



# **Final Initial Study & Mitigated Negative Declaration**

**Buena Vista Water Storage District  
Belridge Pipeline Project**

Prepared for:

Buena Vista Water Storage District

March 2024

*[This page left intentionally blank]*

# Final Initial Study & Mitigated Negative Declaration

## Buena Vista Water Storage District Belridge Pipeline Project

Prepared for:

Buena Vista Water Storage District  
525 North Main Street  
Buttonwillow, CA 93206

Contact:

Mr. Tim Ashlock  
Engineer Manager  
661-324-1101

Prepared by:

GEI Consultants  
5001 California Avenue, Suite 120  
Bakersfield, CA 93309

Contact:

Ginger Gillin  
Principal Environmental Scientist  
503-342-3777



March 2024

Project No. 1801694

*[This page left intentionally blank]*

# Table of Contents

---

<b>1.0</b>	<b>Introduction</b>	<b>1-1</b>
1.1	Summary of Findings .....	1-1
1.2	Document Organization .....	1-2
<b>2.0</b>	<b>Project Description</b>	<b>2-1</b>
2.1	Project Background .....	2-1
2.2	Project Location .....	2-1
2.3	Project Objectives.....	2-2
2.4	Proposed Project.....	2-15
3.1.1	Belridge Pipeline Construction.....	2-15
3.1.2	Electrical and Fiber Optic Lines .....	2-15
3.1.3	Land Acquisition.....	2-16
3.1.4	Construction Schedule, Staffing and Equipment .....	2-16
3.1.5	Operation and Maintenance .....	2-17
2.5	Regulatory Requirements, Permits, and Approval.....	2-17
<b>3.0</b>	<b>Environmental Checklist</b>	<b>3-1</b>
	Project Information .....	3-1
	Environmental Factors Potentially Affected.....	3-2
3.1	Aesthetics .....	3-4
3.1.1	Environmental Setting .....	3-4
3.1.2	Discussion.....	3-4
3.2	Agriculture and Forestry Resources .....	3-6
3.2.1	Environmental Setting .....	3-7
3.2.2	Discussion.....	3-7
3.3	Air Quality.....	3-8
3.3.1	Environmental Setting .....	3-8
3.3.2	Discussion.....	3-12
3.4	Biological Resources.....	3-15
3.4.1	Environmental Setting .....	3-16
3.4.2	Discussion.....	3-16
3.6	Energy .....	3-40
3.6.1	Environmental Setting .....	3-40
3.6.2	Discussion.....	3-40
3.7	Geology and Soils .....	3-42
3.7.1	Environmental Setting .....	3-43
3.7.2	Discussion.....	3-43
3.8	Greenhouse Gas Emissions .....	3-46
3.8.1	Environmental Setting .....	3-46
3.8.2	Discussion.....	3-46
3.9	Hazards and Hazardous Materials.....	3-48
3.9.1	Environmental Setting .....	3-49
3.9.2	Discussion.....	3-49
3.10	Hydrology and Water Quality .....	3-51

3.10.1	Environmental Setting .....	3-52
3.10.2	Discussion .....	3-52
3.11	Land Use and Planning.....	3-55
3.11.1	Environmental Setting .....	3-55
3.11.2	Discussion .....	3-55
3.12	Mineral Resources.....	3-57
3.12.1	Environmental Setting .....	3-57
3.12.2	Discussion .....	3-57
3.13	Noise.....	3-58
3.13.1	Environmental Setting .....	3-58
3.13.2	Discussion .....	3-58
3.14	Population and Housing .....	3-60
3.14.1	Environmental Setting .....	3-60
3.14.2	Discussion .....	3-60
3.15	Public Services .....	3-61
3.15.1	Environmental Setting .....	3-61
3.15.2	Discussion .....	3-61
3.16	Recreation.....	3-62
3.16.1	Environmental Setting .....	3-62
3.16.2	Discussion .....	3-62
3.17	Transportation .....	3-63
3.17.1	Environmental Setting .....	3-63
3.17.2	Discussion .....	3-63
3.18	Tribal Cultural Resources.....	3-65
3.18.1	Environmental Setting .....	3-65
3.18.2	Discussion .....	3-66
3.19	Utilities and Service Systems.....	3-67
3.19.1	Environmental Setting .....	3-67
3.19.2	Discussion .....	3-68
3.20	Wildfire .....	3-69
3.20.1	Environmental Setting .....	3-69
3.20.2	Discussion .....	3-69
3.21	Mandatory Findings of Significance .....	3-71
3.21.1	Discussion .....	3-71
<b>4.0</b>	<b>References</b>	<b>4-1</b>
<b>5.0</b>	<b>Report Preparers</b>	<b>5-1</b>

## List of Tables

---

Table 2-1.	Project Footprint Characteristics.....	2-15
Table 2-2.	Parcels within the Project Site .....	2-16
Table 3-1.	Environmental Resources with Potentially Significant Impacts Prior to Mitigation. .....	3-2
Table 3-2.	Federal and California Ambient Air Quality Standards and Attainment Status..	3-9
Table 3-3.	Ambient Air Quality Monitoring Data Measured at the Bakersfield-California Avenue Monitoring Station.....	3-11
Table 3-4.	Construction Equipment and Typical Equipment Noise Levels.....	3-59

## List of Figures

---

Figure 2-1.	Buena Vista Water Storage District Service Area.....	2-3
Figure 2-2.	Belridge Pipeline Project Location.....	2-5
Figure 2-3.	Belridge Pipeline Project Location Detail (1 of 9).....	2-6
Figure 2-4.	Belridge Pipeline Project Location Detail (2 of 9).....	2-7
Figure 2-5.	Belridge Pipeline Project Location Detail (3 of 9).....	2-8
Figure 2-6.	Belridge Pipeline Project Location Detail (4 of 9).....	2-9
Figure 2-7.	Belridge Pipeline Project Location Detail (5 of 9).....	2-10
Figure 2-8.	Belridge Pipeline Project Location Detail (6 of 9).....	2-11
Figure 2-9.	Belridge Pipeline Project Location Detail (7 of 9).....	2-12
Figure 2-10.	Belridge Pipeline Project Location Detail (8 of 9).....	2-13
Figure 2-11.	Belridge Pipeline Project Location Detail (9 of 9).....	2-14

## List of Appendices

---

Appendix A	Topographical Project Figure
Appendix B	Air Quality/GHG Calculations and Modeling
Appendix C	Biological Resources Technical Report

# Abbreviations and Acronyms

---

°F	degrees Fahrenheit
BMP	best management practice
BSA	Buttonwillow Service Area
CARB	California Air Resource Board
C.A.A.Q.S.	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNLM	Center for Natural Lands Management
CNPS	California Native Plant Society
CO	carbon monoxide
County	Kern County
CRHR	California Register of Historical Resources
CVRWQCB	Central Valley Regional Water Quality Control Board
District	Buena Vista Water Storage District
DOC	Department of Conservation
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
Flood Canal	Kern River Flood Canal
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
HCP	Habitat Conservation Plan
hp-hr	horsepower hours
IS/MND	Initial Study/Mitigated Negative Declaration
MLD	Most Likely Descendant
N.A.A.Q.S.	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO <sub>2</sub>	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System



NRHP	National Register of Historic Places
O <sub>3</sub>	ozone
PG&E	Pacific Gas and Electric
PM	particulate matter
PM10	particulate matter less than 10 microns in diameter
PM2.5	particulate matter less than 2.5 microns in diameter
proposed project/project	Belridge Pipeline Project
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub>	sulfur dioxide
SPAL	Small Project Analysis Level
SSJVIC	South San Joaquin Valley Information Center
State Water Board	State Water Resource Control Board
SWPPP	Stormwater Pollution Prevention Program
USFWS	United States Fish and Wildlife Service
WEF	wildlife exclusion fencing

*[This page left intentionally blank]*

# 1.0 Introduction

---

The Buena Vista Water Storage District (District) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) and Guidelines to address the potentially significant environmental impacts of the proposed Belridge Pipeline Project (proposed project or project) in Kern County, California (County). The District is the lead agency under CEQA.

## 1.1 Summary of Findings

Chapter 3 – Environmental Checklist contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in Chapter 3, the following was determined:

The proposed project would result in no impacts on the following issue areas:

- Aesthetics
- Agriculture and Forestry Resources
- Hazards and Hazardous Waste
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Wildfire

The proposed project would result in less-than-significant impacts on the following issue areas:

- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Utilities and Service System

The proposed project would result in less-than-significant impacts *after* mitigation implementation on the following issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils

## 1.2 Document Organization

The document provides an introduction, project description, environmental checklist, references cited, report preparers, and distribution list, as briefly summarized below:

- **Chapter 1 – Introduction.** This chapter describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS/MND.
- **Chapter 2 – Project Description.** This chapter describes the project location and background, project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.
- **Chapter 3 – Environmental Checklist.** This chapter presents an analysis of environmental issues identified in the CEQA environmental checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact on the physical environment in each topic area. Should any impacts be determined to be potentially significant or significant, an Environmental Impact Report would be required. For this proposed project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to a less-than-significant level.
- **Chapter 4 – References.** This chapter lists the references used to prepare this IS/MND.
- **Chapter 5 – Report Preparers.** This chapter identifies report preparers who contributed to the preparation of this document.

## 2.0 Project Description

---

### 2.1 Project Background

The District's service area includes approximately 50,000 acres in two distinct areas – Buttonwillow Service Area and Maples Service Area – in the lower Kern River watershed of western Kern County (**Figure 2-1**). All water used in the District is delivered to agricultural and environmental users, including the Kern Natural Wildlife Refuge, approximately 7 miles north of the District's northern boundary. Approximately 35,000 acres of the District's service area are annually farmed, the primary crops being pistachios, cotton, alfalfa, and grains. The District receives, on average, 150,000 acre-feet per year of surface water from the Kern River and 12,000 acre-feet per year from the State Water Project. Annual surface water supply is highly irregular and often requires growers to recover recharged groundwater by pumping groundwater from privately-owned wells. The District operates a delivery system of pipelines and earthen canals. The District currently has access to five turnouts from the California Aqueduct that can provide approximately 850 cubic feet per second of gravity inflow capacity directly into the distribution system. The proposed project would facilitate bringing water from an existing turnout on the California Aqueduct to a portion of the District this is difficult to serve with existing facilities. The proposed project will increase water delivery efficiency, saving water losses and power consumption.

### 2.2 Project Location

The proposed project is located in western Kern County (**Figure 2-1**), approximately 5.5 miles west-northwest of the community of Buttonwillow, California. The District is proposing to construct the approximately 2-mile-long Belridge Pipeline between the California Aqueduct and the District's 7th Standard Pipeline (**Figures 2-2 through 2-411, and Appendix A "Topographical Project Figure"**). The west end of the Belridge Pipeline would connect to an existing California Department of Water Resources (DWR) turnout at the California Aqueduct. The pipeline would extend east from the California Aqueduct, across undeveloped land owned by the Chevron Corporation and other private parties, as well as across a portion of the Lokern Preserve before tying into the existing 7th Standard Pipeline just west of the Kern River Flood Canal (Flood Canal).

The Lokern Preserve is owned and managed by the Center for Natural Lands Management (CNLM). ~~and occupies approximately 3,900 acres of scattered natural lands within Kern County.~~ According to CDFW, the lands were acquired for preservation in perpetuity as mitigation required by the CDFW California Endangered Species Act Incidental Take Permit No. 2081-2001-004-4 and the USFWS Biological Opinion 1-1-00-F-172 for the Midway-Sunset Cogeneration Western Midway Sunset Power Project. The proposed project would affect approximately 3.6 acres of the 160-acre parcel. Vegetation removal within the construction corridor would only occur to facilitate pipeline installation and would not be maintained long-term.

The project would be constructed in Sections 2, 3, 4, 9,10, and 11 of Township 29 South, Range 22 East, and Section 32 of Township 28 South, Range 22 East, all within the Mount Diablo Base and Meridian. In addition to facilitating delivery to District water users, the Belridge Pipeline would also deliver water to the existing, in-District Corn Camp Groundwater Recharge Pond, *via* an existing approximately 2-mile-long segment of the 7th Standard Pipeline.

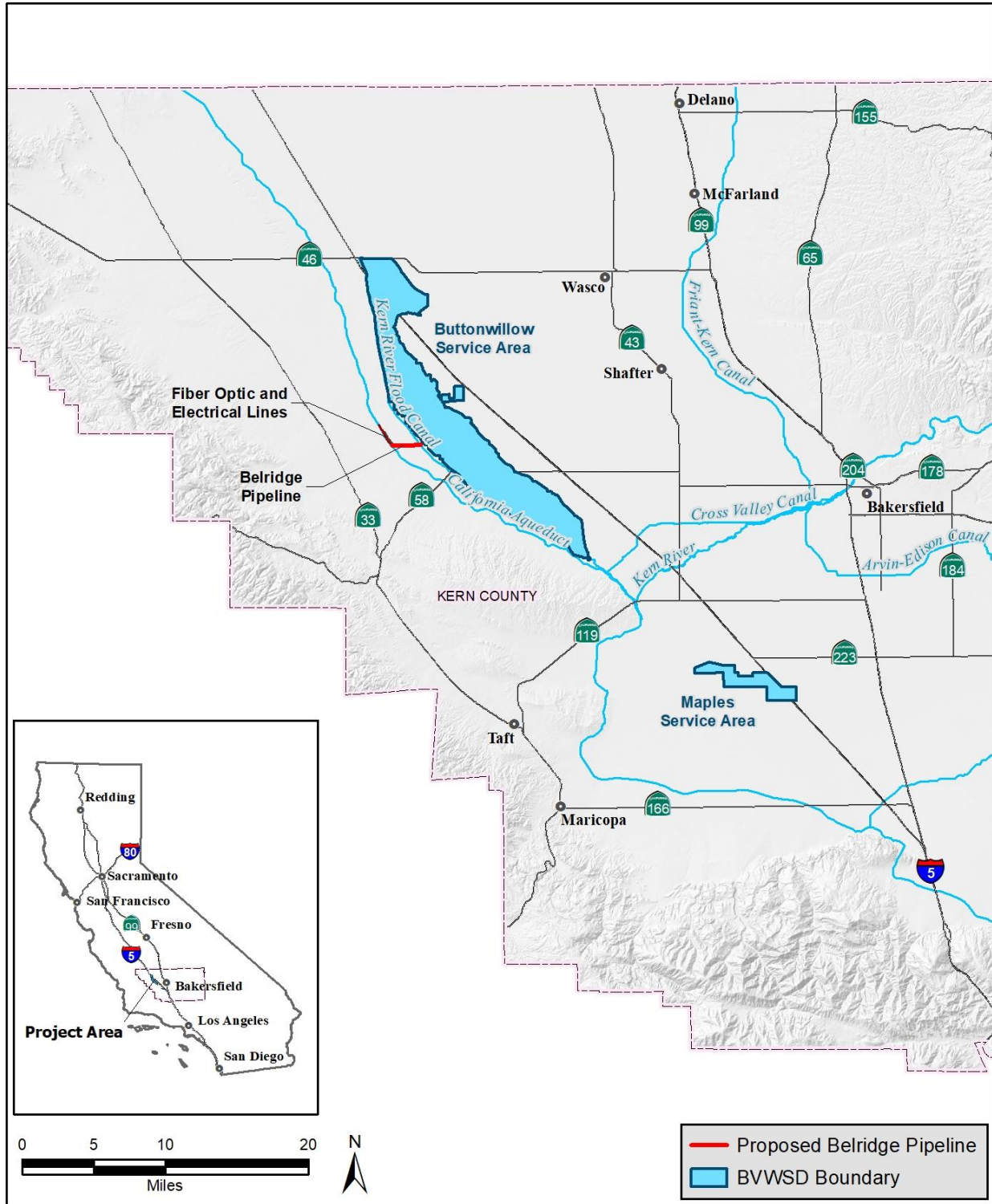
Regional access to the eastern edge of the Belridge Pipeline is *via* Main Drain Road and Dargatz Road. Regional access to the western edge of the Belridge Pipeline and southern end of the electrical and fiber optic lines is *via* Lokern Road, by heading north using unpaved private roads for approximate 2.5 miles to reach the eastern terminus of this portion of the pipeline or 3.5 miles along the California Aqueduct to reach the western terminus (**Figure 2-2**).

## **2.3 Project Objectives**

The proposed project consists of installing approximately 2.5 miles of pipeline to connect an existing turnout at the California Aqueduct on the west end to the District's 7th Standard Pipeline on the east end. The proposed project would improve District facilities and facilitate a more efficient delivery of water to the District. This improvement to District facilities would reduce water losses and power consumption previously required. Additionally, the proposed project would install a new fiber optic line and new electrical line to service the turnout at the California Aqueduct. The project would improve return capacity and increase water supply reliability, and would provide the District with additional water resource management for agricultural uses, or other purposes as determined by the District to:

- Improve water conveyance within the District's service area.
- Help provide a more reliable water supply to farmers located within the District's boundaries.

**Figure 2-1. Buena Vista Water Storage District Service Area.**

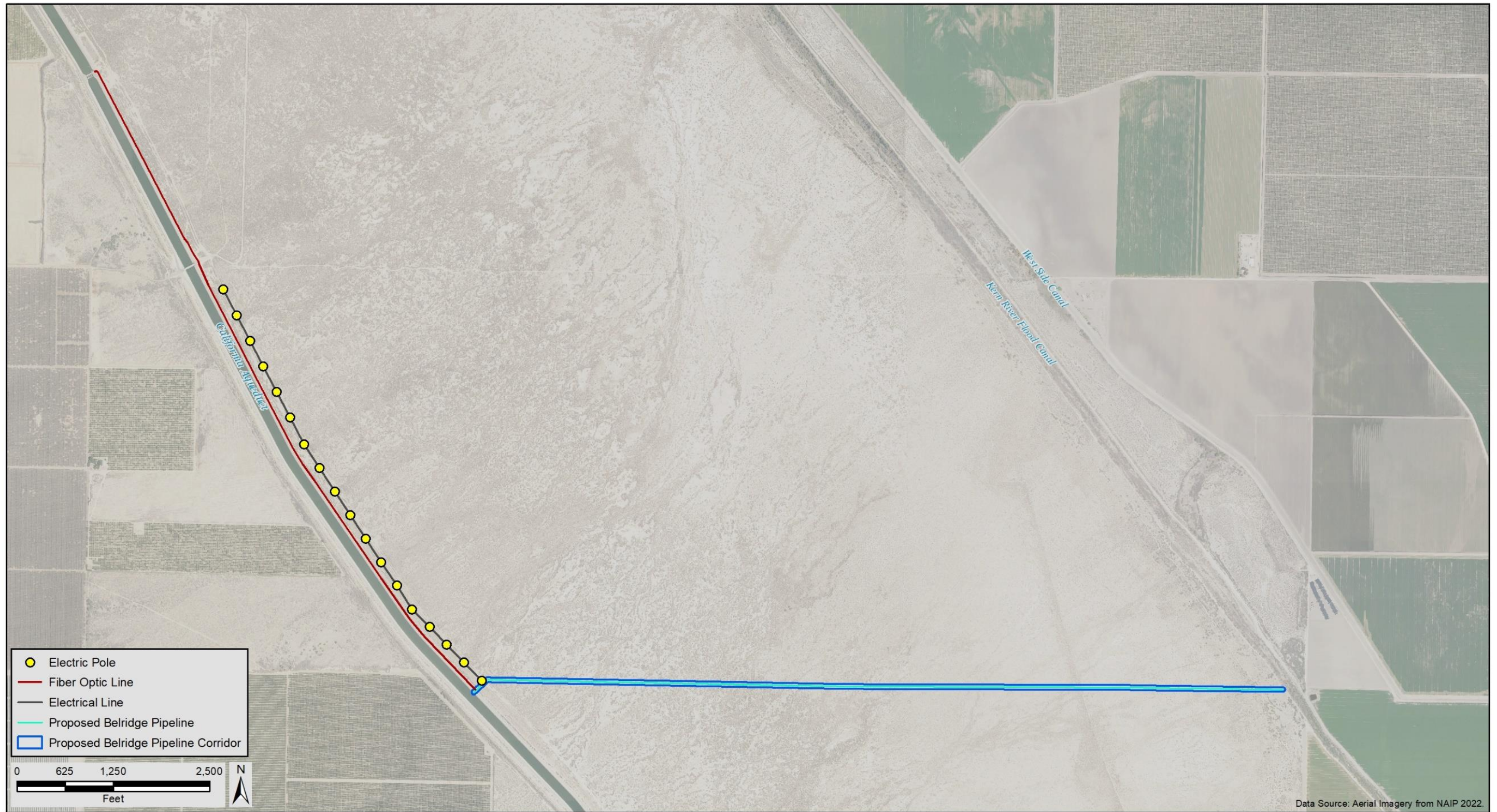


Z:\Projects\1801694\_BVWSD\1801694\_G014\_ProjectLocation\_20231201.mxd  
01Dec2023 RS

*[This page left intentionally blank]*



Figure 2-2. Belridge Pipeline Project Location.



01-Dec-2023 Z:\Projects\1801694\_BVWSD\1801694\_G026\_Belridge\_ProjectSite\_20231201\_v2.mxd RS/SI

Figure 2-3. Belridge Pipeline Project Location Detail (1 of 29).

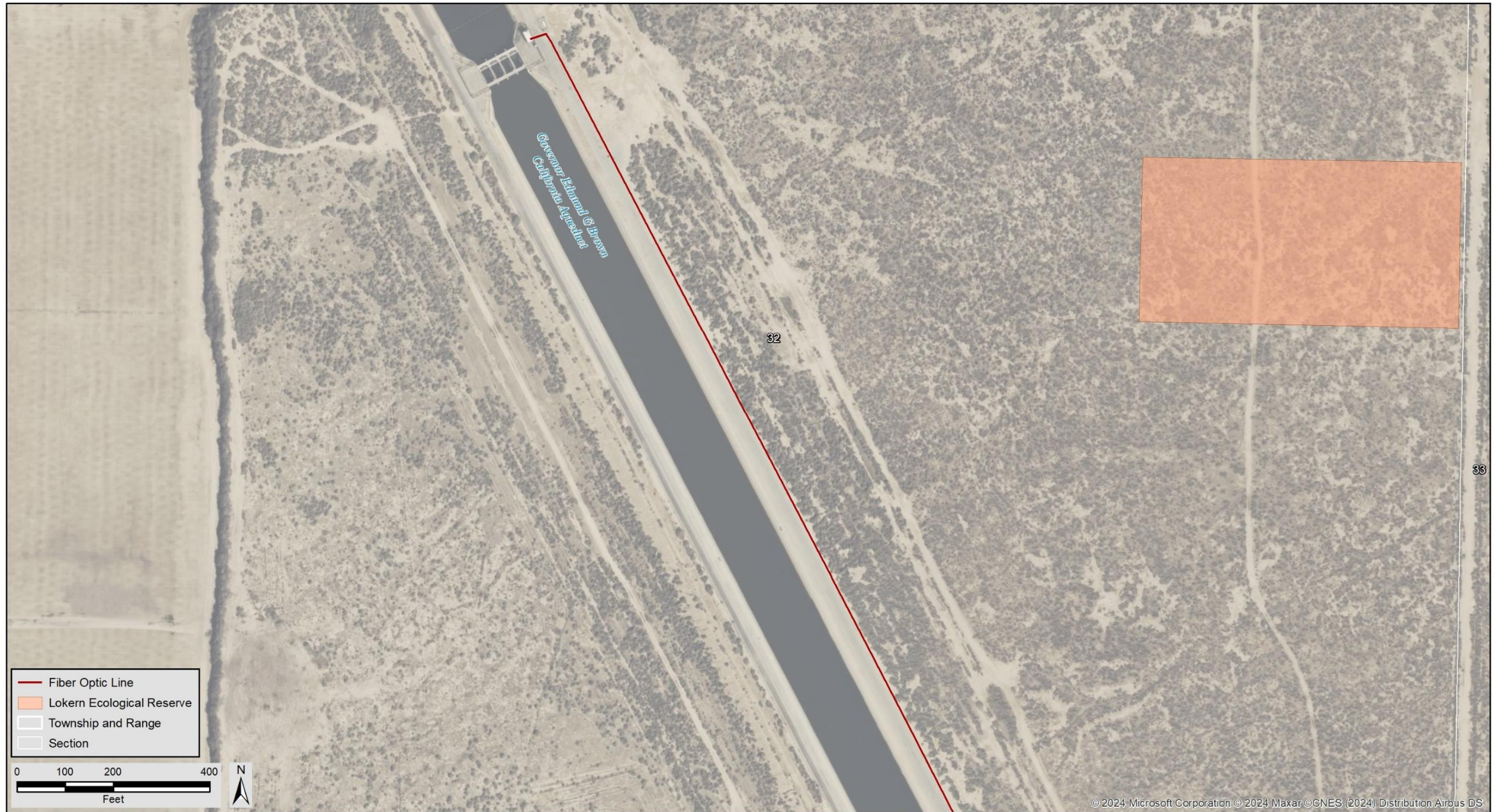


Figure 2-4. Belridge Pipeline Project Location Detail (2 of 29).

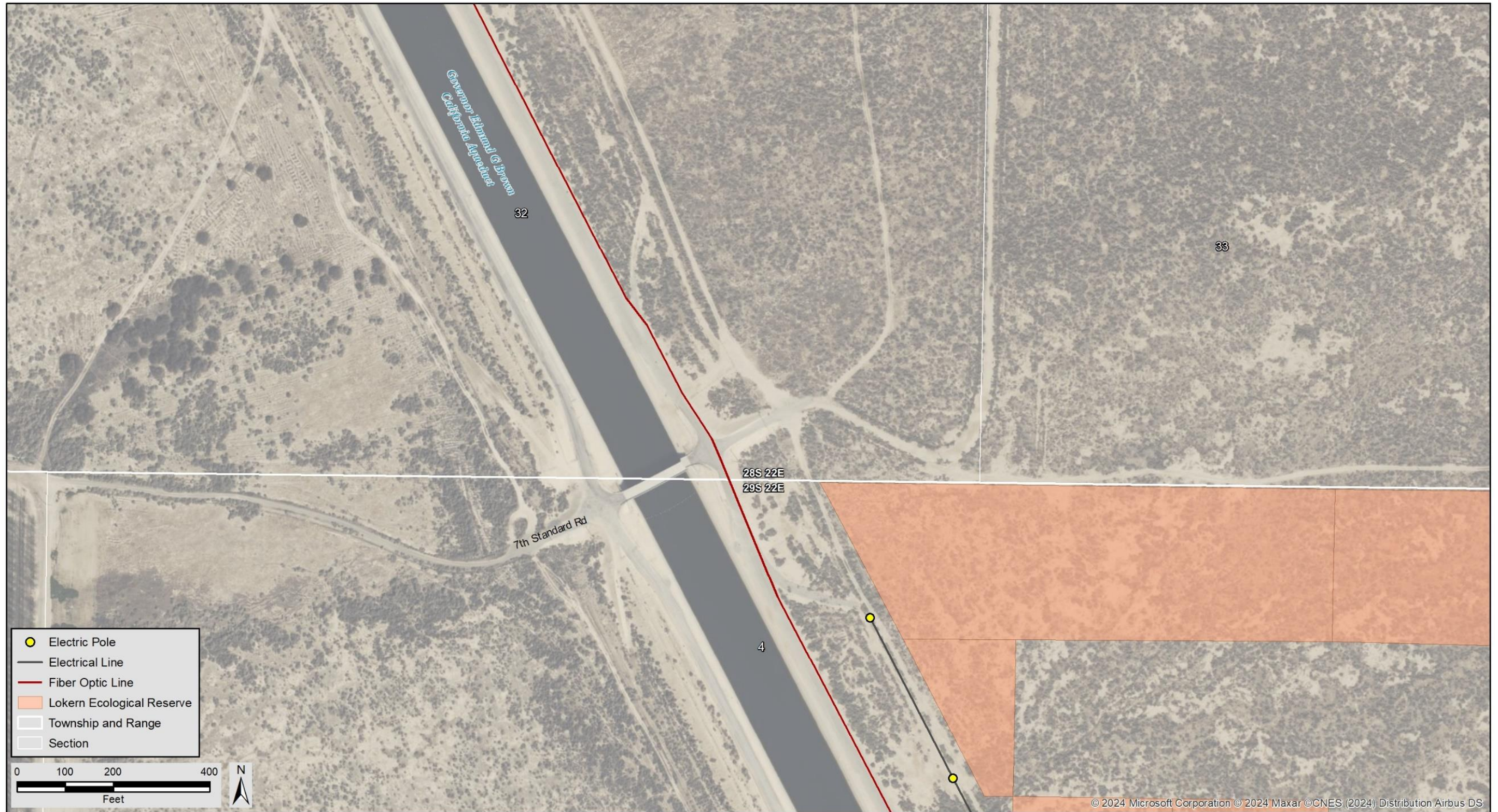


Figure 2-5. Belridge Pipeline Project Location Detail (3 of 9)



Figure 2-6. Belridge Pipeline Project Location Detail (4 of 9)



© 2024 Microsoft Corporation © 2024 Maxar © CNES (2024) Distribution Airbus DS  
 12-Mar-2024 Z:\Projects\1801694\_BVWSD\1801694\_G005\_Belridge\_Mapbook\_20240312.mxd RS

Figure 2-7. Belridge Pipeline Project Location Detail (5 of 9)

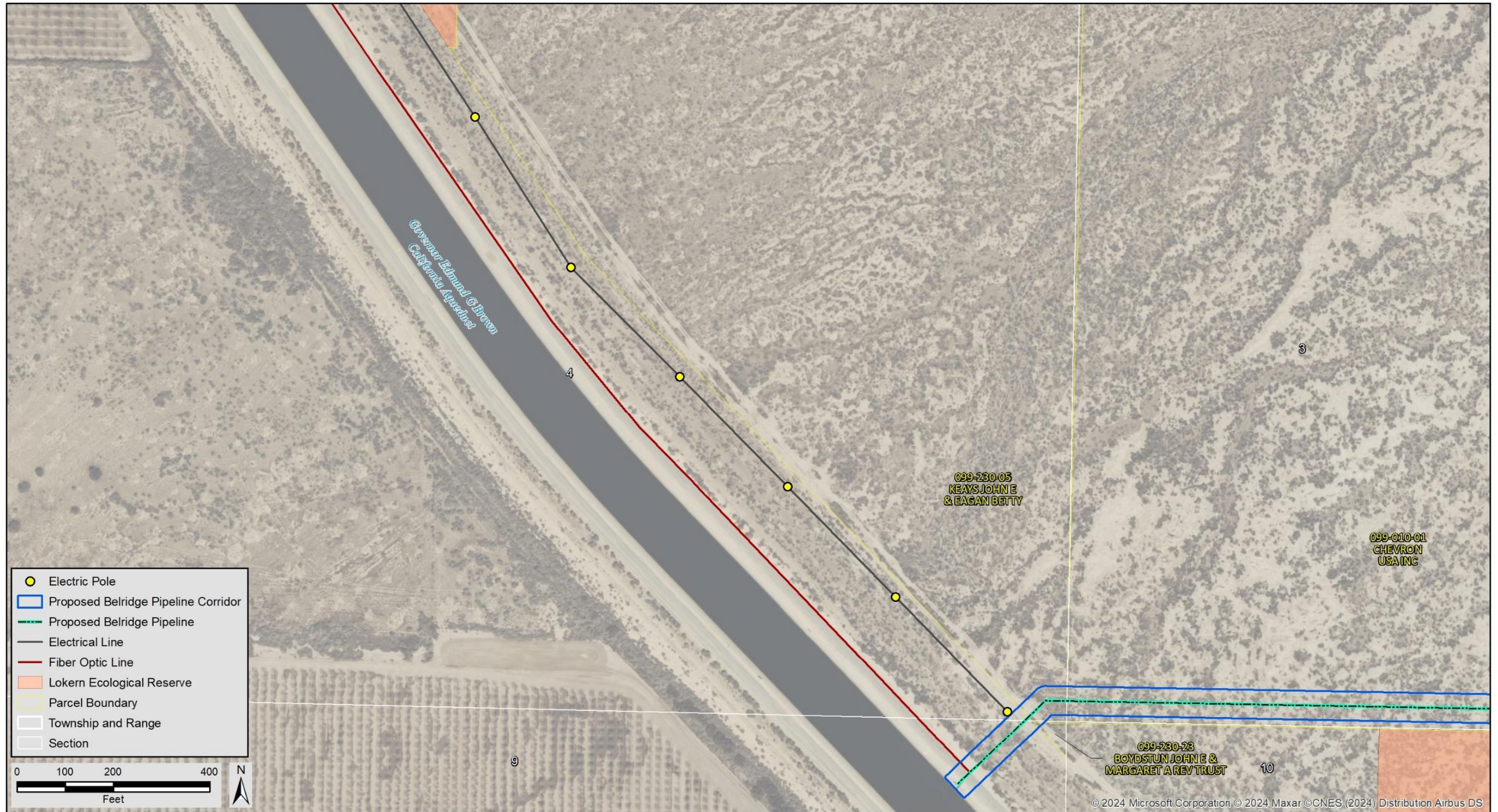


Figure 2-8. Belridge Pipeline Project Location Detail (6 of 9)

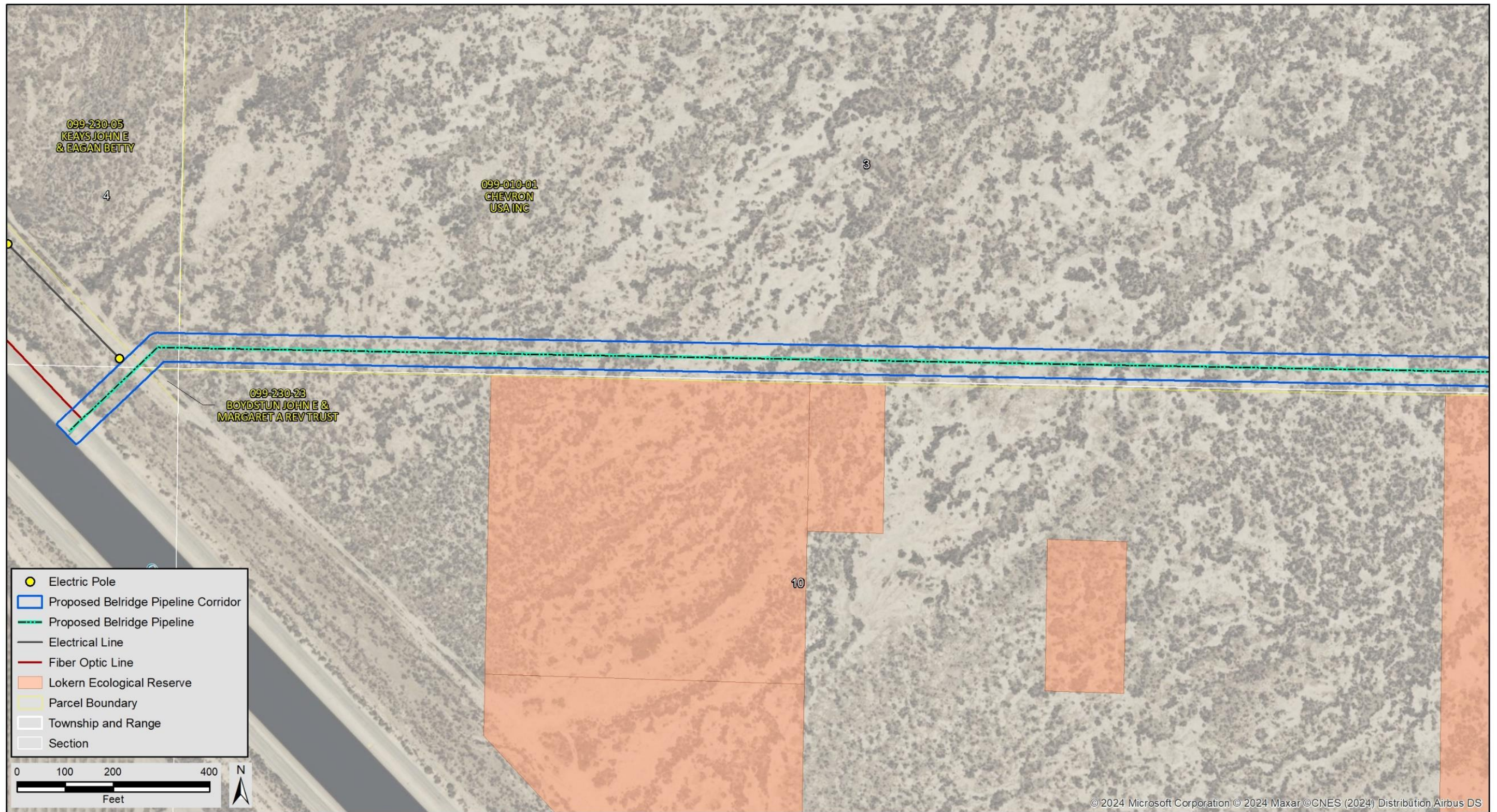


Figure 2-9. Belridge Pipeline Project Location Detail (7 of 9)





Figure 2-10. Belridge Pipeline Project Location Detail (8 of 9)



Figure 2-11. Belridge Pipeline Project Location Detail (9 of 9)



## 2.4 Proposed Project

### 3.1.1 Belridge Pipeline Construction

The project is anticipated to include a 54-inch-diameter pipeline, installed in a single trench that would be approximately 6-feet-wide and 7-feet-deep. The construction corridor would be 60 feet wide to accommodate trenching, access, equipment, and material. Equipment and material staging would primarily occur along existing access corridors and other disturbed areas, such as along the California Aqueduct, canals, roadways, and agricultural field margins. Disturbance between the California Aqueduct and the Flood Canal would be minimized to the maximum extent feasible. Connecting the pipeline to the existing turnout along the California Aqueduct would not require any in-channel work or excavation along the bank of the aqueduct.

The total area in which pipeline construction (trenching, grading, clearing, and grubbing, storage, and access) would occur is approximately 14.62 acres (of which 1.46 acres would be disturbed by trenching). Construction activities would be within and/or immediately surrounded by natural lands and agriculture. Additionally, the pipeline would displace approximately 6,500 cubic yards of soil which would be off hauled to a landfill within 50 miles of the site or to an offsite District-approved location. Impact areas are summarized in **Table 2-1**.

**Table 2-1. Project Footprint Characteristics.**

	Project Footprint Length (Feet)	Project Footprint Width (Feet)	Project Footprint Area (Acres)	Excavation Area Length (Feet)	Excavation Area Width (Feet)	Excavation Area Area (Acres)
Belridge Pipeline	10,566	60	14.62	10,566	6	1.46
Electrical Line	6,072	20	2.79	27	1.5	0.001
Fiber Optic Line	9,504	5	1.10	9,504	1	0.22
Project Total	26,142	–	18.51	20,097	–	1.68

Source: GEI Consultants, Inc. 2023.

