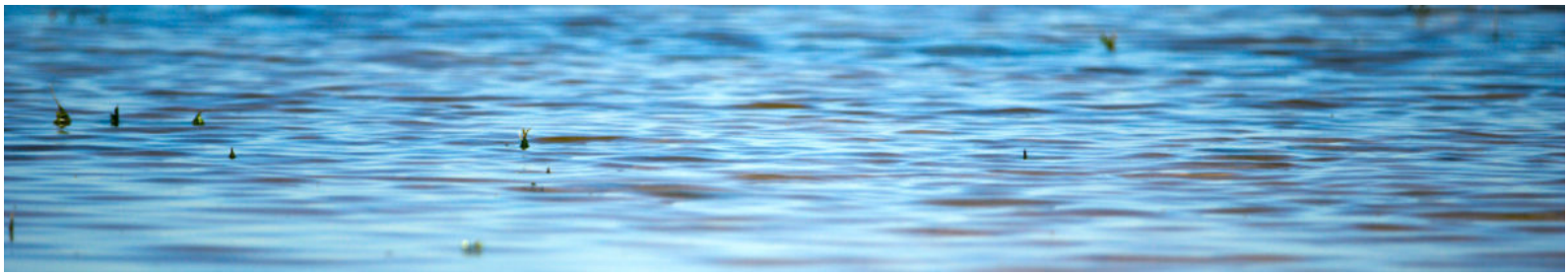

Initial Study & Mitigated Negative Declaration CEQA Report

Buena Vista Water Storage District

Buena Vista Pipeline and Brite Pump Station Project

Prepared for:

Buena Vista Water Storage District

November 2020

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Initial Study & Mitigated Negative Declaration CEQA Report

Buena Vista Water Storage District

Buena Vista Pipeline and Brite Pump Station Project

Prepared for:

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November 2020

Project No. 2003079 Task 4

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Abbreviations and Acronyms

µg/m3	micrograms (one-millionth of a gram) per cubic meter air
AF	acre-feet
AFY	Acre-feet per year
BMP	best management practices
BVWSD	Buena Vista Water Storage District
Caltrans	California Department of Transportation
C.A.R.B.	California Air Resource Boards
C.A.A.Q.S.	California Ambient Air Quality Standards
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	Californi Environmental Quality Act
CFR	Code of Federal Regulations
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
C.O.	carbon monoxide
County	Kern County
dBA	A-weighted decibels
District	Buena Vista Water Storage District
D.O.C.	Department of Conservation
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
HDPE	high-density polyethylene
IS/MND	Initial Study/Mitigated Negative Declaration
Leq	equivalent continuous sound level in decibels
MA	Masters of Art
mi	mile
MLD	Most Likely Descendant
MRZ	Mineral Resource Zone
NAHC	Native American Heritage Commission
$N.O._{.2}$.	nitrogen dioxide
N.P.D.E.S.	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
PG&E	Pacific Gas and Electric
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PRC	Public Resources Code
proposed project/project	Buena Vista Pipeline and Brite Pump Station Project

RPA	registered professional archaeologist
S.J.V.A.B	San Joaquin Valley Air Basin
S.J.V.A.P.C.D.	San Joaquin Valley Air Pollution Control District
$S.O._2$.	sulfur dioxide
S.M.A.R.A.	Surface Mining and Reclamation Act of 1975
SPAL	Small Project Analysis Level
SWPPP	Stormwater Pollution Prevention Program
SWRCB	State Water Resource Control Board
U.S.F.W.S.	United States Fish and Wildlife Service
USGS	United States Geological Survey

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 for the proposed Buena Vista Pipeline and Brite Pump Station 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 that chapter, it was determined that:

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

- Hazards and Hazardous Waste
- Land Use and Planning
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Wildfire

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

- Aesthetics
- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- 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
- Transportation

- Mandatory Findings of Significant

1.2 Other Key Public Agencies Relying on this IS/MND

CEQA requires that state and local governmental agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Public Resources Code [PRC] Section 21000 et seq.). CEQA also requires that each lead agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. There are no other key public agencies relying on this IS/MND.

1.3 Document Organization

This entire document is divided into the following three key sections required under CEQA:

Proposed Mitigated Negative Declaration. The MND, which precedes the presentation of the IS analysis in this document, briefly summarizes the proposed project, summarizes the environmental conclusions, and identifies mitigation measures that would be implemented in conjunction with the proposed project.

Initial Study. The IS constitutes the remaining portion of this document and provides an introduction, project description, environmental checklist, references cited, list of report preparers, and a 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 (EIR) 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 and Location

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. The proposed project is located approximately 20 miles west of downtown Bakersfield and immediately south, 1.5 miles, of the unincorporated community of Buttonwillow, on the Buttonwillow and East Elk Hills U.S. Geological Survey (USGS) 7.5-minute quadrangles (**Figure 2-1**). The District is proposing to install a network of approximately 32 miles of pipeline and a pump station with an adjacent water storage tank in the southern portion of the Buttonwillow Service Area, between State Route 58 and the Kern River Flood Canal (**Figure 2-2**), to facilitate delivery to District water users.

2.2 Proposed Project

2.2.1 Construction

The Project involves construction of the Buena Vista pipeline and Brite Pump Station.

Buena Vista Pipeline

The Buena Vista pipeline consists of approximately 32 miles of buried high-density polyethylene (HDPE) pipe. The District would install either 36-inch-diameter or 48-inch-diameter HDPE pipe, depending on the location and needed capacity. Laterals will be 15- to 27-inch polyvinyl chloride pipe. The pipe would be installed by excavating open trenches, including across the Deep Wells Ditch, within a maximum construction corridor width of 50 feet. The trench would be dug to a maximum of 6 feet wide and 7.5 feet deep. Following installation and testing of the pipe, the trenches would be backfilled with the sand and the excavated soil. All roads would be restored to approximate or better conditions.

Pipe installation activities would occur adjacent to existing County roadways or in existing agricultural areas, including farm roads and fields. The District will be required to temporarily close lanes on some adjacent roadways during construction. The pipe would be installed within or immediately adjacent to the following paved roads that the general public may access: Adohr, Brite, Buerkle, Dairy, Dunford, Elk Grove, and Freeborn roads, Stockdale Highway, and Wasco Way. The District will coordinate with the County and implement traffic control measures for any lane closures.

Figure 2-1: Project Location.

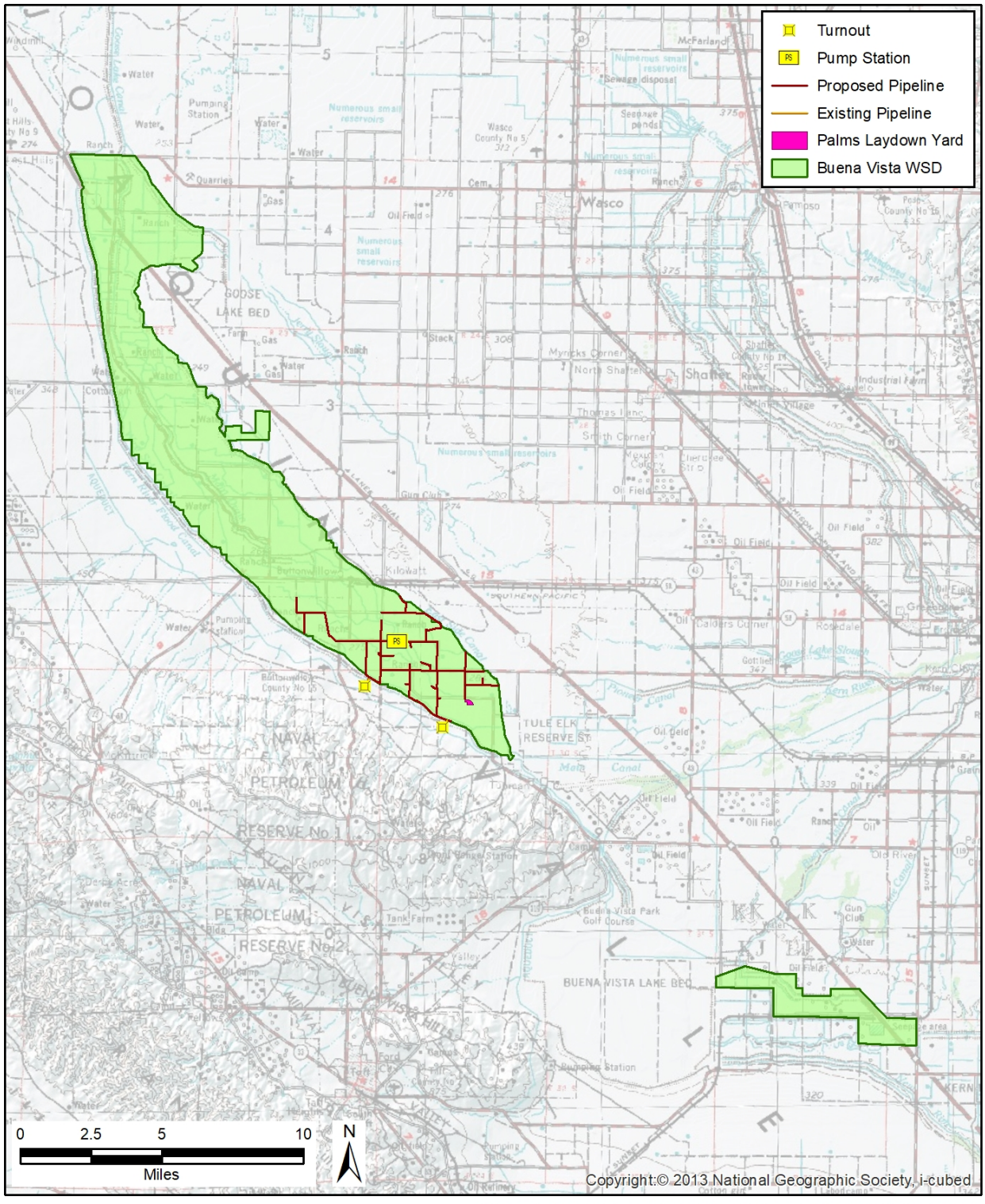

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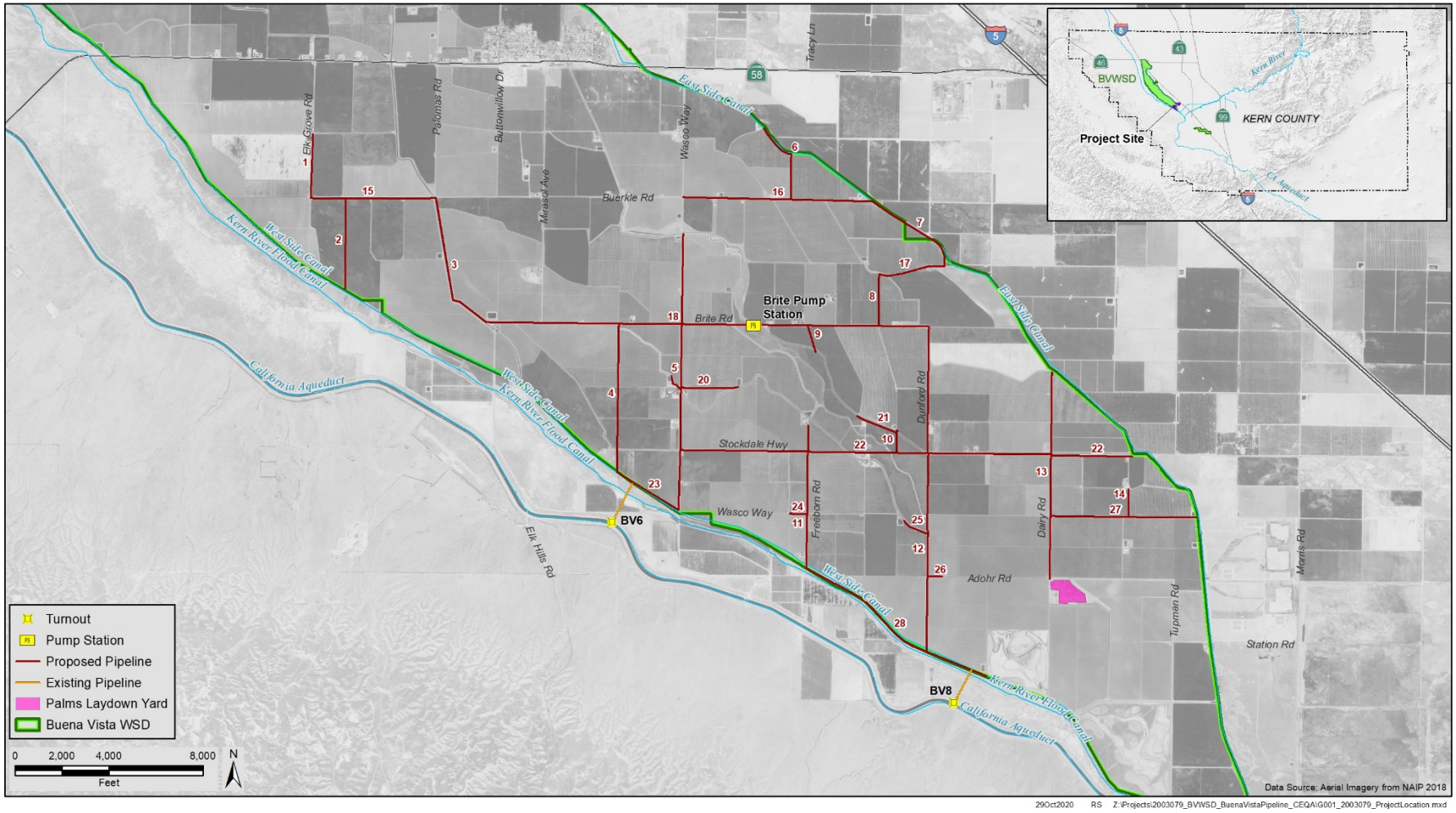
Figure 2-2: Buena Vista Pipeline and Brite Pump Station Project Area.



