located in the southwestern portion of Riverside County within French Valley of the Riverside Lowlands bioregion (Dudek 2003). The study area is characterized by remnant patches of Riversidian sage scrub, annual non-native herbaceous species, bare ground, and developed land. It has been subjected to past grading disturbances associated with development of the surrounding area. Surrounding land uses generally include residential and commercial development to the west and south; French Valley airport to the north; and undeveloped lands to the east. Western Riverside County RCA and Public Quasi-Public conserved lands also occur to the east.

The topography of the site is flat, gently sloping to the south, with elevations ranging from approximately 410 feet above mean sea level (AMSL) at the northern portion of the study area off Hunter Road to approximately 340 feet AMSL at the southern portion of the study area where Sky Canyon Drive meets Murrieta Hot Springs Road.

Eleven soil types have been mapped within the study area (Figure 5, *Soils*): Auld clay, 2 to 8 percent slopes; Bosanko clay, 2 to 8 percent slopes; Bosanko clay, 8 to 15 percent slopes; Greenfield sandy loam, 0 to 2 percent slopes; Hanford coarse sandy loam, 2 to 8 percent slopes; Honcut loam, 2 to 8 percent slopes, eroded; Las Posas rocky loam, 15 to 50 percent slopes, severely eroded; Monserate sandy loam, 5 to 8 percent slopes, eroded; Monserate sandy loam, 15 to 25 percent slopes, severely eroded; Ramona sandy loam, 5 to 8 percent slopes, eroded; and terrace escarpments. The soils are mostly disturbed due to previous grading and development within the study area.



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Source: Aerial (NearMap, 2019)

HELIX Environmental Planning

Soils

Figure 5

3.2 VEGETATION COMMUNITIES

Three vegetation communities or land uses were mapped within study area, including Riversidian sage scrub (including disturbed), disturbed habitat, and developed land (Figure 6, *Vegetation Communities and Sensitive Resources*; Table 2, *Existing Vegetation Communities/Land Use Types*). A brief description of each vegetation community is provided below.

Table 2
EXISTING VEGETATION COMMUNITIES/LAND USE TYPES

Vegetation Community	Rarity Ranking[1]	Acres[2]
Riversidian sage scrub	S5	1.8
Riversidian sage scrub – disturbed	S5	0.1
Disturbed Habitat	--	15.3
Developed	--	20.9
	TOTAL	**38.1**

[1] Rarity Ranking from CDFW's Natural Communities List (2018c).
[2] Habitats are rounded to the nearest 0.1 acre; thus, total does not reflect rounding.

3.2.1 Riversidian Sage Scrub (including disturbed)

Riversidian sage scrub is the most xeric expression of coastal sage scrub, typically found on xeric sites such as steep slopes, severely drained soils, or clays that release stored soil moisture slowly. Typical stands are fairly open and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), and foxtail chess (*Bromus madritensis* ssp. *rubens*). Disturbed Riversidian sage scrub contains many of the same shrub species as undisturbed Riversidian sage scrub but is sparser and has a higher proportion of non-native, annual species.

Riversidian sage scrub within the study area is dominated by California buckwheat, wild oat (*Avena barbata*), and tocalote (*Centaurea melitensis*). A total of 1.9 acres of Riversidian sage scrub occurs within the study area.

3.2.2 Disturbed

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Within the study area, disturbed habitat consists of bare ground with scattered annual non-native species. These areas were previously cleared and graded during development of the surrounding area. The northern portion of the study area is still subject to regular disturbance, appearing to be regularly disced.

3.2.3 Developed

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

study area consists of commercial buildings and public roadways including Winchester Road, Sky Canyon Drive, and Murrieta Hot Springs Road.

3.3 PLANTS

A total of 66 plant species were observed within the study area during the general biological survey, of which 37 (56 percent) are non-native species (Appendix B, *Plant Species Observed*). The predominance of non-native species is indicative of the high degree of disturbance as a result of historical and current uses of the site.

3.4 ANIMALS

A total of 41 animal species were identified within the study area during the general biological survey, including two invertebrates, one reptile, 33 bird species, and four mammal species (Appendix C, *Animal Species Observed or Detected*).

3.5 SENSITIVE BIOLOGICAL RESOURCES

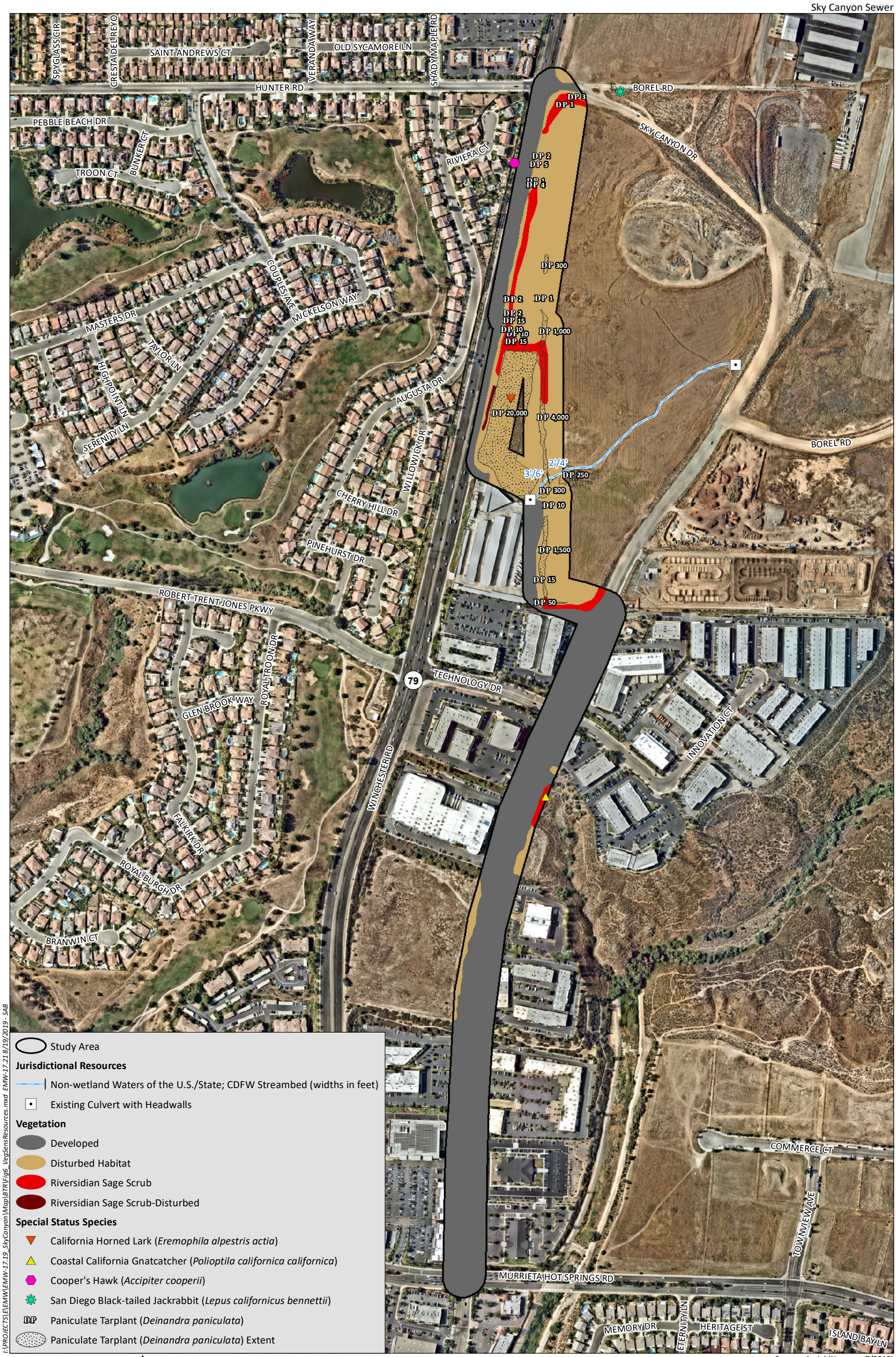
3.5.1 Sensitive Vegetation Communities/Habitats

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.

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

Vegetation types used by CDFW follow the National Vegetation Classification System (NVCS) using the Manual of California Vegetation (MCV), 2nd Edition (Sawyer et al. 2009). The MCV serves as the California extension of the NVCS. The MCV classifies vegetation based on floristic and structural details that are represented as alliances and associations. Vegetation mapped within the property followed Holland (1986). Direct translations between Holland and MCV do not exist for all vegetation types. Additionally, a single vegetation community under Holland may fit the definition of several different alliances or associations described within the MCV. Vegetation communities mapped within the study area were translated to the equivalent classification unit under MCV in order to determine sensitivity rankings. For communities that do not have direct translations within MCV, professional judgment was used to find the best corresponding association or alliance.

No sensitive vegetation communities occur within the study area. Riversidian sage scrub dominated by California buckwheat has a ranking of S5; therefore, it is not considered a sensitive vegetation community. Disturbed habitat and developed lands also do not meet the definition of sensitive habitat under CEQA. Impacts to these vegetation communities do not require mitigation.



Study Area

Jurisdictional Resources

Non-wetland Waters of the U.S./State; CDFW Streambed (widths in feet)

Existing Culvert with Headwalls

Vegetation

Developed

Disturbed Habitat

Riversidian Sage Scrub

Riversidian Sage Scrub-Disturbed

Special Status Species

California Horned Lark (*Eremophila alpestris actia*)

Coastal California Gnatcatcher (*Polioptila californica californica*)

Cooper's Hawk (*Accipiter cooperii*)

San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)

DP Paniculate Tarplant (*Deinandra paniculata*)

Paniculate Tarplant (*Deinandra paniculata*) Extent

0 425 Feet

N

Source: Aerial (Nearmap 7/2019)

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Vegetation Communities and Sensitive Resources

Figure 6

3.5.2 Special Status Plant Species

Special status plant species have been afforded special status and/or recognition by the USFWS and/or the CDFW 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 abundant but occur only in very specific habitats. Lastly, a species may be widespread but exist naturally in small populations.