### 3.1.2 Electrical and Fiber Optic Lines

The District would install a fiber optic line (approximately 1.8 miles long) immediately adjacent to the DWR access road along the California Aqueduct, from a weir at the north end to the existing California Aqueduct turnout at the south end. The fiber optic line would provide the District and DWR with real-time water data. The fiber optic line would be installed within in a single trench approximately 1-foot-wide and 1-foot-deep. Because the District would be able to use small equipment, such as a trencher and jack hammer, the area of disturbance would be limited to 5-feet-wide. The total area of disturbance would be approximately 1.1 acres (of which 0.22 acre would be disturbed by trenching). A small portion of pavement at two locations would temporarily be disturbed. Following installation, the District would backfill the trench and restore the pavement. Soil displacement would be minimal and would be used to backfill and compact the trench. Impact areas are summarized above, in **Table 2-1**.

Additionally, the District would install 18 wooden poles and a new electrical line along an approximately 1.15-mile-long corridor, approximately 100 feet east of the proposed fiber optic line, extending north from the western end of the proposed pipeline. The access corridor for pole installation would be 20-feet-wide. To install each electrical pole, Pacific Gas and Electric (PG&E) would excavate an area approximately 18 inches in diameter to a depth of up to 4 feet. The total area of disturbance would be approximately 2.79 acres (of which 0.001 acre would be disturbed for power pole excavation). The poles would displace approximately 10 cubic yards of soil, which would be either spread onsite or off hauled to a landfill within 50 miles of the site or to an offsite District-approved location. Impact areas are summarized above, in **Table 2-1**.

### **3.1.3 Land Acquisition**

The District plans to acquire 60-foot-wide easements for the construction and maintenance of the Belridge pipeline via purchases or eminent domain, if necessary. Eminent domain is the power of the government to take property for public use. **Table 2-2** shows the list of parcels on which the District would acquire easements. The landowners will receive payments of just compensation, meaning a payment equivalent to the fair market value. Following completion of the proposed project, all land would continue to be managed by the landowners (i.e., CNLM, Chevron, and private landowners).

**Table 2-2. Parcels within the Project Site**

<b>Assessor Parcel Number</b>	<b>Owner</b>
09923005	Private owner
09901001	Chevron USA, Inc.
09901002	Center for Natural Lands Management
09907210	Private owner
09907206	Private owner
09907205	Private owner
09907204	Private owner
09908216	Private owner
09908215	Private owner
09908212	Private owner
09908211	Private owner
09908210	Private owner
09908209	Private owner
09908205	Private owner

Source: Kern County 2023

### **3.1.4 Construction Schedule, Staffing and Equipment**

Construction is expected to begin in summer or fall 2025 and be completed within approximately 10 months, though construction days would take approximately 6 weeks. Work is anticipated to generally progress from east to west. Pipe would be fused while the trench is excavated, over a period of 2 to 3 weeks. Pipe would then be placed in the trench, and the trench would be

backfilled. The trench in each section would be open for 2 to 4 weeks. Completing the tie-in at the California Aqueduct would take approximately 1 week.

A single trench containing one conduit would be excavated for installation of the fiber optic line. Once the fiber optic line is installed, the trench would be backfilled. The trench would only remain open for up to 5 working days. PG&E would install one pole at a time. Once the poles are in place, PG&E would install the electrical line.

Construction would be limited to daylight hours, 10 hours per day, 5 days per week. Anticipated construction equipment and personnel include:

- 8 crew members
- 2 excavators,
- 2 line trucks
- 1 loader
- 1 bulldozer
- 1 truck with belly dump
- 1 dump truck
- 1 water truck
- 1 large fusing machine
- 1 truck-mounted auger
- 1 crew truck
- 3 pick-up trucks

### **3.1.5 Operation and Maintenance**

Following construction activities, pipeline maintenance would be similar to activities that occur as part of the District's ongoing facility maintenance, with some changes in servicing and maintenance trips by staff. District staff are regularly onsite on adjacent lands for operations and maintenance activities of existing project facilities in the area. Therefore, it is anticipated that inspections and maintenance activities for the proposed project would primarily be coordinated and combined with existing maintenance trips. Long-term vegetation removal/maintenance would not occur as part of the project. To minimize habitat disturbance after the pipeline is installed, District staff will inspect the pipeline alignment quarterly with a drone aircraft. Maintenance activities would be limited to troubleshooting and repair of site- and issue-specific items. The fiber optic line and power poles are located within DWR right-of-way and are subject to DWR operating standards. DWR would be responsible for maintaining the fiber optic line, and PG&E would be responsible for maintaining the power poles and electrical line.

## **2.5 Regulatory Requirements, Permits, and Approval**

As the lead agency under CEQA, the District has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and all other applicable regulations are met. Other agencies that may have permitting approval or review authority over portions of the proposed project are listed below:

- **Central Valley Regional Water Quality Control Board (CVRWQCB), Construction Activities General Permit.** Required for any project that disturbs more than 1 acre of soil. The proposed project would disturb approximately 18.51 acres of soil in Kern County. Under this permit, the County would need to develop a Stormwater Pollution Prevention Plan (SWPPP).
- **San Joaquin Valley Air Pollution Control Board (SJVAPCD.), Dust Control Plan.** Required for any project that disturbs more than 1 acre of soil.
- **CDFW. Incidental Take Permit** for species that are listed as threatened or endangered or candidates for listing under the California Endangered Species Act giant kangaroo rat (*Dipodomys ingen*), Tipton kangaroo rat (*D. nitratoides nitratoides*), and Nelson's (San Joaquin) antelope squirrel (*Ammospermophilus nelson*).
- **U.S. Fish and Wildlife Service (USFWS). Incidental Take Authorization** for species that are listed as threatened or endangered under the federal Endangered Species Act.

# 3.0 Environmental Checklist

## Project Information

Item	Description
#1. Project title:	Belridge Pipeline Project
#2. Lead agency name and address:	Buena Vista Water Storage District
#3. Contact person and phone number:	Mr. Tim Ashlock (661) 324-1101
#4. Project location:	525 North Main Street Buttonwillow, CA 93206
#5. Project sponsor's name and address:	Same as lead agency
#6. General plan designation:	Agriculture
#7. Zoning:	Agriculture
#8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project consists of installing one 54" pipeline from the California Aqueduct across undeveloped land owned by the Chevron Corporation, Center for natural Lands Management (CNLM) and other private landowners, to an existing tie in located just West of the Kern River Flood Canal. Additionally, the project would install an electric and fiber optic line along a 1.80-mile-long segment of the California Aqueduct. Construction of the Belridge Pipeline would require a 60-foot-long construction corridor. The total area of disturbance for the proposed project would be approximately 18.51 acres.
#9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The project site is located in an undeveloped portion of unincorporated Kern County. The majority of the project site and vicinity are owned by the Chevron Corporation and CNLM. The CNLM Lokern Preserve occupies approximately 3,900 acres of scattered natural lands in the area, some of which overlap the project site. Portions of the 3,100-acre California Department of Fish and Wildlife Lokern Ecological Reserve border the project site. Nearby land use consists of agriculture, and the South Belridge Oil Field is located approximately 3.3 miles west of the project site and spans approximately 10.5 miles.
#10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	California Department of Fish and Wildlife Central Valley Regional Water Quality Control Board U.S. Fish and Wildlife Service
#11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to Tribal cultural resources, procedures regarding confidentiality, etc.?	Yes. Consultation is described in more detail in Chapter 3.5 – Cultural Resources, and Chapter 3.18 – Tribal Cultural Resources.

**Note:** Conducting consultation early in the CEQA process allows Tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to Tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. **Please also note** that PRC Section 21082.3(c) contains provisions specific to confidentiality.

## Environmental Factors Potentially Affected

No environmental resources were found to have “potentially significant impacts.” The environmental factors listed as “Yes” in **Table 3-1** below would be potentially affected by this project, involving at least one impact that has “Less-than-Significant Impacts with Mitigation Incorporated” as indicated by the checklist on the following pages.

**Table 3-1. Environmental Resources with Potentially Significant Impacts Prior to Mitigation.<sup>1</sup>**

Environmental Resources	Yes or No?
Aesthetics	No
Agriculture and Forestry Resources	No
Air Quality	Yes
Biological Resources	Yes
Cultural Resources	Yes
Energy	No
Geology/Soils	Yes
Greenhouse Gas Emissions	No
Hazards and Hazardous Materials	No
Hydrology/Water Quality	No
Land Use/Planning	No
Mineral Resources	No
Noise	No
Population/Housing	No
Public Services	No
Recreation	No
Transportation	No
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

<sup>1</sup> Impacts to all resources are reduced to less-than-significant with the incorporation of mitigation measures.



## Determination (To be completed by the Lead Agency)

### On the basis of this initial evaluation:

### Yes or No?

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. No
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. Yes
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. No
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. No
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report (EIR) or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. No



Signature

3-18-24

Date

Tim Ashlock

Print Name

Engineering Manager

Title

Buena Vista Water Storage District

Agency

### 3.1 Aesthetics

#1. <b>AESTHETICS.</b> Except as provided in PRC Section 21099, <b>would the project:</b>	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#1 -a. Have a substantial adverse effect on a scenic vista?	No	No	No	<u>Yes</u>	No
#1 -b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	No	No	No	<u>Yes</u>	No
#1 -c. In non-urbanized areas, does it substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	No	No	No	<u>Yes</u>	No
#1 -d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No	No	No	<u>Yes</u>	No

#### 3.1.1 Environmental Setting

The project site is located approximately 4 miles east of State Route 33. Access to the project site is from Lokern Road, by heading north using unpaved private roads for approximate 2.5 miles to reach the eastern terminus of the pipeline at the Flood Canal or 3.5 miles along the California Aqueduct to reach the western terminus. The project site is zoned as agriculture (Kern County 1980). The project area is flat and is comprised of natural lands, dirt roads, and open water canals in a predominately undeveloped part of Kern County. There are no designated scenic vistas within the vicinity of the project sites (Caltrans 2019).

#### 3.1.2 Discussion

**#1 -a, b, c, and d. Have a substantial adverse effect on a scenic vista, Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway, In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are**

**those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality, or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

There are no significant view-sheds, scenic vistas, or scenic highways located in the vicinity of the proposed project (Caltrans 2019). The proposed project includes the construction of approximately 2 miles of pipeline, a connection to the California Aqueduct, 1.8 miles of fiber optic line, and 18 wooden power poles along a 1.10-mile-long segment. During construction, several vehicles and equipment would be onsite which could impact scenic views; however, the project would be constructed in an undeveloped area of Kern County that does not have any scenic views and is not accessible to the general public. Following the completion of construction activities all construction-related equipment would be removed and long-term changes to the visual appearance would be limited to the new power poles and line. The project would not degrade a scenic vista, damage scenic resources, change existing public views (given the rural nature of the site), or create new sources of light. Therefore, there would be no change to visual resources and there would **no impact**.

### 3.2 Agriculture and Forestry Resources

<p><b>#2. AGRICULTURE AND FORESTRY RESOURCES.</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. <b>Would the project:</b></p>	<p>Have Potentially Significant Impact?</p>	<p>Have Less-than-Significant Impact with Mitigation Incorporated?</p>	<p>Have Less-than-Significant Impact?</p>	<p>Have No Impact?</p>	<p>Have Beneficial Impact?</p>
<p>#2 -a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p><b><u>Yes.</u></b></p>	<p>No</p>
<p>#2 -b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p><b><u>Yes</u></b></p>	<p>No</p>
<p>#2 -c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p><b><u>Yes</u></b></p>	<p>No</p>
<p>#2 -d. Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<p>No</p>	<p>No</p>	<p>No</p>	<p><b><u>Yes</u></b></p>	<p>No</p>
<p>#2 -e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>	<p>No</p>	<p>No</p>	<p><b><u>Yes</u></b></p>	<p>No</p>	<p>No</p>

### **3.2.1 Environmental Setting**

The project site is zoned as agriculture (Kern County 1980); however, the site is not currently in agricultural production and does not appear to have been previously cultivated, based on review of aerial photos and conditions observed onsite. The project site is designated as grazing land by the Farmland Mapping and Monitoring Program (Department of Conservation [DOC] 2018). There are no active Williamson Act contracts in the vicinity of the project site (Kern County 2010).

### **3.2.2 Discussion**

#### **#2 -a and b. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

The project site does not contain any Prime Farmland, Unique Farmland or Farmland of Statewide Importance; therefore, the project would not convert any of these land types to non-agriculture land. Additionally, there are no Williamson Act contracts within the project site or vicinity. Therefore, there would be **no impact**.

#### **#2 -c and d. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?**

The project site is not zoned as forest land, timberland, or timberland zoned as timberland production; therefore, no loss or conversion of forest land to non-forest land would occur. There would be **no impact**.

#### **#2 -e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

The proposed project is located on land zoned for agricultural use; however, the land is not currently in agricultural production and does not appear to have cultivated in the past. Therefore, the project would not convert current farmland to non-agricultural use. Additionally, the pipeline would be buried underground and would not inhibit the use of the land, including for agricultural production, in the future. The fiber optic line and electrical poles and line would be installed within the California Aqueduct right-of-way and are unlikely to affect future land use because this area is subject to DWR operations standards. There is no forest land within the vicinity of the proposed project, therefore the project would not convert forest land to non-forest use. Therefore, this impact is considered **less than significant**.

### 3.3 Air Quality

#3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. <b>Would the project:</b>	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#3 -a. Conflict with or obstruct implementation of the applicable air quality plan?	No	No	<u>Yes</u>	No	No
#3 -b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	No	No	<u>Yes</u>	No	No
#3 -c. Expose sensitive receptors to substantial pollutant concentrations?	No	No	<u>Yes</u>	No	No
#3 -d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No	No.	No	<u>Yes</u>	No

#### 3.3.1 Environmental Setting

The proposed project is located in the San Joaquin Valley Air Basin (SJVAB) within Kern County. The SJVAPCD. is responsible for obtaining and maintaining air quality conditions in the County.

The Federal Clean Air Act and California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) to establish health-based air quality standards at the federal and state levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (C.A.A.Q.S.) were established for the following criteria pollutants: carbon monoxide (CO), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter less than 10 microns in diameter (PM<sub>10</sub>), particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>), and lead. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal Clean Air Act and California Clean Air Act.

An “attainment” designation for an area signifies that pollutant concentrations did not violate the NAAQS. or CAAQS for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a

violation was caused by an exceptional event, as identified in the criteria. A “maintenance” designation indicates that the area previously categorized as nonattainment is currently categorized as attainment for the applicable pollutant; though the area must demonstrate continued attainment for a specific number of years before it can be re-designated as an attainment area. An “unclassified” designation signifies that data do not support either an attainment or a nonattainment status. The EPA established NAAQS in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. CAAQS and NAAQS are listed in **Table 3-2**.

**Table 3-2. Federal and California Ambient Air Quality Standards and Attainment Status.<sup>2</sup>**

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone	8-hour	0.070 parts per million (ppm). (137 micrograms per cubic meter).	0.070 ppm. (137 micrograms per cubic meter.) (See Note #1.)
	1-hour	0.09 ppm. (180 micrograms per cubic meter).	(None; see Note #2.)
Respirable Particulate Matter (PM <sub>10</sub> )	24-hour	50 micrograms per cubic meter.	150 micrograms per cubic meter.
	Annual Arithmetic Mean	20 micrograms per cubic meter.	(None.)
Fine Particulate Matter (PM <sub>2.5</sub> )	24-hour	(None.)	35 micrograms per cubic meter.
	Annual Average	12 micrograms per cubic meters.	12 micrograms per cubic meter.
Carbon Monoxide	8-hour	9 ppm. (10 milligrams per cubic meter.)	9 ppm. (10 milligrams per cubic meter).
	1-hour	20 ppm. (23 milligrams per cubic meter).	35 ppm. (40 micrograms per cubic meter).
Nitrogen Dioxide	Annual Average	0.03 ppm. (57 micrograms per cubic meters.)	0.053 ppm. (100 micrograms per cubic meters.)
	1-hour	0.18 ppm. (339 micrograms per cubic meters.)	0.100 ppm. (188 micrograms per cubic meters.)
Lead	30-day Average	1.5 micrograms per cubic meters.	(None.)
	Rolling 3-Month Average	(None.)	0.15 micrograms per cubic meter.
	Quarterly Average	(None.)	1.5 micrograms per cubic meter.
Sulfur Dioxide	24-hour	0.04 parts per million. (105 micrograms per cubic meter.)	0.14 parts per million (for certain areas)
	3-hour	(None.)	(None.)
	1-hour	0.25 parts per million. (655 micrograms per cubic meter.)	0.075 parts per million. (196 micrograms per cubic meter.)

<sup>2</sup> Impacts to all resources are reduced to less-than-significant with the incorporation of mitigation measures.

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Sulfates	24-hour	25 micrograms per cubic meter.	No Federal Standard.
Hydrogen Sulfide	1-hour	0.03 parts per million. (42 micrograms per cubic meter.)	No Federal Standard.
Vinyl Chloride	24-hour	0.01 parts per million. (26 micrograms per cubic meter.)	No Federal Standard.

**Notes:**

#1. On October 1, 2015, the national 8-hour ozone (O<sub>3</sub>) primary and secondary standards were lowered from 0.075 to 0.070 ppm.

#2. 1-Hour O<sub>3</sub> standard revoked effective June 15, 2005, although some areas have continuing obligations under that standard.

Source: SJVAPCD 2012a, EPA 2016

Under the NAAQS, the County is designated as nonattainment for 8-hour O<sub>3</sub> and PM<sub>2.5</sub> and attainment/unclassified for PM<sub>10</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, lead, and sulfates (EPA 2023). Under CAAQS, the County is designated unclassified for all criteria pollutants (CARB 2022a).

The area's air quality monitoring network provides information on ambient concentrations of air pollutants in the SJVAB. SJVAPCD operates several monitoring stations in Kern County, and air quality data was obtained from the Bakersfield-California Avenue station, which is the closest station to the project site. **Table 3-3** compares a 5-year summary of the highest annual criteria air pollutant emissions collected at this station with applicable CAAQS, which are more stringent than the corresponding NAAQS. Due to the regional nature of these pollutants, O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> are expected to be fairly representative of the project site.

As indicated in **Table 3-3**, O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> standards have been exceeded over the past 5 years.



**Table 3-3. Ambient Air Quality Monitoring Data Measured at the Bakersfield-California Avenue Monitoring Station.**

<b>Pollutant Standards, 1-Hour Ozone</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Maximum 1-hour concentration (parts per million)	<b>0.107</b>	<b>0.097</b>	<b>0.110</b>	0.090	<b>0.093</b>
Days Exceeding CAAQS 1-hour standard (>0.09 parts per million)	8	2	3	0	0
<b>Pollutant Standards, 8-Hour Ozone</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
National maximum 8-hour concentration (parts per million).	<b>0.098</b>	<b>0.088</b>	<b>0.098</b>	<b>0.080</b>	<b>0.076</b>
State max. 8-hour concentration (parts per million).	<b>0.098*</b>	<b>0.088</b>	<b>0.098</b>	<b>0.081</b>	<b>0.076</b>
Days Exceeding NAAQS 8-hour. (>0.075 parts per million) (See note #1.)	34	11	11	4	1
Days Exceeding CAAQS 8-hour. (>0.070 parts per million) (See note #1.)	64	28	25	11	7
<b>Pollutant Standards, Particulate Matter (PM<sub>10</sub>)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
National max. 24-hour concentration (micrograms per cubic meter).	136.1	116.3	<b>193.8</b>	<b>437.5</b>	134.7
State max. 24-hour concentration (micrograms per cubic meter).	<b>142.0</b>	<b>125.9</b>	<b>196.8</b>	<b>439.3</b>	<b>133.0</b>
State max. 3-year average concentration (micrograms per cubic meter).	43	43	39	*	47
State annual average concentration (micrograms per cubic meter).	N/A	39.0	*	*	46.8
Days Exceeding NAAQS 24-hour (>150 micrograms per cubic meter).	0	0	*	*	0
Days Exceeding CAAQS 24-hour (>50 micrograms per cubic meter).	*	108.1	*	*	138.7
<b>Pollutant Standards, Particulate Matter (PM<sub>2.5</sub>)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
National max. 24-hour concentration (micrograms per cubic meter).	<b>98.5</b>	59.1	150.7	72.3	58.1
State max. 24-hour concentration (micrograms per cubic meter).	98.5	59.1	159.7	72.3	58.1
State annual average concentration (micrograms per cubic meter).	<b>15.6</b>	11.4	<b>19.7</b>	<b>16.6</b>	*
Days Exceeding N.A.A.Q.S. 24-hour (>35 micrograms per cubic meter).	40.3	12.3	46.4	43.2	35.0

**Notes:**

**Bold:** Values in excess of applicable standard.

\* = There was insufficient (or no) data available to determine the value.

2022 is the latest year of data available as of preparation of this Chapter.

#1. An exceedance is not necessarily a violation.

Source: CARB 2022b.

### 3.3.2 Discussion

#### **#3 -a and -b. Conflict with or obstruct implementation of the applicable air quality plan? Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?**

The proposed project would generate criteria pollutants from the use of diesel-powered vehicles and equipment and earthmoving activities. The SJVAPCD has published guidance on assessing construction projects to determine if they fall below the Small Project Analysis Level (SPAL) threshold (SJVAPCD 2012b) of 18,000 horsepower hours (hp-hr) per day. The proposed project would generate approximately 15,878 hp-hr per day during the most construction intensive time, when installing the pipeline. Therefore, the project would be under the SPAL threshold. Estimated hp-hr calculations are included in **Appendix BA “Air Quality Calculations.”**

Additionally, since the project would disturb more than 5 acres, a Dust Control Prevention Plan including best management practices (BMPs) to minimize the fugitive dust onsite would be submitted to SJVAPCD for review and approval and BMPs would be implemented during construction activities. (SJVAPCD 2007).

Compliance with SPAL would result in a **less than significant** impact. However, SJVAPCD requires all construction projects to implement Regulation VIII “Fugitive PM<sub>10</sub> Prohibitions Best Management Practices.” Therefore, the following mitigation measure would be implemented during all future construction.

#### **Mitigation Measure AQ-1: District Regulation VIII Fugitive PM<sub>10</sub> Prohibitions Best Management Practices**

All projects are subject to SJVAPCD rules and regulations in effect at the time of construction. Control of fugitive dust is required by SJVAPCD Regulation VIII. The District will implement or require its contractor to implement all of the following measures as identified by SJVAPCD:

- Apply water to unpaved surfaces and areas.
- Use non-toxic chemical or organic dust suppressants on unpaved roads and traffic areas.
- Limit or reduce vehicle speed on unpaved roads and traffic areas.
- Maintain areas in a stabilized condition by restricting vehicle access.
- Install wind barriers.
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling.
- Store and hand material in a three-sided structure.

- When storing bulk material, apply water to the surface or cover the stage pile with a tarp.
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials.
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions.
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving the site.
- Prevent trackout by installing a trackout control device.
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately.
- Monitor dust-generating activities and implement appropriate measures for maximum dust control.

Implementation of Mitigation Measure AQ-1 and acquisition of a NPDES construction activity general permit and SWPPP and submitting a Dust Control Prevention Plan would reduce emissions. This impact is considered **less than significant**.

### **#3 -c. Expose sensitive receptors to substantial pollutant concentrations?**

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project air quality impacts. These people include children, senior citizens, and persons with pre-existing respiratory or cardiovascular illnesses, and athletes and others who engage in frequent exercise, especially outdoors. Sensitive receptors include schools, residences, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project site is located in an undeveloped area in unincorporated Kern County and not in the vicinity of any sensitive receptors. The closest sensitive receptor is a residence located approximately 5 miles southeast of the project site.

During construction, most of the particulate matter (PM) emissions would be released in the form of fugitive dust during ground disturbance activities. PM emissions are also generated in the form of equipment exhaust and re-entrained road dust from vehicle travel. Impacts from PM emissions would be temporary and would go back to normal after completing the construction phase. Given the short-term emissions, distance from sensitive receptors, and compliance with all BMPs to be outlined in the SWPPP and Dust Control Prevention Plan, impacts would be **less than significant**.

### **#3 -d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

Human response to odors is subjective, and sensitivity to odor varies from person to person. Typically, odors are considered an annoyance rather than a health hazard. However, a person's response to odor can range from psychological (e.g., irritation, anger, anxiety) to physiological

(e.g., circulatory and respiration reaction, nausea, headaches, etc.). The proposed project would not create new objectionable odors. There would be **no impact**.

### 3.4 Biological Resources

#4. BIOLOGICAL RESOURCES. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#4 -a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No	<u>Yes</u>	No	No	No
#4 -b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No	No	<u>Yes</u>	No	No
#4 -c. Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No	No	No	<u>Yes</u>	No
#4 -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?	No	No	<u>Yes</u>	No	No
#4 -e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	No	<u>Yes</u>	No
#4 -f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	No	No	<u>Yes</u>	No	No

A complete discussion of biological resources is provided in the biological technical report that was completed for the project (*see Appendix CB – Biological Resources Technical Report*).

Information on biological resources that was reviewed to support project planning and impact analysis included the CDFW California Natural Diversity Database (CNDDDB) (CDFW 2023a) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2023). A list of resources under jurisdiction of USFWS that could occur on or near the project site, including critical habitat for Federally threatened and endangered species, was obtained from the Information for Planning and Conservation website (USFWS 2023) and also reviewed.

Biological surveys were conducted along the western half of the pipeline alignment, to which access permission was granted, in 2018-2022 and along the electrical and fiber optic line alignments in 2021 and 2022.

### **3.4.1 Environmental Setting**

The project site is located along the southwestern edge of the San Joaquin Valley and is comprised of relatively undisturbed natural habitat. Between 1981 and 2019, the region received 5 to 10 inches of precipitation annually (WRCC 2020). Elevation on the project site ranges from approximately 250 to 300 feet above mean sea level, with a gentle downhill slope to the east. Soils on the project site include Buttonwillow, Kimberlina, Calfax, Panoche, Milham, and Lokern (NRCS 2023). Saline-alkali and saline-sodic soil map units are mapped within the pipeline alignment.

The Flood Canal immediately east of the pipeline alignment is dominated by nonnative tamarisk (*Tamarix* sp.) thicket. The channel bottom is composed of unconsolidated material, predominantly sands, and side slopes and bed are vegetated. Scattered tamarisk shrubs extend several hundred feet into the adjacent native scrub habitats to the west, but the approximately 2 miles of pipeline alignment between the Flood Canal and California Aqueduct support spinescale scrub and allscale scrub alliances (Sawyer et. al. 2009). These open shrubland communities are dominated by alkali-tolerant shrubs, including common saltbush (*Atriplex polycarpa*), spiny saltbush (*Atriplex spinifera*), iodine bush (*Allenrolfea occidentalis*), bush seepweed (*Suaeda moquinii*), and Alkali heath (*Frankenia grandiflora*). Allscale scrub also occurs along the electrical and fiber optic line alignments.

### **3.4.2 Discussion**

**#4 -a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?**

Twenty-one special-status plant taxa (i.e., taxonomic categories or groups) and 37 special-status animal taxa have been documented from the project vicinity based on the CNDDDB and/or CNPS Inventory, are included on the USFWS resources list, or were otherwise determined to have

potential to occur on or adjacent to the project site. (Note: Not all taxa tracked in the CNDDDB and included in the search results in **Appendix CB – Biological Resources Technical Report** are considered special-status species for purposes of this evaluation.) All these special-status plants and animals were evaluated for potential to be affected by the proposed project.

**Special status plants.** Three special-status plant taxa were observed in the western portion of the pipeline alignment during focused surveys: Kern mallow (*Eremalche parryi* ssp. *kernensis*), Lost Hills crownscale (*Atriplex cordulata* var. *vallicola*), and recurved larkspur (*Delphinium recurvatum*). Kern mallow is federally listed as endangered, and all three of taxa have a California Rare Plant Rank of 1B (rare, threatened, or endangered in California and elsewhere). Pipeline installation activities would result in vegetation removal and ground disturbance within approximately 7 acres along approximately 1 mile of pipeline corridor that is occupied by one or more of these taxa. Based on observations made in 2019 and 2021, Kern mallow and Lost Hills crownscale occupy most of this area, but recurved larkspur is limited to approximately 0.25 mile (less than 2 acres) at the western end of the pipeline alignment. Although an extensive area of occupied habitat would be disturbed by pipeline installation, this represents a small proportion of the overall area of occupation observed during the surveys, and the actual area of occupation likely extends beyond the observed distribution. Therefore, a small proportion of the populations would likely be affected. In addition, disturbance would be temporary, and these special-status plant populations would be allowed to extend back into the disturbance corridor after pipeline installation is complete. However, project implementation would likely result in removal of special-status plants and temporary loss of occupied habitat that could take ~~several~~ years to become reestablished; this could have a substantial ~~short-term~~ impact on the local population of one or more of the affected taxa. This impact would be **less than significant with mitigation incorporated**. Implementing Mitigation Measures BIO-1 and BIO-2 described below would reduce this impact to a less-than-significant level.

**Special status invertebrates.** Crotch's bumble bee (*Bombus crotchii*) was determined to have moderate potential to occur on the project site, which could support suitable foraging, nesting, and overwintering habitat. Approximately 15 acres of potentially suitable habitat for this species would be affected by project implementation. Impacts would primarily occur during construction, but there also would be a ~~temporary~~ reduction in habitat quality and ~~temporary~~ loss of foraging habitat until nectar and pollen sources and suitable nest and overwintering sites re-establish in the construction corridor. Construction-related impacts could include vehicle and equipment strikes, foraging habitat loss, nest destruction, and entombment in burrows. The project site is centrally located in a large contiguous area of thousands of acres of similar habitat. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small proportion of individuals, if the area is occupied by Crotch's bumble bee, and a very small proportion of suitable habitat within the species' range. However, because Crotch's bumble bee is a candidate for state listing as endangered, injury or death of even a small number of individuals could have a substantial adverse effect if there is a population present in the area. This impact would be **less than significant with mitigation incorporated**. Implementing Mitigation Measures BIO-1 and BIO-3 described below would reduce this impact to a less-than-significant level.

**Special status amphibians.** The only special-status amphibian with potential to occur on the project site is western spadefoot (*Spea hammondi*), a California Species of Special Concern. Focused surveys were conducted for western spadefoot individuals and potential breeding habitat on accessible portions of the project site in March 2023. Numerous American bullfrogs (*Lithobates catesbeianus*), western toads (*Anaxyrus boreas*), and Pacific chorus frogs (*Pseudacris regilla*) were observed during the surveys. One potential spadefoot was briefly observed in a burrow, but the identification could not be confirmed. Puddles potentially suitable for breeding were observed along the California Aqueduct access road. Despite the lack of confirmed presence, western spadefoot could occur on the project site. Potential for impacts on this species would primarily occur during construction, as the project would not result in permanent removal of spadefoot habitat. These impacts could include vehicle and equipment strikes, becoming trapped in open trenches or holes, movement obstruction, burrow destruction, and entombment in burrows. The project site is centrally located in a large contiguous area of thousands of acres of native habitat between the Flood Canal and California Aqueduct. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small number of individuals and a very small proportion of suitable habitat within the range of western spadefoot. This would not result in a substantial adverse effect on western spadefoot and impacts on this species would be **less than significant**.

**Special status reptiles.** Four special-status reptile taxa were observed during field surveys or determined to have moderate potential to occur on the project site: blunt-nosed leopard lizard (*Gambelia silus*), coast horned lizard (*Phrynosoma blainvillii*), California glossy snake (*Arizona elegans occidentalis*), and San Joaquin coachwhip (*Masticophis flagellum ruddocki*). Blunt-nosed leopard lizard is state and federally listed as endangered, as well as fully protected by the California Fish and Game Code (CFGC); the remaining taxa are California Species of Special Concern. Although three blunt-nosed leopard lizards were observed near the western end of the pipeline alignment during focused surveys conducted in 2019, no individuals were observed during protocol surveys of the pipeline alignment conducted in 2020 or of the pipeline, fiber optic line, and electrical line alignments conducted in 2022. San Joaquin coachwhip was also observed along the pipeline alignment in 2020 and 2022. The other taxa were not observed during project surveys but suitable habitat for them occurs onsite. A total of approximately 15 acres of habitat occupied by one or more of these species would be affected by project implementation. Vegetation within the pipeline corridor may take ~~several~~ years to reestablish after the pipeline is installed, but there would be no permanent vegetation removal. In addition, because these special-status reptiles occur in open or sparsely vegetated areas, habitat would not be rendered unsuitable by ~~temporary~~ temporary vegetation removal. Therefore, impacts on special-status reptiles would primarily occur during construction. These impacts could include vehicle and equipment strikes, becoming trapped in open trenches or holes, foraging habitat loss and movement obstruction, burrow destruction, and entombment in burrows.

The project site is centrally located in a large contiguous area of thousands of acres of native habitat between the Flood Canal and California Aqueduct. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small number of individuals and a very small proportion of suitable habitat within the range of any special-status reptiles that are present. For



the three reptiles of special concern, this would not result in a substantial adverse effect. Therefore, impacts on these species would be **less than significant**. However, because blunt-nosed leopard lizard populations have been substantially reduced and fragmented, and this species is federally and state-listed as endangered, injury or death of even a small number of individuals could have a substantial adverse effect on the local population. In addition, take of blunt-nosed leopard lizard would violate CFGC Section 5050. Therefore, impacts on blunt-nosed leopard lizard would be **less than significant with mitigation incorporated**. Implementing Mitigation Measures BIO-1, BIO-4, and BIO-5, described below would reduce this impact to a less-than-significant level.

**Special-status birds.** Eight special-status bird species were observed during field surveys or determined to have moderate potential to occur on the project site, based on habitat conditions: burrowing owl (*Athene cunicularia*), golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), California thrasher (*Toxostoma redivivum*), and Le Conte's thrasher (*Toxostoma lecontei*). Swainson's hawk is state-listed as threatened and white-tailed kite is fully protected by the CFGC; the remaining taxa are federal Birds of Conservation Concern and/or California Species of Special Concern. The approximately 15 acres of native scrub habitat that would be disturbed during project activities, particularly pipeline and electrical line installation, includes areas that provide suitable foraging habitat for all eight species and suitable nesting habitat for some of the species. Vegetation along the pipeline alignment would be removed to accommodate pipeline installation, but the pipeline corridor would be allowed to revegetate over time. Vegetation removal along the electrical and fiber optic lines is anticipated to be limited and would not be maintained long-term. Therefore, although it would likely take ~~several~~ years for vegetation to become reestablished, the project alignments would eventually provide similar quality habitat for these species after construction activities are complete. In addition, the extent of habitat that would be affected is minimal, within the larger context of the thousands of acres of similar habitat in the surrounding Lokern area. Therefore, this ~~temporary-habitat disturbance~~ vegetation removal would have a relatively minor impact on the potentially affected special-status bird species.

The project site and immediately adjacent areas do not provide suitable nesting habitat for golden eagle, Swainson's hawk, white-tailed kite, or northern harrier. Therefore, active nests of these species would not be affected and no known or potential nest trees would be removed. However, suitable nesting habitat for burrowing owl, loggerhead shrike, California thrasher, and Le Conte's thrasher is present onsite. If occupied burrowing owl burrows, including nest burrows, are present in the construction corridor, they could be destroyed and individuals could be injured or killed. If occupied nest burrows are present close to the construction corridor, construction activities could result burrow abandonment, reduced care of eggs or young, or premature fledging. Similar effects on nesting loggerhead shrike, California thrasher, or Le Conte's thrasher also could occur if active nests occur on or adjacent to the construction corridor. Because the construction corridor is relatively narrow, few occupied burrows or active nests of these species are likely to be present, and impacts would likely have a relatively limited effect on the local or regional populations of these species. However, project-related nest failure could violate the

MBTA and CFGC Sections 3503 and 3511. This impact would be **less than significant with mitigation incorporated**. Implementing Mitigation Measures BIO-1, BIO-6a, BIO-6b, BIO-6c, and BIO-6d described below would reduce potential impacts on special-status birds to a less-than-significant level and avoid violation of the MBTA and CFGC Sections 3503 and 3511.

**Special status mammals.** Six special-status mammal taxa are known or have moderate potential to occur on the project site, based on observations of individuals or evidence of individuals during field surveys, captures during trapping surveys, habitat conditions, and species range: Tulare grasshopper mouse (*Onychomys torridus tularensis*), giant kangaroo rat (*Dipodomys ingens*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*), San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). Giant kangaroo rat and Tipton kangaroo rat are federally and state-listed as endangered; San Joaquin kit fox is federally listed as endangered and state-listed as threatened; San Joaquin antelope squirrel is also state-listed as threatened; Tulare grasshopper mouse and American badger are California Species of Special Concern. Tipton kangaroo rat was captured during small mammal trapping; San Joaquin antelope squirrel was observed during surveys; sign diagnostic of giant kangaroo rat, San Joaquin kit fox, and badger were observed during surveys; and suitable habitat for Tulare grasshopper mouse is present. A total of approximately 15 acres of suitable habitat for these species would be affected. Vegetation within the construction corridor may take several years to reestablish, but there would be no permanent vegetation loss. Impacts on special-status mammals would primarily occur during construction, but there also would be a temporary reduction in habitat quality until vegetation becomes reestablished in the construction corridor. Construction-related impacts could include vehicle and equipment strikes, becoming trapped in open trenches or holes, foraging habitat loss and movement obstruction, burrow abandonment, burrow destruction, and entombment in burrows.

The project site is centrally located in a large contiguous area of thousands of acres of native habitat between the Flood Canal and Aqueduct. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small number of individuals and a very small proportion of suitable habitat within the range of any special-status mammals that are present. However, because most of these species are federally and/or state listed as threatened or endangered, injury or death of even a small number of individuals could have a substantial adverse effect. Therefore, this impact would be **less than significant with mitigation incorporated**. Implementing Mitigation Measures BIO-1, BIO-4, BIO-7, BIO-8, BIO-9, and BIO-10 described below would reduce this impact to a less-than-significant level.

**Mitigation Measure BIO-1: Implement Best Management Practices during Project Construction to Minimize Impacts on Biological Resources.**

To generally minimize potential effects of Project construction on biological resources, the District will ensure that the following BMPs are implemented:

- BMP-1: All project personnel working on the project site will attend a worker training program before beginning on-site work. The program will be presented by a qualified biologist with knowledge of sensitive biological resources known or with potential to occur on the project site. The program

will address applicable state and federal laws and regulations; sensitive habitats on and adjacent to the project site; biology, habitat needs, and distribution of special-status species on and adjacent to the project site; regulatory status of each resource and its associated protections; measures required to avoid and reduce impacts to these resources during project construction; potential penalties for non-compliance; and procedures to be followed if dead or injured wildlife are found during project activities. Upon completion of the orientation, employees will sign a form stating that they attended the program, understand all required measures, and received a hardhat sticker or other means of identifying that they have attended the program. No untrained personnel will be allowed to work onsite except delivery personnel that are solely dropping off or picking up materials or equipment under the direct supervision of trained project personnel.