The Buena Vista pipeline would be directly connected to the existing BV6 pipeline and turnout which was constructed in August 1976 and the BV8 pipeline and turnout which was constructed in 2013 and are connected to the California Aqueduct (**Figure 2-2**). For the connection, the District would install a "T" and valve that would control the flow of water between the Buena Vista pipeline and BV6 pipeline. BV8 already has a "T" and valve installed. No work would be conducted at or along the California Aqueduct.

Pipe installation is anticipated to generally progress from north to south, and construction will be influenced by the irrigation schedule in the canals. Sections of the pipeline that are adjacent to canals will be constructed at a time when the canals are not full of water, to avoid water seeping into the construction area.

The pipeline that is not adjacent to canals can be constructed when the canals are in use. The District would use the existing Palms Laydown Yard (intersection of Adhor and Dairy roads) to store pipe, equipment, and other materials during construction. Construction equipment is anticipated to include one front-end loader, one excavator, one backhoe, two water trucks, and three pickup trucks. Access to construction sites would be provided by existing paved and unpaved roads. **Table 2-1** provides a summary of roads and canals/ditches by pipeline segment.

Table 2-1. Pipeline Segments and Adjacent Roads and Canal/Ditch Crossings

Map ID No*	Road Name	Paved / Dirt / Agricultural Field	Length (Miles)	Canal / Ditch Crossing	Notes
North-South Pipeline Segments					
1	Elk Grove Road	Paved	0.6	–	–
2	Unnamed North-South Road No. 1	Dirt	0.8	–	–
3	Unnamed Road Along Eighty Foot Ditch	Dirt	1.3	–	Unnamed road is located between Eighty Foot Ditch and Florida Drain
4	Unnamed North-South Road No. 2	Dirt and agricultural field	1.3	Florida Drain and Weed Island Ditch	Pipeline crosses Stockdale Highway
5	Wasco Way (West)	Paved and dirt	2.3	Arizona Ditch, Weed Island Ditch, and Florida Drain	–
6	Unnamed North-South Road No. 3	Dirt	0.8	–	–
7	Unnamed Road Along Eastside Canal	Dirt	0.9	–	–
8	Unnamed North-South Road No. 4	Dirt	0.5	–	–
9	Unnamed North-South Road No. 5	Dirt	0.3	Deep Wells Ditch	Open trench across Deep Wells Ditch
10	Unnamed North-South Road No. 6	Dirt	0.3	Deep Wells Ditch	–

11	Freeborn Road	Paved and dirt	1.5	Florida Drain	–
12	Dunford Road	Paved and dirt	2.8	Deep Wells Ditch and Main Drain	Pipeline crosses Stockdale Highway
13	Dairy Road	Paved and dirt	1.8	Deep Wells Ditch and an unnamed canal	Pipeline crosses Stockdale Highway
14	Unnamed North-South Road No. 7	Dirt	0.3	–	–
East-West Pipeline Segments					
15	Buerkle Road (West)	Paved	1.1	Eighty Foot Ditch and Florida Drain	–
16	Buerkle Road (East)	Paved and dirt	1.6	Depot Drain	–
17	Unnamed East-West Road No. 1	Dirt	0.6	Unnamed canal	–
18	Brite Road	Paved	3.7	Florida Drain, Weed Island Ditch, Marisol Drain, Arizona Ditch, Deep Wells Ditch, and an unnamed canal	Pipeline crosses Wasco Way
19	Unnamed Road Along Marisol Drain (West)	Dirt	0.2	–	–
20	Unnamed Road Along Marisol Drain (East)	Dirt	0.6	–	–
21	Unnamed Road Along Deep Wells Ditch	Dirt	0.4	–	–
22	Stockdale Highway	Paved	3.8	Florida Drain, Arizona Ditch, and Main Drain	Pipeline crosses Wasco Way, Freeborn Road, Dunford Road, and Dairy Road
23	Unnamed Road Along West Side Canal No. 1	Dirt	0.7	–	Connection to BV6 pipeline
24	Wasco Way (East)	Dirt	0.2	–	–
25	Unnamed Road Along Arizona Ditch	Dirt	0.3	Arizona Ditch	–
26	Adohr Road	Paved	0.2	–	–
27	Unnamed East-West Road No. 2	Dirt	1.3	–	–
28	Unnamed Road Along West Side Canal No. 2	Dirt	1.8	Arizona Ditch	Connection to BV8 pipeline

Note:
* The map identification numbers are shown in Figure 1-2.

Construction of the Buena Vista pipeline is expected to begin in fall 2020 and be completed within approximately 24 months. Work would occur during daylight hours, 10 hours per day, 5 days per week and is anticipated to be completed by a crew of up to 8 personnel.

Brite Pump Station

The District would install a pump station and water tank north of Brite Road (just east of the Arizona Ditch and Deep Wells Ditch). The pump station would have a footprint of approximately 0.16 acre. The pump station would be connected to the new Buena Vista pipeline, house four pumps (150 horsepower each), and a ground-mounted transformer connected to a nearby electrical pole. The District would construct a 10-foot-diameter, 27-foot tall water storage tank adjacent to the pump station. For security purposes, the pump station and water storage tank would be illuminated with pole-mounted lights and surrounded by a chain-link fence and a locking gate.

Construction for the Brite Pump Station is anticipated to take 5 months and would begin in fall 2021. The District's contractor would use one excavator, one dozer, one forklift, one welding truck, three service trucks and a crane to set the storage tank. Storage and staging of equipment and material would be located within and immediately adjacent to the pump station footprint. Work would occur during daylight hours, 10 hours per day, 5 days per week and is anticipated to be completed by a crew of up to 8 personnel.

2.2.2 Operation and Maintenance

The Buena Vista pipeline will deliver water via gravity pressure from the BV6 and BV8 pipelines and turnouts to the California Aqueduct during fall through spring when agricultural demand is minimal. During the summer months when irrigation demand is greater, District water will flow to the Brite Pump Station where it will add supplemental water into the pipeline to deliver to the fields. The pump station equipment will be monitored daily by the District during operation and maintained according to the manufacturers' recommendations.

2.3 Project Purpose

The proposed project is designed to enable water delivery to agricultural fields without having to recharge water that is inherent with conveyance of water in unlined canals. The unlined canals will still be used to support groundwater recharge when surface water supplies are in excess of demand. This will enable water percolation via unlined canals and delivery to agricultural fields which are managed separately, depending on water supply and demand.

2.4 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 (C.V.R.W.Q.C.B.), Construction Activities General Permit.** Required for any project that disturbs more than 1 acre of soil. The proposed project would disturb approximately 194 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 (S.J.V.A.P.C.D.), Dust Control Plan.** Required for any project that disturbs more than 1 acre of soil.

3.0 Environmental Checklist

Project Information

#1. Project title:	Buena Vista Pipeline and Brite Pump Station Project
#2. Lead agency name and address:	Buena Vista Water Storage District
#3. Contact person and phone number:	Mr. Tim Ashlock (661) 979-6182
#4. Project location:	The proposed project is located approximately 20 miles west of downtown Bakersfield and immediately south, 1.5 miles, of the unincorporated community of Buttonwillow, on the Buttonwillow and East Elk Hills USGS 7.5-minute quadrangles
#5. Project sponsor's name and address:	Same as lead agency (*see* #2, above)
#6. General plan designation:	Exclusive Agriculture
#7. Zoning:	Exclusive 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 32 miles of pipeline and constructing a pump station.
#9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The project site is located in the unincorporated area of Kern County, in an area dominated by agricultural production. The unincorporated community of Buttonwillow is located approximately 1.5 miles north the project site.
#10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	Central Valley Regional Water Quality Control Board and San Joaquin Valley Air Pollution Control District
#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 Chapters 3.5 – Cultural Resources, and 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** 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.[1]

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	**Yes**
Tribal Cultural Resources	No
Utilities/Service Systems	No
Wildfire	No
Mandatory Findings of Significance	**Yes**

[1] 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

10-29-20

Date

Tim Ashlock

Print Name

Engineer/Manager

Title

Buena Vista Water Storage District

Agency

3.1 Aesthetics

#1. AESTHETICS. Except as provided in PRC Section 21099, **would the project**:

#1 -a. Have a substantial adverse effect on a scenic vista?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#1 -b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#1 -c. 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 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#1 -d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

3.1.1 Environmental Setting

The project site is located west of Interstate 5 (I-5), in Kern County. The proposed project is zoned as letter "A" (signifying exclusive agriculture) (Kern County 1988). The proposed project area is flat and comprised of paved and unpaved roads, canals/ditches, and agricultural fields (*see* **Appendix A** for photos of the project area). There are no designated scenic vistas within the vicinity of the proposed project (California Department of Transportation [Caltrans] 2019).

3.1.2 Discussion

#1 -a, and b. 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?

There are no significant view-sheds, scenic vistas, or scenic highways located in the vicinity of the proposed project (Caltrans 2019). There would be **no impact**.

#1 -c and d. 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? Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project includes installing approximately 32 miles of pipeline and a pump station with an adjacent water storage tank. During construction, several vehicles and equipment would be onsite which is not substantially different that normal agricultural operations. Following the completion of construction activities all construction-related equipment would be removed. The pipeline trenches would be backfilled. Although the pump station and water storage tank would change the existing visual character within the immediate vicinity, these features are entirely compatible with its agricultural surroundings. The proposed project would include new lighting at the pump station; however, the lighting would be focused downward so as not to create substantial glare. Therefore, this impact would be **less-than-significant.**

3.2 Agriculture and Forestry Resources

#2. AGRICULTURE AND FORESTRY RESOURCES. 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. **Would the project**:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#2 -b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#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))?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#2 -d. Result in the loss of forest land or conversion of forest land to non-forest use?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

3.2.1 Environmental Setting

The proposed project is entirely located with an area designated as agriculture (Kern County 1988) and within two farmland types – prime farmland and grazing land – as delineated by the Farmland Mapping and Monitoring Program (Department of Conservation [D.O.C.] 2018). The Brite Pump Station is situated on a parcel subject to a Williamson Act contract (Kern County 2010). The Buena Vista pipeline outside of the County rights-of-way are also located within parcels subject to Williamson contracts (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 proposed project is situated on agricultural lands designated as prime farmland or grazing land (D.O.C. 2018). The Brite Pump Station and Buena Vista pipeline are outside of the County rights-of-way and are also situated on agricultural lands under Williamson Act contracts (Kern County 2010). The Buena Vista pipeline would be installed below existing roads, an agricultural field, and ditches/canals. The pump station would have a footprint of approximately 0.16 acre immediately adjacent to Brite Road. The purpose of the proposed project is to enable water delivery to agricultural fields without having to recharge water that is inherent with conveyance of water in unlined canals. Water conveyance is a permitted use in Kern County's Code of Ordinances 19.12.020 Permitted Uses Exclusive Agriculture (A) District. Pursuant to Section 51238(a)(1) of Williamson Act, the construction and operation of water facilities are deemed compatible uses within an agricultural preserve. During project implementation, the parcels would continue to be mapped as prime farmland and grazing land and the Williamson Act contracts would continue to be valid. Therefore, this impact would be **less-than-significant**.

#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 proposed project site is not located with an area zoned as forest land, timberland, or timberland zoned as timberland production, therefore, no loss or conversion of forest land to non-forest land would be necessary. 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?

Kern County, like the rest of California, is subject to hydrological changes as a result of climate change, including short- and long-term droughts. The District would convey water in the Buena Vista pipeline and store water at the Brite Pump Station when the District's surface water supplies are adequate. The project site is not zoned as forest land. Therefore, this impact would be **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. **Would the project**:

#3 -a. Conflict with or obstruct implementation of the applicable air quality plan?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? No.
#3 -c. Expose sensitive receptors to substantial pollutant concentrations?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#3 -d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

3.3.1 Environmental Setting

The proposed project is located in the San Joaquin Valley Air Basin (S.J.V.A.B.) within Kern County. The S.J.V.A.P.C.D. is responsible for regulating air quality in Kern County.

The Federal Clean Air Act and California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resource Boards (C.A.R.B.) to establish health-based air quality standards at the federal and state levels. National Ambient Air Quality Standards (N.A.A.Q.S.) and California Ambient Air Quality Standards (C.A.A.Q.S.) were established for the following seven criteria pollutants: carbon monoxide (C.O.), ozone (O_3), sulfur dioxide ($S.O._{2.}$), nitrogen dioxide ($N.O._{2.}$), particulate matter (PM) less than 10 microns in diameter (PM_{10}), PM less than 2.5 microns in diameter ($PM_{2.5}$), 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 N.A.A.Q.S. or C.A.A.Q.S. 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 indicated 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 does not support either an attainment or a nonattainment status. The EPA established N.A.A.Q.S. 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. C.A.A.Q.S. and N.A.A.Q.S. are listed in **Table 3-2**.