Special Status Plant Species Observed

One special status plant species was observed on the project site, paniculate tarplant (*Deinandra paniculata*), as detailed below and shown on Figure 6.

Paniculate tarplant (*Deinandra paniculata*)
Sensitivity Status: --/--; CRPR 4.2
Distribution: Elevations below 3,100 feet in coastal southern California from San Luis Obispo to San Diego counties, and in the western portions of San Bernardino and Riverside counties.
Habitat(s): Occurs within open sage scrub, chaparral and woodlands along with grassland and disturbed areas. Often found on sandy soils.
Status on site: Observed in large patches within the northern portion of the study area to the north of Technology Drive and east of Winchester Road (Figure 6). Large patches of the species were recorded with a GPS unit, totaling 3.9 acres and 27,350 plants.

Special Status Plant Species with Potential to Occur

Additional special status plant species that were not observed but may have potential to occur within the study area are listed in Appendix C, *Special Status Plant Species Observed or with Potential to Occur*. In total, one (1) special status plant species were determined to have a high potential to occur on site: Palmer's grapplinghook (*Harpagonella palmeri*). However, the species was not detected during the 2019 rare plant surveys which were conducted during an optimal year for plants based on the above average rainfall year. No additional species have a high potential to occur based on geographic range, elevation range, and/or lack of suitable habitat in the study area.

3.5.3 Special Status Animal Species

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

Special Status Animal Species Observed or Otherwise Detected

Three special status animal species have been observed or detected on or directly adjacent to the study area, or observed flying over the project site, during biological surveys conducted for the project. Each species is listed below in alphabetical order by common name, described, and shown on Figure 6.

California Horned Lark (*Eremophila alpestris actia*)
Status: --/WL
Distribution: Coastal ranges of California from San Joaquin Valley to northern Baja California.
Habitat(s): Inhabits a wide variety of open habitats with low, sparse vegetation where trees and large shrubs are generally absent. Suitable habitats include grasslands along the coast, deserts within the inland regions, shrub habitat at higher elevations, and agricultural areas.
Presence on Site: Multiple individuals were detected within the northern portion of the study area.

Coastal California Gnatcatcher (*Polioptila californica californica*)
Status: FT/SSC
Distribution: Year-round resident of California occurring from Ventura County south to San Diego County, and east within the western portions of San Bernardino and Riverside counties**.**
Habitat(s): Arid, open sage scrub habitats on gently sloping hillsides to relatively flat areas at elevations below 3,000 feet. The composition of sage scrub in which gnatcatchers are found varies; however, California sagebrush (*Artemesia californica*) is at least present as dominant or co-dominant species.
Presence on Site: The species was not detected within the study area during protocol-level surveys conducted between 2018 and 2019, though a pair was detected to the east of Sky Canyon Drive outside of the study area in December 2018.

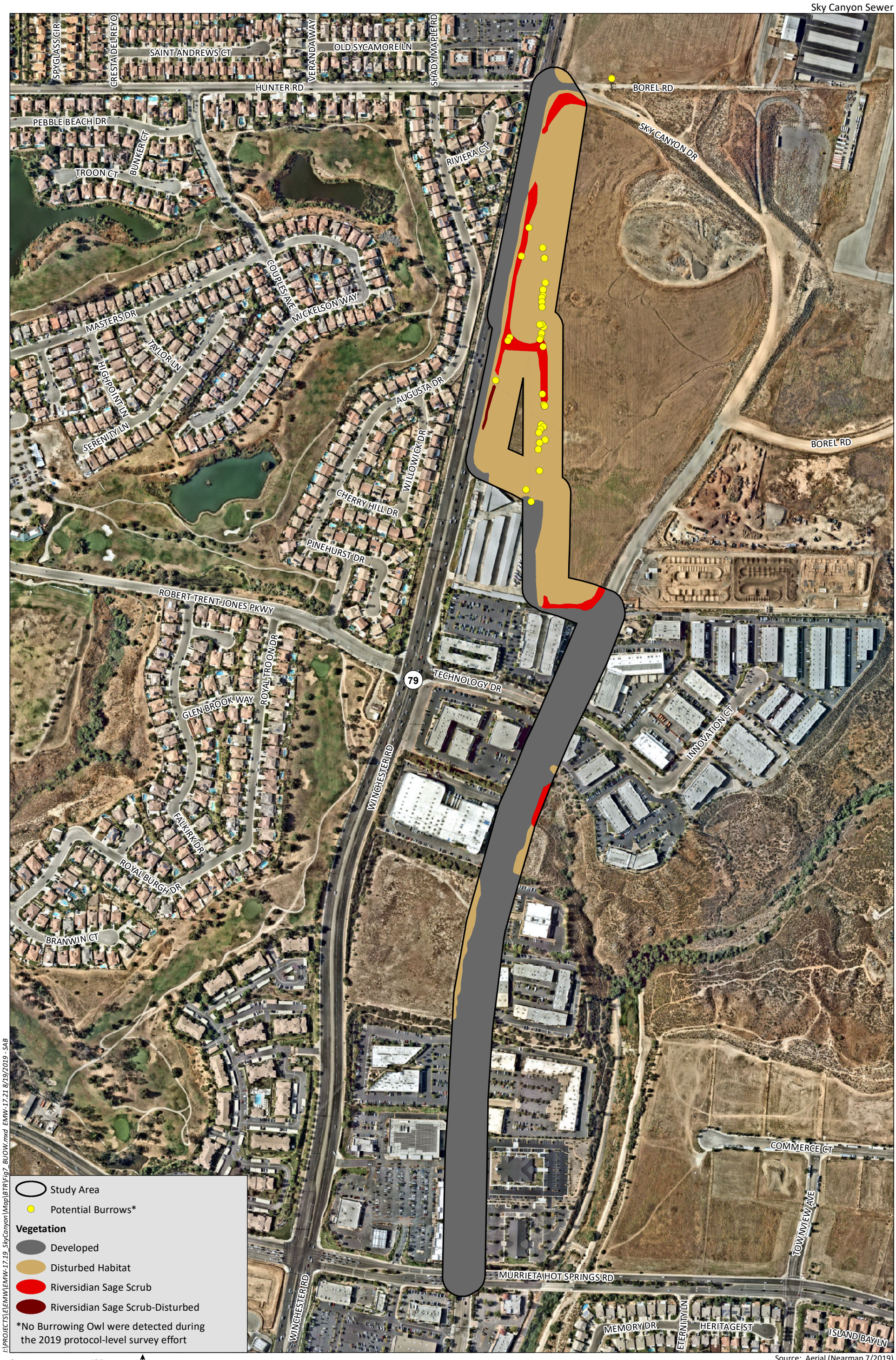
Cooper's hawk (*Accipiter cooperii*)
Status: --/WL
Distribution: In California, the species breeds from Siskiyou County south to San Diego County and east towards Owens Valley at elevations below 9,000 feet.
Habitat(s): Forests, riparian areas, and more recently suburban and urban areas. Nests within dense woodlands and forests and isolated trees in open areas.
Presence on Site: A single individual was observed flying to the west of the study area.

Special Status Animal Species with Potential to Occur

Special status animal species present on site or with potential to occur on site are included in Appendix D, *Special Status Animal Species Observed or with Potential to Occur*. The species are grouped into invertebrates and vertebrates (amphibians, reptiles, birds, and mammals) and alphabetized by scientific name. An explanation of status codes is included as Appendix E, *Explanation of Status Codes for Plant and Animal Species*. One species have a high potential to occur, San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). A single jackrabbit was observed to the northeast of the study area along Borel Road during biological surveys. However, the study area lacks suitable habitat for the species as it is highly disturbed and lacks sufficient vegetative cover to provide live-in habitat. The species could forage within the study area, but would not be anticipated to occupy the area. No other species have high potential to occur based on geographic range, elevation range, and/or lack of suitable habitat in the study area. Burrowing owl was not detected during the 2019 protocol-level surveys and is presumed to be absent from the study area. A total of 34 potential burrows were recorded within the study area but sign of burrowing owl presence or use was not observed at any of the burrows (Figure 7, *Potential Burrowing Owl Burrows*).

3.5.4 Jurisdictional Waters and Wetlands

Potential waters of the U.S., waters of the State, and CDFW jurisdictional habitat are present within the study area. A single unnamed ephemeral drainage feature, in the form of an earthen ditch, is located in



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Source: Aerial (Nearmap 7/2019)

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Potential Burrowing Owl Burrows

Figure 7

the northern portion of the study area, north of Technology Drive and east of Winchester Road (Figure 6). The ephemeral drainage ditch enters the project from the east, where it is conveyed under Sky Canyon Drive through a culvert, flowing in a southwesterly direction and terminating into an existing concrete culvert at the western boundary of the study area. Portions of the drainage ditch were partly obscured from previous discing activities.

Potential USACE- and RWQCB-jurisdictional resources within the study area totals 0.02 acre (277 linear feet) of non-wetland waters of the U.S./State. Potential CDFW-jurisdictional area within the study area totals 0.03 acre of unvegetated streambed.

3.5.5 Habitat and Wildlife Corridor Evaluation

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Corridors can be local or regional in scale and their functions may vary temporally and spatially based on conditions and species presence. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. 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.