- BMP-2: A biological monitor approved by USFWS and CDFW will be present onsite or available as necessary during all project activities that could result in “take” of listed species to assist with implementation of required species-specific avoidance and minimization measures. The biological monitor will have the authority to halt all non-emergency actions in an area in which imminent threat to a listed species arises or if avoidance and minimization measures are not being properly implemented. Work will proceed only after the biological monitor deems it appropriate.
- BMP-3: Before on-site project activities begin on non-agricultural lands, work areas will be marked with fencing, stakes with rope or cord, or other means of clearly delineating the work limits and access routes. All fencing, stakes, etc. will be maintained until project construction is complete and then removed from the project site. Project activities will be restricted to within marked or otherwise designated areas.
- BMP-4: Project activities will only occur during the day (between 30 minutes before sunrise and 30 minutes after sunset).
- BMP-5: All construction traffic will be restricted to designated access routes, work areas, storage areas, and staging and parking areas. Off-road traffic in habitat suitable for listed species and outside designated project boundaries will be prohibited. Vehicles and equipment will adhere to an on-site speed limit of 10 miles per hour during the period when blunt-nosed leopard lizards are likely to be active (March 15–October 15; air temperatures of 77-113 degrees Fahrenheit [°F]). At other times, the on-site speed limit will be 20 miles per hour.
- BMP-6: Construction vehicles and equipment will be cleaned inside and out at an authorized washing facility before arrival at the project site. Exterior cleaning will include pressure washing vehicles and equipment, with close attention paid to the tracks, feet, and/or tires and all elements of the undercarriage. Vehicle cabs will be swept out and refuse will be disposed at an approved off-site location. Vehicles and equipment will be inspected before entering the site to ensure they are free of soil and debris that could harbor nonnative plant seeds, roots, or rhizomes.

- BMP-7: All equipment and materials storage, staging, and parking will be confined to the construction corridors or other previously disturbed areas that do not provide habitat for special-status species, as determined by the biological monitor. Workers will check for wildlife under parked vehicles and equipment prior to operation. If wildlife is observed, vehicles/equipment will not be moved until such wildlife has moved out of harm's way. If necessary and authorized under project permits and approvals, the biological monitor may move wildlife from under/near vehicles/equipment.
- BMP-8: All project materials that could pose a hazard to wildlife (as determined by the biological monitor) will be contained in closed containers either in the work area or on/in vehicles. Loose items (e.g., rags, hose, etc.) will not be stored on the project site unless they are inaccessible to wildlife. Accidental project-related spills of hazardous materials, fuels, lubricants, or solvents will be cleaned up and removed from the project site as soon as possible, according to applicable federal, state, and local regulations. Any spills of hazardous liquids will not be left unattended until clean-up has been completed.
- BMP-9: Project-related use of rodenticides and herbicides on the project site will be prohibited.
- BMP-10: Dust control measures will be implemented throughout construction activities. The amount of water used will be kept to a minimum as to avoid forming puddles.
- BMP-11: To prevent wildlife entrapment during construction, all excavated, steep-walled holes or trenches more than 2-feet-deep will be covered with plywood or similar material when work is not actively being conducted in the excavation. If the trenches cannot be closed, one or more escape ramps of no more than a 1:1 (45-degree) slope will be constructed of earthen fill or created with wooden planks at no greater than 500-foot-long intervals. All covered or uncovered excavations will be inspected at the beginning, middle, and end of each day. Before trenches are filled, they will be inspected for trapped animals. If a trapped or injured animal is discovered, project activities will stop, and escape ramps or structures will be installed immediately to allow the animal(s) to escape voluntarily before construction activities begin/resume. A biological monitor may remove wildlife from an excavation or other entrapment if the immediate welfare of the individual is in jeopardy and appropriate agency permits/approvals are in place. If a federally or state-listed species that is not covered by take authorization (e.g., a fully protected species) becomes entrapped and measures have not been previously developed to address the situation, USFWS and/or CDFW will be contacted to determine the appropriate actions.
- BMP-12: All construction pipes, culverts, or similar structures laid in trenches overnight or stored onsite overnight will be capped. If an open pipe is subsequently discovered, the pipe will be visually inspected for wildlife, if feasible. After it is confirmed that no state or federally listed species are present in the pipe, the pipe will be capped. If the pipe cannot be visually

inspected (buried, bent, too long, etc.), it will be monitored with tracking medium and/or an infrared camera. If after no less than 3 consecutive nights of monitoring, no sign of state or federally listed species is observed, the pipe will be capped. All pipe will be thoroughly inspected for wildlife before the pipe is buried or otherwise used or moved in any way. If an animal is discovered inside a pipe, the pipe will not be moved, and the animal will be allowed to leave voluntarily before construction activities begin/resume. A biological monitor may remove an animal from a pipe or other entrapment if appropriate agency permits/approvals are in place and the immediate welfare of the individual is in jeopardy or the animal does not vacate the pipe on its own accord within a reasonable timeframe. If a federally or state-listed species that is not covered by take authorization (e.g., a fully protected species) becomes entrapped and measures have not been previously developed to address the situation, USFWS and/or CDFW will be contacted to determine the appropriate actions.

- BMP-13: All food-related trash items such as wrappers, cans, bottles, micro-trash, and food scraps generated by project activities will be disposed of in closed containers and removed at least once each week from the site. Deliberate feeding of wildlife will be prohibited.
- BMP-14: Project personnel will be prohibited from having firearms or domestic pets on the project site.
- BMP-15: Any project personnel who inadvertently kills or injures an animal or finds any animal dead, injured, or entrapped on the project site will be required to report the incident immediately to a designated site representative (e.g., foreman, manager, biological monitor, etc.). The site representative must then notify a biological monitor if one has not already been notified. All project work in the immediate vicinity of any such finding will cease until a biological monitor determines the appropriate action and deems it appropriate for work to resume. USFWS will be notified of injury or mortality of any federally listed species, and CDFW will be notified of injury or mortality of any state-listed or other special-status species. Instructions provided by USFWS and/or CDFW for the care of any injured animal and potential transfer of any mortalities will be implemented.
- BMP-16: All construction refuse, including, but not limited to, fencing, stakes, flagging, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, containers, forms, wood, rebar, pipe, pallets, and boxes will be removed within 14 days of completing construction activities.

### **Mitigation Measure BIO-2: Minimize Impacts on Special status Plants.**

To minimize potential effects of Project construction on special status plants, the District will ensure that the following measures are implemented:

- SSP-1: Initial ground disturbance within 50 feet of special-status plant populations will be timed to occur after seed set and prior to germination, to

the extent feasible. This period is generally May to October but may vary depending on annual precipitation and temperature conditions.

- SSP-2: Within habitat occupied by special-status plants, the top 4 inches of soil will be excavated and temporarily stockpiled separately from soils excavated from deeper in the trench. After the pipeline is installed, the trench will first be backfilled with soil excavated from below 4 inches, then soil excavated from the top 4 inches of the trench will be returned to the trench surface as close to the original location as possible and contoured to blend with surrounding grades. Topsoil will not be stockpiled for longer than the beginning of the next growing season.

### **Mitigation Measure BIO-3: Minimize Impacts on Crotch's Bumble Bee.**

To minimize potential effects of Project construction on Crotch's bumble bee, the District will ensure that the following measures are implemented:

- CBB-1: A qualified biologist will conduct a survey to determine the presence of suitable foraging, nesting, or over-wintering habitat for Crotch's bumble bee within or immediately adjacent to the project site. If suitable habitat is present, surveys will be conducted within 1 year of vegetation removal/initial ground disturbance to detect foraging individuals and active nest colonies. Surveys will be conducted by a biologist familiar with Crotch's bumble bee behavior and life history and in accordance with *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023b) or alternative current agency protocols and requirements. Crotch's bumble bees will only be handled for identification and if appropriate agency permits/approvals are in place. If no Crotch's bumble bee or their nests are detected, no further measures will be necessary if vegetation removal/initial ground disturbance occurs before March 1 of the year following the negative survey.
- CBB-2: If Crotch's bumble bee individuals or nests are detected during the surveys, a Crotch's bumble bee Mortality Reduction Plan will be prepared and submitted to CDFW no less than 30 days before project initiation. The plan will identify measures to avoid and minimize impacts on Crotch's bumble bee and may include measures such as the following:
  - 50-foot-wide no disturbance buffers will be implemented around active Crotch bumble bee nests, to the extent feasible
  - If Crotch bumble bee nests cannot be avoided, vegetation removal/initial ground disturbance will be limited to periods when fewer individual Crotch bumble bees are likely to be underground (e.g., after nests have become inactive)
  - Vegetation removal/initial ground disturbance will be timed to minimize potential mortality of overwintering Crotch bumble bee queens, and small mammal burrows that may harbor queens will be excavated by hand to the extent feasible.

- Procedures for handling and disposition of individual Crotch bumble bees, if encountered on the project site during construction activities (including burrow hand-excavation), will be identified and implemented.

#### **Mitigation Measure BIO-4: Install Wildlife Exclusion Fencing.**

To minimize potential effects of Project construction on special-status wildlife, the District will ensure that the following measures are implemented:

- WEF-1: Wildlife exclusion fencing (WEF) will be installed and maintained during pipeline installation. A minimum of 60 days before WEF is installed, a WEF plan that includes fence specifications (smooth material such as aluminum flashing, heavy gauge polyvinyl chloride, or high-density polyethylene matrix material with anti-climbing guards), a map of WEF location, and timing of WEF installation in relation to construction activities will be prepared and submitted to CDFW and USFWS. Fencing will meet all species-specific requirements.

#### **Mitigation Measure BIO-5: Minimize Impacts on ~~and Avoid Take of~~ Blunt-nosed Leopard Lizard.**

To minimize potential effects of Project construction on blunt-nosed leopard lizard ~~and to avoid Project-related take of the species~~, the District will ensure that the following measures are implemented:

- BNLL-1: Surveys following the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard* (CDFW 2019) or alternative current CDFW protocols for detection of blunt-nosed leopard lizard will be conducted and completed no more than 1 year before project construction activities begin.
- BNLL-2: Blunt-nosed leopard lizard take avoidance and minimization measures will be implemented during project construction, such as methods to ensure individuals are not struck by project vehicles and equipment or crushed in burrows within the project disturbance footprint. Means of escape from the work limits when WEF is in place will also be provided. If blunt-nosed leopard lizard is detected on the project site during surveys completed within 1 year of when project activities would begin, a Blunt-nosed Leopard Lizard Avoidance Plan describing these measures will be prepared and submitted to CDFW.
- BNLL-3: A biological monitor will be available during all work activities with potential to result in take of blunt-nosed leopard lizard to ensure take avoidance and minimization measures are properly implemented. If a blunt-nosed leopard lizard is observed during project construction, work activities within 250 feet of the individual will be limited to those activities that will not result in injury or mortality to the individual until it leaves the area of its own accord. A qualified biologist may move the blunt-nosed leopard lizard to outside the project site if appropriate agency permits/approvals are in place and the immediate welfare of the individual is in jeopardy or the blunt-nosed leopard lizard does not vacate the site on its own accord within a reasonable

timeframe. Work activities will not resume until the biological monitor deems it appropriate.

### **Mitigation Measure BIO-6a: Conduct Focused Surveys for Burrowing Owls and Avoid Loss of Occupied Burrows.**

To minimize potential effects of Project construction on burrowing owl and avoid destruction of occupied burrows, the District will ensure that the following measures are implemented.

- BUOW-1: Measures specified in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) or alternative current CDFW protocols and requirements will be implemented to avoid and/or minimize impacts on burrowing owl.
- BUOW-2: A take avoidance survey will be conducted within 14 days before on-site project activities begin in each portion of the site.
- BUOW-3: If any occupied burrows are observed, a qualified biologist will establish and confirm implementation of an appropriate protective buffer around each occupied burrow until the biologist determines the burrow is no longer occupied. ~~A qualified biologist will monitor occupied burrows during project activities to confirm effectiveness of the buffer.~~ The size of the buffer will generally follow recommendations in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) or alternative current CDFW protocols and requirements but may be adjusted by a qualified biologist depending on type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the owls to disturbance. A qualified biologist will monitor occupied burrows during project activities to confirm effectiveness of the buffer.
- BUOW-4: If it is not feasible to implement a buffer of adequate size to avoid disturbance and it is determined, in consultation with CDFW, that ~~passive exclusion~~ eviction of owls from the project site is ~~an appropriate means of minimizing impacts necessary, an exclusion and relocation~~ burrow eviction plan will be developed and implemented in coordination with CDFW. ~~Passive exclusion~~ Eviction will be conducted by a qualified biologist and only during the non-breeding season (September 1 – January 31) ~~not be conducted during the breeding season (February 1 through August 31), unless a qualified biologist verifies through noninvasive means (such as surveillance) that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.~~
- BUOW-5: If passive exclusion is conducted, each occupied burrow that is destroyed will be replaced with at least one artificial burrow at a suitable location in similar habitat within or adjacent to the project alignment. The artificial burrow(s) will be installed within 500 feet of the occupied burrow, if possible, and before passive relocation occurs.



### **Mitigation Measure BIO-6b: Conduct Focused Surveys for Nesting Swainson's Hawk.**

To minimize potential effects of Project construction on nesting Swainson's hawk and avoid Project-related take of the species, the District will ensure that the following measures are implemented:

- SWHA-1: If construction activities would occur during the Swainson's hawk nesting season (April through August), a qualified biologist will conduct surveys of accessible potential Swainson's hawk nesting trees within 0.5 mile of the project site. To the extent practicable, depending on timing of project initiation, surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). At a minimum, at least one survey will be conducted within 10 days before project activities begin during the nesting season.
- SWHA-2: If an active Swainson's hawk nest is found, a qualified biologist will prepare a site-specific take avoidance plan to comply with the California Endangered Species Act and CFGC. Measures may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

### **Mitigation Measure BIO-6c: Conduct Focused Surveys for Nesting White-tailed Kite.**

To minimize potential effects of Project construction on nesting white-tailed kite and avoid Project-related take of the species, the District will ensure that the following measures are implemented:

- WTKI-1: If construction would begin during the white-tailed kite nesting season (March through August), a qualified biologist will conduct a survey of accessible potential white-tailed kite nesting trees within 0.5 mile of the project site. At a minimum, at least one survey will be conducted within 10 days before project activities begin during the nesting season.
- WTKI-2: If an active white-tailed kite nest is found, a qualified biologist will prepare a site-specific take avoidance plan to comply with CFGC. Measures may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be

established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

**Mitigation Measure BIO-6d: Conduct Focused Surveys for Other Nesting Birds.**

To minimize potential effects of Project construction on other nesting birds, the District will ensure that the following measures are implemented:

- BIRD-1: A qualified biologist will conduct surveys of suitable nesting habitat that would be directly disturbed by project activities and suitable nesting habitat for loggerhead shrike, Le Conte's thrasher, California thrasher, and common raptors, in accessible potential habitat within 500 feet of project activities. Surveys will be conducted within 10 days before project activities begin near suitable nesting habitat during the nesting season (February-August).
- BIRD-2: If an active nest is observed, a qualified biologist will prepare a site-specific take avoidance plan to comply with applicable state and federal regulations. Measures for other species may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

**Mitigation Measure BIO-7: Minimize Impacts on Tipton Kangaroo Rat and Giant Kangaroo Rat.**

To minimize potential effects of Project construction on Tipton and giant kangaroo rats, the District will ensure that the following measures are implemented:

- TKR-1: Exclusion and mortality reduction measures for Tipton kangaroo rat and giant kangaroo rat, including fencing, trapping, and translocation requirements, will be developed and submitted to CDFW and USFWS.
- TKR-2: Translocation of Tipton and giant kangaroo rats will be implemented as follows, unless otherwise determined in consultation with CDFW and USFWS:
  - Trapping will be conducted by qualified biologists within portions of the project site known or anticipated to be occupied by Tipton kangaroo rat or

giant kangaroo rat for at least 5 consecutive nights commencing no more than 48 hours after WEF encloses that portion of the work limits.

- Trapping will be conducted when weather conditions are conducive to trapping success and kangaroo rats can be safely handled following methods in *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats* (USFWS 2013) or alternative current agency protocols and requirements.
- If any Tipton kangaroo rat or giant kangaroo rat are encountered during daylight hours or during construction, they will either be hand-captured by a Service-approved biologist or traps will be deployed in the vicinity of the observation until capture.
- Artificial burrows 3 feet long will be constructed using a hand-held soil auger at least 3 inches in diameter and angled into the ground at no greater than 30°. Artificial burrows will avoid existing active kangaroo rat burrows by 50 feet.
- Each captured kangaroo rat will be translocated by a qualified biologist using a modified soft-release approach to an artificial burrow at the closest location outside of the work limits/WEF as possible, but at least 50 feet from anticipated project excavation activities. Captured Tipton kangaroo rats and giant kangaroo rats will be released as soon as practicable after capture and under weather conditions described above for trapping.

#### **Mitigation Measure BIO-8: Minimize Impacts on San Joaquin Antelope Squirrel.**

To minimize potential effects of Project construction on San Joaquin antelope squirrel, the District will ensure that the following measure is implemented:

- SJAS-1: Exclusion and mortality avoidance measures for San Joaquin antelope squirrel, including fencing, trapping, and translocation requirements, will be developed and submitted to CDFW. San Joaquin antelope squirrels translocated as part of the mortality reduction measures, will be released in suitable habitat adjacent to the project site.

#### **Mitigation Measure BIO-9: Minimize Impacts on San Joaquin Kit Fox.**

To minimize potential effects of Project construction on San Joaquin kit fox, the District will ensure that the following measures are implemented:

- SJKF-1: Measures specified in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011) or alternative current agency protocols and requirements will be implemented to avoid and/or minimize impacts on San Joaquin kit fox.
- SJKF-2: Preconstruction surveys will be conducted no more than 30 days before on-site construction activities begin. Surveys will include all work areas and a minimum buffer of 250 feet. Survey protocols and den definitions, buffer zones, and excavation procedures will be consistent with the

Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011) or alternative current agency protocols and requirements.

- SJKF-3: Den avoidance, monitoring, blocking/unblocking and excavation will be implemented as follows, unless otherwise determined in consultation with CDFW and USFWS:
  - Appropriate buffers will be implemented to avoid disturbance of active natal/pupping dens.
  - Potential, known, and inactive natal/pupping dens will be monitored by a qualified biologist for no less than 3 nights by placing tracking material, or other verified means of detecting kit fox presence (remote-sensing cameras, etc.), at each den entrance and checking for evidence of kit fox each morning.
  - If no kit fox activity is documented and the den will not be directly destroyed during project construction, it may be temporarily blocked to discourage individuals from denning during construction activities. Within 48 hours of completing construction activities, blocked dens will be reopened. If the den will be destroyed during project construction and vacancy has been confirmed, the den will be excavated. Inactive natal/pupping dens will only be excavated between August 1 and December 14 and provided that pups have demonstrated behaviors that indicate they are no longer dependent on the adults.
  - If kit fox occupation is documented (but not being used by pups) and disturbance of the occupied den cannot be avoided according to current standards. The following procedures will be implemented upon receiving authorization from CDFW and USFWS:
    - Den use will be discouraged by partially plugging the entrance(s) with vegetation.
    - After either 3 consecutive nights of no recorded kit fox occupation or 5 days of vegetation/soil soft-plugging, the den may be excavated when, in the judgment of a qualified biologist, the den is vacant. Hand excavation is the preferred method; however, mechanical excavation equipment (e.g., backhoe) may be used if required due to soil conditions.

**Mitigation Measure BIO-10: Obtain Take Authorization and Provide Compensatory Mitigation for Take of Federally and/or State-listed Species.**

The District will obtain authorization from USFWS and/or CDFW for take of federally and state-listed species (including candidates for state listing) that would occur during project implementation, including take that may occur as a result of implementing mitigation avoidance and minimization measures described above.

The District will coordinate with USFWS and/or CDFW to develop and implement an appropriate mitigation strategy to avoid, minimize, and compensate for take of listed species. An appropriate compensation ratio will be determined in

consultation with USFWS and/or CDFW but is anticipated to be 1.1 acre of compensation habitat for each acre of habitat that is impacted, based on ~~the temporary nature of the impacts and~~ avoidance of permanent habitat loss. Compensatory mitigation may be implemented on parcels purchased by the District to facilitate project implementation. If this is not feasible or adequate on-site habitat is not available to fulfill compensatory mitigation requirements, mitigation may be implemented at an appropriate alternative location agreed to by USFWS and/or CDFW or through purchase of credits at a USFWS-and/or CDFW-approved bank. If habitat compensation is not provided at an established bank or existing mitigation site with habitat maintenance and protection mechanisms in place, the mitigation strategy will specify funding, monitoring, management, and protection requirements to ensure the compensation habitat is protected and appropriately managed in perpetuity.

**#4 -b and c. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? Have a substantial adverse effect on state- or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

The project site does not support riparian habitat or designated or proposed critical habitat for federally listed species. The California Aqueduct may qualify as a state- and/or federally protected water and be subject to regulation under Clean Water Act Sections 401 and 404, the Porter-Cologne Water Quality Control Act and/or CFGC Section 1602. However, connecting the Belridge pipeline to the existing aqueduct turnout would not require any work within the canal prism. Based on the U.S. EPA WATER GeoViewer and USGS Topographical Map Lokern Quadrangle, there are no blue-lined features within the project footprint. During precipitation events, water generally flows overland in a northwesterly direction. Because there are no natural conveyances (e.g., stream, river) with a defined bed and bank in the project footprint, project implementation would not affect features subject to regulation under CFGC Section 1602. Similarly, the project site does not support features other than the California Aqueduct that may be subject to regulation under Clean Water Act Sections 404 and 401. In addition, project construction would occur during dry conditions and would not affect water quality of any features that may qualify for regulation under the Porter-Cologne Water Quality Control Act. Therefore, there would be **no impact** on these resources.

Spinescale scrub, which is considered a sensitive natural community by CDFW, occurs along an approximately 500-foot-long portion of the pipeline alignment. Pipeline installation would require removal of approximately 0.70 acre of this habitat. Because this area of spinescale scrub extends for at least 100 feet beyond both sides of the pipeline installation corridor and the ~~temporarily disturbed~~ construction corridor area would be allowed to revegetate after project construction is complete, this impact would not have a substantial adverse effect on the habitat and is considered **less than significant**.

**#4 -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?**

The project site does not support any wildlife nursery sites, and connection of the pipeline to the existing turnout at the Aqueduct would not affect movement of aquatic species. Because pipeline would be installed in segments, only a portion of the total construction corridor would be disturbed at a given time. Therefore, wildlife that travel through the area would be able to divert around the area of active construction. Installing the fiber optic line and electrical line would have very minor, if any, impact on wildlife movement because the area of disturbance would be very small and the disturbance period at a given location would be very brief. Therefore, implementing the proposed project would not substantially interfere 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. Therefore, implementing the proposed project would not substantially interfere 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; this impact would be **less than significant**.

**#4 -e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

The 2004 Kern County General Plan, which is currently being updated, includes several policies and implementation measures designed to protect and conserve threatened and endangered species and oak trees (Kern County 2004a). No oak trees are present on the Project site, and the Project has no potential to conflict with Kern County's General Plans oak retention policy. The Plan requires discretionary projects to consider effects to biological resources and wildlife agency comments during the CEQA process; this is consistent with the CEQA process being implemented by the District for the proposed Project. Therefore, implementing the proposed project would not conflict with any local policies or ordinances protecting biological resources and there would be **no impact** related to this issue.

**#4 -f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?**

The project site is west of the existing Metropolitan Bakersfield Habitat Conservation Plan (HCP) area (City of Bakersfield 1994) and the plan area for the Bakersfield HCP that is currently in development. Therefore, the project would not conflict with either of these plans. The site is within the area intended to be covered by the Kern County Valley Floor HCP. A draft of this HCP was issued more than a decade ago (Kern County Planning Department 2006), but a final HCP has not been released or adopted. The project site is within a "Red Zone" of the Draft plan, an area identified as having high importance for conservation. However, because project-related disturbance would be temporary and this HCP has not been adopted, implementing the proposed

project is unlikely to impact the conservation value of the affected lands and would not conflict with any provisions, guidelines, goals, or objectives related to biological resources anticipated to be included in a potential final and adopted version of this HCP. Therefore, implementing the proposed project would not conflict with any provisions, guidelines, goals, or objectives related to biological resources anticipated to be included in a potential final and adopted version of this plan.

CDFW owns and manages several parcels adjacent to the Project footprint and elsewhere in the Lokern area that collectively are part of the Lokern Ecological Reserve. According to CDFW, these parcels were acquired as mitigation for the Metropolitan Bakersfield Habitat Conservation Plan and for other projects requiring mitigation land preservation. Ecological reserves are maintained for the primary purpose of developing a statewide program for protection of rare, threatened, or endangered native plants, wildlife, aquatic organisms, and specialized terrestrial or aquatic habitat types. Therefore, activities such as vegetation removal and removal or disturbance of animals are prohibited. Although portions of the Project would be implemented adjacent to several Lokern Ecological Reserve parcels, no project activities would occur on these parcels, and no plants or animals would be removed from these parcels. Although animals residing on the reserve parcels could be disturbed by Project construction activities, this disturbance would be temporary and is unlikely to substantially affect continued protection of the reserve parcels and the species that depend upon them.

Approximately 0.5 mile of the pipeline would cross the southern end of a parcel that is part of the 3,100-acre Lokern Preserve owned and managed by CNLM. According to CNLM, the affected parcel serves as mitigation for impacts to blunt-nosed leopard lizard, San Joaquin kit fox, and San Joaquin antelope squirrel under the California Energy Commission (CEC) Midway-Sunset Cogeneration Decision (95-AFC-03C) and is required to be conserved in perpetuity for the protection of those listed species. According to CDFW, the lands were acquired for preservation in perpetuity as mitigation required by the CDFW California Endangered Species Act Incidental Take Permit No. 2081-2001-004-4 and the USFWS Biological Opinion 1-1-00-F-172 for the Midway-Sunset Cogeneration Western Midway Sunset Power Project. Implementing the proposed project would affect approximately 3.6 acres of the 160-acre parcel. Vegetation removal within the construction corridor would only occur to facilitate pipeline installation and would not be maintained long-term. Although presence of the pipeline several feet below the ground surface would affect burrowing opportunities, this impact would be limited to the approximately 5-foot-wide pipeline footprint (0.3 acre) and would have a very minor effect on burrowing opportunities. Implementing the proposed project is unlikely to substantially affect continued preservation of habitat values for blunt-nosed leopard lizard, San Joaquin kit fox, or San Joaquin antelope squirrel on the affected parcel, but it would likely conflict with formal habitat protections and prohibitions established for this mitigation land and potentially the larger Lokern Preserve. This impact would be **less than significant with mitigation incorporated**. Implementing Mitigation Measure BIO-11 described below would reduce this impact to a less than significant level.

**Mitigation Measure BIO-11: Minimize Impacts on Existing Mitigation Land and Restore Habitat Adversely Affected by Project Construction.**

To minimize potential effects of Project construction on existing mitigation land owned and managed by CNLM, the District will ensure that the following measures are implemented:

- Before project activities begin on the CNLM parcel, a habitat restoration plan will be developed to address potential adverse impacts of project construction. The plan will document pre-project conditions on the portion of the parcel to be impacted by project construction and identify post-construction revegetation and monitoring efforts to be implemented. The plan will also identify potential remedial actions to be taken if restoration efforts do not meet performance standards. Restoration performance standards will require habitat values for the species for which the mitigation lands were established are restored to equivalent or better than pre-project conditions documented in the restoration plan. The plan will be provided to CNLM for review and the District will work with CNLM to resolve CNLM comments.
- Impacts on the mitigation land, including vegetation removal and other ground disturbance will be minimized to the maximum extent feasible during project construction.
- After project construction is complete, the restoration plan will be implemented and restored habitat will be monitored as specified in the restoration plan. Remedial actions will be implemented, if necessary. Restoration, monitoring, and potential remedial actions may be implemented by qualified personnel retained by the District, by CNLM, or through alternative means agreed to by the District and CNLM. The District will provide funding for restoration plan implementation.



### 3.5 Cultural Resources

#5. CULTURAL RESOURCES. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#5 -a. Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5?	No	<u>Yes</u>	No	No	No
#5 -b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?	No	<u>Yes</u>	No	No	No
#5 -c. Disturb any human remains, including remains interred outside of dedicated cemeteries?	No	<u>Yes</u>	No	No	No

#### 3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance.

#### *Methods*

The cultural resources investigations carried out for the proposed project included a records search at the South San Joaquin Valley Information Center (SSJVIC), archival research archaeological and built environment field surveys of accessible portions of the project site, and a desktop geoarchaeological study.

#### Records Search

On October 13, 2022, GEI Consultants, Inc. (GEI) archaeologist Amy Wolpert, MA, submitted a records search request of the area of potential effects, including the pipeline, fiber optic line and power line installation areas, at the SSJVIC. The search covered the project site and a 0.5-mile-wide buffer surrounding the site. The records search included a review of SSJVIC’s U.S. Geological Survey 7.5-minute topographic base maps indicating previously conducted investigations and previously reported cultural resources, California Department of Parks and Recreation 523 forms, and California Historic Landmarks documentation.

The records search identified no previously recorded archaeological resources and one previously recorded built environment resource within the project area (the Aqueduct), and one previously recorded built environment resources within the 0.5-mile-wide buffer of the project site (the Flood Canal). The record search identified no studies within the project area, and one study report within the 0.5-mile-wide buffer.

### Field Surveys

GEI archaeologists Jesse Martinez, M.A., RPA, and Karen Gardner, M.A., RPA, completed the pedestrian surveys of accessible portions of the project site on June 19-20, 2018. The survey was conducted to intensive standards utilizing transects spaced no more than 15 meters (49 feet) apart. No archaeological resources were observed during the pedestrian survey. GEI relocated and updated the records of one historic-era (more than 50 years old) built environment resource identified in the records search during the field surveys: the Aqueduct.

The project design was updated after the survey in 2018 which required a second survey be conducted. The second pedestrian survey was conducted by GEI archaeologists Amy Wolpert, MA, and Miles Jenks, MA, on December 6th, 2022. The surveys were conducted to intensive standards within the new project alignment, using transects spaced no more than 15 meters (49 feet) apart. The survey relocated and recorded the Aqueduct, which was also identified during the updated records search.

### **3.5.2 Discussion**

#### **a, b) Cause a substantial adverse change in the significance of a historical resource pursuant to in CCR Section 15064.5? Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?**

Under CEQA, public agencies must consider the effects of their actions on “historical resources.” CEQA defines an “historical resource” as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on importance of the resources to California history and heritage.

A cultural resource may be eligible for listing in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.
4. Or has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (OHP 1999).

Impacts would be deemed significant if there is substantial adverse change by means of physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Per Section 15064.5 (b)(2) of the CEQA Guidelines the significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for the purposes of CEQA.

No previously recorded archaeological resources are present within the project site or within 0.5 mile of the project site, and no archaeological resources were discovered during the pedestrian surveys. One historic-era built environment resource was identified as part of the two surveys: the Aqueduct. The Aqueduct was previously determined eligible for NRHP and CRHR listing in 2012. It is therefore also considered a historical resource for the purposes of CEQA. Upon completion of the project, the Aqueduct would retain its integrity and significance. The materials, workmanship, and the general physical characteristics that convey the historical significance of the Aqueduct would remain in place and it would continue to function as originally designed. Therefore, the impact would be **less than significant**.

Though very unlikely, the possibility remains that a resource that meets CRHR significance criteria for a historical resource may be discovered during project-related ground-disturbing activities. If this were to occur, project implementation could have a **potentially significant** impact on the resource. The following mitigation measure has been identified to address this impact.

**Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.**

If cultural resources are identified during Project-related ground-disturbing activities, all potentially destructive work in the immediate vicinity of the find will cease immediately and the District will be notified. In the event of an inadvertent discovery, additional review will be conducted to make a determination on a properties' eligibility for listing in the CRHR and identify any actions that may be necessary to avoid adverse effects. A qualified archaeologist will assess the significance of the find, make a preliminary determination, and if appropriate, provide recommendations for treatment. Ground-disturbing activities will not resume near the find until treatment, if any is recommended, is complete or if the qualified archaeologist determines the find is not significant.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historical resources to a less-than-significant level because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with CEQA and its implementing guidelines. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

**c) Disturb any human remains, including remains interred outside of dedicated cemeteries?**

No human remains have been discovered in the project area and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during Project-related ground-disturbance activities. There is no indication from the records searches or pedestrian surveys that human remains are present on the project site. However, if human remains, including those interred outside of formal cemeteries and including associated items and materials, are discovered during subsurface activities, the human remains, and associated items and materials could be inadvertently damaged. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

**Mitigation Measure CR-2: Avoid Potential Effects on Undiscovered Burials.**

If human remains are found, the District will be immediately notified. The California Health and Safety Code requires that excavation be halted in the immediate area and that the county coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code, Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) by telephone within 24 hours of making that determination (Health and Safety Code, Section 7050.5[c]).

Once notified by the coroner, the NAHC shall identify the person determined to be the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This visit should be conducted within 24 hours of the MLD's notification by the NAHC (Public Resources Code [PRC], Section 5097.98[a]). If a satisfactory agreement for treatment of the remains cannot be reached, any of the parties may request mediation by the NAHC (PRC,

Section 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must reinter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC, Section 5097.98[b]).

Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains to a less-than-significant level because any inadvertent discovery of human remains would be addressed as proscribed by State law and the MLD will be consulted. Therefore, the proposed project would have a **less than significant impact with mitigation**.

### 3.6 Energy

#6. ENERGY. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#6 -a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	No	No	<u>Yes</u>	No	No
#6 -b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	No	No	No	<u>Yes</u>	No

#### 3.6.1 Environmental Setting

Electricity would be supplied to the site by PG&E. In 2022, the total electricity consumption for Kern County was approximately 14,860 million kilowatts per hour (CEC 2023).

#### 3.6.2 Discussion

##### #6 -a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The proposed project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources. The project would involve the use of diesel-fueled vehicles during construction; however, use of these vehicles would be temporary and nonsignificant. The proposed project would install a new fiber optic line and electrical line adjacent to the California Aqueduct. The fiber optic line would provide the District and DWR with real-time water data. The electrical line would serve the turnout at the California Aqueduct. There would not be a significant long-term increase in energy consumption due to the proposed project. The project would use gravity to move water from the west to the east. With gravity flow, the Belridge Pipeline will allow up to 6 grower-operated deep wells to be turned off while using surface water. If the head in the Belridge Pipeline is insufficient, the District can activate the Corn Camp Pump Station which uses a quarter of the power of a grower-operated deep well resulting in significant energy savings. The Corn Camp Pump Station could also be used to move water from the east to the west, which would require a minimal amount of energy consumption. Therefore, impacts would be **less than significant**.

**#6 -b. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?**

Kern County does not have a local plan for renewable energy or energy efficiency. The proposed project would comply with the state's Climate Commitment to reduce the reliance on non-renewable energy sources by half by 2030 (CEC 2015). There would be **no impact**.

### 3.7 Geology and Soils

#7. GEOLOGY AND SOILS. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#7 -a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	No	No	<u>Yes</u>	No	No
#7 -a. i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	No	No	No	<u>Yes</u>	No
#7 -a. ii. Strong seismic ground shaking?	No	No	<u>Yes</u>	No	No
#7 -a. iii. Seismic-related ground failure, including liquefaction?	No	No	<u>Yes</u>	No	No
#7 -a. iv. Landslides?	No	No	<u>Yes</u>	No	No
#7 -b. Result in substantial soil erosion or the loss of topsoil?	No	No	<u>Yes</u>	No	No
#7 -c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No	No	<u>Yes</u>	No	No
#7 -d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated),), creating substantial direct or indirect risks to life or property?	No	No	<u>Yes</u>	No	No
#7 -e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No	No	No	<u>Yes</u>	No



#7 -f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No	<u>Yes</u>	No	No	No
---	----	------------	----	----	----

**3.7.1 Environmental Setting**

The project site is located on the following soil types: Kimberlina fine sandy loam 0 to 2 percent slopes, Kimberlina gravelly sandy loam 2 to 5 percent slopes, Lokern clay, saline-alkali drained, Panoche clay loam 0 to 2 percent slopes, and calflax clay loam saline-sodic 0 to 2 percent (NRCS 2022). The project site is located approximately 5 miles north of an unnamed Quaternary fault and approximately 7 miles west of a pre-Quaternary concealed fault line. The nearest active fault is the San Andres fault line located approximately 22 miles west of the project site (CGS 2015a). There are no Alquist-Priolo fault zones located within the project site (CGS 2022a).

**3.7.2 Discussion**

**#7 -a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**#7 -a. i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

The project site is not located within an Alquist-Priolo Earthquake fault zone. Surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Damage from surface fault rupture is generally limited to a linear zone a few yards wide. Since the proposed project is not located within the vicinity of an active fault, there would be **no impact**.

**#7 -a. ii and iii. Strong seismic ground shaking, Seismic-related ground failure, including liquefaction?**

The pipeline and fiber optic line would be buried underground and would not pose a direct risk to people from seismic activity. If a seismic event should cause the pipeline to break the water would be released underground in a low gradient, undeveloped area, posing minimal risk to people or structures. However, the electrical poles and electrical line would be constructed above-ground. Construction would occur in a rural area away from any development. Therefore, the likelihood of risk of loss, injury, or death are very low, and the project would have no significant impact to people or structures from any seismic-related activity. Additionally, the project site is not located within a known liquefaction zone (CGS 2022b). This impact would be **less than significant**.

**#7 -a. iv. Landslides?**

The project site is located in a topographically flat area and thus there would be no harm from landslides. This impact would be **less than significant**.

**#7 -b, c, and d. Result in substantial soil erosion or the loss of topsoil? Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?**

Because construction activities would disturb an area larger than 1 acre, the District is required by law to obtain coverage under the State Water Board NPDES stormwater permit for general construction activity, including preparation and submittal of a Notice of Intent to discharge with the CVRWQCB. The District is required to prepare a SWPPP and comply with the conditions of the NPDES general stormwater permit for construction activities. The SWPPP shall describe the construction activities to be conducted, BMPs that would be implemented to prevent soil erosion and contaminated stormwater discharges into waterways, and inspection and monitoring activities that would be conducted.

Topsoil may be stripped and stockpiled for later reuse on the site. With the implementation of a Dust Control Plan or Construction Notification form loss of topsoil would be minimized during construction. Operation of the project would not create the potential for soil erosion or loss of topsoil as the area is topographically flat and there would be no ground disturbance associated with project operation. The project site is not located on unstable soils or expansive soils (NRCS 2022). Therefore, the Project would have **less than significant** impacts associated with soil erosion and unstable or expansive soils.

**#7 -e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

The project would not require the use of septic tanks or alternative wastewater disposal systems. Temporary portable restrooms would likely be provided for construction workers. Therefore, there would be **no impact**.

**#7 -f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

The project is located on marine and non-marine sedimentary rock that consist of alluvium, lake, playa, and terrace deposits from the Pleistocene-Holocene ages (CGS 2015b). Since paleontological resources are found almost exclusively in sedimentary rock, there is a chance of discovering unknown paleontological resources within the project site. Therefore, this impact is considered **potentially significant**. The following mitigation measure has been identified to address this impact.