Table 3-2. Federal and California Ambient Air Quality Standards and Attainment Status.

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O_3)	8-hour	0.070 parts per million. (137 micrograms per cubic meter).	0.070 parts per million (137 micrograms per cubic meter.) (*See* Note #1.)
	1-hour	0.09 parts per million. (180 micrograms per cubic meter).	(None; *see* Note #2.)
Respirable Particulate Matter (PM_{10})	24-hour	50 micrograms per cubic meter.	150 micrograms per cubic meter.
	Annual Arithmetic Mean	20 micrograms per cubic meter.	(None.)
Fine Particulate Matter ($PM_{2.5}$)	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 parts per million. (10 milligrams per cubic meter.)	9 parts per million. (10 milligrams per cubic meter).
	1-hour	20 parts per million. (23 milligrams per cubic meter).	35 parts per million. (40 micrograms per cubic meter).
Nitrogen Dioxide	Annual Average	0.03 parts per million. (57 micrograms per cubic meters.)	0.053 parts per million. (100 micrograms per cubic meters.)
	1-hour	0.18 parts per million. (339 micrograms per cubic meters.)	0.100 parts per million. (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)

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
	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.)
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_3) primary and secondary standards were lowered from 0.075 to 0.070 parts per million (ppm).

#2. 1-Hour ozone standard revoked effective June 15, 2005, although some areas have continuing obligations under that standard.

Source: C.A.R.B. 2019, EPA 2016

Under the N.A.A.Q.S., the County is designated as nonattainment for 8-hour ozone, and $PM_{2.5}$, and attainment/unclassified for $PM_{10,}$ C.O., $N.O._{2.}$, $S.O._{2.}$, lead, and sulfates (C.A.R.B. 2018). Under C.A.A.Q.S., the County is designated unclassified for all criteria pollutants (C.A.R.B. 2018).

The area's air quality monitoring network provides information on ambient concentrations of air pollutants in the S.J.V.A.B. Monitoring stations in Kern County are operated by S.J.V.A.P.C.D.; air quality data was obtained from the Bakersfield-California Avenue station. **Table 3-3** compares a 5-year summary of the highest annual criteria air pollutant emissions collected at this station with applicable C.A.A.Q.S., which are more stringent than the corresponding N.A.A.Q.S. Due to the regional nature of these pollutants, O_3, $PM_{2.5}$, and PM_{10} are expected to be fairly representative of the project site.

As indicated in **Table 3-3**, O_3, $PM_{2.5}$, and PM_{10} 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.

Pollutant Standards, 1-Hour Ozone	2014	2015	2016	2017	2018
Maximum 1-hour concentration (ppm)	0.102*	0.104*	0.092*	0.122*	0.107*
Days Exceeding[a] C.A.A.Q.S. 1-hour (>0.09 ppm)	3	6	0	11	8
Pollutant Standards, 8-Hour Ozone	**2014**	**2015**	**2016**	**2017**	**2018**
National maximum 8-hour concentration (ppm).	0.092*	0.096*	0.085*	0.104*	0.098*
State max. 8-hour concentration (ppm).	0.093*	0.097*	0.086*	0.104*	0.098*
Days Exceeding[a] N.A.A.Q.S. 8-hour (>0.075 ppm). (*See* note #1.)	20	28	30	47	34
Days Exceeding[a] C.A.A.Q.S. 8-hour (>0.070 ppm). (*See* note #1.)	39	54	63	87	64
Pollutant Standards, Particulate Matter (PM10)	**2014**	**2015**	**2016**	**2017**	**2018**
National max. 24-hour concentration (micrograms per cubic meter [µg/m3]).	430.1*	104.7	90.9	138.0	136.1
State max. 24-hour concentration (µg/m3).	419.5*	103.6*	92.2*	143.6*	142.0*
State max. 3-year average concentration (µg/m3).	41	44	44	44	43
State annual average concentration (µg/m3).	N/A	44.1	40.9	42.6	N/A
Days Exceeding[a] N.A.A.Q.S. 24-hour (>150 µg/m3).	N/A	0	0	0	0
Days Exceeding[a] C.A.A.Q.S. 24-hour (>50 µg/m3).	N/A	121.4	121.4	98.7	N/A
Pollutant Standards, Particulate Matter (PM2.5)	**2014**	**2015**	**2016**	**2017**	**2018**
National max. 24-hour concentration (µg/m3).	101.9*	107.9*	66.4*	101.8*	98.5*
State max. 24-hour concentration (µg/m3).	101.9	111.9	66.4	101.8	98.5
State annual average concentration (µg/m3).	18.6*	16.6*	15.9*	15.9*	15.6*
Days Exceeding[a] N.A.A.Q.S. 24-hour (>35 µg/m3).	39.3	32.3	25.5	30.2	40.3

Notes:

* = Values in excess of applicable standard.

N/A =There was insufficient (or no) data available to determine the value.

2018 is the latest year of data available as of preparation of this chapter.

#1. An exceedance is not necessarily a violation. Sources: C.A.R.B. 2020.

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. Construction of the proposed project would require approximately 1,156 truck trips to drop off all required material and equipment (approximately 1,056 truck trips for the pipeline and 100 truck trips for the pump station and water storage tank). The excavated soil for the pipeline would be used as backfill. An additional 4,560 vehicle trips would be required for workers commuting to the project site during the 2-year construction period. A total of 5,716 truck/vehicle trips would be required to construct the proposed project over a 2-year period.

The District assumes that 1 vehicle trip per week (2,600 total trips) would be required for operation of the Buena Vista pipeline, pump station, and water storage tank during a 50-year period.

To streamline the process of assessing significance of criteria pollutant emissions from common construction projects, S.J.V.A.P.C.D has developed a screening tool, the Small Project Analysis Level (SPAL) to assist in determining if constructing a project in the County would exceed the construction significance threshold for criteria pollutants. The tool uses project type and size, and S.J.V.A.P.C.D.'s pre-quantified emissions to determine a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants (S.J.V.A.P.C.D., 2017). Construction of a project that does not exceed the screening level is considered to have a less-than-significant impact on air quality (**Table 3-4**). The proposed project would result in a *total* of 8,316 trips (construction and operation) and is significantly lower than the SPAL threshold, which is measured by *trips per day*.

Table 3-4. Small Project Analysis Level by Vehicle Trips.

Land Use Category	Project Size
Residential Housing	1,453 trips per day
Commercial	1,673 trips per day
Office	1,628 trips per day
Institutional	1,707 trips per day
Industrial	1,506 trips per day

Source: S.J.A.P.C.D. 2017

However, since the project would disturb more than 1 acre, the District would need to comply with, and incorporate the appropriate best management practices (BMPs) from, the National Pollutant Discharge Elimination System (N.P.D.E.S.) construction general permit (Order 2009-0009 DWQ as amended by Order 2012-0006-DWQ) and the S.J.V.A.P.C.D.'s Fugitive Dust Control program. The proposed project would also comply with all S.J.V.A.P.C.D. rules

and regulations. S.J.V.A.P.C.D. Regulation VIII implements measures to reduce ambient concentrations of PM_{10} and oxides of nitrogen ($NO_{x)}$.

Therefore, this impact would be **potentially significant**. The following mitigation measures have been identified to address this impact:

Mitigation Measure AQ-1: District Regulation VIII Fugitive PM_{10} Prohibitions Best Management Practices

All projects are subject to S.J.V.A.P.C.D. rules and regulations in effect at the time of construction. Control of fugitive dust is required by S.J.V.A.P.C.D. Regulation VIII. The District shall implement or require its contractor to implement all of the following measures as identified by S.J.V.A.P.C.D.:

- 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. Overlanded 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 track-out by installing a track-out control device
- Clean up track-out at least once a day. If along a busy road or highway, clean up track-out immediately
- Monitor dust-generating actives and implement appropriate measures for maximum dust control

With preparation and implementation of Mitigation Measure AQ-1, N.P.D.E.S. construction general permit and Dust Control Prevention Plan, this impact would be **less-than-significant after mitigation**

#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 other 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 proposed project is located in a predominately agricultural area; however, approximately 45 residences are located adjacent to the Buena Vista pipeline, primarily along Stockdale Highway.

During construction, most of the PM, emissions are 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. Construction impacts from PM emissions would be temporary. Operation of the Buena Vista pipeline and Brite Pump Station would not generate PM emissions. Given the short-term emissions, distance from sensitive receptors, and incorporation of Mitigation Measure AQ-1, 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., irrigation, anger, anxiety) to physiological (e.g., circulatory and respiration reaction, nausea, headaches). During construction, the project would generate odor from the use of diesel fuels, though this would be short-term. During operations, the proposed project would not produce odors. Potential odor effects would be **less-than-significant**.

3.4 Biological Resources

#4. BIOLOGICAL RESOURCES. Would the project:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No..	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#4 -e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? Yes or No.	Have No Impact? **Yes.**

3.4.1 Environmental Setting

The following analysis of potential for biological resources to be impacted by the proposed project is based on information provided in the Biological Technical Report included as **Appendix B.**

Background Review and Field Surveys

GEI Consultants, Inc. (GEI) reviewed the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2020) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020). These reviews were centered on the Buttonwillow and East Elk Hills USGS 7.5- minute quadrangles and included the 10 surrounding quadrangles. A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (U.S.F.W.S.) that could occur on or near the project site was obtained from the Information for Planning and Conservation (IPaC) website (U.S.F.W.S. 2020).

Field surveys of the locations where project activities would occur were conducted by GEI biologist Chris Scanlon on July 9 and 10, 2020, to assess the potential for special-status species to occur on or adjacent to the project site and be affected by project construction, operations, and maintenance.

Existing Conditions

The project site is comprised of agricultural land and associated ditches/canals, farm buildings, and residences. Topography is generally flat, with an average elevation of approximately 285 feet above mean sea level. Representative photographs of the project site are provided in Appendix A.

All project activities would occur within agricultural lands north and east of the West Side Canal and Kern River Flood Canal. No native vegetation assemblages are present on the project site. All areas are actively cultivated, maintained for agricultural production, or support agricultural infrastructure or residences. Agricultural crops are dominated by orchards, primarily pistachio. Row and field crops, such as cotton, corn, and alfalfa also occur, as well as a small amount of vineyard. Road shoulders are compacted and generally barren, though nonnative herbaceous species sometimes grow between road shoulders and agricultural margins. Scattered ornamental trees and shrubs are present near some structures.

Agricultural and other disturbed habitats on the project site support a low diversity of wildlife species that are adapted to this intensely managed environment. Natural habitats west and south of the project site provide much higher quality wildlife habitat and support a higher diversity of species. Because the project site is limited to actively cultivated agricultural lands and associated facilities and residences, only the most mobile species (e.g., birds and mammals with large home ranges) that typically use agricultural and developed habitats are likely to occur on the project site.

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?

The CNDDB search results, CNPS species list, and IPaC resource list included 18 special-status plants and 34 special-status animals, 20 of which have been documented within 3 miles of the proposed project; however, most of these occurrences are from grassland, saltbush scrub, and other

natural shrub habitats south and west of the project site. Based on review of existing documentation, current species distributions, and evaluations made during field surveys, it was determined that habitat for special-status plants, invertebrates, fish, amphibians, and reptiles is absent from the proposed project. Six special-status birds and two special-status mammals were determined to have at least low potential to occur on the project site. Potential for the project to impact these species is evaluated below.

Special-Status Birds

Six special-status bird species were observed during field surveys or determined to have at least low potential to occur on or adjacent to the project site, based on current species distributions and habitat conditions: burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and tricolored blackbird (*Agelaius tricolor*). Because agricultural lands in the project area are dominated by orchards, few areas that provide suitable foraging habitat (e.g., alfalfa, hay, and fallow fields) are present. Therefore, a very small amount of foraging habitat for special-status birds would be affected. In addition, this habitat would primarily be along field margins adjacent to existing roadways, foraging habitat disturbance would be temporary, and a small proportion of the overall habitat would be disturbed at any one time. Therefore, such disturbance would be a minor impact on the potentially affected species.

The proposed project and adjacent areas currently provide marginal nesting habitat for burrowing owl, Swainson's hawk, white-tailed kite, and loggerhead shrike. Suitable nesting habitat for northern harrier and tricolored blackbird could also be present during project implementation, depending on crop types and habitat conditions at the time. Because the project site is subject to regular disturbance from agricultural activities, and project activities are anticipated to cause somewhat similar disturbance levels, potential for project implementation to result in nest failure or burrow abandonment is low. However, if occupied burrows are present along the pipeline corridor or at the pump station site or staging area, they could be destroyed and burrowing owls could be injured or killed. In addition, if active nests are present in or very close to the pipeline corridor, pump station site, or staging area, project activities could result nest abandonment, reduced care of eggs or young, or premature fledging. Depending on the species and number of individuals that are affected, burrow destruction or nest failure could be a substantial adverse effect. Therefore, this impact would be **potentially significant**. The following mitigation measures have been identified to address this impact:

> **Mitigation Measure BIO-1a: Conduct Focused Surveys for Burrowing Owls and Minimize Disturbance of and Avoid Loss of Occupied Burrows**.
>
> To minimize potential effects of project construction on burrowing owl, the District will ensure that the following measures are implemented, consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012).
>
> - A qualified biologist will assess burrowing owl habitat suitability in the area subject to direct impact and adjacent areas within 500 feet.