The project is not located within any linkages recognized by the South Coast Missing Linkages report (South Coast Wildlands 2008) or MSHCP, though it is partially within the MSHCP proposed extension of the existing Core 2 which serves to extend habitat associated with the Lake Mathews and Estelle Mountain regions. However, the study area does not function as a wildlife corridor or linkage, or a core resource area. It is bounded by residential and commercial development to the north, west, and south. Though undeveloped lands and conserved lands, mostly in association with Tucalota Creek, occur to the east, they are also bounded by residential development. The northern portion of the study area is characterized by a highly disturbed, open area lacking sufficient shrub and tree cover to conceal and facilitate wildlife movements within the area. The southern portion of the study area consists of developed roadways and commercial development completely absent of native vegetation or other resources to support wildlife movement. The scattered patches of shrubs and herbaceous cover within the northern portion of the study area provides limited shelter and foraging habitat for wildlife. It also offers little value to wildlife in the area due to the periodic discing of the area.

Local wildlife corridors within the vicinity of the study area most likely occur further west along Tucalota Creek and north of French Valley airport along Warm Springs Creek. Regional wildlife corridors likely occur within larger habitat blocks in the hills further east and northeast of the project in the hillsides surrounding Lake Skinner and Diamond Valley Lake.

4.0 REGIONAL AND REGULATORY CONTEXT

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 District) pursuant to CEQA Guidelines. Biological resources-related laws and regulations that apply to the project include the Federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), CWA, CEQA, California Endangered Species Act (CESA), and California Fish and Game Code (CFG Code).

4.1 FEDERAL REGULATIONS

4.1.1 Federal Endangered Species Act

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

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is a term defined and used in the FESA and refers to specific geographic areas that contain features considered necessary for endangered or threatened species to recover. Critical habitat designations can include areas that are not currently occupied by the species, as the ultimate goal is to restore healthy populations of listed species within their native habitats so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. Only activities that involve a federal permit, license, or funding require consultation with the USFWS.

Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and there is an associated federal action for a proposed impact (e.g., the USACE would initiate a Section 7 consultation with the USFWS for impacts proposed to USACE jurisdictional areas that may also affect listed species or their critical habitat). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. The Multiple Species Conservation Program (MSCP) is a regional HCP that was developed pursuant to Section 10(a) of the FESA.

4.1.2 Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on disturbance of active bird nests

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

4.1.3 Clean Water Act and Rivers and Harbors Act

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

4.2 STATE REGULATIONS

4.2.1 California Environmental Quality Act

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

4.2.2 California Endangered Species Act

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

4.2.3 Native Plant Protection Act

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

4.2.4 California Fish and Game Code

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

and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

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

4.3 LOCAL REGULATIONS

4.3.1 Southwest Area Plan

The proposed project site is located within the County of Riverside General Plan Southwest Area Plan (County 2019). The general plan includes policies for the conservation of biological resources. Those policies include the following:

- SWAP 21.1: Protect the Santa Margarita watershed and habitat, and provide recreational opportunities and flood protection through adherence to the applicable policies found within the Multiple Species Habitat Conservation Plans, Wetlands and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element, as well as use of Best Management Practice policies.

- SWAP 22.1: Protect viable oak woodlands through adherence to the Oak Tree Management Guidelines adopted by Riverside County.

- SWAP 23.1: Provide stepping-stone habitat linkages for the California gnatcatcher as well as other species through the preservation of land from the Santa Rosa Plateau to the Santa Margarita Reserve in San Diego County.

- SWAP 23.2: Conserve the Tenaja corridor, which promotes large mammal movement between the Cleveland National Forest and the Santa Rosa Plateau.

- SWAP 23.3: Maintain habitat connectivity within Murrieta Creek, Temecula Creek, Lower Tucalota Creek, Lower Warm Springs Creek, and Pechanga Creek to facilitate wildlife movement and dispersal, (especially for the California gnatcatcher and Quino checkerspot butterfly) and conservation of wetland species.

- SWAP 23.4: Conserve habitat connections to the Agua Tibia Wilderness, Arroyo Seco, and Wilson Valley.

- SWAP 23.5: Conserve the large block of habitat containing clay soils east of Interstate 215 and south of Scott Road for the Quino checkerspot butterfly and other narrow endemic species such as Munz's onion, California Orcutt grass and spreading navarretia.

- SWAP 23.6: Incorporate a watershed management program into the preservation of wildlife movement and dispersal of wetland species within Pechanga Creek.

- SWAP 23.7: Consider the movement of larger mammals such as the mountain lion, bobcat, and mule deer between the Santa Ana and Mount Palomar Mountains.

- SWAP 23.8 Protect sensitive biological resources in SWAP through adherence to policies found in the Multiple Species Habitat Conservation Plans, Environmentally Sensitive Lands, Wetlands, and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element.

4.3.2 Multiples Species Habitat Conservation Plan Consistency

The MSHCP is a comprehensive multi-jurisdictional effort that includes multiple cities and unincorporated County lands in western Riverside County. Rather than addressing sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system (Dudek 2003). Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors. The Incidental Take Permit was issued by both the USFWS and CDFW on June 22, 2004.

The District is not a signatory to the MSHCP, and as such is not subject to the requirements of the MSHCP. The District has the option to obtain a take authorization for activities by receiving coverage as a Participating Special Entity (PSE) and paying a fee in the amount of five percent of total capital costs of the project. However, since implementation of the proposed project does not require a take of any MSHCP covered species, the District will not be a PSE under MSHCP.

4.3.3 Stephens' Kangaroo Rat Habitat Conservation Plan

The Habitat Conservation Plan (HCP) for Stephens' kangaroo rat describes the conservation, mitigation, and monitoring measures that are implemented within core reserves. Within the HCP, there are seven core reserves totaling 41,221 acres for conservation of Stephens' kangaroo rat and associated habitat. The HCP provides a 30-year incidental take authorization for Stephens' kangaroo rat on lands within its boundaries, which includes 533,954 acres within County of Riverside and Cities of Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Perris, Riverside, and Temecula. Implementation of the HCP is governed by legal agreements executed among the Riverside County Habitat Conservation Agency (RCHCA), its member agencies, USFWS, CDFW, Bureau of Land Management, U.S. Department of Interior, and State of California Resources Agency.

The study area is within the Stephens' kangaroo rat HCP, but is not located within any of the core reserves. Development within the Stephens' kangaroo HCP requires payment of a Mitigation Fee. However, the proposed project is exempt from paying the fee in accordance with Section 10(f) of County Ordinance No. 663, which states that development projects such as the construction of public utility transmission facilities where ground surface disturbance is minimal or where substantially all of the disturbed ground surface can be restored to its original condition are not required to pay the Mitigation Fee. The proposed project includes the construction of a new sewer main (public utility) that is located within disturbed areas and public rights-of-way that would be returned to pre-project conditions

following completion of construction activities. Therefore, the project would not be required to pay the Stephens' kangaroo Mitigation Fee.

5.0 PROJECT EFFECTS

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. Indirect impacts consist of secondary effects of a project, including noise, decreased water quality (e.g., through sedimentation, urban contaminants, or 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 a longer time to become apparent.

5.1 CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE

The significance of impacts to biological resources present or those with potential to occur was determined based upon 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 federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means.

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

(e) Conflict with local policies or ordinances protecting biological resources, such 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.

5.2 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 CDFW or USFWS?

5.2.1 Impact Analysis

One special status plant species and three special status animal species were observed within or adjacent to the study area. The northern portion of the proposed project alignment contains remnant patches of Riversidian sage scrub and disturbed habitat that supports special status plant and animal species. The southern portion of the proposed project alignment is located within the existing road right-of-way along Sky Canyon Drive and does not support special status species. Potential project effects on special status plant and animal species are described below.

Special Status Plant Species

One special status plant species, paniculate tarplant, was observed within the northern portion of the proposed alignment, to the north of Technology Drive (Figure 6). Paniculate tarplant is a CRPR 4.2 species. Implementation of the proposed project would result in direct impacts to the species during project construction (Figures 8a through 8c; Table 3, *Paniculate Tarplant Impacts*). Alignment 1B would impact the most amount of area (1.86 acres) and number of individuals (approximately 12,432), while Alignment Shifted 1C would impact the least amount of area (0.74 acres) and individuals (approximately 7,510).

Table 3
PANICULATE TARPLANT IMPACTS

Alignment	Impacts	
	Acreage	Individuals[1]
1B	1.86	12,432
1C	0.74	7,510
Shifted 1C	0.78	7,952

[1] Approximate number of individuals assuming an even distribution of plants within the mapped polygons of species occurrence.

Impacts on paniculate tarplant would be less than significant based on the species' relatively low sensitivity and numerous recorded occurrences within the project vicinity, indicating that the species' population is relatively stable in the region. As a CRPR 4.2 plant species, paniculate tarplant has been assigned to a watch list for plants of reported limited distribution and moderate degree and immediacy of threat by the CNPS. The impacted individuals are not part of a population at the periphery of the species' range, located in an area where the taxon is especially uncommon, or occurring on unusual substrates. Furthermore, the species would be expected to repopulate the area following completion of construction activities as impacts would be temporary and the species shows an affinity to disturbed areas. Lastly, there are numerous documented occurrences of the species throughout the surrounding area indicating that the study area does not represent a geographically significant population. Therefore, impacts on this CRPR 4.2 plant species are less than significant and would not require mitigation.

Special Status Animal Species

Three special status animal species were detected within or adjacent to the study area: California horned lark, coastal California gnatcatcher, and Cooper's hawk. Furthermore, the study area contains potential burrowing owl habitat, though the species was confirmed to be absent during the 2019 protocol-level survey effort. The potential effects of the project on these species are discussed below.

Burrowing Owl

The northern portion of the study area supports suitable habitat for burrowing owl which is a USFWS Bird of Conservation Concern (BCC), CDFW Species of Special Concern (SSC), and species requiring additional survey, avoidance, and mitigation under the MSHCP for participating entities. Although potential burrows were recorded within the northern portion of the study area, no burrowing owl sign or burrowing owl were detected during the 2019 protocol-level surveys (Figure 7). Implementation of the proposed project would impact potential burrowing owl habitat consisting primarily of disturbed habitat which would not be significant given the absence of burrowing owl from the study area and the temporary nature of the impact. The project would not result in permanent loss of potential burrowing owl habitat, as the general conditions will be returned to pre-project conditions (i.e., disced uplands) upon completion of the project. If burrowing owl individuals were to move into the project impact areas in the future and prior to project construction, impacts to nesting owls would be significant.