### **Mitigation Measure GEO-1: Avoid and Minimize Potential Effects on Paleontological Resources.**

In the event that a paleontological resource is uncovered during project implementation, all ground-disturbing work within 165 feet (50 meters) of the discovery will be halted. A qualified paleontologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, no further effort will be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist will evaluate the resource and determine whether it is “unique” under CEQA, Appendix G, part VII. If the resource is determined not to be unique, work may resume in the area. If the resource is determined to be a unique paleontological resource, work will remain halted, and the paleontologist and the District will identify methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts to paleontological resources and will be required unless there are other equally effective methods. Other methods may be used but must ensure that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils will be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology standard guidelines. Work may resume upon completion of resource treatment, as verified by a qualified paleontologist.

Implementation of mitigation measure GEO-1 would reduce impacts to a less-than-significant level by halting construction activities if paleontological resources are discovered, determining if the resource is unique, and implementing a treatment plan if the resource is determined to be unique. This impact would be **less-than-significant with mitigation incorporated**.

### 3.8 Greenhouse Gas Emissions

#8. GREENHOUSE GAS EMISSIONS. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#8 -a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No	No	<u>Yes</u>	No	No
#8 -b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No	No	<u>Yes</u>	No	No

#### 3.8.1 Environmental Setting

GHGs are present in the atmosphere naturally, released by natural and human-caused sources, and formed from secondary reactions taking place in the atmosphere. Human sources include emissions associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors. Evidence has shown that GHG emissions from locations around the world contribute to global climate change, which could have drastic impacts related to flooding and other natural disasters, agriculture, habitats, water supply, and the economy. Kern County has not adopted a local plan for reducing greenhouse gas (GHG) emissions.

#### 3.8.2 Discussion

##### #8 -a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

SJVAPCD has not established CEQA thresholds of significance for GHG emissions. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 metric tons of carbon dioxide equivalent per year (CO<sub>2e</sub>) for construction related GHG emissions (SMAQMD 2020). In the absence of a local threshold in Kern County, the SMAQMD threshold was used to evaluate the significance of GHG emissions.

GHG emissions would be generated mainly during the construction phase of the proposed project. Temporary GHG emissions, primarily for the use of diesel-powered vehicles, would occur during construction. Equipment that would be used during project implementation are detailed in Section 3.1.4 “Construction Schedule, Staffing and Equipment.” There would be a small amount of GHG emissions generated during the operation phase from maintenance and operation trips. However, it is anticipated that maintenance trips and activities would be similar to what occurs as part of the District’s ongoing facility maintenance, with small changes in servicing and maintenance trips by staff.

The relatively small number of construction vehicles and their short-term usage, as well as the very minor operation related vehicle use, would not generate GHGs of a level that would have a significant impact on the environment. The project is anticipated to generate a maximum of 112 metric tons of carbon dioxide equivalent annually, which is well below the SMAQMD established significance threshold (*see Appendix BA*). Therefore, impacts related to the generation of GHG emissions would be **less than significant**.

**#8 -b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

California has more than 10 Executive Orders directing state agencies to implement programs to reduce GHG emissions to meet 2030 target of 40 percent below 1990 levels (State of California, 2018). CARB is the primary state agency responsible for implementing GHG reduction programs. The District has not adopted a climate change or GHG reduction plan with which the proposed project would conflict, and Kern County does not have any applicable plans, policies or regulations regarding GHG emissions. Therefore, the proposed projects incremental contribution to the cumulative impact of increasing atmospheric levels of GHG would be less than cumulatively considerable. This impact would be **less than significant**.

### 3.9 Hazards and Hazardous Materials

#9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#9 -a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No	No	No	<u>Yes</u>	No
#9 -b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	No	<u>Yes</u>	No
#9 -c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	No	<u>Yes</u>	No
#9 -d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No	No	No	<u>Yes</u>	No
#9 -e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No	No	No	<u>Yes</u>	No
#9 -f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	<u>Yes</u>	No
#9 -g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No	No	No	<u>Yes</u>	No

### **3.9.1 Environmental Setting**

A search of all data sources included in the Cortese List (enumerated in PRC Section 65962.5) was conducted for the project site and vicinity. These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Board; the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the California Department of Toxic Substances Control; and EPA's Superfund Site database (DTSC 2023a and 2023b, State Water Board 2023a and 2023b, CalEPA 2023, EPA 2023). There were no hazardous materials sites identified within 0.25 mile of the project site. The project site is not in an area identified as likely to contain asbestos by DOC (2000). and is not located in a high severity fire hazard zone (CAL FIRE 2022).

### **3.9.2 Discussion**

**#9 -a, b, c, d, f, and g. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

The proposed project would be implemented in an undeveloped portion of unincorporated Kern County. The project is located away from population centers. The closest school is the Grimmway Academy located approximately 16.5 miles northeast in the City of Shafter. The project would not expose people to increased risks from wildland fire as the project is not located within a high severity fire zone. The project would not affect emergency response plans as no new facilities would be constructed as part of the proposed project. The project would not interfere with traffic routes or response vehicle transport. There would be **no impact**.

**#9 -e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?**

Kern County has established an Airport Land Use Compatibility Plan which has been incorporated into the General Plan (Kern County 2012). The purpose of the Airport Land Use Compatibility Plan is to establish procedures and criteria by which the County of Kern and

affected incorporated cities can address compatibility issues when making planning decisions. The eastern terminus of the project site is located approximately 7.5 miles northwest of the Elk Hills Buttonwillow Airport. The project site is not within an Airport Influence Area and as such would not need to be reviewed to insure compatibility with the Airport Land Use Compatibility Plan. There would be **no impact**.



### 3.10 Hydrology and Water Quality

#10. HYDROLOGY AND WATER QUALITY. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#10 -a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No	No	<u>Yes</u>	No	No
#10 -b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	No	No	No	<u>Yes</u>	No
#10 -c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	No	No	<u>Yes</u>	No	No
#10 -c. i. result in substantial erosion or siltation on- or off-site;	No	No	<u>Yes</u>	No	No
#10 -c. ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No	No	<u>Yes</u>	No	No
#10 -c. iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	No	No	<u>Yes</u>	No	No
#10 -c. iv. impede or redirect flood flows?	No	No	<u>Yes</u>	No	No
#10 -d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No	No	No	<u>Yes</u>	No
#10 -e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No	No	No	<u>Yes</u>	No

### **3.10.1 Environmental Setting**

#### **Buena Vista Water Storage District**

The District, established in 1935, is a public agency, which supplies surface water from the Kern River and groundwater to agricultural customers, primarily. The District lies entirely in Kern County and covers about 78.3 square miles in two distinct service areas: the Buttonwillow Service Area (BSA) and the smaller Maples Service Area which lies about 10 miles south of the BSA. The project extends east from the California Aqueduct and crosses undeveloped land owned by Chevron Corporation before connecting to the 7th Standard Pipeline at the western edge of the BSA.

#### **Water Quality**

The project site is located in the Tulare Lake Hydrologic Basin Planning Area within the South Valley Flood Hydrologic Unit as designated by the CVRWQCB (2018). In accordance with Clean Water Act Section 303, water quality standards for this basin are contained in the Water Quality Control Plan for the Tulare Lake Basin. There are no water bodies on the project site that appear on the 303(d) list as an impaired water, however the Main Drain Canal located approximately 2 miles east of the project site is on the 303(d) list and is considered an impaired water (State Water Board 2017).

#### **Groundwater**

The project site is located within the San Joaquin Valley Basin (5-022) near the western edge of the Kern County Groundwater Subbasin about 22 miles west of Bakersfield (DWR 2015). The subbasin is bounded on the north by the Kern County line and the Pleasant Valley, Tulare Lake, and Tule groundwater subbasins, on the east and southeast by the Sierra Nevada foothills and Tehachapi Mountains, and on the west and southwest by the San Emigdio Mountains and the Temblor Range. The project site is located within a Bulletin 118 designated groundwater basin and is located within a groundwater basin designated as High Priority and Critically Overdrafted (DWR 2019).

#### **Flood Management**

The project site is located within a 100-year flood zone. A small portion of the project site is located in a Federal Emergency Management Agency Zone A (1% annual chance of flooding), while the majority of the project site is located in Zone X (Area of Minimal Flood Hazard) (FEMA 2020). The project is not located in a coastal area and is outside of a tsunami hazard zone.

### **3.10.2 Discussion**

#### **#10 -a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?**

Construction of the proposed project is unlikely to affect water quality in the immediate vicinity of areas disturbed by construction activities, however, there is a chance that the project could contribute sediment or other contaminants directly or indirectly into the California Aqueduct and Flood Canal. However, the District would obtain coverage under the NPDES general

construction activities permit, which requires the preparation of a SWPPP. The project would comply with all BMPs outlined in the SWPPP, which would ensure water quality is not substantially degraded. Therefore, this impact would be **less than significant**.

**#10 -b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

The project would not include the use of groundwater. Additionally, the proposed project is not expected to come into contact with groundwater based on the excavation depths needed for installation of the pipeline since depth to groundwater below ground surface in the main aquifer of the District varies from about 30 feet to depths greater than 300 feet (BVWSD 2016). Therefore, there would be no impact to regional groundwater levels or rate of groundwater recharge. There would be **no impact**.

**#10 -c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

**#10 -i, ii, iii, and iv) Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or Impede or redirect flood flows?**

The project may temporarily alter the existing drainage patterns of the site or area during construction due to ground disturbing activities. Construction of the proposed project would disturb earthen material during site clearing, grubbing, and trenching activities, and if earthen material is exposed to high winds and heavy precipitation, erosion would occur. The District will prepare and implement a SWPPP and construction BMPs which will reduce erosion and prevent offsite runoff. Additionally, during construction, the site would employ standard measures to control erosion and sediment and to protect water quality during construction as required by the County's Grading Code, which includes construction standards and BMPs for Erosion and Sediment Control (Kern County 2023). Following installation of the pipeline and fiber optic conduit, the trenches will be backfilled, and the existing drainage patterns restored to approximate pre-project contours. Therefore, this impact would be **less than significant**.

**#10 -d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

The project is not located in a flood hazard, tsunami, or seiche zone; therefore, there will be **no impact**.

**#10 -e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The proposed project consists of the construction of 2 miles of pipeline to increase water conveyance and water supply reliability. There would be **no impact**.

### 3.11 Land Use and Planning

#11. LAND USE AND PLANNING. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#11 -a. Physically divide an established community?	No	No	No	<u>Yes</u>	No
#11 -b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No	No	<u>Yes</u>	No	No

#### 3.11.1 Environmental Setting

The project site is zoned as agriculture (Kern County 1980) and is located on undeveloped, natural land owned by the Chevron Corporation, CNLM, and other private landowners. The portion of the project site owned by CNLM is part of the Lokern Preserve, which was created to provide habitat for several threatened and endangered species. See Section 3.4 “Biological Resources” for further discussion regarding the Lokern Preserve. The land use surrounding the project site consists of natural lands, dirt roads, and water conveyance canals.

#### 3.11.2 Discussion

##### #11 -a. Physically divide an established community?

The project site would be constructed within a rural, undeveloped area of Kern County; therefore, the project would not divide an established community. There would be **no impact**.

##### #11 -b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The purpose of the proposed project (i.e., to provide the District with additional water resource management for agricultural uses) is consistent with the area zoned as agriculture (Kern County 1980). Consequently, the proposed project does not conflict with the County’s land use plan, policy, or regulation.

For construction of the proposed project, the District would obtain approximately 14.5 acres of land, including approximately 3.64 acres of land along the perimeter of the Lokern Preserve, which is owned and managed by CNLM. According to CDFW, the lands were acquired for preservation in perpetuity as mitigation required by the CDFW California Endangered Species Act Incidental Take Permit No. 2081-2001-004-4 and the USFWS Biological Opinion 1-1-00-F-172 for the Midway-Sunset Cogeneration Western Midway Sunset Power Project. The Lokern Preserve serves as mitigation for impacts to sensitive habitat for the San Joaquin kit fox, blunt-

~~nosed leopard lizard, and the San Joaquin antelope squirrel from the construction and operation of the CEC Midway Sunset Project. As part of the CEC's Midway Sunset Cogeneration Decision (95-AFC-03C), a Biological Resources Conditions of Certification required CEC to deposit funds into a Special Deposit Fund account, which was used to purchase the Lokern Preserve parcel that overlaps the project site.~~

Pipeline installation would require clearing, grubbing, and trenching activities to install the pipeline underground. However, following the completion of construction activities, the land would be returned to its pre-project use. No long-term pipeline maintenance corridor is required, and this area would naturally revegetate over time. Maintenance activities would include quarterly inspections of the pipeline alignment, which would be done with a drone aircraft to limit potential habitat impacts. The District would access the site as needed to make repairs; however, this would occur infrequently.

Because it could take several years for the 3.65 acres of mitigation land on the Lokern Preserve to naturally revegetate, project implementation could result in a temporal loss of habitat. This could result in a significant impact related to conflict with existing mitigation land use and management of the affected portion of the Lokern Preserve. The following mitigation measure has been identified to address this impact.

**Mitigation Measure BIO-11: Minimize Impacts on Existing Mitigation Land and Restore Habitat Adversely Affected by Project Construction.**

Mitigation Measure BIO-11 in Section 3.4, "Biological Resources," provides the full text of this mitigation measure.

Implementing Mitigation Measure BIO-11 would reduce significant impacts to less-than-significant by requiring replanting, monitoring, and maintenance of habitat impacted at the Lokern Preserve during construction activities. Therefore, the impact would be **less than significant with mitigation**.

### 3.12 Mineral Resources

#12. MINERAL RESOURCES. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#12 -a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	No	No	<u>Yes</u>	No	No
#12 -b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No	No	No	<u>Yes</u>	No

#### 3.12.1 Environmental Setting

The project site is located within a Surface Mining and Reclamation Act of 1975 study area for aggregate materials in the Bakersfield production-consumption region. Aggregate material consists of sand, gravel, and crushed stones, all of which are considered construction material. The project site is designated as mineral resource zone [MRZ]-3 (Areas containing mineral deposits, the significance of which cannot be evaluated from available data) (DOC 2009). The project site is not permitted for mining.

#### 3.12.2 Discussion

##### #12 -a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.

The project site is located in a Surface Mining and Reclamation Act study area for aggregate material, and, though unlikely, have the potential to contain mineral resource. The project would disturb a total of 18.51 acres and would be installed along the perimeter edge of parcels. Additionally, the project site is not located in an area of known significant mineral deposits. Although unlikely, there is a potential to lose a minimal amount of mineral resources, which would not affect the overall availability of mineral resources in Kern County. Therefore, this impact would be **less than significant**.

##### #12 -b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The project site is not located within the vicinity of a locally important mineral resource recovery site. There would be **no impact**.

### 3.13 Noise

#13. NOISE. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#13 -a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?	No	No	<u>Yes</u>	No	No
#13 -b. Generation of excessive groundborne vibration or groundborne noise levels?	No	No	<u>Yes</u>	No	No
#13 -c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No	No	No	<u>Yes</u>	No

#### 3.13.1 Environmental Setting

The project site is located in an undeveloped area in Kern County. The closest sensitive receptor is a residence located approximately 5 miles southeast of the project site. State Route 33 is located approximately 4 miles west of the project site. The Kern County Code of Ordinances states that construction related noise is limited to the hours of 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekend (Kern County 2020).

#### 3.13.2 Discussion

##### #13 -a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?

Construction of the proposed project would temporarily increase the ambient noise levels within the vicinity of the project site due to the use of heavy machinery during construction activities. All work at the proposed project site would be limited to the hours identified in Kern County's Noise Ordinance.



The list of construction equipment that may be used for project construction activities is shown in **Table 3-4** with typical noise levels generated at 50 feet from the equipment (reference levels). However, the closest residence is located approximately 5 miles southeast of the project site, and construction noise levels at this sensitive noise receptor may not be discernable.

**Table 3-4. Construction Equipment and Typical Equipment Noise Levels.**

Type of Equipment	Typical Noise Levels (decibels) L <sub>max</sub> at 50 Feet
Bulldozer	90
Dump Truck	76
Excavator	81
Front End Loader	79
Fusing Machine	N/A
Pick-up Truck	75

**Notes:**

L<sub>max</sub> = maximum instantaneous sound level

L<sub>eq</sub> = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)

Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI Consultants, Inc. in 2023

Noise generated during operation of the project would be from vehicles driving to and from the site and would be consistent with current ambient noise. Impacts related to noise levels would be **less than significant**.

**#13 -b. Generation of excessive groundborne vibration or groundborne noise levels?**

Ground vibration would only be caused during construction activities. Vibrations could be detectable by nearby sensitive receptors, however, there are no nearby sensitive receptors so this impact. Therefore, impacts would be **less than significant**.

**#13 -c) For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

Kern County has established an Airport Land Use Compatibility Plan which has been incorporated into the General Plan (Kern County 2012). The eastern terminus of the project site is located approximately 7.5 miles northwest of the Elk Hills Buttonwillow Airport. The project site is not located within an Airport Influence Area. The proposed project would not expose people residing or working in the area to excessive noise levels. There would be **no impact**.

### 3.14 Population and Housing

#14. POPULATION AND HOUSING. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact	Have Beneficial Impact?
#14 -a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No	No	No	<u>Yes</u>	No
#14 -b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No	No	No	<u>Yes</u>	No

#### 3.14.1 Environmental Setting

The project site is located in an unincorporated area of Kern County. The population was estimated in 2022 to be 909,813 in Kern County (Department of Finance 2022).

#### 3.14.2 Discussion

##### #14 -a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would not develop a new long-term or permanent water supply that would support or facilitate construction of new homes or businesses or extend roadways or other infrastructure that could increase population near the proposed project. The project would not require additional employees to operate. The project would not increase the amount of water pumped to the District; it would allow for more efficient conveyance of water throughout the District. There would be **no impact**.

##### #14 -b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project would not displace people or housing. The project site is located in an undeveloped area of unincorporated Kern County. The nearest residence is located 5 miles southeast of the project site and consists of one single residence with no other homes nearby. There would be **no impact**.

### 3.15 Public Services

#15. PUBLIC SERVICES. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#15 -a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	No	No	No	<u>Yes</u>	No
Fire protection?	No	No	No	<u>Yes</u>	No
Police protection?	No	No	No	<u>Yes</u>	No
Schools?	No	No	No	<u>Yes.</u>	No
Parks?	No	No	No	<u>Yes</u>	No
Other public facilities?	No	No	No	<u>Yes</u>	No

#### 3.15.1 Environmental Setting

The Kern County Sheriff and California Highway Patrol provide law enforcement services for unincorporated Kern County. The Kern County Fire Department provides fire protection to residents of the unincorporated areas of the County (Kern County 2004b). A mutual agreement between the County and the cities of Bakersfield, Taft, and California City allows for protection and assistance in the jurisdiction of each as needed. The County also has a mutual aid contract with USFWS and a service agreement with the Bureau of Land Management.

#### 3.15.2 Discussion

**#15 -a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

The proposed project would not provide or create a need for new or altered government facilities. There would be **no impact**.

### 3.16 Recreation

#16. RECREATION. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#16 -a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No	No	No	<u>Yes</u>	No
#16 -b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	No	No	No	<u>Yes</u>	No

#### 3.16.1 Environmental Setting

The project site is located in an undeveloped area with no nearby recreational facilities. The closest recreational facility is the Buttonwillow recreational park located in Buttonwillow, approximately 7 miles southeast of the project site.

#### 3.16.2 Discussion

**#16-a and b. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

The project is not growth inducing and would not increase the use of existing parks or recreational facilities or require the construction or expansion of recreational facilities. There would be **no impact**.

### 3.17 Transportation

#17. TRANSPORTATION. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#17 -a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No	No	No	<u>Yes</u>	No
#17 -b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	No	No	No	<u>Yes</u>	No
#17 -c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No	No	No	<u>Yes</u>	No
#17 -d. Result in inadequate emergency access?	No	No	No	<u>Yes</u>	No

#### 3.17.1 Environmental Setting

The proposed project site is located in an undeveloped portion of Kern County. Access to the project site is *via* Lokern Road, by heading north using unpaved private roads for approximately 2.5 miles to reach the eastern terminus of the project site at the Flood Canal or 3.5 miles along the California Aqueduct to reach the western terminus.

#### 3.17.2 Discussion

**#17 -a, b, c, and d). Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Result in inadequate emergency access?**

The project would not conflict with any transportation-related program plan, ordinance, or policies. Construction traffic would utilize existing public and private roads to deliver equipment, supplies, and workers to and from the project sites. Operation and maintenance would not generate a permanent increase in vehicle miles traveled because additional trips are not required.

The project would be constructed in an undeveloped area, with the closest residence being 5 miles southeast of the project site. The private roads to and from the project site are sparsely used. Due to the temporary nature of construction activities and the relatively small project site, the proposed project would not significantly increase vehicle miles traveled within Kern County. The project would not require any road closures or result in inadequate emergency access. Since no new roads are being developed, the project would not increase hazards due to a geometric design feature or incompatible uses. There would be **no impact**.

### 3.18 Tribal Cultural Resources

<b>#18. TRIBAL CULTURAL RESOURCES.</b> Would the project cause a substantial adverse change in the significance of a Tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	<b>Have Potentially Significant Impact?</b>	<b>Have Less-than-Significant Impact with Mitigation Incorporated?</b>	<b>Have Less-than-Significant Impact?</b>	<b>Have No Impact?</b>	<b>Have Beneficial Impact?</b>
#18 -a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or	No	No	No	<u>Yes</u>	No
#18 -b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No	No	No	<u>Yes</u>	No

#### 3.18.1 Environmental Setting

A Tribal Sacred Lands search request was filed with the NAHC by GEI archaeologist Amy Wolpert for a search of their Sacred Land File within the project area. The search was completed on November 18, 2022, with negative results (NAHC 2022).

The District sent a letter to the Torres Martinez Desert Cahuilla Indians on June 14, 2022, in accordance with requirements of Assembly Bill 52 (PRC Section 21080.3.1). A request for consultation has not been received. If a request for consultation is received before the District Board of Directors considers project approval, a summary report of the consultation process will be provided to the Board of Directors prior to their consideration of project approval.

### 3.18.2 Discussion

**#18 -a and b) Would the project cause a substantial adverse change in the significance of a Tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k)? A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

There are no known Tribal cultural resources located in the vicinity of the project site. There are no known Indian Sacred Sites in the vicinity of the project site. Since no known Indian Sacred Sites have been identified within the project site, there would be no direct, indirect, or cumulative impacts to Indian Sacred Sites from the proposed project. The proposed project would not have the potential to affect or prohibit access to any ceremonial use of Indian Sacred Sites. There would be **no impact**.



### 3.19 Utilities and Service Systems

#19. UTILITIES AND SERVICE SYSTEMS. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#19 -a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	No	No	<u>Yes</u>	No	No
#19 -b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	No	No	No	<u>Yes</u>	No
#19 -c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No	No	No	<u>Yes</u>	No
#19 -d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No	No	<u>Yes</u>	No	No
#19 -e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	No	No	<u>Yes</u>	No	No

#### 3.19.1 Environmental Setting

The project area is served by PG&E, Southern California Edison, and Southern California Gas (Kern County 2004a). Sewage disposal is handled by both public and private agencies, and by private individual systems. Several incorporated and unincorporated communities are served by wastewater treatment plants managed by community service districts. The closest wastewater treatment plant is the Wasco wastewater treatment plant located approximately 15 miles northeast of the project site. Domestic water is serviced to the public by various water purveyors consisting of public and private water systems. The Kern County Waste Management Department currently owns and operates seven Class II Landfills, the closest one being the Shafter-Wasco Landfill located approximately 11 miles northeast of the project site (Kern County 2004b).

### **3.19.2 Discussion**

#### **#19 -a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

A fiber optic line and electrical line would be installed as part of the proposed project. The fiber optic line would provide the District and DWR with real-time water data. The electrical line would provide energy to serve the existing turnout at the California Aqueduct. The anticipated amount of energy that would be used by the new electrical line is significantly less than the energy that would otherwise be used by the grower-operated deep wells. Because the proposed project would have a net reduction in energy consumption, this impact would be **less than significant**.

#### **#19 -b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

The project would not require a water supply. The proposed project consists of the construction of 2 miles of pipeline to increase water conveyance and water supply reliability. There would be **no impact**.

#### **#19 -c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

The project site is not served by a wastewater treatment provider and the project would not generate wastewater that requires treatment. There would be **no impact**.

#### **#19 -d and e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?**

The proposed project would not create substantial amounts of solid waste, and as such would not exceed the capacity of local infrastructure. Minimal waste would be generated during construction and would likely be disposed of at the Shafter-Wasco Landfill. The Shafter-Wasco Landfill is permitted through 2053 and can receive 1,500 tons/day (CalRecycle 2020). The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. There would be a **less-than-significant** impact.

### 3.20 Wildfire

#20. WILDFIRE. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, <b>would the project:</b>	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#20 -a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	No	No	No	<u>Yes</u>	No
#20 -b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No	No	No	<u>Yes</u>	No
#20 -c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No	No	No	<u>Yes</u>	No
#20 -d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No	No	No	<u>Yes</u>	No

#### 3.20.1 Environmental Setting

The project site is not located in a high severity fire zone. The project site is located in unincorporated Local Responsible Area Moderate Fire Hazard Zone (CAL FIRE 2022). The Kern County Fire Department provides fire protection for residents of the unincorporated areas of the County, including the project site (Kern County 2004b).

#### 3.20.2 Discussion

**#20 -a, b, c, and d) Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

**Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

The project site is not located in a high severity fire zone. The project would allow for an increased water conveyance capacity throughout the District and would increase water supply reliability. Increase in activity at the project site would not impair emergency response or evacuation. Additionally, the short-term, temporary nature of construction and the intermittent nature of material off hauling and drop-off *via* large trucks at the project site would not pose a risk to emergency response or evacuation during an emergency. The project would not require any infrastructure that would exacerbate fire risk or the risk of flooding, slope instability, or drainage changes. There would be **no impact**.

### 3.21 Mandatory Findings of Significance

#21. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:	Have Potentially Significant Impact?	Have Less-than-Significant Impact with Mitigation Incorporated?	Have Less-than-Significant Impact?	Have No Impact?	Have Beneficial Impact?
#21 -a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	No	<u>Yes</u>	No	No	No
#21 -b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	No	<u>Yes</u>	No	No	No
#21 -c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	<u>Yes</u>	No	No

#### 3.21.1 Discussion

**#21 -a. Would the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

The analysis conducted in this IS concludes that implementation of the proposed project would not have a significant impact on the environment. As evaluated in Chapter 3.4 – Biological Resources, impacts on biological resources would be less-than-significant or less-than-significant with mitigation incorporated. The proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal

community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Chapter 3.5 – Cultural Resources, the proposed project would not eliminate important examples of the major periods of California history or prehistory. This impact would be **less-than-significant with mitigation incorporated**.

**#21 -b. Would the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

As discussed in this IS, the proposed project would result in less than significant impacts with mitigation incorporated, less-than-significant impacts, or no impacts on aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, Tribal cultural resources, utilities and service systems, and wildfire.

The temporary nature of the proposed project construction impacts (up to 10 months), and the minor, negligible changes to long-term operations and maintenance at the project site would result in no impacts or less-than-significant environmental impacts on the physical environment. None of the proposed project impacts make cumulatively considerable, incremental contributions to significant cumulative impacts with incorporation of mitigation presented in this IS. This impact would be **less-than-significant with mitigation incorporated**.

**#21 -c. Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

The project would result in less-than-significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. This impact would be **less than significant**.

## 4.0 References

---

### Chapter 2.0 – Project Description

#### Chapter 3.1 – Aesthetics

California Department of Transportation (Caltrans). 2019. *List of eligible and officially designated State Scenic Highways*. August 2019. Available: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways> Accessed: January 24, 2023.

Kern County. 1980. *Zone Maps*. Available: <https://kernpublicworks.com/maps/zone-maps/> Accessed: June 23, 2020.

#### Chapter 3.2 – Agriculture and Forestry

Department of Conservation (DOC). 2018. *California Important Farmland Finder*. Available: <https://maps.conservation.ca.gov/DLRP/CIFF/> Accessed: June 19, 2020.

Kern County. 1980. *Zone Maps*. Available: <https://kernpublicworks.com/maps/zone-maps/> Accessed: June 23, 2020.

\_\_\_\_\_. 2010. *Kern County Williamson Act Parcels and Non-Renewals, California, 2010*. GIS Layer. Available: <https://databasin.org/datasets/b4b2b8e824114b32b1005c74663237fd> Accessed: June 23, 2020.

#### Chapter 3.3 – Air Quality

California Air Resources Board (CARB). 2022. *Maps of State and Federal Area Designations*. Available: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations> Accessed: January 24, 2023.

\_\_\_\_\_. 2020. *Air Quality Trend Summaries*. Available: <https://www.arb.ca.gov/adam/> Accessed: June 22, 2020.

Environmental Protection Agency (EPA). 2023. *Nonattainment Areas for Criteria Pollutants (Green Book)*. Available: <https://www.epa.gov/green-book> Accessed: January 5, 2024.

\_\_\_\_\_. 2012a. *Ambient Air Quality Standards & Valley Attainment Status*. Available: <https://www.valleyair.org/aqinfo/attainment.htm> Accessed: June 22, 2020.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2012b. *Small Project Analysis Level (SPAL)*. Available:

<https://www.valleyair.org/transportation/CEQA%20Rules/SPALTables61912.pdf> PDF  
Accessed: June 22, 2020.

### Chapter 3.4 – Biological Resources

California Department of Fish and Game (CDFG). 2012. *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency, Sacramento, CA. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed: January 5, 2024.

California Department of Fish and Wildlife (CDFW). 2023a. Results of electronic database search for sensitive species occurrences. Version 5. Biogeographic Data Branch. Available: <https://wildlife.ca.gov/Data/CNDDDB>. Accessed: December 12, 2023.

\_\_\_\_\_. 2023b. *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species*. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants. Online edition, v9.5. Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed: December 12, 2023.

City of Bakersfield. 1994. Metropolitan Bakersfield Habitat Conservation Plan. Available: <https://docs.bakersfieldcity.us/weblink/0/edoc/625001/Metropolitan%20Bakersfield%20Habitat%20Conservation%20Plan.pdf> Accessed: January 24, 2023.

Kern County Planning Department. 2006. *First Public Draft, Kern County Valley Floor Habitat Conservation Plan*. Prepared by Garcia and Associates, Lompoc, CA. December 2006.

Kern County. 2004a. *General Plan*. Available: <https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf>. Accessed: March 2, 2020.

Natural Resources Conservation District (NRCS). 2023. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed: January 5, 2024.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation, 2nd edition*. California Native Plant Society, Sacramento, California.

Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. Available: Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.



United States Fish and Wildlife Service (USFWS). 2011. *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance*. Sacramento Fish and Wildlife Office, Sacramento, CA. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.

\_\_\_\_\_. 2013. *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats*. Sacramento Field Office. Sacramento, CA. Available: <https://www.fws.gov/media/survey-protocol-determining-presence-san-joaquin-kangaroo-rats>. Accessed: December 27, 2023.

\_\_\_\_\_. 2023. IPaC Resource List. Generated at <https://ecos.fws.gov/ipac/> on December 12, 2023.

Western Regional Climate Center (WRCC). 2020. *Recent Climate in the West*. Available: <https://wrcc.dri.edu/> Accessed: January 24, 2023.

### **Chapter 3.5 – Cultural**

Office of Historic Preservation (OHP). 1999. *California State Law and Historic Preservation: Statutes, Regulations and Administrative Policies Regarding Historic Preservation and Protection of Cultural and Historical Resources*. Available: <https://ohp.parks.ca.gov/pages/1054/files/statelaws.pdf> Accessed: January 13, 2023.

### **Chapter 3.6 – Energy**

California Energy Commission (CEC). 2015. *Fact Sheet: California’s 2030 Climate Commitment – Renewable Resources for Half of the State’s Electricity by 2030*. Available: [https://ww3.arb.ca.gov/html/fact\\_sheets/2030\\_renewables.pdf](https://ww3.arb.ca.gov/html/fact_sheets/2030_renewables.pdf). Accessed: June 22, 2020.

\_\_\_\_\_. 2023. *Electricity Consumption by County*. Available: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx> Accessed: December 1, 2023.

### **Chapter 3.7 – Geology and Soils**

California Geologic Survey (CGS). 2015. *Fault Activity Map of California*. Available: <https://maps.conservation.ca.gov/cgs/fam/> Accessed: January 24, 2023.

\_\_\_\_\_. 2015b. *Geologic Map of California*. Available: <https://maps.conservation.ca.gov/cgs/gmc/> Accessed: January 24, 2023.

\_\_\_\_\_. 2022a. *Earthquake Zones of Required Investigation*. Available: <https://maps.conservation.ca.gov/cgs/EQZApp/app/> Accessed: June 22, 2020.

\_\_\_\_\_. 2022b. *CSG Warehouse Information*. Available:  
<https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatory>  
maps Accessed: June 22, 2020.

Natural Resources Conservation Service (NRCS). 2022. *U.S. Department of Agriculture Natural Resources Conservation Services, Web Soil Survey*. Available:  
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> Accessed: January 24, 2023.

### **Chapter 3.8 – Greenhouse Gas Emissions**

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. *Guidance for Valley Land-use Agencies in Addressing GHG Emissions Impacts for New Projects under CEQA*. Available: <http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%202017%202009.pdf> Accessed: June 22, 2020.

State of California. 2018. *California Climate Change. California Climate Change Executive Orders*. Available: <https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf> Accessed: March June 22, 2020.

### **Chapter 3.9 – Hazards and Hazardous Waste**

California Department of Forestry and Fire Protection (CAL FIRE). 2022. *State Responsibility Area Fire Hazard Severity Zones*. Available:  
[https://osfm.fire.ca.gov/media/6687/fhszs\\_map15.pdf](https://osfm.fire.ca.gov/media/6687/fhszs_map15.pdf) Accessed: June 23, 2020.

California Department of Toxic Substances Control. (DTSC) 2023a. *Envirostor Hazardous Waste and Substances Site List (Cortese)*. Available:  
[https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site\\_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM,COLUR&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+\(CORTESE\)](https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM,COLUR&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+(CORTESE)).  
Accessed: December 1, 2023.

\_\_\_\_\_. 2023b. *Cortese List: Section 65962.5(a)*. Available:  
<https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/>. Accessed: December 1, 2023.

CalEPA. California Environmental Protection Agency. 2023. *Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit*. Available: <https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>. Accessed: December 1, 2023.

California State Water Resources Control Board (State Water Board). 2023a. *GeoTracker Database*. Available:

[https://geotracker.waterboards.ca.gov/map/?global\\_id=T0601700073](https://geotracker.waterboards.ca.gov/map/?global_id=T0601700073). Accessed: December 1, 2023.

\_\_\_\_\_. 2023b. *CDO-CAO List*. Available: <https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx>. Accessed: December 1, 2023.

California Department of Conservation (DOC). 2000. *A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, 2000, Map scale 1:1,100,000, Open-File Report 2000-19*. Available: [ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr\\_2000-019.pdf](ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf). Accessed: June 22, 2020.

U.S. Environmental Protection Agency (EPA). 2023. *Superfund Enterprise Management System (SEMS) Database*. Available: <https://www.epa.gov/enviro/sems-search>. Accessed: December 1, 2023.

Kern County. 2012. *Airport Land Use Compatibility Plan*. Available: <https://psbweb.co.kern.ca.us/planning/pdfs/ALUCP2012.pdf> Accessed: June 22, 2020.

### **Chapter 3.10 – Hydrology**

Buena Vista Water Storage District (BVWSD). 2016. Buena Vista Water Storage District 2016 Engineer’s Assessment Report in Support of Proposition 218 Assessment Ballot Proceeding. Available: <https://www.bvh2o.com/EngineersReport.pdf> Accessed: July 1, 2020.

California Regional Water Quality Control Board, Central Valley Region (CVRWQCB). 2018. *Water Quality Control Plan (Basin Plan) for the Tulare Lake Basin*. Available: [https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/tlbp\\_201805.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/tlbp_201805.pdf). Accessed: June 23, 2020.

Department of Water Resources (DWR). 2015. *CA Bulletin 118 Groundwater Basins, Data and Resources*. Available: <https://data.cnra.ca.gov/dataset/ca-bulletin-118-groundwater-basins> Accessed: June 23, 2020.

\_\_\_\_\_. 2019. *Groundwater Basin Prioritization*. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed: June 23, 2020.

Federal Emergency Management Agency (FEMA). 2020. *FEMA’s National Flood Hazard Layer (NFHL) Viewer*. Available: <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd> Accessed: June 23, 2020.

Kern County. 2023. *Kern County Municipal Code, Chapter 17.28 – Grading Code*. Available: [https://library.municode.com/ca/kern\\_county/codes/code\\_of\\_ordinances?nodeId=TIT17B\\_UCO\\_CH17.28GRCO\\_17.28.180COWO](https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT17B_UCO_CH17.28GRCO_17.28.180COWO) Accessed: January 9, 2024.

State Water Resources Control Board (State Water Board). 2017. *Final 2014 and 2016 Integrated Report (CWA Section 303(d) List/ 305(b) Report)*. Available: [https://www.waterboards.ca.gov/water\\_issues/programs/tmdl/2014\\_16state\\_ir\\_reports/category5\\_report.shtml](https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category5_report.shtml). Accessed: June 23, 2020.

### **Chapter 3.11 – Land Use and Planning**

Kern County. 1980. *Zone Maps*. Available: <https://kernpublicworks.com/maps/zone-maps/> Accessed: June 23, 2020.

### **Chapter 3.12 – Mineral Resources**

Department of Conservation (DOC). 2009. *Special Report 210*. Available: [https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatory\\_maps](https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatory_maps) Accessed: June 23, 2020.

### **Chapter 3.13 – Noise**

Kern County. 2012. *Airport Land Use Compatibility Plan*. Available: <https://psbweb.co.kern.ca.us/planning/pdfs/ALUCP2012.pdf> Accessed: June 23, 2020.

Kern County 2020. *Code of Ordinances, Title 8 Health and Safety*. Available: [https://library.municode.com/ca/kern\\_county/codes/code\\_of\\_ordinances](https://library.municode.com/ca/kern_county/codes/code_of_ordinances) Accessed: June 23, 2020.

U.S. Department of Transportation, Federal Highway Administration (FHWA), Office of Planning, Environment, and Realty, Roadway. 2006. *Construction Noise Handbook*. Available: [https://www.fhwa.dot.gov/Environment/noise/construction\\_noise/handbook/handbook09.cfm](https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook09.cfm) Accessed: June 23, 2020.

### **Chapter 3.14 – Population and Housing**

Department of Finance (DOF). 2022. *E-1 Cities, Counties, and State Population Estimates with Annual Percent Change – January 1, 2021, and 2022*. Available: <https://dof.ca.gov/forecasting/demographics/estimates-e1/> Accessed: January 24, 2023.

### **Chapter 3.15 – Public Services**

Kern County. 2004b. *Volume I Recirculated Draft Program Environmental Impact Report*. Available: [https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP\\_RPEIR\\_vol1.pdf](https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_RPEIR_vol1.pdf) Accessed: June 18, 2020.

### **Chapter 3.16 – Recreation**

*No Citations.*

### **Chapter 3.17 – Transportation**

*No Citations.*

### **Chapter 3.18 – Tribal Cultural Resources**

Native American Heritage Commission (NAHC). 2022. *Sacred Lands Record Search*. Accessed: November 18, 2022.