- If suitable habitat or sign of burrowing owl presence is observed, a take avoidance survey will be conducted within 14 days before project activities begin near areas of suitable habitat.

- If any occupied burrows are observed, protective buffers will be established and implemented. A qualified biologist will monitor the occupied burrows during project activities to confirm effectiveness of the buffers. 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.

- If it is not feasible to implement a buffer of adequate size 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. However, 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.

Mitigation Measure BIO-1b: Conduct Focused Surveys for Nesting Swainson's Hawks and Other Special-status Birds and Implement Buffers Around Active Nests.

To minimize potential effects of project construction on nesting Swainson's hawk and other special-status birds, the District will ensure that the following measures are implemented:

- A qualified biologist will conduct surveys of potential Swainson's hawk nesting trees within 0.25 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, a survey will be conducted within 14 days before project activities begin in a given area during the nesting season (April–August).

- A qualified biologist will conduct surveys of suitable nesting habitat that would be directly disturbed by project activities and suitable nesting habitat for white-tailed kite, northern harrier, loggerhead shrike, tricolored blackbird, and common raptors, if present within 500 feet of project activities. Surveys will be conducted within 14 days before beginning project activities begin in a given area during the nesting season (February-August).

- If any active nests are observed, protective buffers will be established and implemented until the nests are no longer active. A qualified biologist will monitor the nest 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 nest to disturbance.

Implementing Mitigation Measures BIO-1a and BIO-1b would reduce the potential impact related to special-status birds to a less-than-significant level because destruction of active nests and occupied burrowing owl burrows would be avoided and disturbance of nearby active nests and occupied burrows would be minimized. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

Special-status Mammals

San Joaquin kit fox and western mastiff bat are the only special-status mammals that were determined to have potential to occur on or adjacent to the project site.

Foraging activities of mastiff bats that may use the project site are unlikely to be disturbed by construction activities. Based on the relatively poor quality of potential roost sites on and adjacent to the project site, maternity roosts are extremely unlikely to occur. Western mastiff bat typically roosts in small colonies and relatively few individuals would be affected, in the unlikely event structures on or adjacent to the project site are used as non-maternity roosting habitat and disturbed by project activities. Potential disturbance of small numbers of non-maternity roosting bats would not be a substantial adverse effect. Therefore, this impact would be **less-than-significant**.

Based on current habitat conditions and observations made during the field surveys, potential for San Joaquin kit fox to den on or adjacent to the project site is very low. However, if a den becomes established or transient individuals are present during project implementation, the den could be abandoned, or kit foxes could be injured or killed if they come in contact with project equipment or become trapped in pipes or trenches. Abandonment of a natal den and direct injury or death of a San Joaquin kit fox would be a substantial adverse effect. Therefore, this impact would be **potentially significant**. The following mitigation measures have been identified to address this impact:

Mitigation Measure BIO-2: Conduct Pre-Construction Surveys and Implement Measures during Construction to Minimize Potential Impacts on San Joaquin Kit Fox.

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

- Before project activities begin, an Environmental Awareness Program will be presented to all project personnel working on the project site. The program will be conducted by a qualified biologist with knowledge of San Joaquin kit fox. The program will address the following: biology and habitat needs; regulatory status

and protection; measures required to reduce potential impacts during project construction; penalties for non-compliance; and benefits of compliance.

- No more than 30 days before project activities begin in a given area, a qualified biologist will conduct a pre-construction survey to determine the potential for San Joaquin kit fox to occur in the area. If potential or known dens for San Joaquin kit fox are found, exclusion zones will be established and maintained, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (U.S.F.W.S. 2011).
- If project activity would occur within 50 feet of a potential den (i.e., a den that is not known to be occupied), monitoring will be conducted at the potential den for 4 consecutive days. If no San Joaquin kit fox activity is documented, project activities can proceed. If San Joaquin kit fox activity is documented, the appropriate exclusion zone will be established and maintained, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (U.S.F.W.S. 2011). If it is infeasible to implement the prescribed exclusion zone, U.S.F.W.S. will be consulted and alternative measures will be implemented to ensure impacts are adequately minimized.
- To prevent kit fox entrapment during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar material at the end of each workday. If the trenches cannot be closed, one or more escape ramps of no more than a 45-degree slope will be constructed of earthen fill or created with wooden planks. 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 kit fox is discovered, project activities will stop, and escape ramps or structures will be installed immediately to allow the animal to escape.
- All construction pipes or similar structures with a diameter of 4 inches or greater that are stored on the ground at a construction site for one or more overnight periods will be thoroughly inspected for wildlife before the pipe is buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If a potential San Joaquin kit fox is discovered inside a pipe, all project activities that could result in take will stop, a qualified biologist will be summoned to identify the species, and U.S.F.W.S. will be notified. If a San Joaquin kit fox is unable to escape voluntarily, U.S.F.W.S. will be contacted immediately to determine what actions should be taken to adequately minimize potential impacts.
- Hazardous materials, fuels, lubricants, and solvents that spill accidentally during project-related activities will be cleaned up and removed from the project site as soon as possible, according to applicable federal, state and local regulations.
- All food-related trash items such as wrappers, cans, bottles or food scraps generated during project activities will be disposed of in closed containers and removed daily

from the project site. No deliberate feeding of wildlife will be allowed, and no pets associated with project personnel will be permitted on the project site.

Implementing Mitigation Measures BIO-2 would reduce the potential impact related to San Joaquin kit fox to a less-than-significant level because destruction or disturbance of occupied dens and injury or death of individuals would be avoided. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

#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?

The project site does not support any designated critical habitat, riparian habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations. Therefore, there would be **no impact** on such resources.

#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?

Aquatic habitat within the proposed project is limited to irrigation ditches/canals, which are heavily maintained, generally lack vegetation, and provide very poor habitat. Because canals on the project site are used solely for irrigation delivery and do not have a significant nexus to traditionally navigable waters, they do not qualify as waters of the United States and are not subject to regulation under Clean Water Act Sections 401 and 404. Additionally, because these canals were excavated in uplands, do not coincide with historic rivers or streams, and provide very poor habitat for fish and wildlife, they are not anticipated to quality for jurisdiction under California Fish and Game Code Section 1602. The irrigation ditches/canals are waters of the State, which routinely include surface waters in artificial channels. The only impact on these features is associated with the portion of pipeline that would be installed via open trench across Deep Wells Ditch. However, the pipe would be installed when the ditch is dry, and the ditch would be restored to pre-installation conditions; there would be no impact on water quality and no change to the ditch flow, bed, channel, or bank. Therefore, impacts on waters of the state would be **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 is part of a much larger extent of agricultural lands and does not serve as a corridor or other primary route for wildlife movement. Other agricultural lands surrounding the project site that would not be disturbed by project implementation provide equally suitable movement opportunities. Because the ditches/canals are dry for much of the year and do not connect to natural waterways, they do not provide migratory corridors. The project site also is not known or

anticipated to serve as a nursery site for any wildlife species. 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 2004). No oak trees are present within the proposed project and the project has no potential to conflict with the County's General Plan's oak retention policy. The General 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**.

#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 proposed project is west of the existing Metropolitan Bakersfield Habitat Conservation Plan area and the plan area for the Bakersfield Habitat Conservation Plan that is currently in development. The proposed project is within the area proposed to be covered by the Kern County Valley Floor Habitat Conservation Plan. A draft of the plan was issued many years ago (Kern County Planning Department 2006), but a final plan has not been released. The proposed project is within an extensive area of "White Zone," which is of lower conservation concern and not identified for acquisition of preserve areas; 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. Therefore, no conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan would occur, and there would be **no impact**.

3.5 Cultural Resources

#5. CULTURAL RESOURCES. Would the project:

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

Records Search

GEI archaeologist Matt Chouest, M.A., requested a records search of the project area and a surrounding 0.25-mile radius of the Southern San Joaquin Valley Information Center (SSJVIC). The SSJVIC responded on August 24, 2020. The SSJVIC response indicated that 9 previously recorded resources are in the project area; on examination of locational data, however, only 8 resources were found to be in the project area. The resources include P-15-009671 (Standard Oil Pipeline), P-15-013725 (East Side Canal), P-15-013726 (Main Drain Canal), P-15-015819 (West Side Canal), P-15-017682 (Arizona Ditch), P-15-017683 (Deep Wells Ditch), P-15-017684 (Eighty Foot Ditch), P-15-017685 (Florida Drain), and P-15-017686 (Weed Island Ditch) (SSJVIC File Number: 20-296).

Native American Consultation and Coordination

A request was submitted to Native American Heritage Commission (NAHC) for a search of their sacred lands file (SLF) to determine if any previously identified tribal cultural resources had been identified in the project area. The NAHC responded on July 14, 2020 stating that the SLF search was negative.

See Chapter 3.18 – Tribal Cultural Resources for additional information.

Field Survey

GEI archaeologists, Amy Wolpert and William Gillean, conducted an intensive-level survey of the project area September 1 through September 4. The pedestrian survey provided intensive-level survey coverage (i.e., transects spaced at 15-meter intervals or closer, or equivalent). The crew carried paper maps of the project area, electronic files of the project area and previously recorded resources loaded onto tablets, and GPS units capable of submeter accuracy to record any identified resources.

The project area consists primarily of road shoulder and dirt roads. Visibility throughout the project area was good with 90 percent or higher ground visibility.

During the pedestrian survey all previously recorded resources were identified in the field except for P-15-009674 (Standard Oil Pipeline), which was not visible in the project area. First recorded in 1999, sections of the resource had already been demolished and it is possible the section of the resource that lies within the project area has also since been destroyed.

Several isolated finds were identified during the pedestrian survey. These include a bottle base dating to 1950 along Elk Grove Road, a fragment of amethyst glass (likely dating to post World War I) along Elk Grove Road, a ceramic sherd (date ambiguous) along Brite Road, a chert flake along Elk Grove Road, a second chert flake along Stockdale Highway, and a glass shard dating between 1929-1954 also along Stockdale Highway.

3.5.2 Discussion

#5 -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 integrity 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 (Office of Historic Preservation 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.

Thirteen built environment resources are in the project area: Eighty Foot Ditch, East Side Canal, Main Drain, Arizona Ditch, West Side Canal, Florida Drain, Weed Island Ditch, Deep Wells Ditch, Marisol Drain, Depot Drain, and three secondary unnamed canals. The Eighty Foot Ditch and East Side Canal have previously been determined ineligible for the NRHP. These two resources are also not eligible for the CRHR. For the purposes of this project, the 11 remaining resources were evaluated for the CRHR and found to be ineligible for CRHR listing because of a lack of historical significance. None of the built environment resources in the project area meet CRHR eligibility and are therefore not considered historical resources for the purposes of CEQA.

Several isolated archaeological artifacts dating to the historical era and prehistory were identified. Isolated artifacts, however, are rarely significant finds because given a general lack of context they have very little potential to yield data that can answer questions important to history or prehistory;

the isolated artifacts identified during the survey lack context and by themselves have little to no data potential; they do not meet significance criteria. Therefore, the impact would be **less-than-significant**.

Though unlikely, the possibility remains that a resource meeting CRHR significance criteria as a historical resource may be discovered during project-related ground-disturbing activities. If this were to occur, then it would be a **potentially significant impact**. 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.**
>
> BVWSD [Buena Vista Water Storage District] shall implement measures to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If buried or previously unidentified historic properties or archaeological resources are discovered during project construction, all work within a 100-foot-radius of the find shall cease. BVWSD shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed in coordination with interested Native American Tribes providing recommendations to BVWSD and shall be completed before project activities continue in the vicinity of the find.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historical and/or archaeological 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 implements guidelines. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

#4 -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 ground-disturbance activities with the proposed project. There is no indication from the records searches or pedestrian survey that human remains are present within the project site locations. However, in the event that 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, BVWSD 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 the find would be assessed by an archaeologist and treated or investigated in accordance with state and federal laws. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

3.6 Energy

#6. ENERGY. Would the project:

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

3.6.1 Environmental Setting

Electricity and natural gas are supplied to Kern County by Pacific Gas and Electric (PG&E), Southern California Edison, and Southern California Gas (Kern County 2004a). In 2018, the total electricity consumption for Kern County was approximately 15,942 million kilowatts per hour (California Energy Commission [CEC] 2018).

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 proposed project would involve the use of diesel-fueled vehicles during construction; however, use of these vehicles would be temporary and insignificant. To convey water through the Buena Vista pipeline, the District would install four pumps (150 horsepower each) at the Brite Pump Station. Operation of the pump station and water storage tank would require electrical energy, which would also not be wasteful, inefficient, or unnecessary. 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:

#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.)	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#7 -a. ii. Strong seismic ground shaking?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#7 -a. iii. Seismic-related ground failure, including liquefaction?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#7 -a. iv. Landslides?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#7 -b. Result in substantial soil erosion or the loss of topsoil?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

#7. GEOLOGY AND SOILS. Would the project:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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 wastewater?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#7 -f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? No.