California Horned Lark

The California horned lark, a CDFW Watch List (WL) and MSHCP-covered species, was detected foraging within the northern portion of the study area during biological surveys (Figure 6). Potential impacts to California horned lark would consist of temporary loss of foraging habitat (disturbed habitat and Riversidian sage scrub) during project construction. Direct and/or indirect impacts to California horned larks nesting within the proposed project footprint during construction would be potentially significant.

Coastal California Gnatcatcher

The coastal California gnatcatcher is a federally listed threatened species, CDFW SSC, and MSHCP-covered species. A gnatcatcher pair was observed foraging within Riversidean sage scrub outside of the study area approximately 50 feet east of Sky Canyon Drive on December 4, 2018 during protocol-level surveys for the species (Figure 6). A single female was observed in the same general area on December 18, 2018. No other gnatcatchers were detected during the protocol-level surveys and no gnatcatchers were detected within the boundaries of the study area itself. The gnatcatcher pair observed in December 2018 most likely occupies off-site habitat further east of Sky Canyon Drive where more-contiguous and higher-quality sage scrub is present along Tucalota Creek.

The northern portion of the study area consists of remnant patches of Riversidean sage scrub predominately composed of California buckwheat. These patches occur as thin strips of habitat along or adjacent to Winchester Road. Riversidean sage scrub in the study area is generally unsuitable for California gnatcatcher as it lacks one of the species' primary vegetation constituent elements, California sagebrush, as a dominant or codominant plant. In addition, the remnant patches in the northern portion of the study area are generally small and isolated from larger swaths of habitat that occur off site, further east. Therefore, the coastal California gnatcatcher is presumed to be absent from the study area and would not be impacted by the proposed project.

Detail View
DP 4,000
2'/4'
DP 250
DP 20,000
3'/6'
DP 300
DP 10
See Detail
BOREL RD
SKY CANYON DR
RIVIERA CT
MASTERS DR
COUPLES AVE
MICKELSON WAY
AUGUSTA DR
HIGHPOINT LN
SERENITY LN
GREEN SIDE CT
WILLOWICK DR
CHERRY HILL DR
PINEHURST DR
JURUPA HILLS DR
MEMBERS CLUB DR
ROBERT TRENT JONES PKWY
ROYAL TROON DR
GLEN BROOK WAY
FALKIRK DR
ROYAL BURGH DR
TECHNOLOGY DR
WINCHESTER RD
INNOVATION CT
COMMERCE CT
MURRIETA HOT SPRINGS RD
79
DP 1,000
DP 1,500
DP 15
DP 50

Study Area
Alignment 1B
Sewer Manhole
Jack-Bore
Temporary Impact
Avoided Area

Jurisdictional Resources

Non-wetland Waters of the U.S./State; CDFW Streambed (widths in feet)
Existing Culvert with Headwalls

Vegetation

Developed
Disturbed Habitat
Riversidian Sage Scrub
Riversidian Sage Scrub-Disturbed

Special Status Species

California Horned Lark (*Eremophila alpestris actia*)
Coastal California Gnatcatcher (*Polioptila californica californica*)
Cooper's Hawk (*Accipiter cooperii*)
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)
Paniculate Tarplant (*Deinandra paniculata*)
Paniculate Tarplant (*Deinandra paniculata*) Extent

I:\PROJECTS\E\EMW\EMW-17.19_SkyCanyon\Map\BTR\Fig8a_ImpactsAlignment1B.mxd EMW-17.21 8/19/2019 - SAB

0 425 Feet

Source: Aerial (Nearmap 7/2019)

HELIX Environmental Planning

Impacts to Vegetation and Sensitive Resources – Alignment 1B

Figure 8a

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Source: Aerial (Nearmap 7/2019)

HELIX Environmental Planning

Impacts to Vegetation and Sensitive Resources – Alignment 1C

Figure 8b

Source: Aerial (Nearmap 7/2019)

HELIX Environmental Planning

Impacts to Vegetation and Sensitive Resources – Shifted Alignment 1C

Figure 8c

Protocol surveys for coastal California gnatcatcher were initiated in the non-breeding season but extended into the gnatcatcher breeding season (February 15 through August 31). Gnatcatchers were only observed adjacent to the study area, east of Sky Canyon Drive, during the non-breeding season (December 2018) and were not detected during the later surveys that continued into the breeding season. Therefore, nesting gnatcatchers are presumed to be absent from potentially suitable sage scrub habitat adjacent to project impact areas. Furthermore, Sky Canyon Drive is a major arterial roadway with regular traffic that would be expected to produce noise levels above 60 decibels per hour. If gnatcatchers were to nest within the adjacent habitat, they would be habituated to current traffic and noise levels and would not be impacted by temporary construction activities. Therefore, the project would have no impact on the species.

Cooper's hawk

Cooper's hawk is a CDFW WL and MSHCP-covered species. The species was observed flying overhead to the west of the study area during biological surveys (Figure 6). The proposed project would not remove potential nesting habitat for the species but could temporary disturb potential foraging habitat located in the northern portion of the study area during project construction. These impacts would not be significant as they would be temporary and will not reduce the amount of suitable nesting habitat for the species.

Nesting Birds

The study area contains shrubs and other vegetation that provide suitable nesting habitat for common birds, including raptors, protected under the MBT and CFG Code. Significant impacts could occur to nesting birds if suitable nesting habitat is removed during the general bird breeding season (January 15 to August 31).

5.2.2 Mitigation Measures

Implementation of mitigation measure BIO-1, which proposes avoiding clearing of vegetation during the bird breeding season would reduce potential impacts to nesting birds, including special status species such as Cooper's hawk and California horned lark, below a level of significance. Potential Impacts to burrowing owl that may move into the study area prior to project construction would be mitigated through implementation of the measure BIO-2.

BIO-1 **Nesting Bird and Raptor Avoidance**: Trimming, grubbing, and clearing of vegetation shall be avoided during the general avian breeding season (January 15 to July 15 for raptors; February 15 to August 31 for other avian species) to the extent feasible. If trimming, grubbing, or clearing of vegetation is proposed to occur during the general avian breeding season, a pre-construction survey shall be conducted by a qualified biologist no more than 7 days prior to vegetation clearing to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, trimming, grubbing, and clearing of vegetation shall be allowed to proceed. If active bird nests are confirmed to be present during the pre-construction survey, a buffer zone will be established by the biologist. 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.

BIO-2 **Burrowing Owl Pre-Construction Survey**: Prior to construction, Eastern Municipal Water District shall retain a qualified biologist to conduct required pre-construction take avoidance surveys for

the burrowing owl in accordance with the protocol described in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The initial take avoidance survey shall occur no less than 14 days prior to initiating ground disturbing activities, with a final survey conducted within 24 hours prior to initiating ground disturbing activities. If, after the initial take avoidance survey, no suitable burrowing owl habitat including burrows is present, the second survey 24 hours prior to ground disturbance shall not be required.

The project shall avoid disturbing active burrowing owl burrows (nesting sites) and burrowing owl individuals. Buffers shall be established around occupied burrows in accordance with guidance provided in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) based on the proposed level of disturbance. For low disturbance projects, initial setback distances for avoidance of active burrows shall be 200 meters from April 1 to October 15 and 50 meters from October 16 to March 31. Exceptions can be made to the avoidance distance for areas with natural (hills, trees) or artificial (buildings, walls) barriers in place. The final avoidance buffer shall be at the discretion of the biologist. If, after consideration of a reduced buffer, an adequate avoidance buffer cannot be provided between an occupied burrow and required ground-disturbing activities, then passive relocation activities during the non-breeding season (September 1 through January 31) may be authorized in consultation with CDFW, which would include preparation, approval, and implementation of a Burrowing Owl Exclusion Plan in accordance with protocol described in the CDFW Staff Report on Burrowing Owl Mitigation. No impacts shall occur to active burrowing owl nests or individuals.

5.2.3 Conclusions

Project implementation could result in significant impacts to nesting birds and raptors, including special status avian species (e.g., Cooper's hawk, California horned lark, and burrowing owl), with the potential to nest within or adjacent to the project area. Implementation of mitigation measures BIO-1 and BIO-2 would reduce impacts to less than significant.

5.3 RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

Would the project 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.

5.3.1 Impact Analysis

The study area is predominately characterized by disturbed habitat and developed land and does not support sensitive vegetation communities. Each proposed alignment would result in impacts to Riversidian sage scrub, disturbed habitat, and developed land, which are not considered sensitive natural communities (Figures 8a through 8c). Impacts to these vegetation communities are not considered significant and, therefore, do not require mitigation.

Project impacts for each proposed alignment area are depicted on Figures 8a through 8c and summarized below within Table 4, *Vegetation Community/Land Use Impacts*.

Table 4
VEGETATION COMMUNITY/LAND USE IMPACTS

Vegetation Community	Rarity[1]	Impacts by Alignment (acres)[2]		
		1B	1C	Shifted 1C
Riversidian Sage Scrub (including disturbed)	S5	.1.1	1.1	0.6
Disturbed	--	5.4	4.4	5.4
Developed	--	8.6	9.5	8.7
	TOTAL	**15.1**	**15.0**	**14.7**

[1] Rarity Ranking from CDFW's Natural Communities List (2018c).
[2] Acreages rounded to the nearest 0.1 acre for uplands and 0.01 acre for wetlands; total reflects rounding.

5.3.2 Mitigation Measures

No mitigation required.

5.3.3 Conclusion

No sensitive natural communities occur within the study area. Therefore, the project would not result in impacts to sensitive natural communities.

5.4 JURISDICTIONAL WETLANDS AND WATERWAYS

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means?