### **Chapter 3.19 – Utilities**

CalRecycle. 2020. *SWIS Facility Details, Shafter-Wasco Recycling & Sanitary LF (15-AA-0057)*. Available:  
<https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3891?siteID=705>  
Accessed: January 24, 2023.

Kern County. 2004a. *General Plan*. Available:

<https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf> Accessed: March 2, 2020.

\_\_\_\_\_. 2004b. *Volume I Recirculated Draft Program Environmental Impact Report*. Available:

[https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP\\_RPEIR\\_vol1.pdf](https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_RPEIR_vol1.pdf) Accessed: March 11, 2020.

### **Chapter 3.20 – Wildfire**

California Department of Forestry and Fire Protection (CAL FIRE). 2022. *State Responsibility Area Fire Hazard Severity Zones*. Available:

[https://osfm.fire.ca.gov/media/6687/fhszs\\_map15.pdf](https://osfm.fire.ca.gov/media/6687/fhszs_map15.pdf) Accessed: June 23, 2020.

Kern County. 2004b. *Volume I Recirculated Draft Program Environmental Impact Report*.

Available: [https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP\\_RPEIR\\_vol1.pdf](https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_RPEIR_vol1.pdf)  
Accessed: June 23, 2020.

### **Chapter 3.21 – Mandatory Findings of Significance**

*No Citations.*

*[This page left intentionally blank]*

## 5.0 Report Preparers

---

### GEI Consultants, Inc.

Ginger Gillin .....Project Director, Document Review

Nicholas Tomera.....Project Manager, Project Introduction, Project Description

Anne King.....Project Biologist

Chrissy Russo.....Project Introduction, Project Description, Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, Wildfire, and Mandatory Findings of Significance

Jesse Martinez, RPA .....Cultural Resources and Tribal Cultural Resources

Ryan Snyder.....Geographic Information Systems

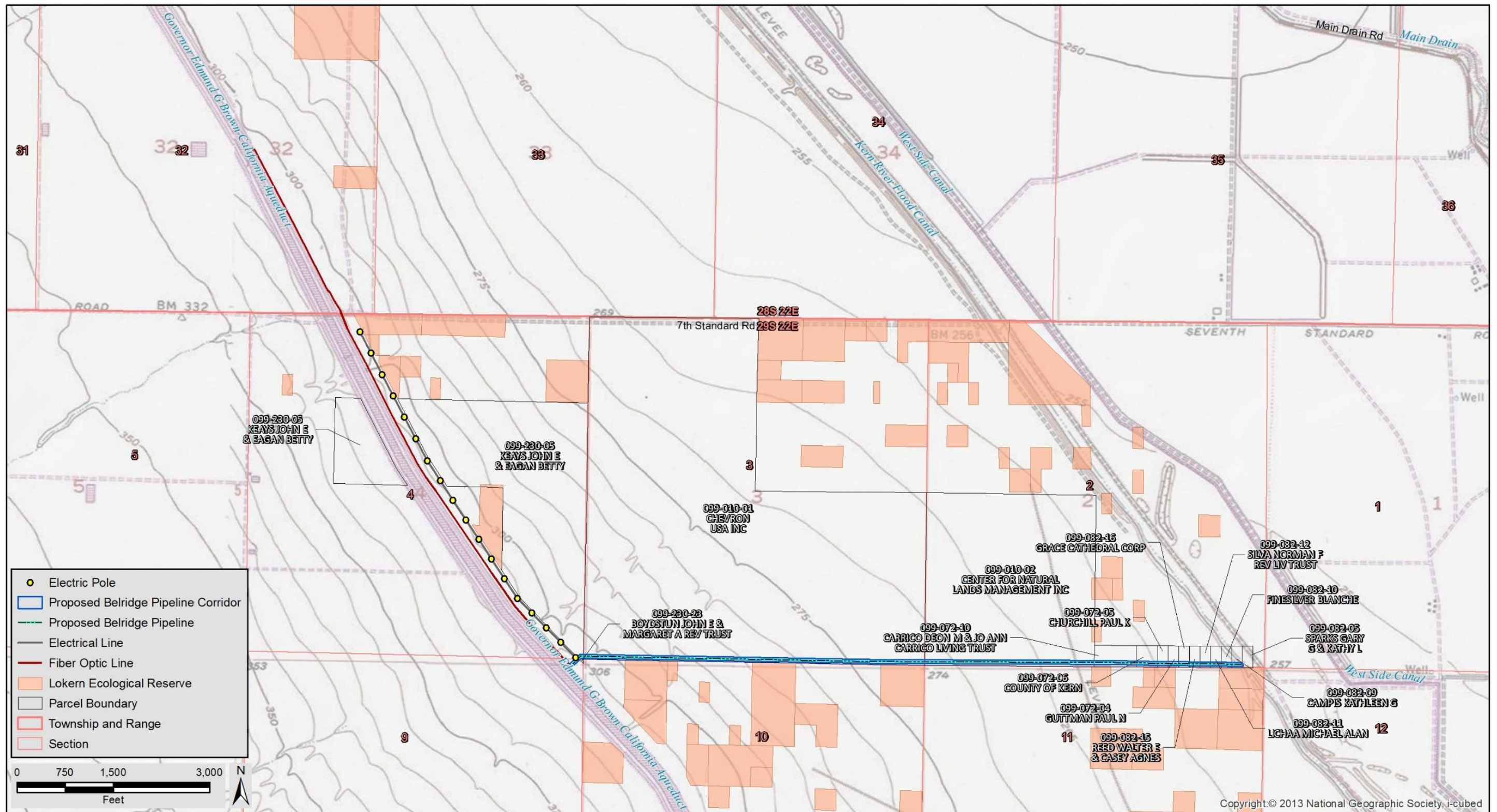
Gigi Gable.....Report Editing

Marguerite Myers.....Formatting and Section 508 Conformance

*[This page left intentionally blank]*



# Appendix A Topographical Project Figure



Copyright: © 2013 National Geographic Society, i-cubed  
 12-Mar-2024 Z:\Projects\1801694\_BVWSD\1801694\_G032\_BelridgeRoutes\_Topo.mxd RS

# **Appendix B    Air Quality/GHG Calculations and Modeling**

---

Belridge Pipeline							
Equipment Type	Units	Estimated Hours of Use per Day for Phase	Horsepower (pulled from CalEEMod version 2022.1)	Working Days Per Activity	Total Equipment Hours	hp-hr	hp-hr/ construction day
<b>Mobilization</b>							
Semi Truck (equipment delivery)	2	8	376	8	128	48,128	6,016
						<b>48,128</b>	<b>6,016</b>
<b>Construction of the Belridge Pipeline</b>							
Excavator	2	10	36	34	680	24,480	720
loader	1	10	84	34	340	28,560	840
Dozer	1	10	367	34	340	124,780	3,670
Dump Truck	2	10	376	34	680	255,680	7,520
Water Truck	1	8	82	34	272	22,304	656
Large fusing machine	1	6	84	34	204	17,136	504
Crew truck	6	3	82	34	612	50,184	1,476
Pick-up Truck	2	3	82	34	204	16,728	492
						<b>539,852</b>	<b>15,878</b>
<b>Construction of the Fiber Optic Line and Wooden Poles</b>							
Line Truck	2	10	82	14	280	22,960	1,640
Truck-mounted Auger	1	10	83	14	140	11,620	830
Pick-up Truck	2	3	82	14	84	6,868	492
Crew truck	6	3	82	14	252	20,664	1,476
						<b>62,132</b>	<b>4,438</b>
				40	0	-	-
							<b>15,878 MAX HP-HR</b>

18,278 hp-hr threshold (SJVAPCD)

# Belridge Detailed Report

## Table of Contents

1. Basic Project Information
  - 1.1. Basic Project Information
  - 1.2. Land Use Types
  - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
2. Emissions Summary
  - 2.1. Construction Emissions Compared Against Thresholds
  - 2.2. Construction Emissions by Year, Unmitigated
3. Construction Emissions Details
  - 3.1. Mobilization (2025) - Unmitigated
  - 3.3. Year 1 - Pipeline (2025) - Unmitigated
  - 3.5. Year 2 - Pipeline (2026) - Unmitigated
  - 3.7. Fiber Optic Line and Wooden Poles (2026) - Unmitigated
4. Operations Emissions Details
  - 4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

## 5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	Belridge
Construction Start Date	10/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	16.2
Location	35.441942047703265, -119.59306049282958
County	Kern-San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2916
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.21

## 1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	1.00	Mile	18.5	0.00	—	—	—	—



### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.76	3.97	35.2	38.1	0.09	1.54	30.0	31.6	1.42	6.52	7.94	—	10,647	10,647	0.35	0.46	6.10	10,799
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.60	5.51	47.4	48.8	0.13	2.00	36.2	38.2	1.84	7.18	9.02	—	15,119	15,119	0.51	0.60	0.22	15,312
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	0.27	2.50	2.92	0.01	0.12	1.52	1.60	0.11	0.32	0.41	—	671	671	0.02	0.03	0.15	679
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.05	0.46	0.53	< 0.005	0.02	0.28	0.29	0.02	0.06	0.07	—	111	111	< 0.005	< 0.005	0.03	112

### 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	1.40	1.17	7.68	8.18	0.04	0.26	6.17	6.42	0.24	0.66	0.90	—	4,129	4,129	0.15	0.14	2.08	4,176
2026	4.76	3.97	35.2	38.1	0.09	1.54	30.0	31.6	1.42	6.52	7.94	—	10,647	10,647	0.35	0.46	6.10	10,799
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	6.60	5.51	47.4	48.8	0.13	2.00	36.2	38.2	1.84	7.18	9.02	—	15,119	15,119	0.51	0.60	0.22	15,312
2026	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.28	0.23	2.05	2.12	0.01	0.09	1.52	1.60	0.08	0.32	0.40	—	625	625	0.02	0.03	0.15	634
2026	0.33	0.27	2.50	2.92	0.01	0.12	1.36	1.48	0.11	0.30	0.41	—	671	671	0.02	0.02	0.13	679
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.05	0.04	0.37	0.39	< 0.005	0.02	0.28	0.29	0.01	0.06	0.07	—	104	104	< 0.005	< 0.005	0.03	105
2026	0.06	0.05	0.46	0.53	< 0.005	0.02	0.25	0.27	0.02	0.05	0.07	—	111	111	< 0.005	< 0.005	0.02	112

### 3. Construction Emissions Details

#### 3.1. Mobilization (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	6.84	7.40	0.03	0.24	—	0.24	0.22	—	0.22	—	3,330	3,330	0.14	0.03	—	3,341
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	6.84	7.40	0.03	0.24	—	0.24	0.22	—	0.22	—	3,330	3,330	0.14	0.03	—	3,341	
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.04	0.03	0.19	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	91.2	91.2	< 0.005	< 0.005	—	91.5	
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	0.01	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2	
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.39	110
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.81	0.18	< 0.005	0.01	6.07	6.08	0.01	0.64	0.65	—	691	691	0.01	0.11	1.70	725
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.6	94.6	< 0.005	< 0.005	0.01	95.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	0.01	0.86	0.18	< 0.005	0.01	6.07	6.08	0.01	0.64	0.65	—	691	691	0.01	0.11	0.04	724
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	< 0.005	2.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	0.16	0.16	< 0.005	0.02	0.02	—	18.9	18.9	< 0.005	< 0.005	0.02	19.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	3.14	3.14	< 0.005	< 0.005	< 0.005	3.29

### 3.3. Year 1 - Pipeline (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.10	4.28	36.5	39.8	0.08	1.69	—	1.69	1.56	—	1.56	—	8,433	8,433	0.34	0.07	—	8,462
Dust From Material Movement:	—	—	—	—	—	—	8.20	8.20	—	4.21	4.21	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.70	1.85	< 0.005	0.08	—	0.08	0.07	—	0.07	—	393	393	0.02	< 0.005	—	394
Dust From Material Movement:	—	—	—	—	—	—	0.38	0.38	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.31	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	65.0	65.0	< 0.005	< 0.005	—	65.3
Dust From Material Movement:	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.6	94.6	< 0.005	< 0.005	0.01	95.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.08	0.04	3.10	0.65	0.02	0.05	21.7	21.8	0.05	2.28	2.33	—	2,475	2,475	0.02	0.39	0.16	2,592
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.58	4.58	< 0.005	< 0.005	0.01	4.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.14	0.03	< 0.005	< 0.005	0.97	0.97	< 0.005	0.10	0.10	—	115	115	< 0.005	0.02	0.12	121
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	19.1	19.1	< 0.005	< 0.005	0.02	20.0

### 3.5. Year 2 - Pipeline (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.64	3.89	32.4	36.9	0.08	1.50	—	1.50	1.38	—	1.38	—	8,118	8,118	0.33	0.07	—	8,146
Dust From Material Movement	—	—	—	—	—	—	8.20	8.20	—	4.21	4.21	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.51	1.72	< 0.005	0.07	—	0.07	0.06	—	0.06	—	378	378	0.02	< 0.005	—	379
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	62.6	62.6	< 0.005	< 0.005	—	62.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.35	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.05	2.82	0.62	0.02	0.05	21.7	21.8	0.05	2.28	2.33	—	2,423	2,423	0.02	0.39	5.76	2,546
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.48	4.48	< 0.005	< 0.005	0.01	4.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.14	0.03	< 0.005	< 0.005	0.97	0.97	< 0.005	0.10	0.10	—	113	113	< 0.005	0.02	0.12	118
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.74	0.74	< 0.005	< 0.005	< 0.005	0.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	18.7	18.7	< 0.005	< 0.005	0.02	19.6

### 3.7. Fiber Optic Line and Wooden Poles (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.68	2.26	22.3	29.6	0.04	1.24	—	1.24	1.14	—	1.14	—	4,486	4,486	0.18	0.04	—	4,501
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.85	1.13	< 0.005	0.05	—	0.05	0.04	—	0.04	—	172	172	0.01	< 0.005	—	173



Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.02	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	28.5	28.5	< 0.005	< 0.005	—	28.6
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.04	0.03	0.03	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	106	106	< 0.005	< 0.005	0.35	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.69	3.69	< 0.005	< 0.005	0.01	3.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
---------	------	------	------	------	------	------	------	------	------	------	------	------	---	------	------	------	------	------	------

### 4. Operations Emissions Details

#### 4.10. Soil Carbon Accumulation By Vegetation Type

##### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

##### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Mobilization	Linear, Grubbing & Land Clearing	9/18/2025	10/1/2025	5.00	10.0	—
Year 1 - Pipeline	Linear, Grading & Excavation	10/1/2025	10/23/2025	5.00	17.0	—
Year 2 - Pipeline	Linear, Grading & Excavation	8/1/2026	8/25/2026	5.00	17.0	—
Fiber Optic Line and Wooden Poles	Linear, Grading & Excavation	8/26/2026	9/14/2026	5.00	14.0	—

### 5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Mobilization	Off-Highway Trucks	Diesel	Average	2.00	10.0	376	0.38
Year 1 - Pipeline	Excavators	Diesel	Average	2.00	10.0	36.0	0.38
Year 1 - Pipeline	Other Construction Equipment	Diesel	Average	6.00	10.0	82.0	0.42
Year 1 - Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Year 1 - Pipeline	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Year 1 - Pipeline	Off-Highway Trucks	Diesel	Average	2.00	10.0	376	0.38
Year 1 - Pipeline	Welders	Diesel	Average	1.00	10.0	46.0	0.45
Year 2 - Pipeline	Excavators	Diesel	Average	1.00	2.00	36.0	0.38
Year 2 - Pipeline	Other Construction Equipment	Diesel	Average	6.00	10.0	82.0	0.42
Year 2 - Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Year 2 - Pipeline	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Year 2 - Pipeline	Off-Highway Trucks	Diesel	Average	2.00	10.0	376	0.38
Year 2 - Pipeline	Welders	Diesel	Average	1.00	10.0	46.0	0.45
Fiber Optic Line and Wooden Poles	Bore/Drill Rigs	Diesel	Average	1.00	10.0	83.0	0.50
Fiber Optic Line and Wooden Poles	Other Construction Equipment	Diesel	Average	10.0	10.0	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Year 1 - Pipeline	—	—	—	—

Year 1 - Pipeline	Worker	8.00	17.3	LDA,LDT1,LDT2
Year 1 - Pipeline	Vendor	0.00	10.6	HHDT,MHDT
Year 1 - Pipeline	Hauling	35.8	20.0	HHDT
Year 1 - Pipeline	Onsite truck	—	—	HHDT
Year 2 - Pipeline	—	—	—	—
Year 2 - Pipeline	Worker	8.00	17.3	LDA,LDT1,LDT2
Year 2 - Pipeline	Vendor	0.00	10.6	HHDT,MHDT
Year 2 - Pipeline	Hauling	35.8	20.0	HHDT
Year 2 - Pipeline	Onsite truck	—	—	HHDT
Mobilization	—	—	—	—
Mobilization	Worker	8.00	17.3	LDA,LDT1,LDT2
Mobilization	Vendor	0.00	10.6	HHDT,MHDT
Mobilization	Hauling	10.0	20.0	HHDT
Mobilization	Onsite truck	—	—	HHDT
Fiber Optic Line and Wooden Poles	—	—	—	—
Fiber Optic Line and Wooden Poles	Worker	8.00	17.3	LDA,LDT1,LDT2
Fiber Optic Line and Wooden Poles	Vendor	0.00	10.6	HHDT,MHDT
Fiber Optic Line and Wooden Poles	Hauling	0.00	20.0	HHDT
Fiber Optic Line and Wooden Poles	Onsite truck	—	—	HHDT

### 5.4. Vehicles

#### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

### 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Mobilization	0.00	0.00	18.5	0.00	—
Year 1 - Pipeline	0.00	4,000	18.5	0.00	—
Year 2 - Pipeline	0.00	4,010	18.5	0.00	—
Fiber Optic Line and Wooden Poles	0.00	0.00	18.5	0.00	—

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	18.5	100%

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
-----------	--------	------------------------------	------------------------------

## 6. Climate Risk Detailed Report

### 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	22.1	annual days of extreme heat
Extreme Precipitation	0.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters



Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

### 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

### 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2
-------------------------	---	---	---	---

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

### 6.4. Climate Risk Reduction Measures

## 7. Health and Equity Details

### 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	80.1
AQ-PM	94.5
AQ-DPM	15.2
Drinking Water	96.9
Lead Risk Housing	65.4
Pesticides	91.4
Toxic Releases	68.0
Traffic	7.36
Effect Indicators	—
CleanUp Sites	42.6
Groundwater	66.1
Haz Waste Facilities/Generators	94.3
Impaired Water Bodies	43.8
Solid Waste	85.1

Sensitive Population	—
Asthma	48.6
Cardio-vascular	78.4
Low Birth Weights	73.1
Socioeconomic Factor Indicators	—
Education	79.6
Housing	57.9
Linguistic	82.6
Poverty	85.8
Unemployment	88.7

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	34.96727833
Employed	23.22597203
Median HI	31.22032593
Education	—
Bachelor's or higher	7.442576671
High school enrollment	100
Preschool enrollment	52.04670858
Transportation	—
Auto Access	58.83485179
Active commuting	27.3193892
Social	—
2-parent households	39.56114462

Voting	47.33735404
Neighborhood	—
Alcohol availability	52.93211857
Park access	12.08777108
Retail density	2.823046324
Supermarket access	7.224432183
Tree canopy	1.180546644
Housing	—
Homeownership	61.36276145
Housing habitability	44.36032337
Low-inc homeowner severe housing cost burden	84.92236623
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	17.09226229
Health Outcomes	—
Insured adults	44.20633902
Arthritis	0.0
Asthma ER Admissions	74.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	49.9
Cognitively Disabled	93.6
Physically Disabled	85.5
Heart Attack ER Admissions	38.2

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	57.9
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	72.4
Elderly	81.3
English Speaking	26.6
Foreign-born	46.4
Outdoor Workers	3.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	92.3
Traffic Density	15.9
Traffic Access	0.0
Other Indices	—
Hardship	82.9
Other Decision Support	—
2016 Voting	34.4

### 7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	96.0
Healthy Places Index Score for Project Location (b)	29.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

### 7.4. Health & Equity Measures

No Health & Equity Measures selected.

### 7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

### 7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

## 8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Anticipated construction phases based on information provided by the client.
Construction: Off-Road Equipment	Construction equipment provided by the District.
Construction: Trips and VMT	Information provided by the District. Hauling trips were estimate based on the anticipated trips needed to bring material to the site, and offhaul excavated materials.
Construction: On-Road Fugitive Dust	The project site is unpaved.

# **Appendix C    Biological Resources Technical Report**

---



**Biological Technical Report**  
**Buena Vista Water Storage District**  
**Belridge Pipeline Project**

Prepared for:  
Buena Vista Water Storage District

January 2024



# **Biological Technical Report**

## **Buena Vista Water Storage District**

### **Belridge Pipeline Project**

Prepared for:

Buena Vista Water Storage District  
525 North Main Street  
Buttonwillow, CA 93206

Contact:

Mr. Tim Ashlock  
Engineer-Manager  
661-324-1101



Prepared by:

GEI Consultants  
5001 California Avenue, Suite 120  
Bakersfield, CA 93309

Contact:

Ginger Gillin  
Principal Environmental Scientist  
503-342-3777

January 2024

Project No. 1801694

# Table of Contents

---

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
1.1	Project Location and Background .....	1
1.2	Project Description .....	1
1.2.1	Belridge Pipeline .....	2
1.2.2	Fiber Optic and Electrical Lines.....	2
1.2.3	Construction, Schedule, Staffing, and Equipment.....	5
1.2.4	Operation and Maintenance .....	5
1.3	Biological Resources Assessment Methods.....	6
1.3.1	Desktop Research.....	6
1.3.2	Field Surveys .....	6
<b>2.0</b>	<b>Regulatory Setting.....</b>	<b>8</b>
2.1	Federal Plans, Policies, Regulations and Laws.....	8
2.1.1	Federal Endangered Species Act.....	8
2.1.2	Section 404 of the Clean Water Act .....	8
2.1.3	Section 401 Water Quality Certification.....	9
2.1.4	Migratory Bird Treaty Act .....	9
2.2	State Plans, Policies, Regulations, Laws .....	10
2.2.1	California Endangered Species Act.....	10
2.2.2	Porter-Cologne Water Quality Control Act .....	10
2.2.3	California Fish and Game Code .....	10
2.2.4	Regional and Local Plans, Policies, Regulations, and Ordinances.....	11
<b>3.0</b>	<b>Environmental Setting .....</b>	<b>12</b>
3.1	Vegetation and Wildlife .....	12
3.1.1	Vegetation.....	12
3.1.2	Wildlife .....	12
3.2	Special-status Species.....	13
3.3	Sensitive Habitats .....	25
3.3.1	Critical Habitat.....	25
3.3.2	Other Habitats Protected under Federal or State Regulations ..	25
3.3.3	Sensitive Natural Communities .....	25
<b>4.0</b>	<b>Potential Impacts.....</b>	<b>26</b>
4.1	Special-status Plants.....	26
4.2	Special-status Wildlife .....	27
4.2.1	Invertebrates .....	27
4.2.2	Reptiles .....	27
4.2.3	Birds.....	28
4.2.4	Mammals .....	28
4.3	Sensitive Habitats .....	29
4.4	Other Potential Impacts on Biological Resources .....	29

<b>5.0</b>	<b>Recommended Impact Avoidance, Minimization, and Compensation Measures .....</b>	<b>31</b>
5.1	Best Management Practices .....	31
5.2	Species-specific Measures.....	34
5.2.1	Special-status Plants.....	34
5.2.2	Crotch’s Bumble Bee .....	34
5.2.3	Wildlife Exclusion Fencing .....	35
5.2.4	Blunt-nosed Leopard Lizard .....	35
5.2.5	Burrowing Owl.....	35
5.2.6	Swainson’s Hawk .....	36
5.2.7	White-tailed Kite .....	37
5.2.8	Other Nesting Birds.....	37
5.2.9	Tipton Kangaroo Rat and Giant Kangaroo Rat .....	37
5.2.10	San Joaquin Antelope Squirrel.....	38
5.2.11	San Joaquin Kit Fox .....	38
5.2.12	Compensatory Mitigation .....	39
5.2.13	Mitigation Land Restoration .....	40
<b>6.0</b>	<b>References .....</b>	<b>41</b>

**List of Tables**

Table 1.	Project Component Characteristics.....	2
Table 2.	Special-status Plants Evaluated for Potential to Occur on the Project Site.....	144
Table 3.	Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site.....	199

**List of Figures**

Figure 1.	Project Components.....	3
Figure 2.	Special-status Plant Populations Observed during Focused Surveys in 2019 and 2022. ....	16
Figure 3.	Special-status Wildlife Observations Documented during Focused Field Surveys and Trapping in 2020-2022. ....	23

**List of Appendices**

- Appendix A – Special-status Species Lists
- Appendix B – Photographs of Project Alignments
- Appendix C – Plant and Animal Species Documented During Field Surveys

## Abbreviations and Acronyms

---

BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
District	Buena Vista Water Storage District
DWR	California Department of Water Resources
EPA	Environmental Protection Agency
ESA	federal Endangered Species Act
Flood Canal	Kern River Flood Canal
GEI	GEI Consultants, Inc.
HCP	habitat conservation plan
IPaC	Information for Planning and Conservation
MBI	McCormick Biological, Inc.
MBTA	Migratory Bird Treaty Act
mph	miles per hour
NMFS	National Marine Fisheries Service
PG&E	Pacific Gas and Electric Company
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
project	Belridge Pipeline Project
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WEF	wildlife exclusion fencing

*[This page intentionally left blank.]*

# 1.0 Introduction

---

This biological technical report addresses biological resources that could be affected by implementing the Buena Vista Water Storage District (District) Belridge Pipeline Project (project). Information on special-status species and sensitive habitats present on the project site and effects of project implementation are evaluated. In addition, measures are recommended to avoid or minimize potential for impacts during project construction.

## 1.1 Project Location and Background

The District's service area includes approximately 50,000 acres in the lower Kern River watershed of western Kern County. The project site is approximately 30 miles west of the City of Bakersfield and 6 miles west-northwest of the community of Buttonwillow, in Sections 2, 3, 4, and 11 of the Lokern U.S. Geological Survey (USGS) 7.5-minute quadrangle.

All water used in the District is delivered to agricultural and environmental users, including the Kern Natural Wildlife Refuge, approximately 7 miles north of the District's northern boundary. Approximately 35,000 acres of the District service area are annually farmed, the primary crops being pistachios, cotton, alfalfa, and grains. The District receives 150,000 acre-feet per year of surface water from the Kern River and 12,000 acre-feet per year from the State Water Project. The District operates a delivery system of pipelines and earthen canals. The District currently has access to five turnouts from the California Aqueduct that can provide approximately 850 cubic feet per second of gravity inflow capacity directly into the distribution system. Annual surface water supply exceeds the District's average annual crop demands; although the supply is highly irregular and often requires growers to recover recharged groundwater by pumping groundwater from privately-owned wells.

The District is proposing to install approximately 2 miles of underground water pipeline between an existing turnout at the California Aqueduct and the District's existing 7th Standard Pipeline. This new pipeline would improve return capacity, increase water supply reliability, reduce pumping of both groundwater and surface water, and provide the District with additional water resources for agricultural uses, or other purposes as determined by the District. The Belridge Pipeline would also deliver water to the Corn Camp Groundwater Recharge Pond, via the existing 7th Standard Pipeline to which the Belridge Pipeline would connect.

## 1.2 Project Description

The Belridge Pipeline would connect to an existing California Department of Water Resources (DWR) turnout at the California Aqueduct. Approximately 2 miles of pipeline would extend east across undeveloped land from the California Aqueduct to immediately west of the Kern River Flood Canal (Flood Canal). In addition, approximately 1.8 miles of underground fiber optic line

and approximately 1.2 miles of overhead electrical line would be installed to service the turnout at the California Aqueduct. These lines would extend north from the turnout, immediately east of and parallel to the California Aqueduct. The location of the proposed pipeline, fiber optic line, and electrical line are shown in **Figure 1**. Characteristics of these project components are summarized in **Table 1** and described further below.

**Table 1. Project Component Characteristics.**

Project Component	Land Use	Project Footprint Length (feet)	Project Footprint Width (feet)	Project Footprint Area (acres)	Excavation Area Length (feet)	Excavation Area Width (feet)	Excavation Area Area (acres)
Belridge Pipeline	Natural	10,566	60	14.62	10,566	6	1.46
Electrical Line	Natural	6,072	20	2.79	27	1.5	<0.01
Fiber Optic Line	Natural	9,504	5	1.10	9,504	1	0.22
<b>Project Total</b>		<b>26,142</b>	<b>–</b>	<b>18.51</b>	<b>20,097</b>	<b>–</b>	<b>1.68</b>

### 1.2.1 Belridge Pipeline

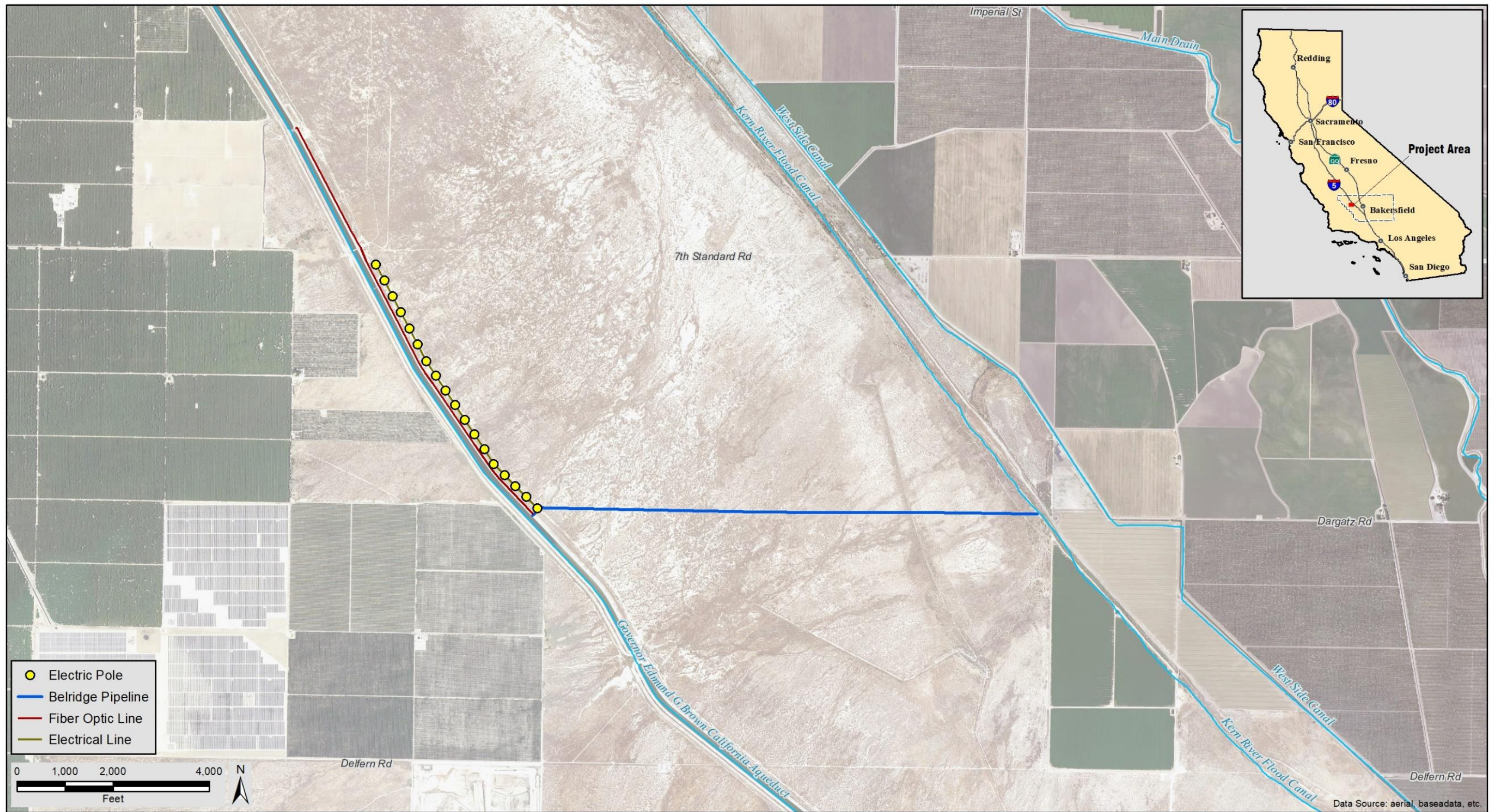
The Belridge Pipeline is anticipated to be a 54-inch-diameter pipe installed in a single trench approximately 6 feet wide and 7 feet deep. The construction corridor would be 60 feet wide to accommodate trenching, access, equipment, and materials. Equipment and material staging would also occur along existing access corridors and other disturbed areas, such as the California Aqueduct, roadways, and agricultural field margins. Pipeline installation activities (trenching, grading, clearing and grubbing, storage, and access) would occur is approximately 14.62 acres of natural lands between the California Aqueduct and the Flood Canal, of which approximately 1.46 acres would be disturbed by trenching).

### 1.2.2 Fiber Optic and Electrical Lines

The fiber optic line would provide the District with real-time water data. It would be installed by District crews in a single trench approximately 1 foot wide and 1 foot deep and would extend immediately adjacent to the access road along the east side of the California Aqueduct, from a weir at the north end to the existing California Aqueduct turnout at the south end. Because of the small trench size, small equipment such as a trencher and jack hammer would be used and the area of disturbance would be limited to 5 feet wide. The total area of disturbance would be approximately 1.1 acres (of which approximately 0.22 acre would be disturbed by trenching).

Eighteen wooden poles and associated electrical line would be installed by Pacific Gas and Electric Company (PG&E) approximately 100 feet east of and parallel to the southern portion of the fiber optic line. The access corridor for pole installation would be 20 feet wide. An area approximately 18 inches in diameter and up to 4 feet deep would be excavated to install each pole. The total area of disturbance would be approximately 2.79 acres (of which 0.001 acre would be excavated).

Figure 1. Project Components.



Source: Figure created by GEI Consultants, Inc. in 2023, based on project alignments provided by Buena Vista Water District

21Dec2023 RS Z:\Projects\1801694\_BVWSD\1801694\_G027\_Belridge\_ProjectOverview\_20231221.mxd



*[This page intentionally left blank.]*

### **1.2.3 Construction, Schedule, Staffing, and Equipment**

Construction is expected to begin in summer or fall 2025 and be completed within approximately 10 months, though construction days would total approximately 6 weeks.

Pipeline installation is anticipated to progress from east to west. Pipe would be fused while the trench is excavated. Pipe would then be placed in the trench, and the trench would be backfilled. The trench would be open for 2 to 4 weeks. Completing the tie-in at the California Aqueduct would take approximately 1 week. A trench would be excavated for fiber optic line installation. Once the fiber optic line is installed, the trench would be backfilled. The trench would only remain open for up to 5 working days. PG&E would install one power pole at a time. Once the poles are in place, PG&E would install the electrical line.

Construction would be limited to daylight hours, 10 hours per day, 5 days per week. Anticipated construction personnel and equipment includes:

- 8 crew members
- 2 excavators
- 1 loader
- 1 bulldozer
- 1 truck with belly dump
- 1 dump truck
- 1 water truck
- 1 large fusing machine
- 1 walk-behind trencher
- 1 auger/pole-setting truck
- 1 30-foot trailer
- 1 crew truck
- 3 pick-up trucks

### **1.2.4 Operation and Maintenance**

Following construction activities, pipeline maintenance would be similar to activities that occur as part of the District's ongoing facility maintenance, with some changes in servicing and maintenance trips by staff. District staff are onsite on adjacent lands regularly for operations and maintenance activities of existing project facilities in the area. Therefore, it is anticipated that inspections and maintenance activities for the proposed project would primarily be coordinated and combined with existing maintenance trips. Long-term vegetation removal/maintenance would not occur as part of the project. To minimize habitat disturbance after the pipeline is installed, District staff will inspect the pipeline alignment quarterly with a drone aircraft. Maintenance activities would be limited to troubleshooting and repair of site- and issue-specific items. The fiber

optic line and power poles are located within DWR right right-of-way and are subject to DWR operating standards. DWR would be responsible for maintaining the fiber optic line, and PG&E would be responsible for maintaining the power poles and electrical line.

## **1.3 Biological Resources Assessment Methods**

### **1.3.1 Desktop Research**

GEI Consultants, Inc. (GEI) reviewed the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2023a) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2023). These reviews were centered on the USGS 7.5- minute quadrangle and included the eight surrounding quadrangles. A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur on or near the project site, including critical habitat for federally threatened and endangered species, was obtained from the Information for Planning and Conservation (IPaC) website (USFWS 2023). The project site is not within the range of any species under jurisdiction of the National Marine Fisheries Service (NMFS). Results of the CNDDDB and CNPS Inventory queries and the IPaC resource list are provided in **Appendix A**.

### **1.3.2 Field Surveys**

Biological surveys were conducted along the western half of the pipeline alignment, to which access permission was granted, in 2018-2022 and along the electrical and fiber optic line alignments in 2021 and 2022.

GEI biologists conducted a focused special-status plant field survey in mid-May 2018 and mid-April 2019. The survey area included a 100-foot-wide corridor centered on the western half of the pipeline alignment. Habitat suitability for special-status plant species was evaluated, and the survey was timed to occur in when target species would be readily identifiable, based on phenology. Portions of the project site that provided potentially suitable habitat for special-status plants were systematically surveyed on foot.

McCormick Biological, Inc. (MBI) biologists conducted various field surveys along the western half of pipeline alignment. A reconnaissance-level field survey was conducted in September 2018 to assess potential for sensitive biological resources to occur on and adjacent to the project site. Protocol surveys for blunt-nosed leopard lizard (*Gambelia silus*) were conducted in April, June, and July 2019 and April, May, June, August, and September 2020. Trapping for small mammals was conducted on 6 nights in January 2020, and mapping of dens and burrows of special-status mammals and burrowing owl was conducted in October 2020. The survey areas included 100- to 200-foot-wide survey corridors, depending on the target resources.

MBI biologists conducted an initial reconnaissance-level field survey of the fiber optic line alignment in January 2021. Additional surveys to evaluate potential special-status species presence and document dens and burrows of special-status mammals and burrowing owl (*Athene*

*cunicularia*) along the proposed pipeline, fiber optic, and electrical line alignments were conducted in September 2021. Focused surveys for special-status plants were conducted in late March 2022. The survey area included up to a 300-foot-wide survey corridor centered on the alignments, depending on access availability. Protocol surveys of all the project alignments for blunt-nosed leopard lizard were conducted from April to September 2022.

## **2.0 Regulatory Setting**

---

Biological resources are subject to a variety of laws and regulations as part of the environmental review process. This section briefly describes the laws and regulations anticipated to apply to the proposed project.