3.7.1 Environmental Setting

The proposed project area is dominated by Lokern clay, drained soil and Buttonwillow clay, drained soil (Natural Resources Conservation Service [NRCS] 2020). The proposed project is located approximately 2.5 miles northeast of an unnamed quaternary fault (age undifferentiated) in the Elk Hills (California Geological Survey [CGS] 2010a). A quaternary fault is an active fault that has been recognized at the surface and which has evidence of movement in the past 1.6 million years. The proposed project is not located in or near a fault zone, landslide zone, or liquefaction zone (CGS 2020). The proposed project is located on marine and non-marine sedimentary rock (CGS 2010b).

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 proposed project is not located within a fault zone (CGS 2020). The proposed project is located approximately 2.5 miles northeast of an unnamed quaternary fault (CGS 2010a). 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 on an active fault line and is at least 1 mile away from a quaternary fault line, impacts would be **less-than-significant**.

#7 -a. ii. Strong seismic ground shaking?

The pipeline and water storage tank would not pose a direct risk to people during seismic activity. After a seismic event, water to the pipeline could be shut off. If the water storage tank (approximately 0.05 acre-feet) were to fail, the water would be dispersed to the surrounding area, including adjacent canals and farmland. Therefore, there would be no significant impact to people or structures from any seismic-related activity as a result of implementation of the proposed project. This impact would be **less-than-significant**.

#7 -a. iii. Seismic-related ground failure, including liquefaction?

The proposed project is not located within a known liquefaction zone (CGS 2020). Therefore, there would be **no impact**.

#7 -a. iv. Landsides?

The project site is not located in a landslide zone (CGS 2020). Because the project site is located in a topographically flat area, there is no risk of landslides. Therefore, there would be **no impact**.

#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 the excavated soil will be used as backfill for the pipeline trenches and the pump station would be constructed aboveground, the proposed project will not result in a substantial loss of erosion or topsoil. Furthermore, the District will prepare and implement a SWPPP and Dust Control Plan, which will further ensure that impacts to erosion and topsoil are minimized during construction.

The proposed project is not located on a geologic unit or soil that is inherently unstable. The entire pipeline would be installed belowground. Although the pump station and water storage tank would be installed aboveground, these features would not make the soil unstable. Therefore, the proposed project would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

The proposed project primarily consists of Lokern clay, drained soil and Buttonwillow clay, drained soil, both of which are considered to be expansive soils (NRCS 2020); however, the

proposed project would not create a direct or indirect risk to life or property because of the limited size and scope of the project and rural/agricultural nature of the project area.

Therefore, there would be **less-than-significant** impacts.

#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 proposed 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 site is located on marine and non-marine sedimentary rock that consist of alluvium, lake, playa, and terrace deposits, and is from the Pleistocene-Holocene ages (CGS 2010b). Since paleontological resources are found almost exclusively in sedimentary rock, there is a chance of discovering unknown paleontological resources during excavation activities. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

> **Mitigation Measure GEO-1: Avoid 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 shall be halted. A qualified paleontologist shall 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 shall be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist shall evaluate the resource and determine whether it is "unique" under CEQA, Appendix G, part VII. The determination and associated plan for protection of the resource shall be provided to the District for review and approval. If the resource is determined not to be unique, work may commence in the area. If the resource is determined to be a unique paleontological resource, work shall remain halted, and the paleontologist shall consult with the District staff regarding 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 shall 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 shall be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology standard

guidelines; typically, the Natural History Museum of Los Angeles County and University of California, Berkeley accept paleontological collections at no cost to the donor. Work may commence upon completion of treatment, as approved by the District.

Implementing Mitigation Measure GEO-1 would reduce the potential impact related to discovery of unknown paleontological resources to a less-than-significant level because the fossil would be preserved. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

3.8 Greenhouse Gas Emissions

#8. GREENHOUSE GAS EMISSIONS. Would the project:

#8 -a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#8 -b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.8.1 Environmental Setting

Kern County has not adopted a local plan for reducing greenhouse gas (GHG) emissions. The S.J.V.A.P.C.D. has adopted the Guidance for Valley Land-use Agencies Addressing GHG Emissions Impacts for New Projects under CEQA (Guidance) (S.J.V.A.P.C.D. 2009). Although the Guidance addresses stationary source and development projects, the District has adopted it for construction-related projects.

3.8.2 Discussion

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

GHG emissions would be generated during the construction phase of the proposed project from the use of diesel-powered vehicles. Project operations, which includes water conveyance and use of the pump station and water storage tank, will not result in GHG emissions. During operations, vehicle usage, and therefore GHG emissions, would be minimal. Therefore, GHG emissions related to vehicle engine exhaust 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 issued numerous Executive Orders directing state agencies to implement programs to reduce GHG emissions to meet 2030 target of 40 percent below 1990 levels (California 2018). C.A.R.B. is the primary state agency responsible implementing GHG reduction programs. Kern County does not have an adopted local greenhouse gas reduction plan. The S.J.V.A.P.C.D. provides guidance for addressing GHG emissions from land use development projects. The S.J.V.A.P.C.D. considers development projects to be less than significant if the project achieves 29 percent GHG emission reductions target by using approved Best Performance Standards (BPS), which includes project design elements and technologies, such as the use of energy efficient equipment, that reduce GHG emissions (S.J.V.A.P.C.D. 2009). The Guidance does not require quantification of project-specific GH emissions for projects that implement BPS. Consistent with

CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions (S.J.V.A.P.C.D. 2009). Because the District would incorporate energy efficient equipment and comply with the Guidance, the impact would be **less-than-significant**.

3.9 Hazards and Hazardous Materials

#9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

#9 -a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#9 -f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#9 -g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.9.1 Environmental Setting

Queries of the State Water Resource Control Board's (SWRCB) Geotracker and California Department of Toxic Substances Control Envirostor hazardous materials sites indicate that the proposed project is not located on a known hazardous materials site (SWRCB 2020; Department of Toxic Substance Control 2020). The proposed project is also not located in a high-severity fire hazard zone (California Department of Forestry and Fire Department [CALFIRE] 2007a and 2007b). The County is updating the 2020 Multi-Jurisdictional Hazard Mitigation Plan (Kern County 2020).

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 constructed within and adjacent to active agriculture, roads, and canals. The proposed project is located in a rural area and does not involve the transport, use, or disposal of hazardous materials. The proposed project would rely on electric power rather than liquid fuels. The proposed project would not expose people to increased risks from wildland fire as it is not located within a high-severity fire zone. The proposed project would not impair implementation of the Multi-Jurisdictional Hazard Mitigation Plan (Kern County 2020). The County has not issued an emergency evacuation plan that encompasses the proposed project. 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 and affected incorporated cities can address compatibility issues when making planning decisions. The proposed project is located

approximately 1.5 miles east of the Elk Hills-Buttonwillow Airport. The proposed 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:

#10 -a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

#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 -c. i. result in substantial erosion or siltation on- or off-site;	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#10 -c. ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

#10. HYDROLOGY AND WATER QUALITY. Would the project:

#10 -c. iv. impede or redirect flood flows?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#10 -d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#10 -e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

3.10.1 Environmental Setting

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 (MSA) which lies about 10 miles south of the BSA. The proposed project is situated south of unincorporated community of Buttonwillow, west of I-5, and north and east of the West Side Canal.

The San Joaquin Valley, forming the southern two-thirds of the Central Valley, is a broad structural trough bordered on the east by the Sierra Nevada Mountains and on the west by the Diablo and the Temblor ranges. The valley extends 220 miles southeastward from the confluence of the San Joaquin and the Sacramento rivers to the Tehachapi and the San Emigdio mountains. The width of the valley ranges from 25 miles in the northern portion to 55 miles in the south (Croft 1972). The southern portion of the valley is internally drained by the Kings, Kaweah, Tule, and Kern rivers that flow into the Tulare drainage basin, which includes the beds of the former Tulare, Buena Vista, and Kern lakes.

BVWSD is located near the western edge of the Kern County Groundwater Subbasin about 16 miles west of Bakersfield along the western edge of the southern San Joaquin Valley (DWR 2003). 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 Kern River is an important source of water for the District with the BSA located north of the river.

At the present time, growers in the project area irrigate their crops using surface water delivered by BVWSD through the existing canal system. They supplement their water supplies using privately owned wells.

3.10.2 Discussion

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

The irrigation ditches/canals are waters of the State, which routinely include surface waters in artificial channels. The only impact on these features is associated with the portion of pipeline that would be installed via open trench across Deep Wells Ditch. However, the pipe would be installed when the ditch is dry, and the ditch would be restored to pre-installation conditions. During construction, the District will 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 2020). Operation of the proposed project would not result in violation of water quality standards or waste discharge requirements. 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 proposed project relies on continued conveyance of surface water within a buried pipeline and will not use groundwater as a source of supply nor result in a net reduction in regional groundwater recharge as a result of project construction or operation. The pipeline would be used to convey irrigation deliveries in place of approximately 18.2 miles of district-owned canals which now convey water during the three-month period when the District distributes surface water. Under the baseline (existing) condition, seepage from the 29 miles of canal used to deliver water over a three-month period is estimated to be approximately 12,390 acre-feet per year (AFY) as detailed in **Table 3-5**. After completion of the project only 10.8 miles of canal would be needed for water deliveries during this period with an estimated seepage rate of 3,450 AFY shown in **Table 3-6**. The difference between the values computed in the two tables results in a net reduction in seepage of approximately 8,940 AFY. Seepage reductions were estimated based on an investigation carried out by the District that estimated seepage rates for each of the District's canals, and results taken from this investigation were confirmed by Reclamation in a 2017 water conservation verification study (Reclamation 2017). These estimated reductions in seepage do not account for the fact that canal reaches no longer needed for water delivery would remain in service as linear recharge features that would be used for banking water in high flow years.

Table 3-5. Seepage Under Baseline Condition.

Canal	Length (miles)	Seepage (AFY)
West Side Canal	10.2	3,723
80-Foot Canal	3.0	821
Arizona Canal	2.5	694
Weed Island Canal	1.5	421
Deep Wells Canal	3.4	1,188
East Side Canal	8.4	5,540
Totals	29.0	12,387

Table 3-6. Seepage Under With-Project Condition.

Canal	Length (miles)	Seepage (AFY)
West Side Canal	5.3	1,934
80-Foot Canal	3.0	822
Arizona Canal	2.5	694
Totals	10.8	3,450

All water that seeps from the canals under the baseline condition would be delivered to growers through the pipeline, reducing the growers need to pump groundwater as is now done to supplement surface water deliveries. This reduction in pumping would offset the groundwater recharge generated by seepage, resulting in no net reduction in recharge. As a result, this impact would be **less-than-significant**.

#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 pipeline would be installed belowground. A portion of the pipeline (approximately 60 linear feet) would be installed across Deep Wells Ditch via open trench; however, the pipe would be installed when the ditch is dry, and the ditch would be restored to pre-installation conditions. The pump station and water storage tank would have a minimal aboveground footprint (approximately 0.16 acre). and agricultural runoff in the project vicinity currently collects within existing ditches and canals within agricultural fields and along adjacent roadways. This drainage pattern would not be altered, and erosion and surface runoff will not be increased beyond existing conditions by construction or operation of the proposed project. Construction and operation of the project would not redirect flood flows. 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 proposed project is located in Federal Emergency Management Agency (FEMA) Zone X except the southernmost portion of the project (area of minimal flood hazard [panels 06029C1750E and 6029C22225E]). Two pipeline segments (totaling approximately 2.5 miles) along the West Side Canal are located within FEMA Zone A (special flood hazard area); however, the pipeline would be installed belowground on a levee road. The proposed project is not located within an area that would be affected by tsunami or seiche (FEMA 2010; DOC 2020). This impact would be **less-than-significant**.

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

The proposed project is located within the jurisdiction of the Central Valley Regional Water Quality Control Board's Water Quality Control Plan for the Tulare Lake Basin [Kern County subbasin 256] (SRWQCB 2018) and within the high-priority, critically-overdrafted Kern County groundwater subbasin (5-022.14), as designated in DWR's Bulletin 118 (DWR 2016). However, the proposed project will not affect implementation of the water quality control plan nor the Groundwater Sustainability Plan for this area, as there will be no discharge to surface waters nor any use or effect to groundwater related to construction or operation of the proposed project. This impact would be **less-than-significant**.

3.11 Land Use and Planning

#11. LAND USE AND PLANNING. Would the project:

#11 -a. Physically divide an established community?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.11.1 Environmental Setting

The project site is located 1.5 miles south of the unincorporated community of Buttonwillow within areas zoned as exclusive agriculture (Kern County 1988). The proposed project is located in a rural area and surrounded by various agricultural crops and ditches/canals.

3.11.2 Discussion

#11 -a and b. Physically divide an established the community, and 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 proposed project is consistent with the existing zoning which is exclusive agriculture (Kern County 1988). As discussed in Chapter 3.4 – Biological Resources, the proposed project is located within the area proposed to be covered by the Kern County Valley Floor Habitat Conservation Plan (Kern County Planning Department 2006); however, 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. Therefore, there would be **no impact**.

3.12 Mineral Resources

#12. MINERAL RESOURCES. Would the project:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.12.1 Environmental Setting

The proposed project is located within a Surface Mining and Reclamation Act of 1975 (S.M.A.R.A.) study area for aggregate materials in the Bakersfield Production-Consumption Region. The proposed project is designated as mineral resource zone [MRZ]-3 (areas containing mineral deposits, the significance of which cannot be evaluated from available data) (DOC 2009).