5.4.1 Impact Analysis

A single, unnamed drainage feature occurs in the northern portion of the study area (Figure 6). The drainage qualifies as a non-wetland waters of the U.S./State subject to USACE and RWQCB jurisdiction and as streambed habitat subject to CDFW jurisdiction. The drainage lacks wetland-dependent vegetation. The project has been designed to avoid impacts to potential jurisdictional areas through use of the trenchless installation method, jack-and-bore, to install the new pipeline under the existing drainage feature. The launching and receiving pit locations will be off set within uplands located at least five feet on each side of the existing drainage (Figures 8a through 8c). Jack and bore technologies are different from horizontal directional drilling in that they do not involve the use of a directional drill auger or fluid that could inadvertently release during operation and cause a potential frac-out event. The proposed jack-and-bore activities would have no potential to cause an inadvertent drill fluid release or frac-out and no associated impacts are anticipated. Therefore, no direct impacts on the avoided drainage feature would occur.

Potential indirect impacts on the avoided drainage feature would be prevented during construction through successful implementation of standard Best Management Practices (BMPs) as part of the project's Storm Water Pollution Prevention Plan (SWPPP). Implementation of a SWPPP and associated BMPs are a regulatory requirement for the proposed project. Specific BMPs may include but would not necessarily be limited to: maintaining the project work areas free of trash and debris; employing appropriate standard spill prevention practices and clean-up materials; installing and maintaining

sediment and erosion control measures; maintaining effective control of fugitive dust; and properly storing, handling, and disposing of toxins and pollutants, including waste materials. If temporary construction fencing and other BMPs aren't properly implemented during construction, then equipment and personnel could inadvertently encroach into environmentally sensitive areas that are planned to be avoided, which could result in a significant impact.

5.4.2 Mitigation Measures

Implementation of required BMPs in combination with measures BIO-3 and BIO-4, which requires installation of temporary construction fencing and biological monitoring, would ensure that construction activities are contained within the proposed work limits and that potentially significant direct and indirect impacts on jurisdictional resources are avoided.

BIO-3 Prior to construction, to help ensure inadvertent impacts to jurisdictional areas outside of the approved impact footprint are avoided during construction, temporary construction fencing, including silt fencing, as appropriate and where determined necessary by the SWPPP, shall be installed at the edges of the approved impact limits for the project. A qualified biologist shall be retained to 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-4 A qualified biologist will conduct a pre-construction environmental training session for construction personnel to inform them of the sensitive biological resources on site and avoidance measures to remain in compliance with project approvals. The biologist will monitor initial vegetation clearing, grubbing, and grading activities to ensure that activities occur within the approved limits of work and avoid impacts to nesting birds. The biologist will periodically monitor the limits of construction where work activities occur outside public road rights-of-way to ensure that avoidance areas are delineated with temporary fencing and that fencing remains intact.

5.4.3 Conclusion

The proposed project would avoid direct impacts to jurisdictional resources present within the study area. Implementation of the measure BIO-3 would ensure that construction activities remain within the approved limits of work and avoid unauthorized direct and indirect impacts to jurisdictional resources.

5.5 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 wildlife corridors, or impede the use of native wildlife nursery sites?

5.5.1 Impact Analysis

The study area is bordered by existing residential and commercial development, and as such, does not by itself function as and does not contribute to any wildlife corridors or linkages, or native wildlife nursery sites. The project would not impede the movement of any native, resident, or migratory fish or wildlife species; interfere with established native, resident, or migratory wildlife corridors, including

regional corridors or linkages identified in the MSHCP; and would not impede the use of native wildlife nursery sites. Therefore, no impact to wildlife movement and nursery sites would occur.

5.5.2 Mitigation Measures

No mitigation is required.

5.5.3 Conclusion

Project implementation would not result in significant impacts on wildlife movement and nursery sites. No impact would occur, and mitigation is not required.

5.6 LOCAL POLICIES AND ORDINANCES

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

5.6.1 Impact Analysis

The proposed project is located within the Southwest Area Plan of the County's General Plan. Implementation of the project does not conflict with policies or conservation measures for biological resources. The proposed project site does not support sensitive natural communities, oak woodlands, or riparian habitat. Impacts to the disturbed drainage ditch that flows through the northern portion of the study area would be avoided. Riversidian sage scrub within the project footprint consists of small, scattered patches of habitat adjacent to roadways with heavy traffic, and was found to not support coastal California gnatcatcher. Impacts to Riversidean sage scrub would be less than 1.1 acres and would not result in detrimental effects to gnatcatchers or dispersal of the species within the area. Gnatcatchers adjacent to the project were found to be utilizing habitat off site along Tucalota Creek which provides higher quality habitat for the species and serves as a dispersal corridor to Lake Skinner and larger blocks of habitat to the northeast. The project does not occur within a wildlife movement corridor and does not contain habitat or other resources to facilitate movement of wildlife within the region. The project would primarily occur within the existing disturbed areas and public road rights-of-way that would be returned to pre-project conditions. No significant impact would occur.

5.6.2 Mitigation Measures

No mitigation required.

5.6.3 Conclusion

The project would not conflict with local policies or ordinances protecting biology resources.

5.7 ADOPTED PLANS

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

5.7.1 Impact Analysis

The project is located within the boundaries of the adopted Western Riverside MSHCP; however, the District is not a signatory to the MSHCP, and as such is not subject to the requirements of the MSHCP. Nevertheless, the project would not conflict with the conservation goals and objectives of the MSHCP for the local area. The site occurs within portions of Criteria Cell 6071, but is situated primarily within disturbed habitat and existing developed lands, with limited portions intersecting smaller remnant stands of Riversidean sage scrub. Conservation is generally targeted further to the northwest, northeast, and east amongst the more-rugged terrain and expansive hills connecting the Lake Mathews and Estelle Mountain areas to the southeast via Sedco Hills, Wildomar and into the Antelope Valley/French Valley area. However, as stated above, the project could result in potential significant impacts to special status species and nesting birds, including species covered under the MSHCP. Additional, protocol-level surveys for burrowing owl were completed in accordance with Section 6.3.2 of the MSHCP. The species was confirmed to be absent from the study area, although suitable owl habitat remains present. Compliance with existing regulations, including the MBTA and CFG Code, and implementation of measures BIO-1 and BIO-2 would ensure avoidance of burrowing owl impacts and project consistency with the MSHCP. Furthermore, avoidance of the existing drainage feature with the implementation of required BMPs and mitigation measure BIO-3 would ensure that unauthorized impacts to riverine resources do not occur and the project would be consistent with Section 6.1.2 of the MSCHP.

The project is also located within the Stephen's kangaroo rat HCP, but not within any of the core reserves (County 1996). Stephens' kangaroo rat biological surveys are not required under the HCP for activities occurring on lands outside of core reserves. The study area is disturbed and lacks sufficient shrub and herbaceous cover to support the species. Reported occurrences of the species within the project vicinity are from the 1980s and the species is believed extirpated from the area due to previous disturbances and development activities. More recent observations of the species occur four miles east of the project near Lake Skinner.

The project is exempt from the Stephen's kangaroo rat Mitigation Fee in accordance with Section 10(f) of County Ordinance No. 663. The proposed project would involve the construction of a public sewer main where ground disturbance is minimal, and the majority of the area would be restored to its original condition, excluding the proposed sewer manhole locations.

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

5.7.2 Mitigation Measures

Compliance with existing regulations and implementation of measures BIO-1 through BIO-3 would ensure project consistency with the MSHCP.

5.7.3 Conclusion

The project could result in potential significant impacts to sensitive biological resources addressed under the MSHCP, including covered species, burrowing owl, and riverine resources; however, compliance with the MBTA and CFG Code and implementation of measures BIO-1 through BIO-3 would reduce potential impacts to less than significant and achieve consistency with the MSHCP.

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BTR Appendix A

Representative Site Photographs

Photo 1. Northern portion of the study area to east of Winchester Road and south of Hunter Road. Facing south.

Photo 2. Riversidian sage scrub along Winchester Road. Facing south.

Photo 3. Remnant patches of Riversidian sage scrub and disturbed habitat in the northern portion of the study area. Facing south.

Photo 4. Commercial development along Sky Canyon Drive. Facing south.

Photo 5. Existing disturbed drainage in the northern portion of study area. Partially filled by mowing activities. Facing northeast (upstream).

Photo 6. Culvert with headwall where drainage terminates. Facing southwest (downstream).

Photo 7. Off-site upstream portion of disturbed drainage where it exits an existing culvert under Sky Canyon Drive and flows southwest towards the study area.

Photo 8. Patch of paniculate tarplant (*Deinandra paniculata*) within disturbed habitat in the northern portion of the study area. Facing north.