### **2.1 Federal Plans, Policies, Regulations and Laws**

#### ***2.1.1 Federal Endangered Species Act***

Pursuant to the federal Endangered Species Act (ESA) (Title 16, § 1531 and following sections of the U.S. Code [16 USC 1531 et seq.]), USFWS and NMFS have regulatory authority over species listed, proposed, or candidates for federal listing as threatened or endangered and over projects that may result in take of federally listed species. In general, persons subject to the ESA (including private parties) are prohibited from “take” of endangered or threatened fish and wildlife species on private property, and from taking endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

The ESA defines take as, “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” “Harass” is defined as, “...an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, and sheltering.” “Harm” is defined as, “...an act which kills or injures wildlife. This may include significant habitat modification or degradation where it kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

ESA Section 7 outlines procedures for federal interagency cooperation to protect and conserve federally listed species and designated critical habitat. ESA Section 7(a)(2) requires federal agencies to consult with USFWS and/or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of a listed species, or destroying or adversely modifying designated critical habitat. For projects where federal action is not involved and take of a listed species may occur, a project proponent may seek an incidental take permit under ESA Section 10(a). Section 10(a) which allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan (HCP) that ensures minimization and mitigation of impacts associated with the take.

#### ***2.1.2 Section 404 of the Clean Water Act***

Section 404 of the Clean Water Act (CWA) requires a project proponent to obtain a permit from the U.S. Army Corps of Engineers (USACE) before engaging in any activity that involves

discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the U.S. (with the exception of wetlands) are currently defined as territorial seas and waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; interstate waters, including wetlands; other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; and impoundments of waters otherwise defined as waters of the U.S.

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. In 2023, the U.S. Supreme Court in *Sackett v. EPA* (598 U.S. \_\_\_) announced that a wetland must have a continuous surface connection with a relatively permanent body of water connected to traditional interstate navigable waters. In September 2023, USACE and USEPA issued a final rule to amend the “Revised Definition of ‘Waters of the United States’” consistent with *Sackett*.

During review of a project, USACE must ensure compliance with applicable federal laws, including the EPA’s Section 404(b)(1) Guidelines. USACE regulations require impacts on waters of the United States, including wetlands, to be avoided and minimized to the maximum extent practicable, and that unavoidable impacts be compensated (33 CFR 320.4[r]).

### **2.1.3 Section 401 Water Quality Certification**

Under CWA Section 401, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state’s water quality standards and criteria. In California, the State Water Resources Control Board delegates the authority to grant water quality certification to the nine Regional Water Quality Control Boards (RWQCBs); the Central Valley RWQCB has jurisdiction over the project area.

### **2.1.4 Migratory Bird Treaty Act**

The federal Migratory Bird Treaty Act (MBTA) (16 USC, Sec. 703, Supp. I, 1989) is administered by the USFWS and prohibits killing, possessing, or trading migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, bird nests, and eggs and applies to all persons and agencies in the U.S., including federal agencies. Currently, there is no process for obtaining project-related take authorization under the MBTA.

## **2.2 State Plans, Policies, Regulations, Laws**

### **2.2.1 California Endangered Species Act**

The California Endangered Species Act (CESA) (California Fish and Game Code [CFGF] Section 2050 et seq.) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. CESA states that CDFW, together with the project proponent and any state lead agency, must develop reasonable and prudent alternatives consistent with conserving the species, while maintaining the project purpose to the greatest extent possible. Take of state-listed species incidental to otherwise lawful activities requires a permit, pursuant to CESA Section 2081(b). Project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding must be in place to implement mitigation measures and monitor compliance and effectiveness. Mitigation can include land acquisition, permanent protection and management, and/or funding in perpetuity of compensatory lands.

As under the federal ESA, listed plants have considerably less protection than fish and wildlife under CESA. The California Native Plant Protection Act (CFGF Section 19000 et seq.) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, or road, or other right-of-way, provided that the owner first notifies CDFW and gives the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed.

### **2.2.2 Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act; California Water Code Section 13000 et seq.) requires that each of the state's nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. RWQCB jurisdiction includes federally protected waters and areas that meet the definition of "waters of the state." Waters of the state is defined as, "...any surface water or groundwater, including saline waters, within the state's boundaries." The RWQCB has the discretion to take jurisdiction over areas not federally regulated under CWA Section 401, provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

### **2.2.3 California Fish and Game Code**

#### **2.2.3.1 Rivers, Lakes, and Streams**

Under CFGF Section 1602, it is unlawful for any entity to substantially divert or obstruct the natural flow of or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or to deposit or dispose of debris, waste, or other material where it may pass

into any river, stream, or lake, without first notifying CDFW of such activity and obtaining an agreement authorizing the activity. In practice, CDFW may exert authority over any feature that holds water at least periodically or intermittently, and associated habitat (e.g., riparian vegetation), that supports fish, other aquatic life, or terrestrial wildlife.

#### **2.2.3.2 Fully Protected Species**

CFGF Sections 3511, 4700, 5050, and 5515 provide protection from take for 37 fish and wildlife species referred to as fully protected species. Except for take related to scientific research or incidental take authorized as part of an approved Natural Community Conservation Plan, take of fully protected species is prohibited.

#### **2.2.3.3 Protection of Birds**

CFGF Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs.

### **2.2.4 Regional and Local Plans, Policies, Regulations, and Ordinances**

The Land Use, Open Space, and Conservation Element of the Kern County General Plan (2009) includes the goal and associated policies designed to preserve natural resources, primarily threatened and endangered species, listed below.

**GOAL GP-1:** Ensure that the County can accommodate anticipated future growth and development while maintaining a safe and healthful environment and a prosperous economy by preserving valuable natural resources, guiding development away from hazardous areas, and assuring the provision of adequate public services.

- **Policy GP 1.10.5-27.** Threatened or endangered plant and wildlife species should be protected in accordance with state and federal laws.
- **Policy GP 1.10.5-28.** The County should work closely with state and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.



## 3.0 Environmental Setting

---

The project site is located along the southwestern edge of the San Joaquin Valley and is primarily comprised of relatively undisturbed natural habitat. Between 1981 and 2019, the region received 5 to 10 inches of precipitation annually (Western Regional Climate Center 2020). Elevation on the project site ranges from approximately 250 to 300 feet above mean sea level, with a gentle downhill slope to the east. Soils on the project site include Kimberlina, Calfax, Panoche, Milham, and Lokern (NRCS 2022). Saline-alkali and saline-sodic soil map units are mapped within the pipeline alignment, between the Flood Canal and the California Aqueduct.

### 3.1 Vegetation and Wildlife

#### 3.1.1 Vegetation

The approximately 2 miles of pipeline alignment between the Flood Canal and California Aqueduct support spinescale scrub and allscale scrub alliances (Sawyer et. al. 2009). These open shrubland communities are dominated by alkali-tolerant shrubs, including common saltbush, spiny saltbush (*Atriplex spinifera*), iodine bush (*Allenrolfea occidentalis*), bush seepweed (*Suaeda moquinii*), and Alkali heath (*Frankenia grandiflora*). Allscale scrub also occurs along the electrical and fiber optic line alignments. Representative photographs of the project alignments are provided in **Appendix B**.

#### 3.1.2 Wildlife

The native scrub vegetation along the project alignments likely supports a variety of wildlife species, some of which are special-status species primarily restricted to these habitats and discussed further below. Common reptiles observed during the field surveys include side-blotched lizard (*Uta stansburiana*), tiger whiptail (*Aspidoscelis tigris*), and northwestern rattlesnake (*Crotalus oreganus*); common mammals observed include Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis latrans*). The more diverse list of common birds observed include resident and migrant species that nest locally, such as red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferous*), Anna's hummingbird (*Calypte anna*), greater roadrunner (*Geococcyx californicus*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), common raven (*Corvus corax*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), Bewick's wren (*Thryomanes bewickii*), western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), Bell's sparrow (*Artemisospiza belli*), and house finch (*Haemorhous mexicanus*).

## 3.2 Special-status Species

For purposes of this project, special-status species are plants and animals that fall into any of the following categories:

- Taxa (i.e., taxonomic categories or groups) officially listed, candidates for listing, or proposed for listing under ESA or CESA as endangered, threatened, or rare
- Taxa that meet the criteria for listing
- Wildlife identified by CDFW as species of special concern and plant taxa considered by CDFW to be “rare, threatened, or endangered” in California
- Species listed as Fully Protected under the CFGC
- Birds of Conservation Concern designated by USFWS

Plant taxa are assigned by CDFW to one of the following six California Rare Plant Ranks (CRPR):

- CRPR 1A—Presumed to be extinct in California
- CRPR 1B—Rare, threatened, or endangered in California and elsewhere
- CRPR 2A—Presumed extirpated in California, but are more common elsewhere
- CRPR 2B—Rare, threatened, or endangered in California but more common elsewhere
- CRPR 3—Plants about which more information is needed (a review list)
- CRPR 4—Plants of limited distribution (a watch list)

All plants with a CRPR are considered “special plants” by CDFW; this is a broad term used to refer to all plant taxa inventoried in the CNDDDB, regardless of their legal or protection status. As indicated above, only plant taxa considered by CDFW to be “rare, threatened, or endangered in California” (i.e., CRPR 1B and 2B plants) are considered to have special status for purposes of this project.

**Table 2** provides information on each special-status plant taxon that was included in the CNDDDB or CNPS search results and/or on the IPaC resource list. None of the species listed in Table 2 were observed during focused rare plant surveys conducted by GEI in May 2018, likely because of a below-average water year. In 2019, however, Kern mallow (*Eremalche parryi* ssp. *kernensis*), Lost Hills crownscale (*Atriplex cordulata* var. *vallicola*), and recurved larkspur (*Delphinium recurvatum*) were observed during focused surveys conducted in April. All three of these taxa have a CRPR of 1B, and Kern mallow is federally listed as endangered. Kern mallow was observed in a similar area during focused surveys conducted by MBI in March 2022. The extents of special-status plant populations observed during focused surveys conducted by GEI and MBI are depicted in **Figure 2**. These observed extents are confined by the survey area and do not represent the total population distributions. The exact extent of the populations was not determined, but they were noted to extend beyond the survey area to the north, south, and east.

Five additional special-status plants were determined to have low potential to occur on the project site because although potentially suitable habitat for them is present, they were not observed during focused surveys: heartscale (*Atriplex cordulata* var. *cordulata*), lesser saltscale (*Atriplex minuscula*), California jewelflower (*Caulanthus californicus*), Lemmon’s jewelflower (*Caulanthus lemmonii*), and San Joaquin woollythreads (*Monolopia congdonii*). All these taxa have a CRPR of 1B; California jewelflower is federally and state-listed as endangered and San Joaquin woollythreads is federally listed as endangered.

**Table 2. Special-status Plants Evaluated for Potential to Occur on the Project Site.**

Species	Blooming Period	Status <sup>1</sup> Federal	Status <sup>1</sup> State	Habitat Associations	Potential to Occur on Project Site
Horn’s milkvetch <i>Astragalus hornii</i> var. <i>hornii</i>	May–October	–	1B.1	Alkaline soil along lake margins, in meadows, seeps, playas	None; no suitable habitat is present on or adjacent to the project site.
Heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	April–October	–	1B.2	Sandy saline or alkaline soil in chenopod scrub and valley and foothill grassland	Low; suitable habitat is present but not observed during focused surveys.
Earlimart orache <i>Atriplex cordulata</i> var. <i>erecticaulis</i>	August–November	–	1B.2	Valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Lost Hills crownscale <i>Atriplex coronata</i> var. <i>vallicola</i>	April–September	–	1B.2	Sandy saline or alkaline soils in chenopod scrub, valley and foothill grassland, vernal pools	High; observed in western portion of pipeline alignment during 2019 surveys.
lesser saltscale <i>Atriplex minuscula</i>	May–October	–	1B.1	Alkaline sandy soil in chenopod scrub, valley and foothill grassland, playas	Low; suitable habitat is present but not observed during focused surveys.
subtle orache <i>Atriplex subtilis</i>	April–October	–	1B.2	Alkaline soil in valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
California jewelflower <i>Caulanthus californicus</i>	February–May	E	E/1B.1	Sandy soil in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland	Low; suitable habitat is present but not observed during focused surveys.
Lemmon’s jewelflower <i>Caulanthus lemmonii</i>	February–May	–	1B.2	Pinyon and juniper woodland and valley and foothill grassland	Low; suitable habitat is present but not observed during focused surveys.
slough thistle <i>Cirsium crassicaule</i>	May–August	–	1B.1	Chenopod scrub, riparian scrub, marshes, swamps, sloughs	None; no suitable habitat is present on or adjacent to the project site.
recurved larkspur <i>Delphinium recurvatum</i>	March–June	–	1B.2	Alkaline soils in chenopod scrub, cismontaine woodland, valley and foothill grassland	High; observed in western portion of pipeline alignment during 2019 surveys.
Kern mallow <i>Eremalche parryi</i> ssp. <i>Kernensis</i>	January–May	E	1B.2	Open sandy and clay soil, often at edge of clearings in chenopod scrub, pinyon and juniper woodland, valley and foothill grassland	High; observed in western portion of pipeline alignment during 2019 and 2022 surveys and southern portion of electrical alignment in 2022.

Species	Blooming Period	Status <sup>1</sup> Federal	Status <sup>1</sup> State	Habitat Associations	Potential to Occur on Project Site
Temblor buckwheat <i>Eriogonum temblorense</i>	April–September	–	1B.2	Valley and foothill grassland on clay or sandstone substrate	None; no suitable habitat is present on or adjacent to the project site.
Tejon poppy <i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	February–May	–	1B.1	Chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
alkali-sink goldfields <i>Lasthenia chrysantha</i>	February–April	–	1B.1	Alkaline soil in vernal pools	None; no suitable habitat is present on or adjacent to the project site.
Coulter’s goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	February–June	–	1B.1	Marshes and swamps, playas, vernal pools	None; no suitable habitat is present on or adjacent to the project site.
pale-yellow layia <i>Layia heterotricha</i>	March–June	–	1B.1	Alkaline or clay soil in cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Munz’s tidy-tips <i>Layia munzii</i>	March–April	–	1B.2	Alkaline clay soil in chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
showy golden madia <i>Madia radiata</i>	March–May	–	1B.1	Cismontane woodland and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
San Joaquin woollythreads <i>Monolopia congdonii</i>	February–May	E	1B.2	Sandy soil in chenopod scrub and valley and foothill grassland	Low; suitable habitat is present but not observed during focused surveys.
California alkali grass <i>Puccinellia simplex</i>	March–May	–	1B.2	Alkaline soil in wet areas, lake margins, meadows and seeps, vernal pools, chenopod scrub, valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
oil neststraw <i>Stylocline citroleum</i>	March–April	–	1B.1	Clay soil in chenopod scrub, coastal scrub, valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.

Notes: CRPR = California Rare Plant Rank

**<sup>1</sup>Status Definitions**

Legal Status

– = no status

E = Listed as Endangered under the federal or state Endangered Species Act

California Rare Plant Ranks

1B = Plant species considered rare or endangered in California and elsewhere (but not legally protected under the federal or California Endangered Species Acts).

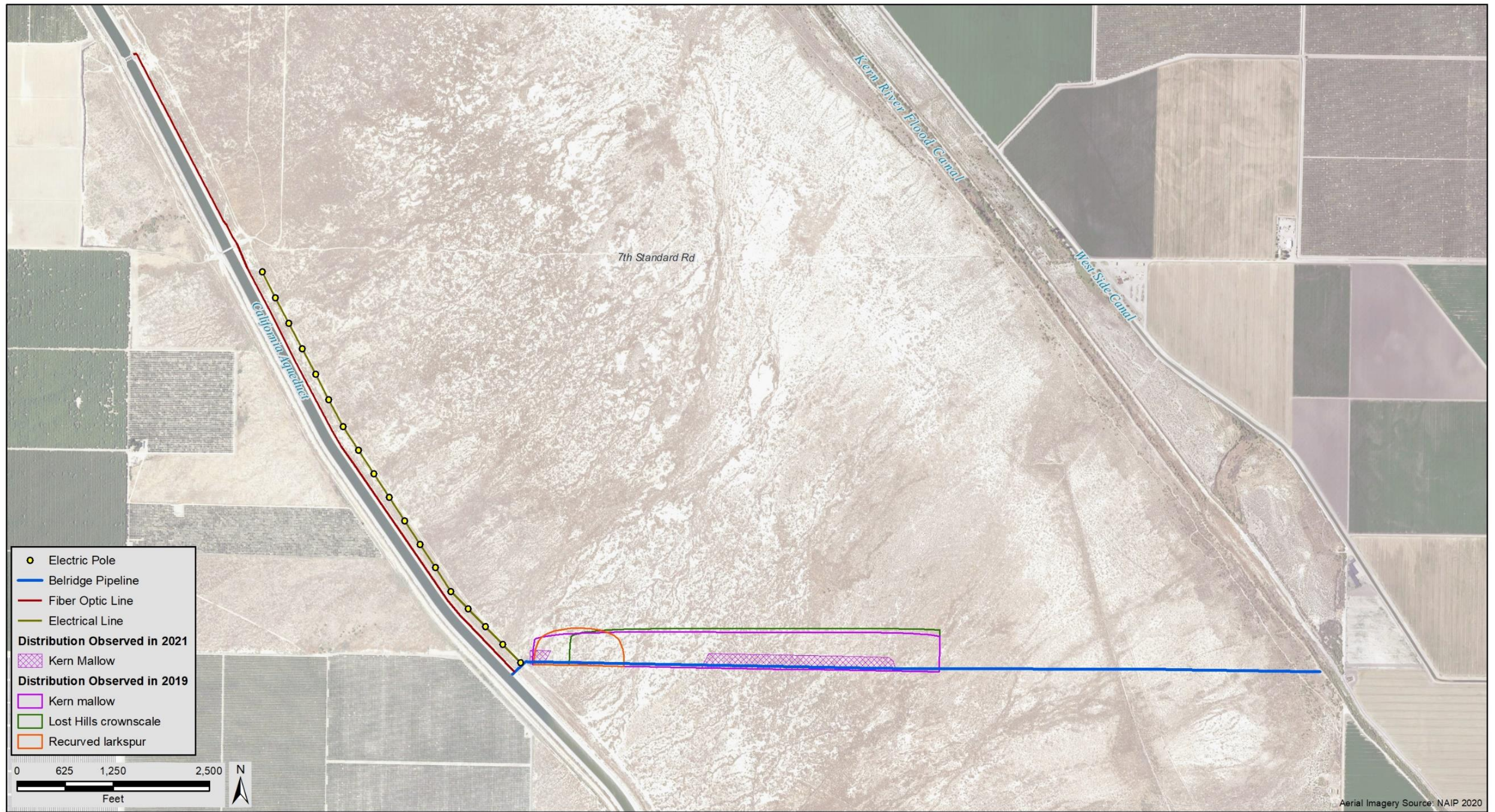
California Rare Plant Rank Extensions

.1 = Seriously endangered in California (greater than 80% of occurrences are threatened and/or have a high degree and immediacy of threat).

.2 = Fairly endangered in California (20-80% of occurrences are threatened and/or have a moderate degree and immediacy of threat).

Sources: CDFW 2023a; CNPS 2023; GEI Consultants, Inc. observations in 2019; MBI observations in 2022; USFWS 2023

Figure 2. Special-status Plant Populations Observed during Focused Surveys in 2019 and 2022.



Sources: Observations made during surveys conducted by GEI in 2019 and MBI in 2022

21-Dec-2023 Z:\Projects\1801694\_BVWSD\1801694\_G025\_BelridgePlantSurvey\_20231221.mxd RS

*[This page intentionally left blank.]*

**Table 3** provides information on each special-status animal that was included in the CNDDDB search results, on the IPaC resource list, or was otherwise determined to have potential to occur on or adjacent to the project site. Locations of observations of special-status wildlife made during MBI field surveys and small mammal trapping conducted in 2020 through 2022 are depicted in **Figure 3**. Based on the review of existing documentation and observations made during the 2018 to 2022 field surveys, 21 special-status species were observed or determined to have low to high potential to occur on and/or adjacent to the project site.

The project site provides potentially suitable habitat for Crotch's bumble bee (*Bombus crotchii*), which was determined to have moderate potential to occur. This invertebrate species is currently a candidate for state listing as endangered. Very few recent occurrences of the species have been documented in the San Joaquin Valley, but several are from the Bakersfield area (CDFW 2023a, iNaturalist 2023). No individuals were observed during focused field surveys for other species, which were conducted during the Crotch's bumble bee flight period, but focused surveys for this species were not conducted. Vegetation observed on the project site includes plant families that are commonly associated with Crotch's bumble bee (e.g., Fabaceae, Asteracea). Therefore, the site could provide foraging habitat in years when suitable species are present and blooming. The project site also may provide suitable nesting and overwintering sites.

Four special-status reptile taxa were observed during field surveys or determined to have moderate potential to occur on or adjacent to the project site: blunt-nosed leopard lizard, coast horned lizard (*Phrynosoma blainvillii*), California glossy snake (*Arizona elegans occidentalis*), and San Joaquin coachwhip (*Masticophis flagellum ruddocki*). Blunt-nosed leopard lizard is federally and state-listed as endangered, as well as fully protected by the CFGC; the remaining taxa are California Species of Special Concern. Although three blunt-nosed leopard lizards were observed near the western end of the pipeline alignment during focused surveys conducted in 2019, no individuals were observed during protocol surveys of the pipeline alignment conducted in 2020 or of the pipeline, fiber optic line, and electrical line alignments in 2022.

Eight special-status bird species were observed during field surveys or determined to have moderate potential to occur on or adjacent to the project site: burrowing owl, golden eagle (*Aquila chrysaetos*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), California thrasher (*Toxostoma redivivum*), and LeConte's thrasher (*Toxostoma lecontei*). Swainson's hawk is state-listed as threatened; golden eagle and white-tailed kite are fully protected by the CFGC; the remaining taxa are federal Birds of Conservation Concern and/or California Species of Special Concern. Observation locations of special-status birds other than burrowing owl are not shown in Figure 3, because such observations were of foraging individuals and evidence of nesting at the relevant locations was not documented. However, the project site provides potential nesting habitat for loggerhead shrike and the thrashers.

Eight special-status mammal taxa were observed or determined to have low to high potential to occur on or adjacent to the project site: Tulare grasshopper mouse (*Onychomys torridus*

*tularensis*), giant kangaroo rat (*Dipodomys ingens*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*), short-nosed kangaroo rat (*Dipodomys nitratooides brevinasus*), Nelson’s (=San Joaquin) antelope squirrel (*Ammospermophilus nelsoni*), American badger (*Taxidea taxus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and western mastiff bat (*Eumops perotis californicus*). Giant kangaroo rat and Tipton kangaroo rat are federally and state-listed as endangered; San Joaquin kit fox is federally listed as endangered and state-listed as threatened; San Joaquin antelope squirrel is state-listed as threatened; the remaining species are California Species of Special Concern. San Joaquin antelope squirrels were observed at multiple locations along the project alignments, and Tipton kangaroo rats were captured along the pipeline alignment. Giant kangaroo rat was not captured, but characteristic burrows were observed. San Joaquin kit fox was not observed, but potential dens were present in the survey area.

**Table 3. Special-status Fish and Wildlife Evaluated for Potential to Occur on the Project Site.**

Species	Status Federal	Status State	Habitat Associations	Potential to Occur on the Project Site
<b>Fish</b>				
Delta smelt <i>Hypomesus transpacificus</i>	T	E	Semi-anadromous; typically restricted to the Sacramento-San Joaquin River Delta and the lower Sacramento River	None; no suitable habitat is present on or adjacent to the project site, which is outside the range of this species.
<b>Invertebrates</b>				
Crotch’s bumble bee <i>Bombus crotchii</i>	–	CE	Open grasslands and scrublands	Moderate; project area may provide foraging habitat in years when suitable plants bloom and may provide suitable nesting and overwintering habitat.
monarch butterfly <i>Danaus plexippus</i>	C	–	Requires milkweed for egg laying and larval feeding and various nectar plants	Very low; no milkweed or other plants likely to be used for breeding or foraging were observed in the survey areas.
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	–	Vernal pools and seasonal wetlands, including a wide range of sizes and depths	None; no suitable habitat is present on or adjacent to the project site.
<b>Amphibians</b>				
California red-legged frog <i>Rana draytonii</i>	T	SSC	Lowlands and foothill areas, in or near permanent deep water with dense, shrubby or emergent riparian vegetation	None; no suitable habitat is present on or adjacent to the project site, which is outside the range of this species.
western spadefoot <i>Spea hammondi</i>	–	SSC	Vernal pools and seasonal wetlands in grasslands and open woodlands	None; no suitable habitat is present on or adjacent to the project site.
<b>Reptiles</b>				
California legless lizard <i>Anniella</i> sp.	–	SSC	Moist, loose soils in a variety of natural habitats	Very low; project site is outside mapped range of the species.
Temblor legless lizard <i>Anniella alexanderae</i>	–	CE, SSC	Poorly known; likely in occurs in sparsely vegetated areas with moist sandy soils	Very low; project site is outside mapped range of the species.
blunt-nosed leopard lizard <i>Gambelia sila</i>	E	E, FP	Sparsely vegetated and relatively flat grasslands and alkali and desert scrub habitats	Moderate; three individuals observed along western portion of pipeline alignment in 2019 but none observed along project alignments in 2020 or 2022.



Species	Status Federal	Status State	Habitat Associations	Potential to Occur on the Project Site
coast horned lizard <i>Phrynosoma blainvillii</i>	–	SSC	Most commonly along sandy washes with scattered low bushes	Moderate; potentially suitable habitat is present throughout the project site.
California glossy snake <i>Arizona elegans occidentalis</i>	–	SSC	Wide variety of habitats, including grassland and scrub, often with loose or sandy soils	Moderate; potentially suitable habitat is present throughout the project site.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	–	SSC	Open, dry habitats with little or no tree cover, including grasslands and saltbrush scrub	High; observed at several locations along western portion of pipeline alignment in 2020 and 2022 and at north end of fiber optic line in 2022.
giant garter snake <i>Thamnophis gigas</i>	T	T	Open water and emergent vegetation in marshes, sloughs, and other aquatic habitats; also requires open upland habitat	None; no suitable habitat is present on or adjacent to the project site, which is outside the range of this species.
western pond turtle <i>Emys marmorata</i>	–	SSC	Permanent or nearly permanent water bodies; nests in sunny uplands near suitable aquatic habitat	None; no suitable aquatic habitat is present on or adjacent to the project site.
<b>Birds</b>				
western snowy plover <i>Charadrius alexandrinus nivosus</i>	T	SSC	Sandy beaches, salt pond levees, and shores of alkali lakes	None; no suitable habitat is present on or adjacent to the project site.
short-eared owl <i>Asio flammeus</i>	–	SSC	Variety of open habitats; requires sufficient ground cover for nesting	Low; rarely documented in the region.
long-eared owl <i>Asio otus</i>	–	SSC	Conifer, oak, riparian, pinyon-juniper, and desert woodlands that are open or adjacent to grasslands, meadows, or shrublands	Low; potential nesting habitat is restricted to the Kern River Flood Canal and known occurrences in the region are southeast of Bakersfield.
burrowing owl <i>Athene cunicularia</i>	BCC	SSC	Nests and forages in grasslands, agricultural lands, and other open habitats with natural or artificial burrows or friable soils	High; known to occur in project vicinity and potentially suitable burrows observed in survey areas.
golden eagle <i>Aquila chrysaetos</i>	–	FP	Variety of habitats in foothills, mountains, high plains, and dessert; primarily nests on cliffs in steep canyons, but also in large trees in open areas	Moderate; project site provides suitable foraging habitat, but no suitable nest sites on or near the site.
white-tailed kite <i>Elanus leucurus</i>	–	FP	Nests in woodlands and isolated trees and forages in grasslands, pasture, and agricultural fields	Moderate; project site provides suitable foraging habitat, but no suitable nest trees occur on or adjacent to the project site.
Swainson's hawk <i>Buteo swainsoni</i>	–	T	Nests in riparian forest and scattered trees; forages in grasslands and agricultural fields	High; known to occur in project vicinity; project site provides suitable foraging habitat, but no suitable nest trees occur on or adjacent to the project site.
northern harrier <i>Circus cyaneus</i>	BCC	SSC	Nests and forages in grasslands, field crops, and marshes; nests on the ground in patches of dense, often tall, vegetation	High; observed during field surveys; project site provides suitable foraging habitat, but no suitable nesting habitat occurs on or adjacent to the site.

Species	Status Federal	Status State	Habitat Associations	Potential to Occur on the Project Site
loggerhead shrike <i>Lanius ludovicianus</i>	–	SSC	Savannah, shrublands, and open woodlands with shrubs and small trees for nesting	High; observed during field surveys; project site provides suitable foraging and nesting habitat.
California thrasher <i>Toxostoma redivivum</i>	BCC	–	Open, low woodlands, chaparral, and other scrubby habitats	High; observed during field surveys; suitable foraging and nesting habitat is present on the project site.
LeConte's thrasher <i>Toxostoma lecontei</i>	–	SSC	Dry, open scrub habitats with dense spiny vegetation	High; observed during field surveys; suitable foraging and nesting habitat is present on the project site.
willow flycatcher <i>Empidonax traillii</i>	–	E	Riparian woodland and scrub	Very low; project site is outside breeding distribution and provides very poor habitat for migrant individuals.
yellow warbler <i>Setophaga petechia</i>	–	SSC	Riparian woodland and scrub, open scrub, and second-growth woodland, especially near water	Very low; project site does not provide suitable nesting habitat and foraging quality is poor.
tricolored blackbird <i>Agelaius tricolor</i>	BCC	T	Nests in dense low vegetation; forages in grasslands and agricultural fields	Very low; no suitable nesting habitat currently occurs on or adjacent to the project site, and foraging quality is poor.
<b>Mammals</b>				
Buena Vista Lake ornate shrew <i>Sorex ornatus relictus</i>	E	SSC	Moist soils in marsh and riparian habitat, with stumps, logs and litter for cover	None; no suitable habitat is present on or adjacent to the project site; nearest known occurrence from an artificial pond, approximately 17 miles southeast of the project site in 1999.
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	–	SSC	Dry, open scrublands	Moderate; project site provides suitable habitat but none were captured during small mammal trapping conducted in 2020.
giant kangaroo rat <i>Dipodomys ingens</i>	E	E	Dry grasslands and alkali scrub with sandy loam soils	Moderate; characteristic burrow complexes observed in survey area in 2021 but none were captured during small mammal trapping conducted in 2020.
Tipton kangaroo rat <i>Dipodomys nitratooides nitratooides</i>	E	E	Saltbrush and sink scrub vegetation with soft, friable soils	High; captured at numerous locations in 2020.
short-nosed kangaroo rat <i>Dipodomys nitratooides brevinasus</i>	–	SSC	Grassland and shrub habitats with friable alkali soils	Low; suitable habitat occurs on the project site, but this species' current range is west of the California Aqueduct.
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	–	T	Grasslands and open shrubland with gullies and washes	High; numerous individuals observed along the project alignments in 2022.
American badger <i>Taxidea taxus</i>	–	SSC	Dry, open areas in various habitats with friable soils and uncultivated ground	Moderate; suitable habitat is present throughout the project site.

Species	Status Federal	Status State	Habitat Associations	Potential to Occur on the Project Site
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	T	Primarily grasslands and sparsely vegetated shrublands with loose-textured soils	High; suitable habitat is present throughout the project site, and potential dens were observed in 2020 and 2021.
western mastiff bat <i>Eumops perotis californicus</i>	–	SSC	Open semi-arid to arid habitats; roosts in cliff crevices, high buildings, tunnels, and trees	Low; project site provides potential foraging habitat, but no suitable roosting habitat is present nearby.

<sup>1</sup> **Status Definitions**

E = Listed as Endangered under the federal or state Endangered Species Act

T = Listed as Threatened under the federal or state Endangered Species Act

C = Candidate for listing as Threatened or Endangered under the state Endangered Species Act

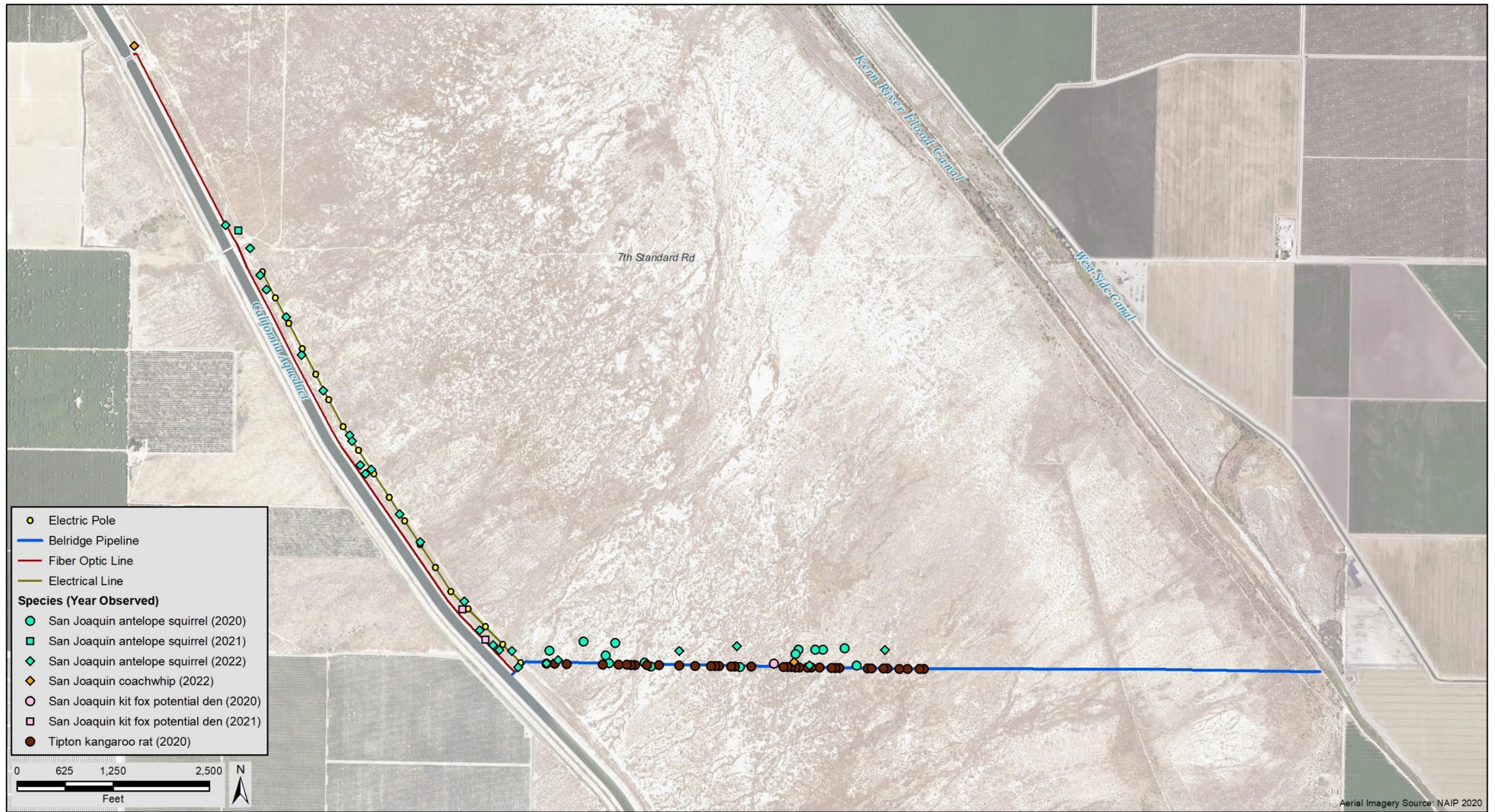
BCC= Federal Bird of Conservation Concern

FP = Fully Protected under the California Fish and Game Code

SSC= California Species of Special Concern

Sources: CDFW 2022, 2023a; iNaturalist 2023; MBI observations made in 2018–2022; Shuford and Gardali 2008; USFWS 2023

Figure 3. Special-status Wildlife Observations Documented during Focused Field Surveys and Trapping in 2020-2022.



Sources: Observations made during surveys and trapping conducted by MBI in 2020-2022

21-Dec-2023 Z:\Projects\1801694\_BVWSD\1801694\_G030\_Belridge\_WildlifeObservations\_20231221.mxd RS

*[This page intentionally left blank.]*

### **3.3 Sensitive Habitats**

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration, such as under ESA, Section 404 of the CWA, the Porter-Cologne Act, and Section 1602 of the CFGC. Sensitive habitats may be of special concern for a variety of reasons, such as their locally or regionally declining status or because they provide important habitat for special-status species.

#### **3.3.1 Critical Habitat**

Critical habitat is a geographic area containing features determined to be essential to the conservation of a species federally listed as threatened or endangered. No designated or proposed critical habitat is present on or near the project site.

#### **3.3.2 Other Habitats Protected under Federal or State Regulations**

The California Aqueduct may qualify as a water of the United States and be subject to regulation under CWA Sections 401 and 404. Even if not a water of the United States, it may be considered waters of the state and/or be subject to CFGC Section 1602. However, connecting the Belridge pipeline to the existing aqueduct turnout would not require any work within the canal prism.

#### **3.3.3 Sensitive Natural Communities**

CDFW maintains a list of terrestrial natural communities that are native to California, the List of Vegetation Alliances and Associations (CDFW 2023b). Within that list, CDFW identifies and ranks sensitive natural communities of special concern considered to be highly imperiled. Spinescale scrub that occurs along a portion of the pipeline alignment is considered a sensitive natural community.

## 4.0 Potential Impacts

---

Implementing the proposed project would result in temporary disturbance of the pipeline, electrical line, and fiber optic line installation corridors. No aquatic habitat would be affected, because connection to the existing turnout at the California Aqueduct would not require work within the aqueduct prism.

Approximately 15 acres of native scrub habitat (spinescale scrub and allscale scrub) would be removed or disturbed in the pipeline corridor. However, no long-term pipeline maintenance corridor is required, and this area would naturally revegetate over time. Therefore, all habitat effects along the pipeline alignment would be temporary. Up to approximately 3 acres and 1 acre would be disturbed during electrical and fiber optic line installation, respectively. Because the fiber optic line would be installed immediately adjacent to the existing California Aqueduct maintenance road and the installation corridor would be very narrow (5 feet wide), very limited vegetation removal is anticipated to be required. Vegetation removal along the electrical line is also anticipated to be limited because vegetation within this corridor is patchy, and use of an existing adjacent access corridor for construction access is anticipated to minimize vegetation clearing. In addition, permanent vegetation removal is not anticipated to be required, and a similar patchy vegetation distribution would naturally reestablish.

The impact discussions below focus on resources determined to have potential to be affected by implementing the project. Therefore, special-status species that have no potential to low potential to occur on or near the project site (i.e., because suitable habitat is absent, the project site is outside the species' current range, the taxa was not observed during focused surveys) and are unlikely to be affected by the project are not addressed in these discussions.