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 proposed project is located in a S.M.A.R.A. study area but there are no known significant mineral deposits. The proposed project includes installation of the Buena Vista pipeline and Brite Pump Station. Construction would occur primarily within agricultural and paved roadways. There would be no loss of mineral resources and the proposed project would not limit the extraction of mineral resources (if any are present). 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 proposed project 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:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#13 -b. Generation of excessive ground-borne vibration or ground-borne noise levels?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.13.1 Environmental Setting

The proposed project is located in a predominately agricultural area. There are approximately 40 sensitive receptors (i.e., residences) located adjacent to the proposed Buena Vista pipeline alignment, primarily along Brite Road and Stockdale Highway. The Kern County Code of Ordinances states that construction-related noise (which is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site) 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 weekends (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 proposed project due to the use of heavy machinery during construction activities. Increase ambient noise would occur intermittently during the construction. The closest residence is approximately 70 feet from the proposed project. All work would be limited to the hours identified in Kern County's Noise Ordinance. Typical composite noise levels for construction activities, and distances of various noise contours from construction sites are presented in **Table 3-7.**

Table 3-7. Typical Noise Levels During Construction.

		Approximate Distance (feet) to Reduce Noise to Given dBA, Leq)[1]		
Construction Activity	Noise Level at 50 feet (dBA), equivalent continuous sound level in decibels [Leq])[2]	60	65	70
Ground Clearing	84	790	450	250
Excavation	89	1,400	800	450
Well drilling (driver)	80	430	235	150
Foundation	78	400	220	130
Erection	85	890	500	280
Finishing (exterior)	89	1,400	800	450

Notes:

1 EPA, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 1971; United States Department of Transportation, Federal Highway Administration, Office of Planning, Environment, and Realty, Roadway Construction Noise Model, June 28, 2017.

2 Calculations assume a 6 dBA reduction for each doubling of distance from the noise source.

dBA = A-weighted decibels

Leq = equivalent continuous sound level in decibels

During operation, the proposed project will not generate loud noises. Therefore, noise would be **less-than-significant**.

#13 -b. Generation of excessive ground-borne vibration or ground-borne noise levels?

Ground vibration would be caused during construction activities, primarily during excavation for pipe installation. Ground vibration may occur during operation; however, any impact would be restricted to maintenance activities. Vibrations would be detectable by nearby sensitive receptors. No adverse levels of vibration would be generated during project operations. 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 proposed project is located approximately 1.5 miles east of the Elk Hills-Buttonwillow Airport. The proposed project 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:

#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)?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#14 -b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.14.1 Environmental Setting

The proposed project is located in the unincorporated area of Kern County. In 2019, the population of Kern County was estimated to be 916,464 (Department of Finance 2019).

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 provides water supply for agriculture. It will not encourage additional housing development or be indirectly growth inducing. The proposed project would not require additional employees to operate. There would be **no impact**.

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

The proposed project would not displace people or housing. The proposed project is located in a predominately agricultural area with little to no residential properties in the vicinity. There would be **no impact**.

3.15 Public Services

#15. PUBLIC SERVICES. Would the project:

#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:	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
Fire protection?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
Police protection?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
Schools?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
Parks?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
Other public facilities?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

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, and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (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.

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 require new or altered government facilities, as the project would not increase the need for public services from the existing conditions. There would be **no impact**.

3.16 Recreation

#16. RECREATION. Would the project:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#16 -b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.16.1 Environmental Setting

The Buttonwillow Parks and Recreation Department operates recreational facilities within the unincorporated community of Buttonwillow which is approximately 1.5 miles north of the Buena Vista pipeline.

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 proposed 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:

#17 -a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#17 -b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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)?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#17 -d. Result in inadequate emergency access?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? No.

3.17.1 Environmental Setting

The proposed project is located approximately south of the unincorporated community of Buttonwillow and west of I-5. The Buena Vista pipeline would be installed with agricultural roads and County roads, which include Adohr, Brite, Buerkle, Dairy, Dunford, Elk Grove, and Freeborn roads, Stockdale Highway, and Wasco Way. There are no transit or on-street bicycle/pedestrian facilities near the proposed project.

3.17.2 Discussion

#17 -a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Buena Vista pipeline would be installed within or adjacent to existing paved and dirt roads (*see* **Table 2-1**). To minimize impacts, the pipeline would be installed as close to the shoulder of the County roads as possible; however, temporary lane closures during construction would be required. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

Mitigation Measure TR-1: Prepare and Implement a Traffic Control Plan

Subject to approval by Kern County, the District will prepare and implement a Traffic Control Plan, which will include the following:

- Identify hours of construction;
- Include a discussion of haul routes, limits on the length of open trench, work area delineation, traffic control and flagging;
- Identify all access and parking restriction, pavement markings and signage requirements (e.g., speed limit, temporary loading zones);
- Layout a plan for notifications and a process for communication with affected residents and businesses prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;
- Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All County roads will remain passable to emergency service vehicles at all times;
- Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access; and
- Specify the street restoration requirements pursuant to agreements with Kern County.

Additionally, the District will apply for a road closure permit related to the short-term construction, pursuant to Chapter 12.12 of the County Code of Ordinances, and a highway encroachment permit, pursuant to Chapter 12.16 of the County Code of Ordinances.

Implementing Mitigation Measure TR-1 would reduce the potential impact related to lane closures to a less-than-significant level. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

#17 -b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3, subdivision (b) allows a lead agency to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms. As discussed in Section 3.3, “Air Quality,” the District estimates a total of 5,716 truck/vehicle trips would be required to construct the proposed project.

Because the proposed project is consistent with CEQA Guidelines Section 15064.3, subdivision (b), there would be **no impact**.

#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)?

Since no new roads are being developed, the project would not increase hazards due to a geometric design feature or incompatible use. There would be **no impact**.

#17 -d. Result in inadequate emergency access?

Construction-related traffic could delay or temporarily obstruct the movement of emergency vehicles. Therefore, a **potentially significant impact** would occur. Mitigation Measure TR-1 (described above) has been identified to address this impact. Implementing Mitigation Measure TR-1 would reduce the potential impact to emergency access to a less-than-significant level. Therefore, the proposed project would have a **less-than-significant impact with mitigation**.

3.18 Tribal Cultural Resources

#18. TRIBAL CULTURAL RESOURCES. 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:

#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	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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.	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.18.1 Environmental Setting

A Tribal Sacred Lands search request was filed with the NAHC. The search was completed on July 14, 2020, with the conclusion that no tribal cultural resources are located on or near the proposed project (NAHC 2020).

On October 8, 2020, the District submitted a notification letter to the Torres Martinez Desert Cahuilla Indians pursuant to Assembly Bill 52; to date, the District has not received a response.

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 or known Indian Sacred Sites located no tribal cultural resources are located on or near the proposed project. Since no known Indian Sacred Sites have

been identified on or near the proposed project, 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 known Indian Sacred Sites. There would be **no impact**.

3.19 Utilities and Service Systems

#19. UTILITIES AND SERVICE SYSTEMS. Would the project:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#19 -b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.
#19 -e. Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? No.

3.19.1 Environmental Setting

The proposed project area is served by PG&E, Southern California Edison, and Southern California Gas (Kern County 2004). 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 Buttonwillow Community Wastewater Treatment Plant, approximately 1.5 miles north of the proposed project. Domestic water is serviced to the public by various water purveyors consisting of public and private water systems. The closest landfill is the Shafter-Wasco Recycling and Sanitary Landfill, approximately 13 miles northeast of the proposed project.

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?

Installation of the pump station and water storage tank would require electrical power; however, electrical transmission lines are already located on Brite Road so the connection would not cause significant environmental effects. There would be **less-than-significant** impacts.

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

Water stored at the water storage tank would be obtained from existing District sources (e.g., Kern River) and delivered via the proposed Buena Vista pipeline. There is no reasonably foreseeable future development related to the construction and operation of the proposed project. 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?

Wastewater would not be produced as a result of the proposed project. 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 statues 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, such as removal of road asphalt, would be generated during construction and no increase in waste production would occur during the operation of the proposed project. The proposed project would comply with federal, state, and local management and reduction statues and regulations related to solid waste. There would be **less-than-significant** impacts.

3.20 Wildfire

#20. WILDFIRE. If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, **would the project**:

#20 -a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**
#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? No.	Have No Impact? **Yes.**

3.20.1 Environmental Setting

The proposed project is not located in a high-severity fire zone. The proposed project is located in an unincorporated Local Responsible Area classified as un-zoned (CALFIRE 2007). The Kern County Fire Department provides fire protection for residents of the unincorporated areas of the County and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (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 proposed project site is not located in a high-severity fire zone. The short-term, temporary nature of construction would not pose a risk to emergency response or evacuation during an emergency. The proposed project would not create 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:

#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?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? 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)?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? **Yes.**	Have Less-than-Significant Impact? No.	Have No Impact? No.
#21 -c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Have Potentially Significant Impact? No.	Have Less-than-Significant Impact with Mitigation Incorporated? No.	Have Less-than-Significant Impact? **Yes.**	Have No Impact? 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.)

The proposed project is designed to enable water delivery to agricultural fields without the need to convey water via unlined canals. Past projects include the Northern Area Pipeline Project, 7th Standard Pipeline Project, and the Palms Groundwater Recharge Project. Future projects include the Palms Groundwater Recovery Project and Corn Camp Groundwater Recharge Project.

The District prepared an IS/MND for the Northern Area Project and 7th Standard Pipeline Project, which also involved installation of buried pipeline to convey water and reduce seepage from open earthen canals. Mitigation measures similar to measures established within the Northern Area Project and 7th Standard Pipeline Project have been established for the proposed project. Construction of the proposed project would not have a significant cumulative effect to resources in the proposed project area if mitigation measures are followed during construction.

The proposed project would result in less than significant impacts with mitigation incorporated, less-than-significant impacts, or no impacts on aesthetics, air quality, biological resources, cultural resources, 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's construction impacts, and the minor, negligible changes to long-term operations and maintenance would result in no impacts or less-than-significant environmental impacts on the physical environment. None of the proposed project's 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 proposed 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**.

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Appendix A – Project Site Photos

Photograph 1: Orchard adjacent to pipeline route in eastern portion of project site.

Photograph 2: Canal adjacent to pipeline route in eastern portion of project site.

Photograph 3: Rural residence adjacent to pipeline route in eastern portion of project site.

Photograph 4: Pipeline route in northwestern portion of project site.

Appendix B – Biological Technical Report

Draft

Biological Technical Report
Buena Vista Pipeline Project

Prepared for:

Buena Vista
Water Storage District

November 2020

Prepared by:

GEI Consultants

Consulting
Engineers and
Scientists

Draft

Biological Technical Report
Buena Vista Pipeline Project

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November 2020

Project No. 2003079

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Abbreviations and Acronyms

BMPs	Best Management Practices
CDFW	California Department of Fish and Wildlife
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
District	Buena Vista Water Storage District
ESA	Endangered Species Act
FGC	California Fish and Game Code
GEI	GEI Consultants, Inc.
HDPE	high-density polyethylene
IPaC	Information for Planning and Conservation
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
project	Buena Vista 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

1. Introduction

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

1.1 Project Location and 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. The project site is approximately 20 miles west of downtown Bakersfield and immediately south of the unincorporated community of Buttonwillow, on the Buttonwillow and East Elk Hills U.S. Geological Survey (USGS) 7.5-minute quadrangles (**Figure 1**).

The District is proposing to install a network of approximately 32 miles of pipeline to facilitate delivery to water users in the southern portion of the Buttonwillow Service Area, south of State Route 58 and between the East Side Canal and West Side Canal (**Figure 2**). The project is designed to enable water delivery to agricultural fields without the need to convey water via unlined canals. This will enable water percolation via unlined canals and delivery to agricultural fields to be mutually exclusive actions.

1.2 Project Construction

The project includes construction of the Buena Vista pipeline and Brite Pump Station.