BTR Appendix B

Plant Species Observed

Appendix B
Plant Species Observed

Family	Scientific Name*,†	Common Name
Aizoaceae	*Carpobrotus edulis**	hottentot-fig
Apocynaceae	*Vinca major**	greater periwinkle
Asteraceae	*Artemisia douglasiana*	Douglas' sagewort
	Artemisia californica	California sagebrush
	Baccharis pilularis	coyote brush
	*Centaurea melitensis**	tocalote
	Deinandra fasciculata	fascicled tarplant
	Deinandra paniculata†	paniculate tarplant
	*Dimorphotheca sinuate**	African daisy
	Erigeron canadensis	Canada horseweed
	Eriophyllum lanosum	white easter bonnets
	Helianthus annuus	western sunflower
	Heterotheca grandiflora	telegraph weed
	*Hypochaeris radicata**	rough cat's ear
	Isocoma menziesii	goldenbush
	*Lactuca serriola**	rickly lettuce
	*Oncosiphon piluliferum**	stinknet
	Pseudognaphalium biolettii	bicolor cudweed
	*Sonchus asper**	prickly sow thistle
	Symphyotrichum subulatum	slim aster
	Uropappus lindleyi	silver puffs
Boraginaceae	*Amsinckia intermedia*	rancher's fiddleneck
	Heliotropium curassavicum	salt heliotrope
	Phacelia sp.	phacelia
	Plagiobothrys sp.	popcorn flower
Brassicaceae	*Brassica nigra**	black mustard
	*Capsella bursa-pastoris**	shepherd's purse
	*Hirschfeldia incana**	short-pod mustard
	*Raphanus sativus**	wild radish
	*Sisymbrium irio**	London rocket
Cactaceae	*Cylindropuntia californica*	California cholla
Chenopodiaceae	*Salsola tragus**	Russian thistle
Convolvulaceae	*Cuscuta californica*	California dodder
Crassulaceae	*Crassula connata**	pygmy-weed
Euphorbiaceae	*Croton setiger*	turkey-mullein
	*Ricinus communis**	castor bean
Fabaceae	*Acacia redolens**	bank catclaw
	Acmispon glaber	deerweed
	Acmispon micranthus	grab lotus
	Astragalus sp.	locoweed
	Lupinus bicolor	miniature lupine
	Lupinus succulentus	arroyo lupine

Appendix B (cont.)
Plant Species Observed

Family	Scientific Name*,†	Common Name
Fabaceae	*Medicago polymorpha**	burclover
	*Melilotus indicus**	Indian sweet clover
	*Trifolium pretense**	red clover
Geraniaceae	*Erodium cicutarium**	redstem filaree
Malvaceae	*Malva parviflora**	cheeseweed
Myrsinaceae	*Lysimachia arvensis**	scarlet pimpernel
Myrtaceae	*Eucalyptus* sp.*	eucalyptus
Orobanchaceae	*Castilleja exserta*	purple owl's clover
Pinaceae	*Pinus* sp.*	Pine
Poaceae	*Avena barbata**	slender oat
	*Bromus diandrus**	common ripgut grass
	*Bromus hordeaceus**	Soft chess
	*Bromus madritensis**	foxtail chess
	*Cynodon dactylon**	Bermuda grass
	Elymus sp.*	wheatgrass
	*Festuca myuros**	fescue
	*Festuca perennis**	Italian ryegrass
	*Polypogon monspeliensis**	annual beard grass
	*Schismus barbatus**	Mediterranean grass
Polygonaceae	*Eriogonum fasciculatum*	buckwheat
	*Rumex crispus**	curly dock
Salicaceae	*Salix exigua*	narrow-leaved willow
Solanaceae	*Datura wrightii*	Jimsonweed
Tamaricaceae	*Tamarix ramosissima**	saltcedar

* Non-Native Species

† Special Status Species

BTR Appendix C

Animal Species Observed or Detected

Appendix C
Animal Species Observed or Detected

Taxon		Scientific Name†	Common Name
Order	**Family**		
INVERTEBRATES			
Coleoptera	Tenebrionidae	unidentified	darkling beetle
Lepidoptera	Nymphalidae	*Vanessa cardui*	Painted Lady
VERTEBRATES			
Reptiles			
Squamata	Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard
Birds			
Accipitriformes	Accipitridae	*Accipiter cooperii*†	Cooper's Hawk
		Buteo jamaicensis	Red-tailed Hawk
		Buteo lineatus	Red-shouldered Hawk
	Cathartidae	*Cathartes aura*	Turkey Vulture
Anseriformes	Anatidae	*Anas platyrhynchos*	Mallard
		Branta canadensis	Canada Goose
Apodiformes	Trochilidae	*Calypte anna*	Anna's Hummingbird
		Selasphorus sp.	Allen's/Rufous Hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	Killdeer
Columbiformes	Columbidae	*Zenaida macroura*	Mourning Dove
Falconiformes	Falconidae	*Falco sparverius*	American Kestrel
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Alaudidae	*Eremophila alpestris actia*†	California Horned Lark
	Bombycillidae	*Bombycilla cedrorum*	Cedar Waxwing
	Corvidae	*Corvus brachyrhynchos*	American Crow
		Corvus corax	Common Raven
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
	Hirundinidae	*Petrochelidon pyrrhonota*	Cliff Swallow
	Icteriidae	*Sturnella neglecta*	Western Meadowlark
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Parulidae	*Setophaga coronata*	Yellow-rumped Warbler
	Passerellidae	*Melospiza melodia*	Song Sparrow
		Melozone crissalis	California Towhee
		Passerculus sandwichensis	Savannah Sparrow
		Zonotrichia leucophrys	White-crowned Sparrow
	Polioptilidae	*Polioptila caerulea*	Blue-gray Gnatcatcher
		Polioptila californica californica†	Coastal California Gnatcatcher
	Sturnidae	*Sturnus vulgaris*	European Starling
	Troglodytidae	*Thryomanes bewickii*	Bewick's Wren
	Tyrannidae	*Sayornis nigricans*	Black Phoebe
Passeriformes	Tyrannidae	*Sayornis saya*	Say's Phoebe
		Tyrannus vociferans	Cassin's Kingbird
Mammals			
Carnivora	Canidae	*Canis latrans*	coyote
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail
Rodentia	Sciuridae	*Otospermophilus beecheyi*	California ground squirrel

† Special Status Species

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BTR Appendix D

Special Status Plant Species Observed or with Potential to Occur

Appendix D
Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
Chaparral sand-verbana *(Abronia villosa* var. *aurita)*	--/-- CRPR 1B.1	Annual herb. Occurs in sandy places within coastal scrubs, chaparral, and desert dunes. Flowers: March to September. Elevation: 246 to 5,249 feet (75 to 1,600 meters).	**None**. Suitable sandy soils are absent from the study area and there are no recorded occurrences of the species within the project vicinity.
Munz's onion (*Allium munzii*)	FE/ST CRPR 1B.1	Perennial bulbiferous herb. Occurs on mesic and clay soils within coastal scrubs, chaparral, cismontane woodland, pinyon and juniper woodlands, and grasslands. Flowering period: March to May. Elevation: 974 to 3,510 feet (297 to 1,070 meters).	**Low**. Clay soils are present within the study area; however, the closest reported location of the species is located over 1 mile east of the project site from the 1980's.
San Diego ambrosia (*Ambrosia pumila*)	FE/-- CRPR 1B.1	Perennial herb. Occurs on sandy loam or clay, sometimes alkaline, soils. Found in native grassland, valley bottoms, dry drainages, stream floodplain terraces, and vernal pool margins. Also occurs on slopes, disturbed places, and in coastal sage scrub or chaparral. Flowering period: April to July. Elevation: 164 to 1,969 feet (50 to 600 meters).	**Low.** Suitable soils are mapped within the study area and the species has been reported over 1.5 miles east. However, the species is unlikely to occur in the study area based on the site's previous and on-going disturbances.
Douglas' fiddleneck (*Amsinckia douglasiana*)	--/-- CRPR 4.2	Annual herb. Found on unstable shaly sedimentary slopes within cismontane woodland and grasslands. Flowering period: March to May. Elevation: below 6,397 feet (below 1,950 meters).	**None**. The study area lacks shaly slopes and suitable habitats. No reported occurrences of the species are present in the project vicinity.
Rainbow manzanita (*Arctostaphylos rainbowensis*)	--/-- CRPR 1B.1	Perennial shrub. Occurs among granitic outcrops within chaparral. Flowering period: December to march. Elevation: 672 to 2,198 feet (205 to 670 meters).	**None**. Granitic outcrops and chaparral are absent from the study area. This conspicuous perennial shrub would most likely have been observed if present.
Orcutt's brodiaea (*Brodiaea orcuttii*)	--/-- CRPR 1B.1	Perennial bulbiferous herb. Occurs on mesic or clay soils within vernal pools or grasslands near streams. Also found within chaparral, cismontane woodlands, coniferous forests, meadows, and seeps. Flowering period: May to July. Elevation: 98 to 5,550 feet (30 to 1,692 meters).	**Low**. Clay soils are present in the study area; however, there are no reported occurrences of the species within the project vicinity.
Plummer's mariposa lily (*Calochortus plummerae*)	--/-- CRPR 4.2	Perennial bulbiferous herb. Found in granitic and rocky areas of chaparral, coastal sage scrub, cismontane woodland, lower montane coniferous forest, and grassland. Flowering period: May to July. Elevation: 328 to 5,577 feet (100 to 1,700 meters).	**None.** Suitable soils are absent from the study area and there are no reported occurrences in the project vicinity.

Appendix D (cont.)
Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*)	--/-- CRPR 1B.2	Perennial bulbiferous herb. Found on dry, rocky, and open slopes within chaparral, coastal sage scrub, and grasslands. Flowering period: May to July. Elevation: 344 to 2,805 feet (105 and 855 meters).	**Low**. Suitable dry, rocky slopes do not occur in the study area. The closest occurrence of the species is located over 1 mile east of the study area.
Payson's jewelflower (*Caulanthus simulans*)	--/-- CRPR 4.2	Annual herb. Found in sandy and granitic soils within coastal scrubs, chaparral, and pinyon-juniper woodlands. Flowering period: March to June. Elevation: 295 to 7,217 feet (90 to 2,200 meters).	**Low.** The study area lacks suitable soils and contains limited sage scrub habitat. Furthermore, no records of the species occur within the project vicinity.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	--/-- CRPR 1B.1	Annual herb. Occurs on alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. Blooms April to September. Elevation: below 2,100 feet (640 meters).	**Low**. Suitable alkaline soils are absent from the study area. No known occurrences of the species occur within the project vicinity.
Long-spined spineflower *(Chorizanthe polygonoides* var. *longispina)*	--/-- CRPR 1B.2	Annual herb. Occurs in chaparral, coastal scrub, and native grassland, often in sandy soils. Flowering period: April to June. Elevation: 98 to 4,920 feet (30 to 1,500 meters).	**Low.** Sandy soils are absent from the study area and suitable habitat limited to remnant patches of sage scrub.
San Miguel savory (*Clinopodium chandleri*)	--/-- CRPR 1B.2	Perennial shrub. Occurs within chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland on rocky, gabbroic, or metavolcanic soils. Blooms March to July. Elevation: 390 to 3,530 feet (120 to 1,075 meters.	**None**. Suitable soils are absent from the study area. This conspicuous perennial shrub would have most likely been observed during surveys if present.
Small-flowered morning-glory (*Convolvulus simulans*)	--/-- CRPR 4.2	Annual herb. Occurs on clay soils and serpentinite seeps in openings within chaparral, coastal scrub, and native grassland. Flowering period: April to June. Elevation: 98 to 2,871 feet (30 to 875 meters).	**Low**. Suitable clay soils occur in the study area. However, there are no recent reports of the species in the project vicinity. The closest occurrence of the species is from the 1980s to the north of French Valley Airport.
Paniculate tarplant (*Deinandra paniculata*)	--/-- CRPR 4.2	Annual herb. Occurs in vernally mesic areas, sometimes sandy soils, in coastal scrub, valley and foothill grassland, and vernal pools with sandy soil. Blooms March to December. Elevation: 80 to 3,100 feet (25 to 940 meters).	**Present.** Species occurs in the northern portion of the study, to the north of Technology Drive and east of Winchester Road, within disturbed Riversidian sage scrub and disturbed habitat.