### 4.1 Special-status Plants

Three special-status plant taxa (Kern mallow, Lost Hills crownscale, and recurved larkspur) were observed in the western portion of the pipeline alignment during focused surveys. Pipeline installation activities would result in vegetation removal and ground disturbance within a minimum of approximately 7 acres along approximately 1 mile of pipeline corridor that is occupied by one or more of these taxa. Based on observations made in 2019 and 2021, Kern mallow and Lost Hills crownscale occupy most of this area, but recurved larkspur is limited to approximately 0.25 mile (less than 2 acres) at the western end of the pipeline alignment. Although an extensive area of occupied habitat would be disturbed by pipeline installation, this represents a small proportion of the overall area of occupation observed during the surveys, which extends to the north and south, well beyond the construction corridor and likely beyond the survey area. Therefore, a small proportion of the populations would be affected. In addition, disturbance would be temporary, and these special-status plant populations are likely to extend back into the disturbance corridor after pipeline installation is complete. However, project implementation

would likely result in removal of special-status plants and temporary loss of occupied habitat that could take several years to become reestablished; this could have a substantial short-term impact on the local population of one or more of the affected taxa.

## **4.2 Special-status Wildlife**

### **4.2.1 Invertebrates**

Crotch's bumble bee was determined to have moderate potential to occur on the project site, which could support suitable foraging, nesting, and overwintering habitat. Approximately 15 acres of potentially suitable habitat for this species would be affected by project implementation. Impacts would primarily occur during construction, but there also would be a temporary reduction in habitat quality and temporary loss of foraging habitat. Construction-related impacts could include vehicle and equipment strikes, foraging habitat loss, nest destruction, and entombment in burrows.

The project site is centrally located in a large contiguous area of thousands of acres of similar habitat. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small proportion of individuals, if the area is occupied by Crotch's bumble bee, and a very small proportion of suitable habitat within the species' range. However, because Crotch's bumble bee is a candidate for state listing as endangered, injury or death of even a small number of individuals could have a substantial adverse effect on the population.

### **4.2.2 Reptiles**

Four special-status reptile taxa were observed during field surveys (blunt-nosed leopard lizard and San Joaquin coachwhip) or determined to have moderate potential to occur (coast horned lizard and California glossy snake) on the project site. Approximately 15 acres of habitat occupied by one of more of these species would be affected. Vegetation within the pipeline corridor may take several years to reestablish after the pipeline is installed, but there would be no permanent vegetation removal. In addition, because these special-status reptiles occur in open or sparsely vegetated areas, habitat would not be rendered unsuitable by temporary vegetation removal. Therefore, impacts on special-status reptiles would primarily occur during construction. These impacts could include vehicle and equipment strikes, becoming trapped in open trenches or holes, foraging habitat loss and movement obstruction, burrow destruction, and entombment in burrows.

The project site is centrally located in a large contiguous area of thousands of acres of native habitat between the Flood Canal and California Aqueduct. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small number of individuals and a very small proportion of suitable habitat within the range of any special-status reptiles that are present. For the three reptiles of special concern, this would not result in a substantial adverse effect. However, because blunt-nosed leopard lizard populations have been substantially reduced and fragmented, and this species is federally and state-listed as endangered, injury or death of even a small number of individuals could have a substantial adverse effect on the local population. In addition, take of blunt-nosed leopard lizard would violate CFGC Section 5050.



### **4.2.3 Birds**

Eight special-status bird species are known or have moderate potential to occur on the project site. The approximately 15 acres of native scrub habitat that would be disturbed during project activities provides suitable foraging habitat for all eight species and suitable nesting habitat for four of the species. Vegetation along the pipeline alignment would be removed to accommodate pipeline installation, but the pipeline corridor would revegetate over time. Vegetation removal along the electrical and fiber optic lines is anticipated to be limited and would not be maintained long-term. Therefore, although it would likely take several years for vegetation to become reestablished, the project alignments would eventually provide similar quality habitat after construction activities are complete. In addition, the extent of habitat that would be affected is minimal, within the larger context of the thousands of acres of similar habitat in the surrounding Lokern area. Therefore, this temporary habitat disturbance would have a minor impact on the potentially affected species.

The project site and immediately adjacent areas do not provide suitable nesting habitat for golden eagle, Swainson's hawk, white-tailed kite, or northern harrier. Therefore, active nests of these species would not be affected. However, suitable nesting habitat for burrowing owl, loggerhead shrike, California thrasher, and LeConte's thrasher is present onsite. Suitable burrowing owl burrows were observed adjacent to the pipeline alignment in 2021 and 2022. If occupied burrowing owl burrows, including nest burrows, are present in the construction corridor, they could be destroyed and individuals could be injured or killed. If occupied nest burrows are present close to the construction corridor, pipeline installation could result burrow abandonment, reduced care of eggs or young, or premature fledging. Similar effects on nesting loggerhead shrike, California thrasher, or LeConte's thrasher also could occur if active nests occur on or adjacent to the construction corridor. Because the construction corridor is relatively narrow, few active nests of these species are likely to be impacted, and such impacts would likely have a relatively limited effect on the local or regional populations of these species. However, project-related nest failure could violate the MBTA and CFGC Sections 3503 and 3511.

### **4.2.4 Mammals**

Six special-status mammal taxa are known or have moderate potential to occur on the project site. Tipton kangaroo rat was captured during small mammal trapping; San Joaquin antelope squirrel was observed during surveys; sign diagnostic of giant kangaroo rat, San Joaquin kit fox, and badger were observed during surveys; and suitable habitat for Tulare grasshopper mouse is present. Approximately 15 acres of habitat for one of more of these species would be affected. Vegetation within the construction corridor may take several years to reestablish, but there would be no permanent vegetation loss. Impacts on special-status mammals would primarily occur during construction, but there also would be a temporary reduction in habitat quality until vegetation becomes reestablished. Construction-related impacts could include vehicle and equipment strikes, becoming trapped in open trenches or holes, foraging habitat loss and movement obstruction, burrow abandonment, burrow destruction, and entombment in burrows.

The project site is centrally located in a large contiguous area of thousands of acres of native habitat between the Flood Canal and Aqueduct. Therefore, disturbance of such a small percentage of this habitat would affect a relatively small number of individuals and a very small proportion of suitable habitat within the range of any special-status mammals that are present. However, because most of these species are federally and/or state-listed as threatened or endangered, injury or death of even a small number of individuals could have a substantial adverse effect.

### **4.3 Sensitive Habitats**

No waters of the United States, riparian habitat, or critical habitat for federally listed species would be affected by project implementation.

Pipeline installation is anticipated to require removal of a small amount of (less than 1 acre) spinescale scrub, a CDFW sensitive natural community. Because this area of spinescale scrub extends at least 100 feet beyond the pipeline installation corridor to the north and south, and the disturbance and vegetation removal would be temporary, this impact would not have a substantial adverse effect.

### **4.4 Other Potential Impacts on Biological Resources**

The project site does not support any wildlife nursery sites, and connection of the pipeline to the existing turnout at the Aqueduct would not affect movement of aquatic species. Because pipeline would be installed in segments, only a portion of the total construction corridor would be disturbed at a given time. Therefore, wildlife that travel through the area would be able to divert around the area of active construction. Installing the fiber optic line and electrical line would have very minor, if any, impact on wildlife movement because the area of disturbance would be very small and the disturbance period at a given location would be very brief. Therefore, implementing the proposed project would not substantially interfere 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.

The 2004 Kern County General Plan, which is currently being updated, includes several policies and implementation measures designed to protect and conserve threatened and endangered species and oak trees (Kern County 2004). No oak trees are present on the project site, and the project has no potential to conflict with Kern County's General Plan's oak retention policy. The Plan requires discretionary projects to consider effects to biological resources and wildlife agency comments during the CEQA process; this is consistent with the CEQA process being implemented by the District for the proposed project. Therefore, implementing the proposed project would not conflict with any local policies or ordinances protecting biological resources.

The project site is west of the recently expired Metropolitan Bakersfield HCP area (City of Bakersfield 1994) and the plan area for the Bakersfield HCP that is currently in development. Therefore, the project would not conflict with either of these plans. The site is within the area intended to be covered by the Kern County Valley Floor HCP. A draft of this HCP was issued

more than a decade ago (Kern County Planning Department 2006), but a final HCP has not been released nor adopted. The project site is within a “Red Zone” of the draft plan, an area identified as having high importance for conservation. However, because project-related disturbance would be temporary and this HCP has not been adopted, implementing the proposed project would not impact the overall conservation value of the affected lands and would not conflict with any provisions, guidelines, goals, or objectives related to biological resources anticipated to be included in a potential adopted version of this HCP.

Approximately 0.5 mile of the pipeline would cross the southern end of a parcel that is part of the 3,100-acre Lokern Preserve owned and managed by the Center for Natural Lands Management (CNLM). According to CNLM, the affected parcel serves as mitigation for impacts to blunt-nosed leopard lizard, San Joaquin kit fox, and San Joaquin antelope squirrel under the California Energy Commission Midway-Sunset Cogeneration Decision (95-AFC-03C) and is required to be conserved in perpetuity for the protection of those listed species. Implementing the proposed project would affect approximately 3.6 acres of the 160-acre parcel. Vegetation removal within the construction corridor would only occur to facilitate pipeline installation and would not be maintained long-term. Although presence of the pipeline several feet below the ground surface would affect burrowing opportunities, this impact would be limited to the approximately 5-foot-wide pipeline footprint (0.3 acre) and would have a very minor effect on burrowing opportunities. Implementing the proposed project is unlikely to substantially affect continued preservation of habitat values for blunt-nosed leopard lizard, San Joaquin kit fox, or San Joaquin antelope squirrel on the affected parcel, but it would likely conflict with formal habitat protections and prohibitions established for this mitigation land and potentially the larger Lokern Preserve.

A variety of common resident and migratory birds that use agricultural and native scrub habitats could nest on or adjacent to the project site. Because the fiber optic line would be installed immediately adjacent to an existing roadway, there is minimal potential for this project component to result in direct destruction of active nests. However, installing the pipeline and electrical poles could remove active nests if construction activities occur during the nesting season. In addition, if active nests are present on or very near the project site, construction activities could result nest abandonment, reduced care of eggs or young, or premature fledging. The potential extent of project-related loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels, but it could be considered a violation of the MBTA and CFGC Section 3503.

## 5.0 Recommended Impact Avoidance, Minimization, and Compensation Measures

---

The measures described in this section are primarily designed to avoid or reduce project-related impacts on special-status species and other biological resources that are protected under state and federal laws and regulations. General construction best management practices (BMPs) are presented first, followed by measures for special-status species or groups of species. In addition to avoidance and minimization measures, potential compensatory mitigation measures are identified to offset unavoidable impacts on protected species; specific compensatory mitigation requirements would be identified during the ESA and CESA permitting processes.

### 5.1 Best Management Practices

**BMP-1:** All project personnel working on the project site will attend a worker training program before beginning on-site work. The program will be presented by a qualified biologist with knowledge of sensitive biological resources known or with potential to occur on the project site. The program will address applicable state and federal laws and regulations; sensitive habitats on and adjacent to the project site; biology, habitat needs, and distribution of special-status species on and adjacent to the project site; regulatory status of each resource and its associated protections; measures required to avoid and reduce impacts to these resources during project construction; potential penalties for non-compliance; and procedures to be followed if dead or injured wildlife are found during project activities. Upon completion of the orientation, employees will sign a form stating that they attended the program, understand all required measures, and received a hardhat sticker or other means of identifying that they have attended the program. No untrained personnel will be allowed to work onsite except delivery personnel that are solely dropping off or picking up materials or equipment under the direct supervision of trained project personnel.

**BMP-2:** A biological monitor approved by USFWS and CDFW will be present onsite or available as necessary during all project activities that could result in “take” of listed species to assist with implementation of required species-specific avoidance and minimization measures. The biological monitor will have the authority to halt all non-emergency actions in an area in which imminent threat to a listed species arises or if avoidance and minimization measures are not being properly implemented. Work will proceed only after the biological monitor deems it appropriate.

**BMP-3:** Before on-site project activities begin, work areas will be marked with fencing, stakes with rope or cord, or other means of clearly delineating the work limits and access routes. All fencing, stakes, etc., will be maintained until project construction is complete and then removed from the project site. Project activities will be restricted to within marked or otherwise designated areas.

**BMP-4:** Project activities will only occur during the day (between 30 minutes before sunrise and 30 minutes after sunset).

**BMP-5:** All construction traffic will be restricted to designated access routes, work areas, storage areas, and staging and parking areas. Off-road traffic in habitat suitable for listed species and outside designated project boundaries will be prohibited. Vehicles and equipment will adhere to an on-site speed limit of 10 miles per hour (mph) during the period when blunt-nosed leopard lizards are likely to be active (March 15–October 15; air temperatures of 77–113 degrees Fahrenheit [°F]). At other times, the on-site speed limit will be 20 mph.

**BMP-6:** Construction vehicles and equipment will be cleaned inside and out at an authorized washing facility before arrival at the project site. Exterior cleaning will include pressure washing vehicles and equipment, with close attention paid to the tracks, feet, and/or tires and all elements of the undercarriage. Vehicle cabs will be swept out and refuse will be disposed at an approved off-site location. Vehicles and equipment will be inspected before entering the site to ensure they are free of soil and debris that could harbor nonnative plant seeds, roots, or rhizomes.

**BMP-7:** All equipment and materials storage, staging, and parking will be confined to the construction corridors or other previously disturbed areas that do not provide habitat for special-status species, as determined by the biological monitor. Workers will check for wildlife under parked vehicles and equipment prior to operation. If wildlife is observed, vehicles/equipment will not be moved until such wildlife has moved out of harm's way. If necessary and authorized under project permits and approvals, the biological monitor may move wildlife from under/near vehicles/equipment.

**BMP-8:** All project materials that could pose a hazard to wildlife (as determined by the biological monitor) will be contained in closed containers either in the work area or on/in vehicles. Loose items (e.g., rags, hose, etc.) will not be stored on the project site unless they are inaccessible to wildlife. Accidental project-related spills of hazardous materials, fuels, lubricants, or solvents will be cleaned up and removed from the project site as soon as possible, according to applicable federal, state, and local regulations. Any spills of hazardous liquids will not be left unattended until clean-up has been completed.

**BMP-9:** Project-related use of rodenticides and herbicides on the project site will be prohibited.

**BMP-10:** Dust control measures will be implemented throughout construction activities. The amount of water used will be kept to a minimum as to avoid forming puddles.

**BMP-11:** To prevent wildlife entrapment during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar material when work is not actively being conducted in the excavation. If the trenches cannot be closed, one or more escape ramps of no more than a 1:1 (45-degree) slope will be constructed of earthen fill or created with wooden planks at no greater than 500-foot long intervals. All covered or uncovered excavations will be inspected at the beginning, middle, and end of each day. Before trenches are filled, they

will be inspected for trapped animals. If a trapped or injured animal is discovered, project activities will stop, and escape ramps or structures will be installed immediately to allow the animal(s) to escape voluntarily before construction activities begin/resume. A biological monitor may remove wildlife from an excavation or other entrapment if the immediate welfare of the individual is in jeopardy and appropriate agency permits/approvals are in place. If a federally or state-listed species that is not covered by take authorization (e.g., a fully protected species) becomes entrapped and measures have not been previously developed to address the situation, USFWS and/or CDFW will be contacted to determine the appropriate actions.

**BMP-12:** All construction pipes, culverts, or similar structures laid in trenches overnight or stored onsite overnight will be capped. If an open pipe is subsequently discovered, the pipe will be visually inspected for wildlife, if feasible. After it is confirmed that no state or federally listed species are present in the pipe, the pipe will be capped. If the pipe cannot be visually inspected (buried, bent, too long, etc.), it will be monitored with tracking medium and/or an infrared camera. If after no less than 3 consecutive nights of monitoring, no sign of state or federally listed species is observed, the pipe will be capped. All pipe will be thoroughly inspected for wildlife before the pipe is buried or otherwise used or moved in any way. If an animal is discovered inside a pipe, the pipe will not be moved, and the animal will be allowed to leave voluntarily before construction activities begin/resume. A biological monitor may remove an animal from a pipe or other entrapment if appropriate agency permits/approvals are in place and the immediate welfare of the individual is in jeopardy or the animal does not vacate the pipe on its own accord within a reasonable timeframe. If a federally or state-listed species that is not covered by take authorization (e.g., a fully protected species) becomes entrapped and measures have not been previously developed to address the situation, USFWS and/or CDFW will be contacted to determine the appropriate actions.

**BMP-13:** All food-related trash items such as wrappers, cans, bottles, micro-trash, and food scraps generated by project activities will be disposed of in closed containers and removed at least once each week from the site. Deliberate feeding of wildlife will be prohibited.

**BMP-14:** Project personnel will be prohibited from having firearms or domestic pets on the project site.

**BMP-15:** Any project personnel who inadvertently kills or injures an animal or finds any animal dead, injured, or entrapped on the project site will be required to report the incident immediately to a designated site representative (e.g., foreman, manager, biological monitor, etc.). The site representative must then notify a biological monitor if one has not already been notified. All project work in the immediate vicinity of any such finding will cease until a biological monitor determines the appropriate action and deems it appropriate for work to resume. USFWS will be notified of injury or mortality of any federally listed species, and CDFW will be notified of injury or mortality of any state-listed or other special-status species. Instructions provided by USFWS and/or CDFW for the care of any injured animal and potential transfer of any mortalities will be implemented.

**BMP-16:** All construction refuse, including, but not limited to, fencing, stakes, flagging, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, containers, forms, wood, rebar, pipe, pallets, and boxes will be removed within 14 days of completing construction activities.

## 5.2 Species-specific Measures

### 5.2.1 Special-status Plants

**SSP-1:** Initial ground disturbance within 50 feet of special-status plant populations will be timed to occur after seed set and prior to germination, to the extent feasible. This period is generally May to October but may vary depending on annual precipitation and temperature conditions.

**SSP-2:** Within habitat occupied by special-status plants, the top 4 inches of soil will be excavated and temporarily stockpiled separately from soils excavated from deeper in the trench. After the pipeline is installed, the trench will first be backfilled with soil excavated from below 4 inches, then soil excavated from the top 4 inches of the trench will be returned to the trench surface as close to the original location as possible and contoured to blend with surrounding grades. Topsoil will not be stockpiled for longer than the beginning of the next growing season.

### 5.2.2 Crotch's Bumble Bee

**CBB-1:** A qualified biologist will conduct a survey to determine the presence of suitable foraging, nesting, or over-wintering habitat for Crotch's bumble bee within or immediately adjacent to the project site. If suitable habitat is present, surveys will be conducted within 1 year of vegetation removal/initial ground disturbance to detect foraging individuals and active nest colonies. Surveys will be conducted by a biologist familiar with Crotch's bumble bee behavior and life history and in accordance with *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023c) or alternative current agency protocols and requirements. Crotch's bumble bees will only be handled for identification and if appropriate agency permits/approvals are in place. If no Crotch's bumble bee or their nests are detected, no further measures will be necessary if vegetation removal/initial ground disturbance occurs before March 1 of the year following the negative survey.

**CBB-2:** If Crotch's bumble bee individuals or nests are detected during the surveys, a Crotch's bumble bee Mortality Reduction Plan will be prepared and submitted to CDFW no less than 30 days before project initiation. The plan will identify measures to avoid and minimize impacts on Crotch's bumble bee and may include measures such as the following:

- 50-foot no disturbance buffers will be implemented around active Crotch's bumble bee nests, to the extent feasible
- If Crotch's bumble bee nests cannot be avoided, vegetation removal/initial ground disturbance will be limited to periods when fewer individual Crotch's bumble bees are likely to be underground (e.g., after nests have become inactive)

- Vegetation removal/initial ground disturbance will be timed to minimize potential mortality of overwintering Crotch's bumble bee queens, and small mammal burrows that may harbor queens will be excavated by hand to the extent feasible.
- Procedures for handling and disposition of individual Crotch's bumble bees, if encountered on the project site during construction activities (including burrow hand-excavation), will be identified and implemented.

### **5.2.3 Wildlife Exclusion Fencing**

**WEF-1:** Wildlife exclusion fencing (WEF) will be installed and maintained during pipeline installation. A minimum of 60 days before WEF is installed, a WEF plan that includes fence specifications (smooth material such as aluminum flashing, heavy gauge polyvinyl chloride, or high-density polyethylene matrix material with anti-climbing guards), a map of WEF location, and timing of WEF installation in relation to construction activities will be prepared and submitted to CDFW and USFWS. Fencing will meet all species-specific requirements.

### **5.2.4 Blunt-nosed Leopard Lizard**

**BNLL-1:** Surveys following current CDFW protocols for detection of blunt-nosed leopard lizard will be conducted and completed no more than 1 year before project construction activities begin.

**BNLL-2:** Blunt-nosed leopard lizard take avoidance measures will be implemented during project construction, such as methods to ensure individuals are not struck by project vehicles and equipment or crushed in burrows within the project disturbance footprint. Means of escape from the work limits when WEF is in place will also be provided. If blunt-nosed leopard lizard is detected on the project site during surveys completed within 1 year of when project activities would begin, a Blunt-nosed Leopard Lizard Avoidance Plan describing these measures will be prepared and submitted to CDFW.

**BNLL-3:** A biological monitor will be available during all work activities with potential to result in take of blunt-nosed leopard lizard to ensure take avoidance measures are properly implemented. If a blunt-nosed leopard lizard is observed during project construction, work activities within 250 feet of the individual will be limited to those activities that will not result in injury or mortality to the individual until it leaves the area of its own accord. A qualified biologist may move the blunt-nosed leopard lizard to outside the project site if appropriate agency permits/approvals are in place and the immediate welfare of the individual is in jeopardy or the blunt-nosed leopard lizard does not vacate the site on its own accord within a reasonable timeframe. Work activities will not resume until the biological monitor deems it appropriate.

### **5.2.5 Burrowing Owl**

**BUOW-1:** Measures specified in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) or alternative current CDFW protocols and requirements will be implemented to avoid and/or minimize impacts on burrowing owl.



**BUOW-2:** A take avoidance survey will be conducted within 14 days before on-site project activities begin in each portion of the site.

**BUOW-3:** If any occupied burrows are observed, a qualified biologist will establish and confirm implementation of an appropriate protective buffer around each occupied burrow until the biologist determines the burrow is no longer occupied. A qualified biologist will monitor occupied burrows during project activities to confirm effectiveness of the buffer. The size of the buffer will depend on type and intensity of project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the owls to disturbance.

**BUOW-4:** If it is not feasible to implement a buffer of adequate size to avoid disturbance and it is determined, in consultation with CDFW, that passive exclusion of owls from the project site is an appropriate means of minimizing impacts, an exclusion and relocation plan will be developed and implemented in coordination with CDFW. Passive exclusion will not be conducted during the breeding season (February 1–August 31), unless a qualified biologist verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival.

**BUOW-5:** If passive exclusion is conducted, each occupied burrow that is destroyed will be replaced with at least one artificial burrow at a suitable location in similar habitat within or adjacent to the project alignment. The artificial burrow(s) will be installed within 500 feet of the occupied burrow, if possible, and before passive relocation occurs.

### **5.2.6 Swainson's Hawk**

**SWHA-1:** If construction activities would occur during the Swainson's hawk nesting season (April–August), a qualified biologist will conduct surveys of accessible potential Swainson's hawk nesting trees within 0.5 mile of the project site. To the extent practicable, depending on timing of project initiation, surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). At a minimum, at least one survey will be conducted within 10 days before project activities begin during the nesting season.

**SWHA-2:** If an active Swainson's hawk nest is found, a qualified biologist will prepare a site-specific take avoidance plan to comply with CESA and the CFGC. Measures may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

### **5.2.7 White-tailed Kite**

**WTKI-1:** If construction would begin during the white-tailed kite nesting season (March–August), a qualified biologist will conduct a survey of accessible potential white-tailed kite nesting trees within 0.5 mile of the project site. At a minimum, at least one survey will be conducted within 10 days before project activities begin during the nesting season.

**WTKI-2:** If an active white-tailed kite nest is found, a qualified biologist will prepare a site-specific take avoidance plan to comply with CFGC. Measures may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

### **5.2.8 Other Nesting Birds**

**BIRD-1:** A qualified biologist will conduct surveys of suitable nesting habitat that would be directly disturbed by project activities and suitable nesting habitat for loggerhead shrike, Le Conte's thrasher, California thrasher, and common raptors, in accessible potential habitat within 500 feet of project activities. Surveys will be conducted within 10 days before project activities begin near suitable nesting habitat during the nesting season (February–August).

**BIRD-2:** If an active nest is observed, a qualified biologist will prepare a site-specific take avoidance plan to comply with applicable state and federal regulations. Measures for other species may include but are not limited to nest-specific no disturbance buffers, biological monitoring, rescheduling construction activities around sensitive periods for the species (e.g., nest establishment), and/or implementing construction best practices, such as staging equipment out of the species' line of sight from the nest tree. The avoidance/protection measures will be established before construction activities begin and continue until the adult and young birds are no longer reliant on the nest site. A qualified biologist will monitor construction activities and behavior of the nesting birds and young to ensure project activities do not cause disturbance that could result in nest abandonment, reduced care of eggs or young, or premature fledging.

### **5.2.9 Tipton Kangaroo Rat and Giant Kangaroo Rat**

**TKR-1:** Exclusion and mortality reduction measures for Tipton kangaroo rat and giant kangaroo rat, including fencing, trapping, and translocation requirements, will be developed and submitted to CDFW and USFWS.

**TKR-2:** Translocation of Tipton and giant kangaroo rats will be implemented as follows, unless otherwise determined in consultation with CDFW and USFWS:

- Trapping will be conducted by qualified biologists within portions of the project site known or anticipated to be occupied by Tipton kangaroo rat or giant kangaroo rat for at least 5 consecutive nights commencing no more than 48 hours after WEF encloses that portion of the work limits.
- Trapping will be conducted when weather conditions are conducive to trapping success and kangaroo rats can be safely handled following methods in *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats* (USFWS 2013) or alternative current agency protocols and requirements.
- If any Tipton kangaroo rat or giant kangaroo rat are encountered during daylight hours or during construction, they will either be hand-captured by a Service-approved biologist or traps will be deployed in the vicinity of the observation until capture.
- Artificial burrows 3 feet long will be constructed using a hand-held soil auger at least 3 inches in diameter and angled into the ground at no greater than 30°. Artificial burrows will avoid existing active kangaroo rat burrows by 50 feet.
- Each captured kangaroo rat will be translocated by a qualified biologist using a modified soft-release approach to an artificial burrow at the closest location outside of the work limits/WEF as possible, but at least 50 feet from anticipated project excavation activities. Captured Tipton kangaroo rats and giant kangaroo rats will be released as soon as practicable after capture and under weather conditions described above for trapping.

#### **5.2.10 San Joaquin Antelope Squirrel**

**SJAS-1:** Exclusion and mortality avoidance measures for San Joaquin antelope squirrel, including fencing, trapping, and translocation requirements, will be developed and submitted to CDFW. San Joaquin antelope squirrels translocated as part of the mortality reduction measures, will be released in suitable habitat adjacent to the project site.

#### **5.2.11 San Joaquin Kit Fox**

**SJKF-1:** Measures specified in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) or alternative current agency protocols and requirements will be implemented to avoid and/or minimize impacts on San Joaquin kit fox.

**SJKF-2:** Preconstruction surveys will be conducted no more than 30 days before on-site construction activities begin. Surveys will include all work areas and a minimum buffer of 250 feet. Survey protocols and den definitions, buffer zones, and excavation procedures will be consistent with the *Standardized Recommendations for Protection of the Endangered San Joaquin*

*Kit Fox Prior to or During Ground Disturbance* (USFWS 2011) or alternative current agency protocols and requirements.

**SJKF-3:** Den avoidance, monitoring, blocking/unblocking and excavation will be implemented as follows, unless otherwise determined in consultation with CDFW and USFWS:

- Appropriate buffers will be implemented to avoid disturbance of active natal/pupping dens
- Potential, known, and inactive natal/pupping dens will be monitored by a qualified biologist for no less than 3 nights by placing tracking material, or other verified means of detecting kit fox presence (remote-sensing cameras, etc.), at each den entrance and checking for evidence of kit fox each morning.
- If no kit fox activity is documented and the den will not be directly destroyed during project construction, it may be temporarily blocked to discourage individuals from denning during construction activities. Within 48 hours of completing construction activities, blocked dens will be reopened. If the den will be destroyed during project construction and vacancy has been confirmed, the den will be excavated. Inactive natal/pupping dens will only be excavated between August 1 and December 14 and provided that pups have demonstrated behaviors that indicate they are no longer dependent on the adults.
- If kit fox occupation is documented (but not being used by pups) and disturbance of the occupied den cannot be avoided according to current standards. The following procedures will be implemented upon receiving authorization from CDFW and USFWS:
  - Den use will be discouraged by partially plugging the entrance(s) with vegetation.
  - After either 3 consecutive nights of no recorded kit fox occupation or 5 days of vegetation/soil soft-plugging, the den may be excavated when, in the judgment of a qualified biologist, the den is vacant. Hand excavation is the preferred method; however, mechanical excavation equipment (e.g., backhoe) may be used if required due to soil conditions.

### **5.2.12 Compensatory Mitigation**

The District will obtain authorization from USFWS and/or CDFW for take of federally and state-listed species (including candidates for state listing) that would occur during project implementation, including take that may occur as a result of implementing avoidance and minimization measures. The District will coordinate with USFWS and/or CDFW to develop and implement an appropriate mitigation strategy to compensate for take of listed species. An appropriate compensation ratio will be determined in consultation with USFWS and/or CDFW but is anticipated to be 1.1 acre of compensation habitat for each acre of habitat that is impacted, based on the temporary nature of the impacts and avoidance of permanent habitat loss. Compensatory mitigation may be implemented on parcels purchased by the District to facilitate project implementation. If this is not feasible or adequate on-site habitat is not available to fulfill compensatory mitigation requirements, mitigation may be implemented at an appropriate

alternative location agreed to by USFWS and/or CDFW or through purchase of credits at a USFWS-and/or CDFW-approved bank. If habitat compensation is not provided at an established bank or existing mitigation site with habitat maintenance and protection mechanisms in place, the mitigation strategy will specify funding, monitoring, management, and protection requirements to ensure the compensation habitat is protected and appropriately managed in perpetuity.

### ***5.2.13 Mitigation Land Restoration***

Before project activities begin on the CNLM parcel, a habitat restoration plan will be developed to address potential adverse impacts of project construction. The plan will document pre-project conditions on the portion of the parcel to be impacted by project construction and identify post-construction revegetation and monitoring efforts to be implemented. The plan will also identify potential remedial actions to be taken if restoration efforts do not meet performance standards. Restoration performance standards will require habitat values for the species for which the mitigation lands were established are restored to equivalent or better than pre-project conditions documented in the restoration plan. The plan will be provided to CNLM for review and the District will work with CNLM to resolve CNLM comments.

Impacts on the mitigation land, including vegetation removal and other ground disturbance will be minimized to the maximum extent feasible during project construction. After project construction is complete, the restoration plan will be implemented and restored habitat will be monitored as specified in the restoration plan. Remedial actions will be implemented, if necessary. Restoration, monitoring, and potential remedial actions may be implemented by qualified personnel retained by the District, by CNLM, or through alternative means agreed to by the District and CNLM. The District will provide funding for restoration plan implementation.

## 6.0 References

---

- California Department of Fish and Game (CDFG). 2012. *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency, Sacramento, CA. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed: January 5, 2024.
- California Department of Fish and Wildlife (CDFW). 2022. Estimated Range of Temblor Legless Lizard. Wildlife Branch. Sacramento, CA. Available: <https://wildlife.ca.gov/Data/CNDDDB/News/temblor-legless-lizard-status-review-how-you-can-help#gsc.tab=0>. Accessed: December 27, 2023.
- \_\_\_\_\_. 2023a. Results of electronic database search for sensitive species occurrences. Version 5. Biogeographic Data Branch. Available: <https://wildlife.ca.gov/Data/CNDDDB>. Accessed: December 12, 2023.
- \_\_\_\_\_. 2023b. List of California Sensitive Natural Communities. Sacramento, CA. Available: <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities>. Accessed: December 12, 2023.
- \_\_\_\_\_. 2023c. *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species*. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.
- California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants. Online edition, v9.5. Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed: December 12, 2023.
- City of Bakersfield. 1994. *Metropolitan Bakersfield Habitat Conservation Plan*.
- iNaturalist. 2023. Crotch's bumble bee observations. Available: <https://www.inaturalist.org/observations>. Accessed December 12, 2023.
- Kern County Planning Department. 2006. *First Public Draft, Kern County Valley Floor Habitat Conservation Plan*. Prepared by Garcia and Associates, Lompoc, CA.
- \_\_\_\_\_. 2004. *Kern County General Plan*. Available: [https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP\\_Complete.pdf](https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf). Accessed: December 27, 2023.
- Natural Resources Conservation District (NRCS). 2022. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed: May 23, 2022.
- Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation*, 2<sup>nd</sup> Edition, California Native Plant Society. Sacramento, CA.

Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*. Available: Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.

United States Fish and Wildlife Service (USFWS). 2011. *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance*. Sacramento Fish and Wildlife Office, Sacramento, CA. Available: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. Accessed December 27, 2023.

\_\_\_\_\_. 2013. *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats*. Sacramento Field Office, Sacramento, CA. Available: <https://www.fws.gov/media/survey-protocol-determining-presence-san-joaquin-kangaroo-rats>. Accessed: December 27, 2023.

\_\_\_\_\_. 2023. IPaC Resource List. Generated at <https://ecos.fws.gov/ipac/> on December 12, 2023.

Western Regional Climate Center. 2020. *Recent Climate in the West*. Available: <https://wrcc.dri.edu/> Accessed: January 24, 2023.

## **Appendix A – Special-status Species Lists**

---





CNPS Rare Plant Inventory.

**Search Results**

29 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [3511934:3511944:3511954:3511936:3511935:3511945:3511955:3511956:3511946]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK
<a href="#"><u><i>Astragalus hornii</i> var. <i>hornii</i></u></a>	Horn's milk-vetch	Fabaceae	May-Oct	None	None	1B.1
<a href="#"><u><i>Atriplex cordulata</i> var. <i>cordulata</i></u></a>	heartscale	Chenopodiaceae	Apr-Oct	None	None	1B.2
<a href="#"><u><i>Atriplex cordulata</i> var. <i>erecticaulis</i></u></a>	Earlimart orache	Chenopodiaceae	Aug-Sep(Nov)	None	None	1B.2
<a href="#"><u><i>Atriplex coronata</i> var. <i>coronata</i></u></a>	crownscale	Chenopodiaceae	Mar-Oct	None	None	4.2
<a href="#"><u><i>Atriplex coronata</i> var. <i>vallicola</i></u></a>	Lost Hills crownscale	Chenopodiaceae	Apr-Sep	None	None	1B.2
<a href="#"><u><i>Atriplex minuscula</i></u></a>	lesser saltscale	Chenopodiaceae	May-Oct	None	None	1B.1
<a href="#"><u><i>Atriplex subtilis</i></u></a>	subtle orache	Chenopodiaceae	(Apr)Jun-Sep(Oct)	None	None	1B.2
<a href="#"><u><i>Canbya candida</i></u></a>	white pygmy-poppy	Papaveraceae	Mar-Jun	None	None	4.2
<a href="#"><u><i>Caulanthus californicus</i></u></a>	California jewelflower	Brassicaceae	Feb-May	FE	CE	1B.1
<a href="#"><u><i>Caulanthus lemmonii</i></u></a>	Lemmon's jewelflower	Brassicaceae	Feb-May	None	None	1B.2
<a href="#"><u><i>Cirsium crassicaule</i></u></a>	slough thistle	Asteraceae	May-Aug	None	None	1B.1
<a href="#"><u><i>Clarkia xantiana</i> ssp. <i>parviflora</i></u></a>	Kern Canyon clarkia	Onagraceae	May-Jun	None	None	4.2
<a href="#"><u><i>Delphinium recurvatum</i></u></a>	recurved larkspur	Ranunculaceae	Mar-Jun	None	None	1B.2
<a href="#"><u><i>Eremalche parryi</i> ssp. <i>kernensis</i></u></a>	Kern mallow	Malvaceae	Jan(Feb)Mar-May	FE	None	1B.2
<a href="#"><u><i>Eriastrum hooveri</i></u></a>	Hoover's eriastrum	Polemoniaceae	Mar-Jul	FD	None	4.2
<a href="#"><u><i>Eriogonum gossypinum</i></u></a>	cottony buckwheat	Polygonaceae	Mar-Sep	None	None	4.2
<a href="#"><u><i>Eriogonum nudum</i> var. <i>indictum</i></u></a>	protruding buckwheat	Polygonaceae	(Apr)May-Oct(Dec)	None	None	4.2
<a href="#"><u><i>Eriogonum temblorense</i></u></a>	Temblor buckwheat	Polygonaceae	(Apr)May-Sep	None	None	1B.2
<a href="#"><u><i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i></u></a>	Tejon poppy	Papaveraceae	(Feb)Mar-May	None	None	1B.1
<a href="#"><u><i>Lasthenia chrysantha</i></u></a>	alkali-sink goldfields	Asteraceae	Feb-Apr	None	None	1B.1
<a href="#"><u><i>Lasthenia ferrisiae</i></u></a>	Ferris' goldfields	Asteraceae	Feb-May	None	None	4.2
<a href="#"><u><i>Lasthenia glabrata</i> ssp. <i>coulteri</i></u></a>	Coulter's goldfields	Asteraceae	Feb-Jun	None	None	1B.1
<a href="#"><u><i>Layia heterotricha</i></u></a>	pale-yellow layia	Asteraceae	Mar-Jun	None	None	1B.1
<a href="#"><u><i>Layia munzii</i></u></a>	Munz's tidy-tips	Asteraceae	Mar-Apr	None	None	1B.2
<a href="#"><u><i>Madia radiata</i></u></a>	showy golden madia	Asteraceae	Mar-May	None	None	1B.1
<a href="#"><u><i>Monolopia congdonii</i></u></a>	San Joaquin woollythreads	Asteraceae	Feb-May	FE	None	1B.2
<a href="#"><u><i>Puccinellia simplex</i></u></a>	California alkali grass	Poaceae	Mar-May	None	None	1B.2
<a href="#"><u><i>Stylocline citroleum</i></u></a>	oil neststraw	Asteraceae	Mar-Apr	None	None	1B.1
<a href="#"><u><i>Trichostema ovatum</i></u></a>	San Joaquin bluecurls	Lamiaceae	(Apr-Jun)Jul-Oct	None	None	4.2

Showing 1 to 29 of 29 entries

**Suggested Citation:**

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 12 December 2023].