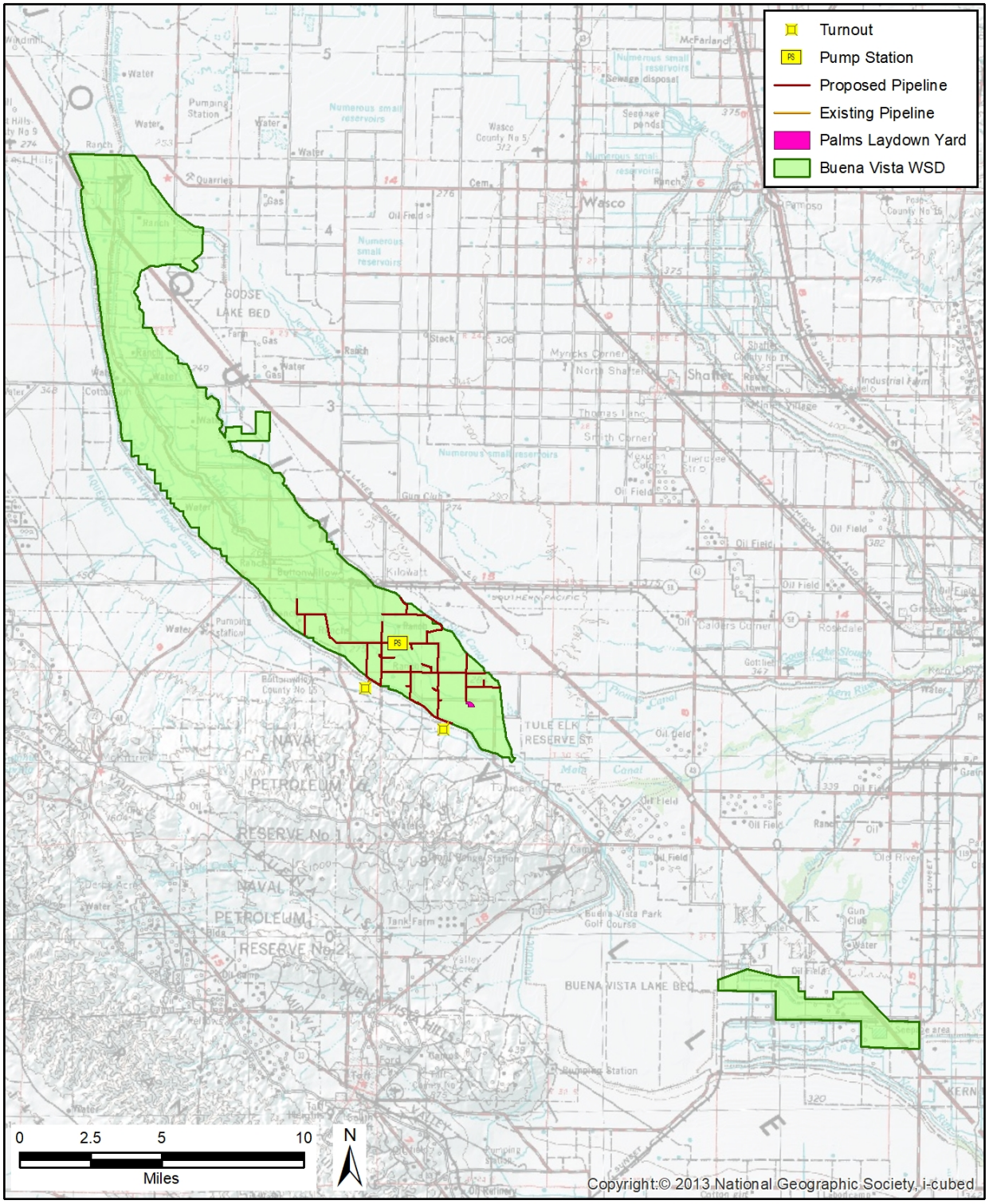
1.2.1 Buena Vista Pipeline

The Buena Vista pipeline consists of approximately 32 miles of buried high-density polyethylene (HDPE) pipe. The District would install either 36-inch-diameter or 48-inch-diameter HDPE pipe, depending on the location and needed capacity. Laterals will be 15- to 27-inch polyvinyl chloride pipe. The pipe would be installed by excavating open trenches, including across the Deep Wells Ditch, within a maximum construction corridor width of 50 feet. The trench would be dug to a maximum of 6 feet wide and 7.5 feet deep. Following installation and testing of the pipe, the trenches would be backfilled with the sand and the excavated soil. All roads would be restored to approximate or better conditions.

Pipelines would cross several irrigation canals and ditches. All but one of these crossings would occur at existing roadway crossings and would not require trenching through the ditch/canal. The only exception is one of the Deep Wells Ditch crossings; pipe at this crossing would be installed via an open trench when the ditch is dry.

Pipe installation is anticipated to generally progress from north to south, although construction will also be influenced by the irrigation schedule in the canals. Sections of the pipeline that are adjacent to canals will be constructed at a time when the canals are not full of water, to avoid water seeping into the construction area. Pipeline that is not adjacent to canals can be constructed when the canals are in use.

Figure 1. Buena Vista Pipeline Project Location



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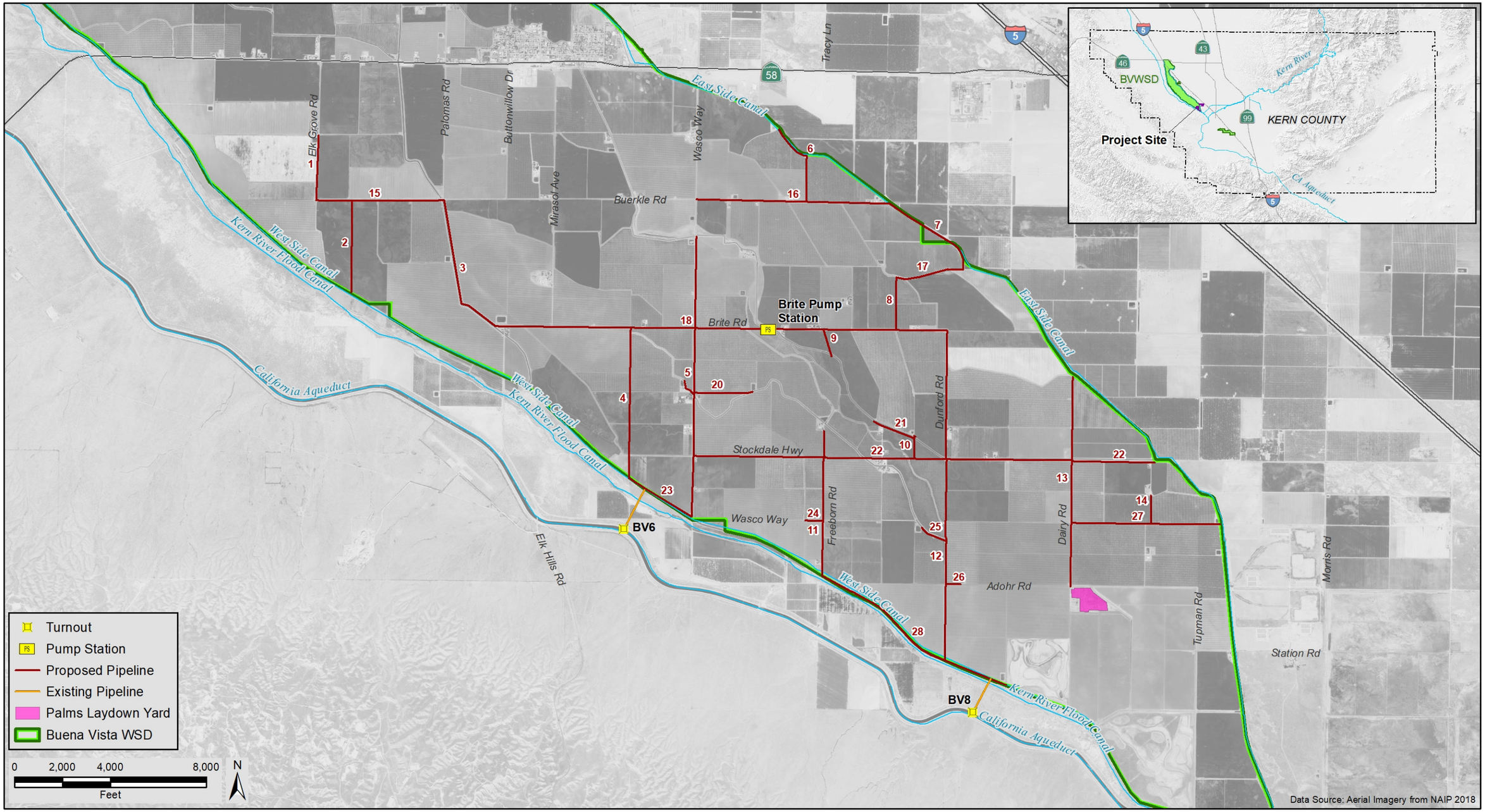
Source: Buena Vista Water Storage District 2020, adapted by GEI Consultants, Inc. in 2020

Figure 2. Buena Vista Pipeline Overview



Source: Buena Vista Water Storage District 2020, adapted by GEI Consultants, Inc. in 2020

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The District would use the existing Palms Laydown Yard (at the intersection of Adhor and Dairy roads) to store pipe, equipment, and other materials during construction. Construction equipment is anticipated to include one front-end loader, one excavator, one backhoe, two water trucks, and three pickup trucks. Access to construction areas would be provided by existing paved and unpaved roads.

Construction of the Buena Vista pipeline is expected to begin in fall 2020 and be completed within approximately 24 months. Work would occur during daylight hours, 10 hours per day, 5 days per week and is anticipated to be completed by a crew of up to 8 personnel.

1.2.2 Brite Pump Station

The District would install a pump station and water tank north of Brite Road (see Figure 2). The pump station would be connected to the new Buena Vista Pipeline and house four pumps (150 horsepower each) and a ground-mounted transformer connected to a nearby electrical pole. The District would construct a 10-foot-diameter, 27-foot-tall water storage tank adjacent to the pump station. For security purposes, the pump station and water storage tank would be illuminated with pole-mounted lights and surrounded by a chain-link fence. The fenced area would be approximately 0.25 acre.

Construction for the Brite Pump Station is anticipated to take 5 months and would begin in spring 2021. The District's contractor would use one excavator, one dozer, one forklift, one welding truck, three service trucks and one crane to construct the pump station and associated facilities. Storage and staging of equipment and material would occur within and immediately adjacent to the pump station footprint. Work would occur during daylight hours, 10 hours per day, 5 days per week and is anticipated to be completed by a crew of up to 8 personnel.

1.3 Project Operation and Maintenance

The Buena Vista pipeline would deliver water via gravity pressure from the BV6 and BV8 pipelines and turnouts to the California Aqueduct during fall through spring, when agricultural demand is minimal. During the summer months when irrigation demand is greater, water would flow to the Brite Pump Station where it would charge the pipeline to adequately deliver water to the fields. The pump station equipment would be monitored daily during operation and maintained according to the manufacturers' recommendations.

2. Biological Resources Assessment Methods

2.1 Desktop Research

GEI, Consultants, Inc. (GEI) reviewed the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2020) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020). These reviews were centered on the Buttonwillow and East Elk Hills USGS 7.5- minute quadrangles and included the ten 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 was obtained from the Information for Planning and Conservation (IPaC) website (USFWS 2020).

2.2 Field Survey

A field survey of the project site and adjacent areas was conducted by GEI biologist Chris Scanlon on July 9 and 10, 2020. The survey focused on evaluating potential for special-status species to occur on or adjacent to the project site and be affected by project activities. The project site is the area in which project activities would occur, including pipeline installation, pump station construction, and staging.

3. Environmental Setting

The project site is located along the southwestern edge of the San Joaquin Valley and is comprised of agricultural land and associated canals, farm buildings, and residences. Topography is generally flat, with an average elevation of approximately 285 feet above mean sea level. Representative photographs of the project site are provided in **Appendix A**.

3.1 Vegetation and Wildlife

All project activities would occur within agricultural lands north and east of the West Side Canal and Kern River Flood Canal. No native vegetation assemblages are present on the project site. All areas are actively cultivated, maintained for agricultural production, or support agricultural infrastructure or residences. Agricultural crops are dominated by orchards, primarily pistachio. Row and field crops, such as cotton, corn, and alfalfa also occur, as well as a small amount of vineyard. Road shoulders are compacted and generally barren, though nonnative herbaceous species sometimes grow between road shoulders and agricultural margins. Scattered ornamental trees and shrubs are present near some structures.

Agricultural and other disturbed habitats on the project site support a low diversity of wildlife species that are adapted to this intensely managed environment. Natural habitats west and south of the project site provide much higher quality wildlife habitat and support a higher diversity of species. Because the project site is limited to actively cultivated agricultural lands and associated facilities and residences, only the most mobile species (e.g., birds and mammals with large home ranges) that typically use agricultural and developed habitats are likely to occur on the project site.

3.2 Special-status Species

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 by the Federal government or the State of California as endangered, threatened, or rare;
- taxa that meet the criteria for listing;
- wildlife identified by CDFW as species of special concern
- plants considered by CDFW to be “rare, threatened, or endangered in California;”
- species listed as Fully Protected under the California Fish and Game Code;

- taxa afforded protection under local or regional planning documents.