Appendix D (cont.)
Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
San Diego button celery (*Eryngium aristulatum* var. *parishii*)	FE/SE CRPR 1B.1	Annual or perennial herb. Grows in vernal pools and other mesic areas, such as marshes. Flowering period: May to June. Elevation: below 2,313 feet (705 meters).	**None**. Verna pools and other potentially suitable habitats are absent from the study area.
Palmer's grapplinghook (*Harpagonella palmeri*)	--/-- CRPR 4.2	Annual herb. Found in clay soils in annual grasslands and coastal sage scrub. Blooms March to May. Elevation: 65 to 3,100 feet (20 to 955 meters).	**High.** Suitable clay soils occur within the study area and the species was observed along Sky Canyon Drive, north of Technology Drive, in the 1980s. The species was not observed during the 2019 rare plant survey; which was an optimal year for plants based on the above average rainfall.
Graceful tarplant (*Holocarpha virgata ssp. elongata*)	--/-- CRPR 4.2	Annual herb. Occurs in grasslands, coastal scrub, chaparral, and cismontane woodland. Flowering period: May to November. Elevation: 195 to 3,600 feet (60 to 1,100 meters).	**Low.** Suitable habitat within the study area limited to remnant patches of coastal sage scrub. However, no records of the species occur in the project vicinity.
Vernal barley (*Hordeum intercedens*)	--/-- CRPR 3.2	Annual herb. Occurs in vernal pools, alkaline flats, and dry, saline streambeds. Also found in saline flats and depressions within grasslands. Flowering period: March to June. Elevation: below 3.280 feet (1,000 meters).	**None**. No vernal pools or suitable alkaline and saline habitats occur within the study area, and there are no reported occurrences of the species are found in the project vicinity.
Mesa horkelia (*Horkelia cuneata* var. *puberula*)	--/-- CRPR 1B.1	Perennial herb. Occurs in sandy or gravelly soils of maritime chaparral, coastal sage scrub, and woodlands. Elevation: 230 to 2,657 feet (70 and 810 meters). Blooms February to July.	**Low**. The study area lacks suitable soils and suitable habitat is limited to remnant patches of sage scrub occur in the northern portion of the study area. No reported occurrences of the site are found in the project vicinity.
Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)	--/-- CRPR 4.2	Perennial herb. Found in moist saline environments such as alkaline seeps and meadows, and coastal salt marshes and swamps. Flowering period: May to June. Elevation: below 984 feet (300 meters).	**Low**. Suitable saline and alkaline soils do not occur within the study area, and the species is not known to occur within the project vicinity.
Santa Lucia dwarf rush (*Juncus luciensis*)	--/-- CRPR 1B.2	Annual herb. Found on wet, sandy soils of seeps, meadows, streams, and roadsides. Also found within vernal pools. Flower period: April to July. Elevation: 984 to 6,692 feet (300 to 2,040 meters).	**None**. No suitable habitats occur within the study area, and there are no reported occurrences of the species are found in the project vicinity.

Appendix D (cont.)
Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	--/-- CRPR 1B.1	Annual herb. Grows in vernal pools, playas, and saline habitats within alkali sinks, coastal salt marshes, and wetland communities. Flowering period: April to May. Elevation: below 3,281 feet (1,000 meters).	**None**. No vernal pools, or suitable saline and alkali habitats occur within the study area. Furthermore, no records of the species occur within the project vicinity.
Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*)	--/-- CRPR 4.3	Annual herb. Grows in openings in sage scrub and chaparral at the coastal and foothill elevations. 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).	**Low**. Suitable habitat limited to remnant patches of sage scrub in the northern portion of the study area. However, no reported occurrences of the species are located in the project vicinity. The closet occurrence is located over 5 miles northeast of the project near Lake Skinner.
Little mousetail (*Myosurus minimus* ssp. *apus*)	--/-- CRPR 3.1	Annual herb. Occurs in alkaline vernal pools within native grassland. Flowering period: March to June. Elevation: 65 to 2,100 feet (20 to 640 meters).	**None**. Suitable vernal pool habitat does not occur within the study area.
Spreading navarretia (*Navarretia fossalis*)	FT/-- CRPR 1B.1	Annual herb. Occurs in vernal pools, chenopod scrub, marshes, swamps, and playas. Flowering period: April to June. Elevation: 98 to 4,265 feet (30 to 1,300 meters).	**None**. Vernal pools and other potentially suitable habitat do not occur within the study area.
Prostrate vernal pool navarretia (*Navarretia prostrata*)	--/-- CRPR 1B.1	Annual herb. Occurs in alkaline floodplains and vernal pools. Flowering period: April to July. Elevation: 9 to 3,970 feet (3 to 1,210 meters).	**None**. Vernal pools are not present within the study area.
California Orcutt grass (*Orcuttia californica*)	FE/SE CRPR 1B.1	Annual herb. Found within vernal pools. Flowering period: April to August. Elevation: 49 to 2,165 feet (15 to 660 meters).	**None**. Vernal pools are not present within the study area.
Fish's milkwort (*Polygala cornuta* var. *fishiae*)	--/-- CRPR 4.3	Annual shrub. Occurs within chaparral, riparian woodlands, and oak woodlands. Flowering period: May to August. Elevation: 328 to 3,280 feet (100 to 1,000 meters).	**None**. Suitable habitats do not occur in the study area.
White rabbit-tobacco (*Pseudognaphalium leucocephalum*)	--/-- CRPR 2B.2	Perennial herb. Occurs on sandy or gravelly soils of benches, dry stream bottoms, and canyon bottoms within coastal scrub, chaparral, cismontane woodland, and riparian woodland. Flowering period: July to November. Elevation: below 6,890 feet (2,100 meters).	**Low.** Suitable soils are absent from the study area, and limited suitable sage scrub habitat occurs as remnant patches in the northern portion of the study area. No reported occurrences of the species are present in the project vicinity.

Appendix D (cont.)
Special Status Plant Species Observed or with Potential to Occur

Species	Status[1]	Habit, Ecology and Life History	Potential to Occur[2]
Engelmann oak (*Quercus engelmannii*)	--/-- CRPR 4.2	Perennial tree. Occurs on slopes and foothills within grasslands, chaparral, oak woodland, and riparian woodlands. Flowering period: March to June. Elevation: 160 to 4,300 feet (50 to 1,300 meters).	**Presumed Absent.** This conspicuous perennial tree would have been observed if present.
San Bernardino aster (*Symphyotrichum defoliatum*)	--/-- CRPR 1B.2	Perennial herb. Occurs near ditches, streams, and springs within grasslands, meadows, coastal scrubs, cismontane woodland, and lower montane coniferous forests. Also found in disturbed areas. Flowering period July to November. Elevation: 6 to 6,692 feet (2 to 2,040 meters).	**Low.** Limited suitable habitat occurs within the study area as remnant patches of sage scrub in the northern portion of the project. However, no reported occurrences of the species are present in the project vicinity.

[1] F = Federal; S = State of California; E = Endangered; T = Threatened; CE = Candidate Endangered; R = Rare

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

County of San Diego Sensitivity Status: Plant species are divided into Groups A through D on the County Rare Plant List. **Groups A and B** Plants include those that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met. **Groups C and D** Plants include those species that are becoming less common but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

MSCP Covered Species: Covered Species under County MSCP Subarea Plan; NE = Narrow Endemic Species under County MSCP Subarea Plan.

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

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BTR Appendix E

Special Status Animal Species Observed or with Potential to Occur

Appendix E
Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
INVERTEBRATES			
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE/--	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 plaintain [*Plantago erecta*], woolly plantain [*Plantago patagonia*] but also Coulter's snapdragon [*Antirrhinum coulterianum*], and rigid bird's beak [*Cordylanthus rigidus*]) and nectar sources. Often found on rounded hilltops, ridgelines, and occasionally rocky outcrops. Occurs within a wide range of open-canopied habitats including vernal pools, sage scrub, chaparral, grassland, and open oak and juniper woodland communities.	**Low**. The study area is predominantly characterized by disturbed habitat and developed land lacking suitable habitat for the species. Though previous observations of the species occur within the project vicinity, no host plants were observed within the study area.
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE/--	In California, occurs from Los Angeles County south to coastal San Diego County, and east to western Riverside County. Found in deep seasonal vernal pools, ephemeral ponds, stock ponds, and other human modified depressions at least 30 centimeters deep. Associated with grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation.	**None.** No vernal pools or ephemeral ponds were documented within the study area.
VERTEBRATES			
Amphibians			
Western spadefoot toad (*Spea hammondii*)	--/SSC	Occurs from northern California southward to San Diego County, and west of the Sierra Nevada at elevations below 4,500 feet. This terrestrial species requires 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 also found in riparian habitats with suitable water resources. Breeding pools must lack exotic predators such fish, bullfrogs, and crayfish for the species to successfully reproduce. Estivates in burrows within upland habitats adjacent to potential breeding sites.	**None.** No vernal pools, ephemeral ponds, or other potentially suitable habitat occurs within the study area.