Element_Type	Scientific_Name	Common_Name	Element_Code	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank	Quad_Code	Quad_Name	Data_Status	Taxonc
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals Amphibi: Scaphio Spea ha
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals Amphibi: Scaphio Spea ha
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3511945	LOKERN	Mapped	Animals Amphibi: Scaphio Spea ha
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3511934	EAST ELK HILLS	Mapped	Animals Amphibi: Scaphio Spea ha
Animals - Amphibians	Spea hammondii	western spadefoot	AAABF02020	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped	Animals Amphibi: Scaphio Spea ha
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP   WL	-	3511935	WEST ELK HILLS	Unprocessed	Animals Accipitric chrysaet
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP   WL	-	3511936	REWARD	Unprocessed	Animals Accipitric chrysaet
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP   WL	-	3511934	EAST ELK HILLS	Unprocessed	Animals Accipitric chrysaet
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511934	EAST ELK HILLS	Unprocessed	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511946	BELRIDGE	Unprocessed	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511956	LOST HILLS	Mapped	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals Accipitric swainso
Animals - Birds	Buteo swainsoni	Swainsons hawk	ABNKC19070	None	Threatened	-	-	3511935	WEST ELK HILLS	Unprocessed	Animals Accipitric swainso
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	3511935	WEST ELK HILLS	Unprocessed	Animals Accipitric Circus h
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	3511956	LOST HILLS	Unprocessed	Animals Accipitric

											Circus h
Animals - Birds	Circus hudsonius	northern harrier	ABNKC11011	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Accipitric Circus h
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3511945	LOKERN	Unprocessed	Animals Accipitric Elanus l
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3511945	LOKERN	Unprocessed	Animals Alaudide Eremopt alpestris
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3511946	BELRIDGE	Unprocessed	Animals Alaudide Eremopt alpestris
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3511935	WEST ELK HILLS	Unprocessed	Animals Alaudide Eremopt alpestris
Animals - Birds	Charadrius nivosus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3511955	SEMITROPIC	Mapped	Animals Charadr Charadr nivosus
Animals - Birds	Falco columbarius	merlin	ABNKD06030	None	None	WL	-	3511945	LOKERN	Unprocessed	Animals Falconid columba
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Falconid mexican
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3511936	REWARD	Unprocessed	Animals Falconid mexican
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3511955	SEMITROPIC	Mapped	Animals Icteridae tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	Threatened	SSC	-	3511954	WASCO SW	Mapped and Unprocessed	Animals Icteridae tricolor
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511955	SEMITROPIC	Unprocessed	Animals Laniidae ludovicie
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511944	BUTTONWILLOW	Unprocessed	Animals Laniidae ludovicie
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Laniidae ludovicie
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511946	BELRIDGE	Unprocessed	Animals Laniidae ludovicie
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511936	REWARD	Unprocessed	Animals Laniidae ludovicie
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Laniidae ludovicie

Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Mimidae Toxostor
Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals Mimidae Toxostor
Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals Mimidae Toxostor
Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511945	LOKERN	Mapped and Unprocessed	Animals Mimidae Toxostor
Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511954	WASCO SW	Mapped	Animals Mimidae Toxostor
Animals - Birds	Toxostoma lecontei	Le Contes thrasher	ABPBK06100	None	None	SSC	-	3511955	SEMITROPIC	Mapped	Animals Mimidae Toxostor
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3511944	BUTTONWILLOW	Unprocessed	Animals Parulida Setopha petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Parulida Setopha petechia
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3511935	WEST ELK HILLS	Unprocessed	Animals Parulida Setopha petechia
Animals - Birds	Numenius americanus	long-billed curlew	ABNNF07070	None	None	WL	-	3511935	WEST ELK HILLS	Unprocessed	Animals Scolopai Numenit americal
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-	3511935	WEST ELK HILLS	Unprocessed	Animals Strigidae flammeu
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Strigidae otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511945	LOKERN	Mapped and Unprocessed	Animals Strigidae cunicula
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals Strigidae cunicula
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals Strigidae cunicula
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals Strigidae cunicula
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals Strigidae cunicula

Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals Strigidae cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Strigidae cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals Strigidae cunicularia
Animals - Birds	Empidonax traillii	willow flycatcher	ABPAE33040	None	Endangered	-	-	3511944	BUTTONWILLOW	Unprocessed	Animals Tyrannid Empidor
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3511934	EAST ELK HILLS	Mapped	Animals Apidae - crotchii
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	Candidate Endangered	-	-	3511936	REWARD	Mapped	Animals Apidae - crotchii
Animals - Insects	Protodufourea zavortinki	Zavortinks protodufourea bee	IIHYM77020	None	None	-	-	3511936	REWARD	Mapped	Animals Halictida Protoduf zavortin
Animals - Insects	Protodufourea zavortinki	Zavortinks protodufourea bee	IIHYM77020	None	None	-	-	3511935	WEST ELK HILLS	Mapped	Animals Halictida Protoduf zavortin
Animals - Mammals	Antilocapra americana	pronghorn	AMALD01010	None	None	-	-	3511936	REWARD	Unprocessed	Animals - Antilocap americana
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511936	REWARD	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511954	WASCO SW	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Canida macrotis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Canida

											macrotis
Animals - Mammals	Cervus canadensis nannodes	tule elk	AMALC01011	None	None	-	-	3511936	REWARD	Unprocessed	Animals - Cervid; canadennode
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Onychomys torridus tularensis	Tulare grasshopper mouse	AMAFF06021	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Cricetid; Onychomys torridus tularensis
Animals - Mammals	Dipodomys ingens	giant kangaroo rat	AMAFD03080	Endangered	Endangered	-	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Heteromys; Dipodomys
Animals - Mammals	Dipodomys ingens	giant kangaroo rat	AMAFD03080	Endangered	Endangered	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Heteromys; Dipodomys
Animals - Mammals	Dipodomys ingens	giant kangaroo rat	AMAFD03080	Endangered	Endangered	-	-	3511936	REWARD	Mapped and Unprocessed	Animals - Heteromys; Dipodomys
Animals - Mammals	Dipodomys ingens	giant kangaroo rat	AMAFD03080	Endangered	Endangered	-	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Heteromys; Dipodomys
Animals - Mammals	Dipodomys ingens	giant kangaroo rat	AMAFD03080	Endangered	Endangered	-	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Heteromys; Dipodomys
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Heteromys; Dipodomys nitratoides brevinasus
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals - Heteromys; Dipodomys nitratoides brevinasus
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Heteromys; Dipodomys

											nitratoid brevinas
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid brevinas
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid brevinas
Animals - Mammals	Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	AMAFD03153	None	None	SSC	-	3511956	LOST HILLS	Mapped	Animals - Hetero Dipodor nitratoid brevinas
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511954	WASCO SW	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Dipodomys nitratoides nitratoides	Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	-	-	3511935	WEST ELK HILLS	Unprocessed	Animals - Hetero Dipodor nitratoid nitratoid
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Hetero Perogna inornatu
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511936	REWARD	Mapped and Unprocessed	Animals - Hetero



											Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511955	SEMITROPIC	Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Perognathus inornatus	San Joaquin pocket mouse	AMAFD01060	None	None	-	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals - Hetero Perogna inornatus:
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals - Moloss Eumops californic
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Moloss Eumops californic
Animals - Mammals	Eumops perotis californicus	western mastiff bat	AMACD02011	None	None	SSC	-	3511945	LOKERN	Mapped	Animals - Moloss Eumops californic
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Musteli Taxidea
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511946	BELRIDGE	Unprocessed	Animals - Musteli Taxidea
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped	Animals - Musteli Taxidea
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511956	LOST HILLS	Unprocessed	Animals - Musteli Taxidea
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals - Musteli Taxidea
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Musteli Taxidea

Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3511934	EAST ELK HILLS	Unprocessed	Animals - Musteli Taxidea
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511936	REWARD	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Ammospermophilus nelsoni	Nelsons (=San Joaquin) antelope squirrel	AMAFB04040	None	Threatened	-	-	3511945	LOKERN	Mapped and Unprocessed	Animals - Sciurid Ammospermophilus nelsoni
Animals - Mammals	Sorex ornatus relictus	Buena Vista Lake ornate shrew	AMABA01102	Endangered	None	SSC	-	3511944	BUTTONWILLOW	Mapped	Animals - Soricid ornatus relictus
Animals - Reptiles	Anniella alexanderae	Temblor legless lizard	ARACC01030	None	Candidate Endangered	SSC	-	3511945	LOKERN	Mapped	Animals - Anniellid Anniella alexanderae
Animals - Reptiles	Anniella alexanderae	Temblor legless lizard	ARACC01030	None	Candidate Endangered	SSC	-	3511935	WEST ELK HILLS	Mapped	Animals - Anniellid Anniella alexanderae
Animals - Reptiles	Anniella alexanderae	Temblor legless lizard	ARACC01030	None	Candidate Endangered	SSC	-	3511936	REWARD	Mapped	Animals - Anniellid Anniella alexanderae
Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	ARADB01017	None	None	SSC	-	3511936	REWARD	Mapped	Animals - Colubrid Arizona elegans occidentalis
Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	ARADB01017	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals - Colubrid

											Arizona occident
Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	ARADB01017	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped	Animals Colubrid Arizona occident
Animals - Reptiles	Arizona elegans occidentalis	California glossy snake	ARADB01017	None	None	SSC	-	3511954	WASCO SW	Mapped	Animals Colubrid Arizona occident
Animals - Reptiles	Masticophis flagellum ruddocki	San Joaquin coachwhip	ARADB21021	None	None	SSC	-	3511956	LOST HILLS	Mapped and Unprocessed	Animals Colubrid Masticoç flagellurr
Animals - Reptiles	Masticophis flagellum ruddocki	San Joaquin coachwhip	ARADB21021	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Colubrid Masticoç flagellurr
Animals - Reptiles	Masticophis flagellum ruddocki	San Joaquin coachwhip	ARADB21021	None	None	SSC	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals Colubrid Masticoç flagellurr
Animals - Reptiles	Masticophis flagellum ruddocki	San Joaquin coachwhip	ARADB21021	None	None	SSC	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Colubrid Masticoç flagellurr
Animals - Reptiles	Masticophis flagellum ruddocki	San Joaquin coachwhip	ARADB21021	None	None	SSC	-	3511936	REWARD	Mapped and Unprocessed	Animals Colubrid Masticoç flagellurr
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511936	REWARD	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511935	WEST ELK HILLS	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511934	EAST ELK HILLS	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511946	BELRIDGE	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511945	LOKERN	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511956	LOST HILLS	Mapped	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511954	WASCO SW	Mapped and Unprocessed	Animals Crotaphy Gambeli
Animals - Reptiles	Gambelia sila	blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	FP	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals Crotaphy Gambeli

Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	Proposed Threatened	None	SSC	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals Emydidae marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	Proposed Threatened	None	SSC	-	3511956	LOST HILLS	Mapped	Animals Emydidae marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	Proposed Threatened	None	SSC	-	3511945	LOKERN	Mapped	Animals Emydidae marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3511944	BUTTONWILLOW	Mapped	Animals Natricidae Thamnophis
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3511934	EAST ELK HILLS	Mapped	Animals Natricidae Thamnophis
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511935	WEST ELK HILLS	Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511945	LOKERN	Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511946	BELRIDGE	Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511944	BUTTONWILLOW	Mapped and Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511955	SEMITROPIC	Mapped and Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3511954	WASCO SW	Unprocessed	Animals Phrynosoma Phrynosoma blainvillii
Community - Terrestrial	Alkali Seep	Alkali Seep	CTT45320CA	None	None	-	-	3511955	SEMITROPIC	Mapped	Commur Terrestrial: Seep
Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511955	SEMITROPIC	Mapped	Commur Terrestrial: Saltbush
Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511956	LOST HILLS	Mapped	Commur Terrestrial: Saltbush
Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511945	LOKERN	Mapped	Commur Terrestrial: Saltbush
Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511944	BUTTONWILLOW	Mapped	Commur Terrestrial: Saltbush
Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511935	WEST ELK HILLS	Mapped	Commur Terrestrial: Saltbush

Community - Terrestrial	Valley Saltbush Scrub	Valley Saltbush Scrub	CTT36220CA	None	None	-	-	3511934	EAST ELK HILLS	Mapped	Commur Terrestri: Saltbush
Community - Terrestrial	Valley Sink Scrub	Valley Sink Scrub	CTT36210CA	None	None	-	-	3511945	LOKERN	Mapped	Commur Terrestri: Sink Scr
Community - Terrestrial	Valley Sink Scrub	Valley Sink Scrub	CTT36210CA	None	None	-	-	3511955	SEMITROPIC	Mapped	Commur Terrestri: Sink Scr
Plants - Vascular	Cirsium crassicaule	slough thistle	PDAST2E0U0	None	None	-	1B.1	3511955	SEMITROPIC	Mapped	Plants - Asterace Cirsium
Plants - Vascular	Cirsium crassicaule	slough thistle	PDAST2E0U0	None	None	-	1B.1	3511954	WASCO SW	Mapped	Plants - Asterace Cirsium
Plants - Vascular	Lasthenia chrysantha	alkali-sink goldfields	PDAST5L030	None	None	-	1B.1	3511955	SEMITROPIC	Mapped	Plants - Asterace Lastheni chryasant
Plants - Vascular	Lasthenia chrysantha	alkali-sink goldfields	PDAST5L030	None	None	-	1B.1	3511956	LOST HILLS	Mapped	Plants - Asterace Lastheni chryasant
Plants - Vascular	Lasthenia ferrisiae	Ferris goldfields	PDAST5L070	None	None	-	4.2	3511956	LOST HILLS	Unprocessed	Plants - Asterace Lastheni
Plants - Vascular	Lasthenia glabrata ssp. coulteri	Coulters goldfields	PDAST5L0A1	None	None	-	1B.1	3511945	LOKERN	Mapped	Plants - Asterace Lastheni ssp. cou
Plants - Vascular	Layia heterotricha	pale-yellow layia	PDAST5N070	None	None	-	1B.1	3511936	REWARD	Mapped	Plants - Asterace heterotri
Plants - Vascular	Layia munzii	Munzs tidy-tips	PDAST5N0B0	None	None	-	1B.2	3511956	LOST HILLS	Mapped	Plants - Asterace munzii
Plants - Vascular	Madia radiata	showy golden madia	PDAST650E0	None	None	-	1B.1	3511945	LOKERN	Mapped	Plants - Asterace radiata
Plants - Vascular	Monolopia congdonii	San Joaquin woollythreads	PDASTA8010	Endangered	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Asterace Monolop congdon
Plants - Vascular	Monolopia congdonii	San Joaquin woollythreads	PDASTA8010	Endangered	None	-	1B.2	3511946	BELRIDGE	Mapped	Plants - Asterace Monolop congdon
Plants - Vascular	Monolopia congdonii	San Joaquin woollythreads	PDASTA8010	Endangered	None	-	1B.2	3511956	LOST HILLS	Mapped	Plants - Asterace Monolop congdon
Plants - Vascular	Monolopia congdonii	San Joaquin woollythreads	PDASTA8010	Endangered	None	-	1B.2	3511955	SEMITROPIC	Mapped	Plants - Asterace Monolop congdon
Plants - Vascular	Monolopia congdonii	San Joaquin woollythreads	PDASTA8010	Endangered	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Asterace

											Monolop congdon
Plants - Vascular	Stylocline citroleum	oil neststraw	PDAST8Y070	None	None	-	1B.1	3511935	WEST ELK HILLS	Mapped	Plants - Asterace Styloclin
Plants - Vascular	Stylocline citroleum	oil neststraw	PDAST8Y070	None	None	-	1B.1	3511934	EAST ELK HILLS	Mapped	Plants - Asterace Styloclin
Plants - Vascular	Stylocline citroleum	oil neststraw	PDAST8Y070	None	None	-	1B.1	3511936	REWARD	Mapped	Plants - Asterace Styloclin
Plants - Vascular	Caulanthus californicus	California jewelflower	PDBRA31010	Endangered	Endangered	-	1B.1	3511955	SEMITROPIC	Mapped	Plants - Brassica Caulantf californic
Plants - Vascular	Caulanthus californicus	California jewelflower	PDBRA31010	Endangered	Endangered	-	1B.1	3511956	LOST HILLS	Mapped	Plants - Brassica Caulantf californic
Plants - Vascular	Caulanthus californicus	California jewelflower	PDBRA31010	Endangered	Endangered	-	1B.1	3511946	BELRIDGE	Mapped	Plants - Brassica Caulantf californic
Plants - Vascular	Caulanthus lemmonii	Lemmons jewelflower	PDBRA0M0E0	None	None	-	1B.2	3511936	REWARD	Mapped	Plants - Brassica Caulantf lemmoni
Plants - Vascular	Atriplex cordulata var. cordulata	heartscale	PDCHE040B0	None	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Chenop Atriplex var. cord
Plants - Vascular	Atriplex cordulata var. erecticaulis	Earlimart orache	PDCHE042V0	None	None	-	1B.2	3511944	BUTTONWILLOW	Mapped	Plants - Chenop Atriplex var. errec
Plants - Vascular	Atriplex cordulata var. erecticaulis	Earlimart orache	PDCHE042V0	None	None	-	1B.2	3511955	SEMITROPIC	Mapped	Plants - Chenop Atriplex var. errec
Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3511955	SEMITROPIC	Unprocessed	Plants - Chenop Atriplex var. coro
Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3511956	LOST HILLS	Unprocessed	Plants - Chenop Atriplex var. coro
Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3511945	LOKERN	Unprocessed	Plants - Chenop Atriplex var. coro
Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3511936	REWARD	Unprocessed	Plants - Chenop Atriplex var. coro
Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3511934	EAST ELK HILLS	Unprocessed	Plants - Chenop

											Atriplex (var. coronata)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511934	EAST ELK HILLS	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511936	REWARD	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511956	LOST HILLS	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex coronata var. vallicola	Lost Hills crownscale	PDCHE04371	None	None	-	1B.2	3511955	SEMITROPIC	Mapped	Plants - Chenopodiaceae Atriplex (var. vallicola)
Plants - Vascular	Atriplex minuscula	lesser saltscale	PDCHE042M0	None	None	-	1B.1	3511954	WASCO SW	Mapped	Plants - Chenopodiaceae Atriplex (var. minuscula)
Plants - Vascular	Atriplex minuscula	lesser saltscale	PDCHE042M0	None	None	-	1B.1	3511944	BUTTONWILLOW	Mapped	Plants - Chenopodiaceae Atriplex (var. minuscula)
Plants - Vascular	Atriplex subtilis	subtle orache	PDCHE042T0	None	None	-	1B.2	3511944	BUTTONWILLOW	Mapped	Plants - Chenopodiaceae Atriplex (var. subtilis)
Plants - Vascular	Atriplex subtilis	subtle orache	PDCHE042T0	None	None	-	1B.2	3511954	WASCO SW	Mapped	Plants - Chenopodiaceae Atriplex (var. subtilis)
Plants - Vascular	Astragalus hornii var. hornii	Horns milk-vetch	PDFAB0F421	None	None	-	1B.1	3511954	WASCO SW	Mapped	Plants - Fabaceae Astragalus (var. hornii)
Plants - Vascular	Astragalus hornii var. hornii	Horns milk-vetch	PDFAB0F421	None	None	-	1B.1	3511955	SEMITROPIC	Mapped	Plants - Fabaceae Astragalus (var. hornii)
Plants - Vascular	Astragalus hornii var. hornii	Horns milk-vetch	PDFAB0F421	None	None	-	1B.1	3511944	BUTTONWILLOW	Mapped	Plants - Fabaceae Astragalus (var. hornii)
Plants - Vascular	Astragalus hornii var. hornii	Horns milk-vetch	PDFAB0F421	None	None	-	1B.1	3511945	LOKERN	Mapped	Plants - Fabaceae Astragalus (var. hornii)
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511946	BELRIDGE	Unprocessed	Plants - Lamiales Trichostema

											Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511944	BUTTONWILLOW	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511955	SEMITROPIC	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511954	WASCO SW	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511956	LOST HILLS	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511935	WEST ELK HILLS	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Trichostema ovatum	San Joaquin bluecurls	PDLAM220A0	None	None	-	4.2	3511934	EAST ELK HILLS	Unprocessed	Plants - Lamiae Trichostema ovatum
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511934	EAST ELK HILLS	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511936	REWARD	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511955	SEMITROPIC	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511944	BUTTONWILLOW	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511946	BELRIDGE	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Eremalche parryi ssp. kernensis	Kern mallow	PDMAL0C031	Endangered	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Malvace Eremalche ssp. kernensis
Plants - Vascular	Clarkia xantiana ssp. parviflora	Kern Canyon clarkia	PDONA05181	None	None	-	4.2	3511936	REWARD	Unprocessed	Plants - Onagraceae



											Clarkia x ssp. par
Plants - Vascular	Canbya candida	white pygmy- poppy	PDPAP05020	None	None	-	4.2	3511936	REWARD	Unprocessed	Plants - Papaver Canbya
Plants - Vascular	Eschscholzia lemmonii ssp. kernensis	Tejon poppy	PDPAP0A071	None	None	-	1B.1	3511936	REWARD	Mapped	Plants - Papaver Eschsch lemmoni kernensi
Plants - Vascular	Eschscholzia lemmonii ssp. kernensis	Tejon poppy	PDPAP0A071	None	None	-	1B.1	3511935	WEST ELK HILLS	Mapped	Plants - Papaver Eschsch lemmoni kernensi
Plants - Vascular	Eschscholzia lemmonii ssp. kernensis	Tejon poppy	PDPAP0A071	None	None	-	1B.1	3511934	EAST ELK HILLS	Mapped	Plants - Papaver Eschsch lemmoni kernensi
Plants - Vascular	Puccinellia simplex	California alkali grass	PMPOA53110	None	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Poaceae Puccinel
Plants - Vascular	Puccinellia simplex	California alkali grass	PMPOA53110	None	None	-	1B.2	3511936	REWARD	Mapped	Plants - Poaceae Puccinel
Plants - Vascular	Puccinellia simplex	California alkali grass	PMPOA53110	None	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Poaceae Puccinel
Plants - Vascular	Puccinellia simplex	California alkali grass	PMPOA53110	None	None	-	1B.2	3511956	LOST HILLS	Mapped	Plants - Poaceae Puccinel
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511956	LOST HILLS	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511955	SEMITROPIC	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511945	LOKERN	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511946	BELRIDGE	Mapped	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511944	BUTTONWILLOW	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511935	WEST ELK HILLS	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriastrum hooveri	Hoovers eriastrum	PDPLM03070	Delisted	None	-	4.2	3511934	EAST ELK HILLS	Mapped and Unprocessed	Plants - Polemor Eriastru
Plants - Vascular	Eriogonum gossypinum	cottony buckwheat	PDPGN082E0	None	None	-	4.2	3511934	EAST ELK HILLS	Unprocessed	Plants - Polygon; Eriogont gossypir

Plants - Vascular	Eriogonum gossypinum	cottony buckwheat	PDPGN082E0	None	None	-	4.2	3511935	WEST ELK HILLS	Unprocessed	Plants - Polygon; Eriogon gossypir
Plants - Vascular	Eriogonum gossypinum	cottony buckwheat	PDPGN082E0	None	None	-	4.2	3511936	REWARD	Unprocessed	Plants - Polygon; Eriogon gossypir
Plants - Vascular	Eriogonum gossypinum	cottony buckwheat	PDPGN082E0	None	None	-	4.2	3511956	LOST HILLS	Unprocessed	Plants - Polygon; Eriogon gossypir
Plants - Vascular	Eriogonum nudum var. indictum	protruding buckwheat	PDPGN08494	None	None	-	4.2	3511936	REWARD	Unprocessed	Plants - Polygon; Eriogon var. indic
Plants - Vascular	Eriogonum nudum var. indictum	protruding buckwheat	PDPGN08494	None	None	-	4.2	3511935	WEST ELK HILLS	Unprocessed	Plants - Polygon; Eriogon var. indic
Plants - Vascular	Eriogonum temblorense	Temblor buckwheat	PDPGN085P0	None	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Polygon; Eriogon temblor
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3511935	WEST ELK HILLS	Mapped	Plants - Ranunc Delphinii recurvati
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3511934	EAST ELK HILLS	Mapped	Plants - Ranunc Delphinii recurvati
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3511936	REWARD	Mapped	Plants - Ranunc Delphinii recurvati
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3511955	SEMITROPIC	Mapped	Plants - Ranunc Delphinii recurvati
Plants - Vascular	Delphinium recurvatum	recurved larkspur	PDRAN0B1J0	None	None	-	1B.2	3511945	LOKERN	Mapped	Plants - Ranunc Delphinii recurvati

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

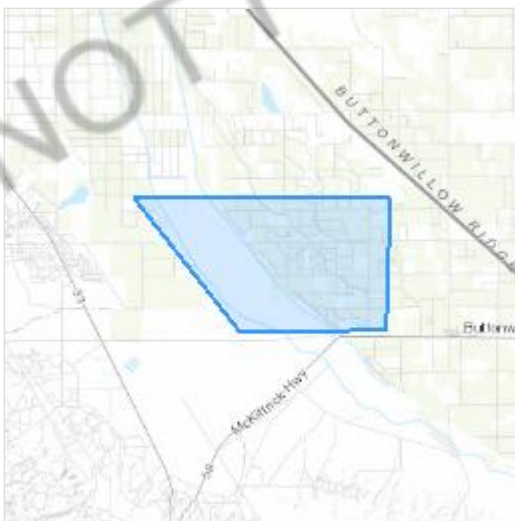
## Project information

### NAME

Belridge Pipeline Project

### LOCATION

Kern County, California



### DESCRIPTION

Some(The proposed project is located in western Kern County, approximately 4 miles west-northwest of the community of Buttonwillow, California. The proposed project includes installing approximately 2.5 miles of pipeline between the California Aqueduct

and the District's 7th Standard Pipeline. Additionally, the proposed project would install a new fiber optic line and new electrical line to service the turnout at the Aqueduct. The project would improve return capacity and increase water supply reliability, and would provide the District with additional water resources for agricultural uses, or other purposes as determined by the District.)

## Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

NOT FOR CONSULTATION

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
  2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
<b>Buena Vista Lake Ornate Shrew</b> <i>Sorex ornatus relictus</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/1610">https://ecos.fws.gov/ecp/species/1610</a>	Endangered
<b>Giant Kangaroo Rat</b> <i>Dipodomys ingens</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/6051">https://ecos.fws.gov/ecp/species/6051</a>	Endangered
<b>San Joaquin Kit Fox</b> <i>Vulpes macrotis mutica</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/2873">https://ecos.fws.gov/ecp/species/2873</a>	Endangered
<b>Tipton Kangaroo Rat</b> <i>Dipodomys nitratoides nitratoides</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/7247">https://ecos.fws.gov/ecp/species/7247</a>	Endangered

## Reptiles

NAME	STATUS
<b>Blunt-nosed Leopard Lizard</b> <i>Gambelia silus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/625">https://ecos.fws.gov/ecp/species/625</a>	Endangered
<b>Giant Garter Snake</b> <i>Thamnophis gigas</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a>	Threatened

## Amphibians

NAME	STATUS
------	--------

---

California Red-legged Frog *Rana draytonii* Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

## Fishes

---

NAME STATUS

Delta Smelt *Hypomesus transpacificus* Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/321>

## Insects

---

NAME STATUS

Monarch Butterfly *Danaus plexippus* Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

## Crustaceans

---

NAME STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi* Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/498>

## Flowering Plants

---

NAME STATUS

California Jewelflower *Caulanthus californicus* Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4599>

Kern Mallow *Eremalche kernensis* Endangered  
Wherever found  
No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/1731>

San Joaquin Woolly-threads *Monolopia (=Lembertia)* Endangered  
*congdonii*  
Wherever found  
No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/3746>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>



## What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

## What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

## What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The [data](#) in this location indicates there are no migratory [birds of conservation concern](#) expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

## What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

## How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

## What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

## Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact

[Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on Federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

### CBRA information is not available at this time

This can happen when the CBRS map service is unavailable, or for very large projects that intersect many coastal areas. Try again, or visit the [CBRS map](#) to view coastal barriers at this location.

### Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

#### Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact [CBRA@fws.gov](mailto:CBRA@fws.gov).

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

### Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1C](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PSSC](#)

[PSSA](#)

FRESHWATER POND

[PUBFx](#)

[PUBE](#)

LAKE

[L2USCh](#)

RIVERINE

[R2UBHx](#)

[R4SBCx](#)

[R4SBC](#)

[R5UBFx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

#### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

## **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

## **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

## **Appendix B – Photographs of Project Alignments**





Western portion of pipeline alignment between the Kern River Flood Canal and California Aqueduct, facing west-northwest (June 30, 2022).



West end of pipeline alignment and south end of fiber optic and electrical line alignments at California Aqueduct, facing northwest (July 1, 2022).



Middle of fiber optic and electrical line alignments, facing northwest (July 1, 2022)



North end of electrical line alignment, facing northwest (July 1, 2022).

## **Appendix C – Plant and Animal Species Documented During Field Surveys**

---



**Plants Observed During Surveys Conducted for the Belridge Pipeline Project  
(2018 – 2022)**

Scientific Name	Common Name (*nonnative species)
<b>Aizoaceae</b>	
<i>Mesembryanthemum nodiflorum</i>	Slenderleaf iceplant*
<b>Amaranthaceae</b>	
<i>Amaranthus albus</i>	Prostrate pigweed*
<i>Dysphania ambrosioides</i>	Mexican-Tea*
<b>Anacardiaceae</b>	
<i>Pistacia vera</i>	Cultivated pistachio*
<b>Asteraceae</b>	
<i>Acroptilon repens</i>	Russian knapweed*
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Ambrosia salsola</i>	cheesebush
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis salicifolia</i>	Mulefat
<i>Deinandra pallida</i>	Kern tarweed
<i>Ericameria</i> sp.	Rabbitbrush
<i>Erigeron canadensis</i>	Canadian horseweed
<i>Gnaphalium palustre</i>	Lowland cudweed
<i>Gutierrezia californica</i>	Snakeweed
<i>Helianthus annuus</i>	Common sunflower
<i>Isocoma acradenia</i> var. <i>bracteosa</i>	Alkali goldenbush
<i>Lactuca serriola</i>	Prickly lettuce*
<i>Layia glandulosa</i>	White layia
<i>Lasthenia californica</i>	California goldfields
<i>Lepidospartum squamatum</i>	Scale broom
<i>Matricaria discoidea</i>	Common pineapple weed
<i>Xanthium strumarium</i>	Cocklebur
<b>Boraginaceae</b>	
<i>Amsinckia intermedia</i>	Rancher's fireweed
<i>Amsinckia menziesii</i>	Menzies' fiddleneck
<b>Brassicaceae</b>	
<i>Brassica nigra</i>	Black mustard*
<i>Capsella bursa-pastoris</i>	Shephard's purse*

Scientific Name	Common Name (*nonnative species)
<i>Hirschfeldia incana</i>	Summer mustard*
<i>Lepidium latifolium</i>	Broadleaved pepperweed*
<i>Raphanus sativus</i>	Wild radish*
<i>Sisymbrium irio</i>	London rocket*
<i>Sisymbrium officinale</i>	Hedge mustard*
<b>Chenopodiaceae</b>	
<i>Allenrolfea occidentalis</i>	Iodine bush
<i>Atriplex canescens</i>	Four wing saltbush
<i>Atriplex coronata</i> var. <i>vallicola</i>	Lost Hills crownscale
<i>Atriplex lentiformis</i>	Quailbush
<i>Atriplex polycarpa</i>	Cattle spinach
<i>Atriplex spinifera</i>	Spiny saltbush
<i>Bassia hyssopifolia</i>	Fivehook*
<i>Salsola tragus</i>	Russian thistle*
<i>Suaeda moquinii</i>	Bush seepweed
<i>Suaeda nigra</i>	Bush seepweed
<b>Convolvulaceae</b>	
<i>Calystegia atriplicifolia</i>	Night-blooming false bindweed
<b>Cyperaceae</b>	
<i>Cyperus eragrostis</i>	Tall flatsedge
<i>Cyperus esculentus</i>	Yellow nutsedge
<b>Euphorbiaceae</b>	
<i>Croton setigerus</i>	Dove weed
<b>Fabaceae</b>	
<i>Acmispon wrangelianus</i>	Chilean bird's-foot trefoil
<i>Astragalus lentiginosus</i> var. <i>nigracalycis</i>	Freckled milkvetch
<i>Medicago sativa</i>	Alfalfa*
<i>Melilotus indicus</i>	Yellow sweetclover*
<b>Frankeniaceae</b>	
<i>Frankenia grandiflora</i>	Alkali heath
<i>Frankenia salina</i>	Alkali heath
<b>Geraniaceae</b>	
<i>Erodium cicutarium</i>	Red-stemmed filaree*
<i>Erodium moschatum</i>	Musky filaree*

Scientific Name	Common Name (*nonnative species)
<b>Heliotropiaceae</b>	
<i>Heliotropium curassavicum</i>	Salt heliotrope
<b>Hydrophyllaceae</b>	
<i>Phacelia distans</i>	Distant phacelia
<i>Phacelia tanacetifolia</i>	Tansy leaf phacelia
<b>Malvaceae</b>	
<i>Eremalche parryi</i> ssp. <i>kernensis</i>	Kern mallow
<i>Malva parviflora</i>	Cheeseweed*
<i>Malvella leprosa</i>	Alkali-mallow
<b>Orobanchaceae</b>	
<i>Castilleja exserta</i> subsp. <i>exserta</i>	Purple owl's clover
<b>Poaceae</b>	
<i>Avena barbata</i>	Slender wild oats*
<i>Bromus carinatus</i>	California brome
<i>Bromus diandrus</i>	Rip-gut brome*
<i>Bromus hordeaceus</i>	Downy chess*
<i>Bromus madritensis</i> subsp. <i>rubens</i>	Red brome*
<i>Cynodon dactylon</i>	Bermuda grass*
<i>Digitaria sanguinalis</i>	Crabgrass*
<i>Distichlis spicata</i>	Salt grass
<i>Echinochloa crus-galli</i>	Barnyard grass*
<i>Festuca microstachys</i>	Six-weeks fescue
<i>Festuca myuros</i>	Rat-tail fescue*
<i>Festuca perennis</i>	Italian ryegrass*
<i>Hordeum murinum</i>	Mouse barley*
<i>Paspalum distichum</i>	Knotgrass
<i>Phalaris minor</i>	Lesser canary grass*
<i>Phalaris aquatica</i>	Harding grass*
<i>Poa annua</i>	Annual bluegrass
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass*
<i>Schismus barbatus</i>	Mediterranean grass*
<i>Sporobolus airoides</i>	Alkali sacaton
<b>Polygonaceae</b>	
<i>Polygonum arenastrum</i>	Common knotgrass*

Scientific Name	Common Name (*nonnative species)
<i>Rumex crispus</i>	Curly dock*
<b>Ranunculaceae</b>	
<i>Delphinium recurvatum</i>	Recurved larkspur
<b>Salicaceae</b>	
<i>Salix exigua</i>	Narrowleaf willow
<i>Salix gooddingii</i>	Black willow
<i>Salix laevigata</i>	Red willow
<b>Solanaceae</b>	
<i>Datura wrightii</i>	Jimson weed
<i>Nicotiana glauca</i>	Tree tobacco*
<i>Solanum elaeagnifolium</i>	Silverleaf nightshade*
<b>Tamaricaceae</b>	
<i>Tamarix ramosissima</i>	Tamarisk*
<i>Tamarix</i> sp.	Saltcedar*
<b>Vitaceae</b>	
<i>Vitis</i> sp.	Cultivated grape*
<b>Zygophyllaceae</b>	
<i>Tribulus terrestris</i>	Puncturevine*

Sources: GEI Consultants, Inc. observations in 2018 and 2019; MBI observations in 2022



## Wildlife Observed During Surveys Conducted for the Belridge Pipeline Project (2018 – 2022)

Family	Scientific Name	Common Name
<b>Reptiles</b>		
Colubridae	<i>Coluber flagellum ruddocki</i>	San Joaquin coachwhip
Phrynosomatidae	<i>Uta stansburiana</i>	Common side-blotched lizard
Teiidae	<i>Aspidooscelis tigris munda</i>	Western whiptail
Viperidae	<i>Crotalus oreganus</i>	Western rattlesnake
<b>Birds</b>		
Accipitridae	<i>Buteo jamaicensis</i>	Red-tailed hawk
Accipitridae	<i>Buteo swainsoni</i>	Swainson's hawk
Accipitridae	<i>Circus hudsonius</i>	Northern harrier
Alaudidae	<i>Eremophila alpestris</i>	Horned lark
Anatidae	<i>Anas platyrhynchos</i>	Mallard
Ardeidae	<i>Butorides virescens</i>	Green heron
Caprimulgidae	<i>Chordeiles acutipennis</i>	Lesser nighthawk
Charadriidae	<i>Charadrius vociferus</i>	Killdeer
Columbidae	<i>Columba livia</i>	Rock pigeon
Columbidae	<i>Streptopelia decaocto</i>	Eurasian collared dove
Columbidae	<i>Zenaida macroura</i>	Mourning dove
Corvidae	<i>Corvus brachyrhynchos</i>	America crow
Corvidae	<i>Corvus corax</i>	Common raven
Cuculidae	<i>Geococcyx californianus</i>	Greater roadrunner
Falconidae	<i>Falco sparverius</i>	American kestrel
Fringillidae	<i>Haemorhous mexicanus</i>	House finch
Hirundinidae	<i>Petrochelidon pyrrhonota</i>	Cliff swallow
Icteridae	<i>Agelaius phoeniceus</i>	Red-winged blackbird
Icteridae	<i>Euphagus cyanocephalus</i>	Brewer's blackbird
Icteridae	<i>Icterus cucullatus</i>	Hooded oriole
Icteridae	<i>Sturnella neglecta</i>	Western meadowlark
Laniidae	<i>Lanius ludovicianus</i>	Loggerhead shrike
Laridae	<i>Hydroprogne caspia</i>	Caspian tern
Mimidae	<i>Mimus polyglottos</i>	Northern mockingbird
Mimidae	<i>Toxostoma lecontei</i>	LeConte's thrasher
Mimidae	<i>Toxostoma redivivum</i>	California thrasher

Odontophoridae	<i>Callipepla californica</i>	California quail
Passerellidae	<i>Artemisiospiza belli</i>	Bell's sparrow
Passerellidae	<i>Zonotrichia leucophrys</i>	White-crowned sparrow
Poliopitidae	<i>Poliopitila caerulea</i>	Blue-gray gnatcatcher
Recurvirostridae	<i>Recurvirostra americana</i>	American avocet
Scolopacidae	<i>Numenius americanus</i>	Long-billed curlew
Strigidae	<i>Athene cunicularia</i>	Burrowing owl
Sturnidae	<i>Sturnus vulgaris</i>	European starling*
Trochilidae	<i>Calypte anna</i>	Anna's hummingbird
Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's wren
Tyrannidae	<i>Sayornis nigricans</i>	Black phoebe
Tyrannidae	<i>Sayornis saya</i>	Say's phoebe
Tyrannidae	<i>Tyrannus verticalis</i>	Western kingbird
<b>Mammals</b>		
Canidae	<i>Canis latrans</i>	Coyote
Heteromyidae	<i>Dipodomys nitratoides nitratoides</i>	Tipton kangaroo rat
Geomyidae	<i>Thomomys bottae</i>	Botta's pocket gopher
Leporidae	<i>Lepus californicus</i>	Black-tailed jackrabbit
Leporidae	<i>Sylvilagus audubonii</i>	Desert cottontail
Mustelidae	<i>Taxidea taxus</i>	American badger
Sciuridae	<i>Ammospermophilus nelsoni</i>	San Joaquin (Nelson's) antelope squirrel
Sciuridae	<i>Otospermophilus beecheyi</i>	California ground squirrel

Source: MBI observations made in 2018–2022