Appendix E (cont.)
Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Reptiles			
Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*)	--/WL	Found within the southwestern portion of California in southern San Bernardino, western Riverside, Orange, and San Diego Counties on the western slopes of the Peninsular ranges below 3,500 feet. Suitable habitat includes coastal sage scrub, chaparral, juniper woodland, oak woodland, and grasslands along with alluvial fan scrub and riparian areas. Occurrence of the species correlated with the presence perennial plants (such as California buckwheat, California sagebrush, black sage, or chaparral) to provide a food base for its major food source, termites.	**Low.** The study area is predominately characterized by disturbed habitat and developed land., though small, isolated patches of remnant Riversidean sage scrub occur within the study area.
Birds			
Cooper's Hawk (*Accipiter cooperii*)	--/WL	In California, the species breeds from Siskiyou County south to San Diego County and east towards 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.	**Present.** A single individual was observed flying to the west of the study area during biological surveys.
Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)	--/WL	Restricted to southwestern California occurring from Santa Barbara County southwards 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. Prefer areas with California sagebrush but are generally absent from areas with dense stands of coastal sage scrub or chaparral. May occur on steep grassy slopes without shrubs if rock outcrops are present.	**Low.** The study area is generally flat, lacking suitable sloped hillsides inhabited by the species. Though there are occurrences of the species within the project vicinity, Riversidean sage scrub within the study area consists of small, isolated patches bordered by disturbed habitat or developed land.
Bell's sparrow (*Artemisiospiza belli*)	BCC/WL	Non-migratory resident on the coastal ranges of California and western slopes of the central Sierra Nevada mountains. Occurs year-round in southern California. Breeds in dry coastal sage scrub and chaparral, desert scrub, and similar other open, scrubby habitats. In foothill chaparral, they tend toward younger, less dense stands that are recovering from recent fires; less common in older, taller stands that have remained unburned.	**Low.** Small, isolated patches of remnant coastal sage scrub occur within the study area. However, there are no reported occurrences within the project vicinity.

Appendix E (cont.)
Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Birds (cont.)			
Burrowing Owl (*Athene cunicularia*)	BCC/SSC	Found from central California east to the Mojave Desert and south to coastal San Diego County. Primarily a grassland species that prefers areas with level to gentle topography and well-drained soils. Species can also occupy agricultural areas, vacant lots, and pastures. Requires underground burrows for nesting and roosting that are typically dug by other species such as California ground squirrel (*Spermophilus beecheyi*). Also utilizes natural rock cavities, debris piles, culverts, and pipes for nesting and roosting.	**Presumed Absent**. Protocol-level surveys for the species conducted in 2019 were negative. The closest reported occurrence of the species is located approximately 0.5-mile north of the study area where 2 adults were observed foraging in May 2003.
White-tailed Kite (*Elanus leucurus*)	--/FP	Year-long resident of California residing along the coasts and valleys west of the Sierra Nevada foothills and southeast deserts, though the species has also been documented breeding in arid regions east of the Sierra Nevada and within Imperial County. Inhabits low elevation grasslands, wetlands, oak woodlands, open woodlands, and is associated with agricultural areas. Breeds in riparian areas adjacent to open spaces nesting in isolated or relatively large stands of trees.	**None.** The study area is characterized by upland habitats and lacks suitable woodlands or riparian habitat occupied by the species.
California Horned Lark (*Eremophila alpestris actia*)	--/WL	One of 21 recognized subspecies occurring in the coastal ranges of California from San Joaquin Valley to northern Baja California. Inhabits a wide variety of open habitats with low, sparse vegetation where trees and large shrubs are generally absent. Suitable habitats include grasslands along the coast, deserts within the inland regions, shrub habitat at higher elevations, and agricultural areas.	**Present.** Multiple individuals were detected within the northern portion of the study area.
Coastal California Gnatcatcher (*Polioptila californica californica*)	FT/SSC	Year-round resident of California occurring from Ventura County south to San Diego County, and east within the western portions of San Bernardino and Riverside Counties. Typically occurs in arid, open sage scrub habitats on gently sloping hillsides to relatively flat areas at elevations below 3,000 feet. The composition of sage scrub in which gnatcatchers are found varies; however, California sagebrush is at least present as dominant or co-dominant species. Mostly absent from areas dominated by black sage, white sage, or lemonadeberry, though may occur more regularly in inland regions dominated by black sage.	**Presumed Absent.** The species was not detected within the study area during protocol-level surveys conducted between 2018 and 2019, though a pair was detected to the east of Sky Canyon Drive outside of the study area in December 2018.

Appendix E (cont.)
Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Birds (cont.)			
Least Bell's Vireo (*Vireo bellii pusillus*)	FE/SE	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 and willows with mule fat, oaks, and sycamore, and mesquite (*Prosopis glandulosa*) and arrowweed (*Pluchea sericea*) within desert habitats. The species can be tolerant of the presence of non-native species such as tamarisk.	**None.** Suitable riparian habitat does not occur within the study area.
Mammals			
San Bernardino kangaroo rat (*Dipodomys merriami parvus*)	FE/SSC	Occurs in southwestern San Bernardino and western Riverside Counties primarily within the San Bernardino, Menifee, and San Jacinto valleys. Inhabits alluvial fan sage scrub and coastal sage scrub habitats with gravelly and sandy soils. Occupies alluvial floodplains and adjacent upland habitats. Rarely found in dense vegetation or rocky washes.	**None** The study area is predominantly characterized by disturbed habitat and developed land. Though small, isolated patches of Riversidean sage scrub occur within the study area, no recent occurrences of the species are reported within the project vicinity.
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE/ST	Occurs in southern California within the San Jacinto Valley, western Riverside County, and southwestern San Bernardino County, and northwestern San Diego county at elevations between 4,100 feet. Inhabits native to open grasslands and sparse coastal sage scrub (less than 30 percent cover) on relatively flat or gently sloping ground. Dominant species include native and non-native herbaceous species such as filaree (*Erodium* sp.), non-native grasses (*Bromus* ssp.), California sagebrush, and California buckwheat.	**Low.** Riversidean sage scrub within the study area consists of small, isolated patches surrounded by disturbed habitat or developed land. Reported occurrences of the species within the project vicinity are from the 1980's, recent observations are located further east of the project near Lake Skinner.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	--/SSC	Occurs along the coastal regions of southern California south to northern Baja California. Found in arid regions preferring grasslands, agricultural fields, and sparse scrub. Typically absent from areas with high-grass or dense brush, such as closed-canopy chaparral, primarily occupying short-grass and open scrub habitats.	**High.** The species was observed northeast of the study area to the north of Borreal Road. However, the study area lacks suitable habitat for the species as it is highly disturbed and lacks sufficient vegetative cover to provide live in habitat. The species could forage within the study area but would not be anticipated to occupy the area.

Appendix E (cont.)
Special Status Animal Species Observed or with Potential to Occur

Species	Status[1]	Habitat Associations	Potential to Occur[2]
Mammals (cont.)			
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	--/SSC	Occurs in the coastal basins of southern California from the San Fernando Valley of Los Angeles County, east to the City of San Bernardino in San Bernardino County, and south through San Jacinto and Temecula Valleys of Riverside County. Inhabits lower elevations grassland, alluvial sage scrub, and coastal sage scrub. Prefers sparsely vegetated habitats with fine, sandy soils.	**Low**. Riversidean sage scrub within the study area consists of small, isolated patches surrounded by disturbed habitat and developed land. There are no recent reported occurrences of the specie sin the project vicinity.

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

[2] Potential to Occur is assessed as follows. **None**: Species is so limited to a particular habitat that it cannot disperse on its own, and habitat suitable for its establishment and survival does not occur in the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur in the study area; **Low**: Suitable habitat is present in the project site but no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs in the study area and the species has been recorded recently on or near the study area, but was not observed during project surveys; **Present**: The species was observed during biological surveys for the project and is assumed to occupy the project site.

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BTR Appendix F

Explanation of Codes

Appendix F
Explanation of Status Codes for Plant and Animal Species

FEDERAL, STATE, AND LOCAL CODES

U.S. FISH AND WILDLIFE SERVICE (USFWS)

FE Federally listed endangered

FT Federally listed threatened

FC Federal candidate for listing

BCC Birds of Conservation Concern (discussed in more detail, below)

BGEPA Bald and Golden Eagle Protection Act (discussed in more detail below)

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

SE State listed endangered

SR State listed rare

ST State listed threatened

SSC State species of special concern

WL Watch List

Fully Protected Fully Protected species refer 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.

OTHER CODES AND ABBREVIATIONS

USFWS BALD AND GOLDEN EAGLE PROTECTION ACT (BGEPA)

In 1782, Continental Congress adopted the bald eagle as a national symbol. During the next one and a half centuries, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle "at any time or in any manner."

In 1962, Congress amended the Eagle Act to cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. The golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. Another 1962 amendment authorizes the Secretary of the Interior to grant permits to Native Americans for traditional religious use of eagles and eagle parts and feathers.

USFWS BIRDS OF CONSERVATION CONCERN (BCC)

This report from 2002 aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities and draw attention to species in need of conservation action. 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. The report is available online at http://migratorybirds.fws.gov/reports/bcc2002.pdf.

CALIFORNIA NATIVE PLANT SOCIETY (CNPS) CALIFORNIA RARE PLANT RANKING (CRPR)

Lists

1A = Presumed extinct.

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

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

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

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

.2 – Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 – Not very endangered in California (less than 20 percent of occurrences threatened, 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.

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