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

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

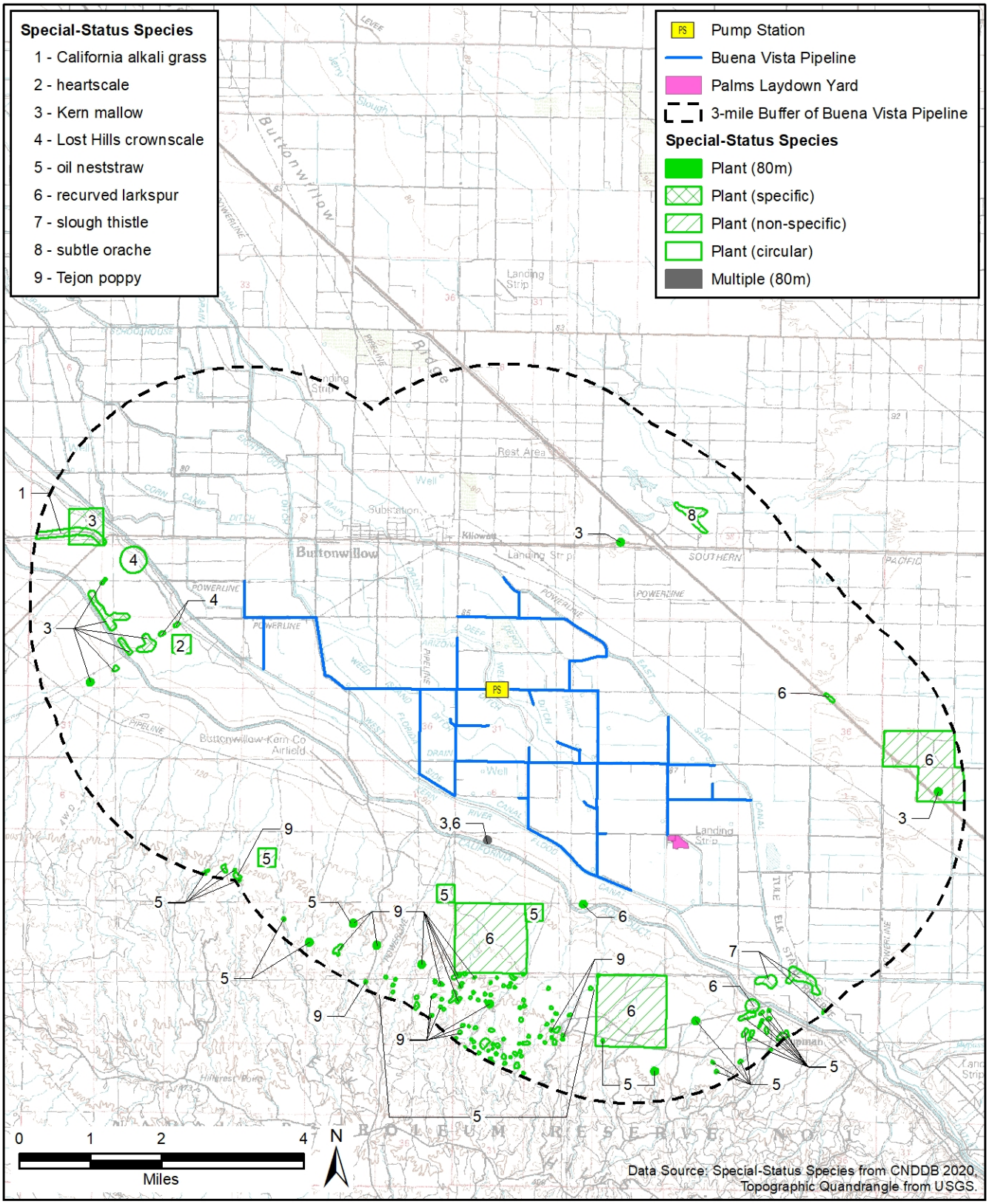
All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDB, regardless of their legal or protection status. As indicated above, only plant taxa considered by CDFW to be "rare, threatened, or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

Results of the CNDDB and CNPS Inventory queries and the IPaC list are provided in **Appendix B**. The CNDDB USGS 12-quadrangle search yielded occurrences of 52 special-status plants and animals. Twenty of these have been documented within 3 miles of the project site, as shown in **Figures 3 and 4**. However, most of these occurrences are from grassland, saltbush scrub, and other natural shrub habitats south and west of the project site. (Note: Not all species tracked in the CNDDB and included in the search results meet the special-status definition described above.)

Table 1 provides information on each special-status plant that was included in the CNDDB or CNPS search results and/or on the IPaC resource list that have potential to occur on the project site. Based on the review of existing documentation and habitat evaluations made during field surveys, habitat for special-status plants is absent from the project site and immediately adjacent areas. Therefore, none of the taxa listed in Table 1 were determined to have potential to occur on or adjacent to any portion of the project site.

Table 2 provides information on each special-status animal that was included in the CNDDB search results, on the IPaC resource list, or was otherwise determined to have potential to occur on or adjacent to the project site. Based on the review of existing documentation and observations made during the field survey, eight of these taxa were observed or determined to have at least low potential to occur on and/or adjacent to the project site. These taxa are discussed further below.

Figure 3. California Natural Diversity Database Occurrences of Special-status Plants within 3 Miles of the Project Site



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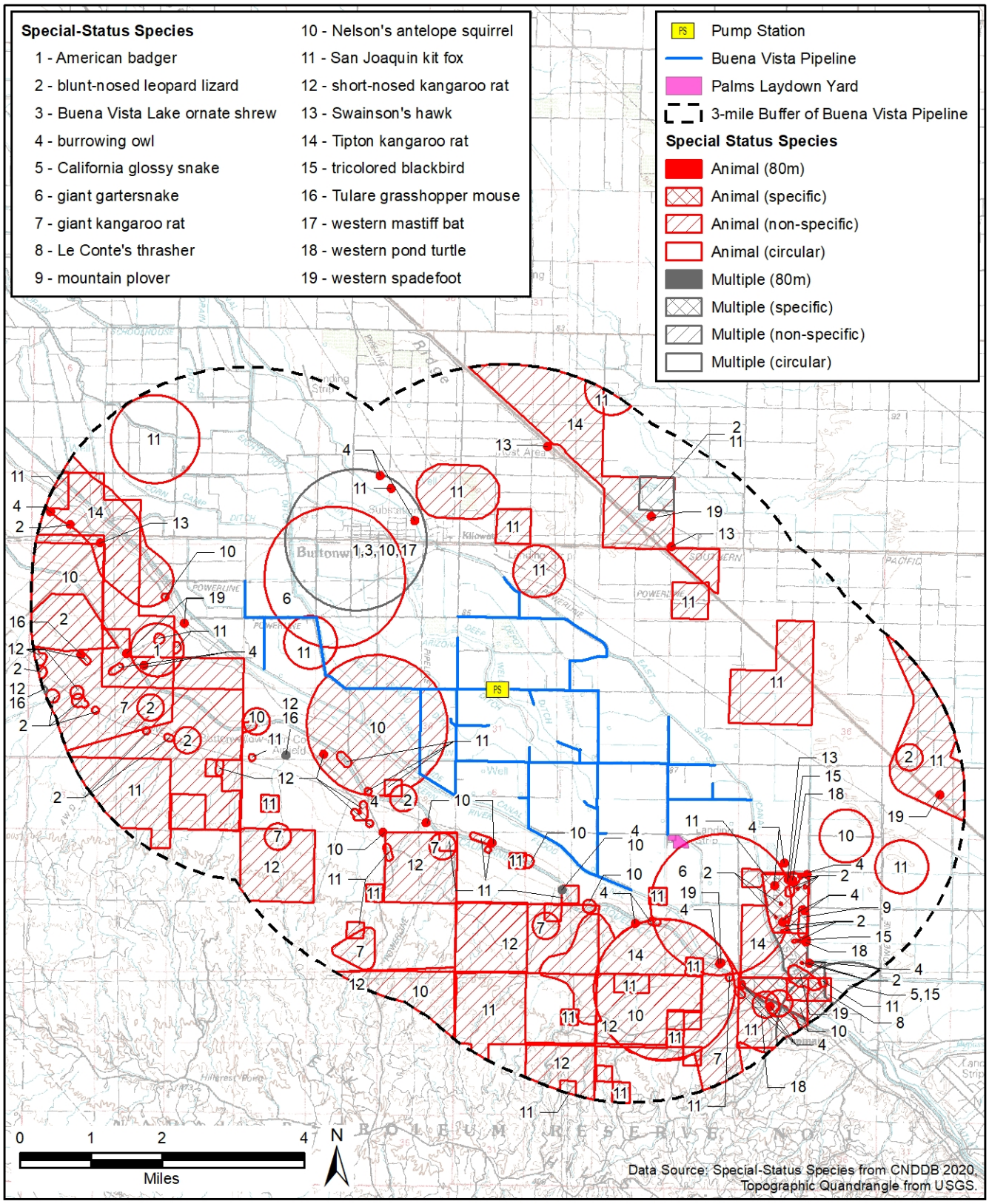
Source: CDFW 2020, adapted by GEI Consultants, Inc. 2020

Figure 4. California Natural Diversity Database Occurrences of Special-status Animals within 3 Miles of the Project Site



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Source: CDFW 2020, adapted by GEI Consultants, Inc. 2020

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status[1]		Habitat Associations	Potential to Occur on Project Site
		Federal	State		
Horn's milkvetch *Astragalus hornii var. hornii*	May–October	–	1B.1	Alkaline soils along lake margins, in meadows, seeps, and playas	None; no suitable habitat is present on or adjacent to the project site.
Heartscale *Atriplex cordulata* var. *cordulata*	April–October	–	1B.2	Sandy saline or alkaline soils in chenopod scrub and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Earlimart orache *Atriplex cordulata* var. *erecticaulis*	August–November	–	1B.2	Valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Lost Hills crownscale *Atriplex cordulata* var. *vallicola*	April–September	–	1B.2	Sandy saline or alkaline soils in chenopod scrub, valley and foothill grassland, and vernal pools	None; no suitable habitat is present on or adjacent to the project site.
Lesser saltscale *Atriplex minuscula*	May–October	–	1B.1	Alkaline sandy soils in chenopod scrub, valley and foothill grassland, and playas	None; no suitable habitat is present on or adjacent to the project site.
Subtle orache *Atriplex subtilis*	June–September	–	1B.1	Alkaline soils in valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
California jewelflower *Caulanthus californicus*	February–May	E	E/1B.1	Sandy soil in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Slough thistle *Cirsium crassicaule*	February–May	–	1B.1	Chenopod scrub, riparian scrub, and marshes, swamps, and sloughs	None; no suitable habitat is present on or adjacent to the project site.
Recurved larkspur *Delphinium recurvatum*	March–June	–	1B.2	Alkaline soils in chenopod scrub, cismontaine woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Kern mallow *Eremalche parryi* ssp. *kernensis*	January–May	E	1B.2	Open sandy and clay soils, often at edge of clearings in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Temblor buckwheat *Eriogonum temblorense*	May–September	–	1B.2	Valley or foothill grassland on clay or sandstone substrate	None; no suitable habitat is present on or adjacent to the project site.
Tejon poppy *Eschscholzia lemmonii* ssp. *kernensis*	February–April	–	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 *Lasthenia chrysantha*	February–June	–	1B.1	Alkaline vernal pools	None; no suitable habitat is present on or adjacent to the project site.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	February–June	–	1B.1	Marshes and swamps, playas, and vernal pools	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status[1]		Habitat Associations	Potential to Occur on Project Site
		Federal	State		
Showy golden madia *Madia radiata*	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 *Monolopia congdonii*	February–May	E	1B.2	Sandy soils in chenopod scrub, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
California alkali grass *Puccinellia simplex*	March–May	–	1B.2	Alkaline soils in wet areas, lake margins, meadows and seeps, vernal pools, chenopod scrub, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.
Oil neststraw *Stylocline citroleum*	March–April	–	1B.1	Clay soils in chenopod scrub, coastal scrub, and valley and foothill grassland	None; no suitable habitat is present on or adjacent to the project site.

Notes: CNDDB = California Natural Diversity Database; CRPR = California Rare Plant Rank

[1] **Status Definitions**

Legal 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 percent of occurrences are threatened and/or have a high degree and immediacy of threat).

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

– = no status

Sources: CDFW 2020; CNPS 2020; GEI Consultants, Inc. data collected in 2020; USFWS 2020

Table 2. Special-status Animals Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on or Adjacent to The Project Site
	Federal	State		
Fish				
Delta smelt *Hypomesus transpacificus*	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.
Invertebrates				
Vernal Pool fairy shrimp *Branchinecta lynchi*	T	–	Vernal pools and seasonal wetlands.	None; no suitable habitat is present on or adjacent to the project site.
Crotch bumble bee *Bombus crotchii*	–	C	Open grasslands and scrublands	None; no suitable habitat is present on or adjacent to the project site.
Amphibians				
California red-legged frog *Rana draytonii*	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 *Spea hammondii*	–	SSC	Vernal pools and seasonal wetlands in grasslands and open woodlands	None; no suitable habitat is present on or adjacent to the project site.
Reptiles				
Temblor legless lizard *Anniella alexanderae*	–	SSC	Poorly known; likely in occurs in sparsely vegetated areas with moist sandy soils	None; no suitable habitat is present on or adjacent to the project site.
Blunt-nosed leopard lizard *Gambelia silus*	E	E, FP	Sparsely vegetated and relatively flat grasslands and alkali and desert scrub habitats	None; no suitable habitat is present on or adjacent to the project site.
Coast horned lizard *Phrynosoma blainvillii*	–	SSC	Most commonly along sandy washes with scattered low bushes	None; no suitable habitat is present on or adjacent to the project site.
California glossy snake *Arizona elegans occidentalis*	–	SSC	Wide variety of habitats, including grassland and scrub, often with loose or sandy soils	None; no suitable habitat is present on or adjacent to the project site.
San Joaquin coachwhip *Masticophis flagellum ruddocki*	–	SSC	Open, dry habitats with little or no tree cover, including grasslands and saltbrush scrub	None; no suitable habitat is present on or adjacent to the project site.
Giant gartersnake *Thamnophis gigas*	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 *Actinemys marmorata*	–	SSC	Permanent or nearly permanent water bodies; nests in sunny uplands near suitable aquatic habitat	None; on-site irrigation canals do not provide suitable aquatic habitat.
Birds				
Western snowy plover *Charadrius alexandrinus nivosus*	T	–	Sandy beaches, salt pond levees, and shores of alkali lakes	None; no suitable habitat is present on or adjacent to the project site.

Table 2. Special-status Animals Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on or Adjacent to The Project Site
	Federal	State		
Mountain plover *Charadrius montanus*	–	SSC	Flat areas with short vegetation and bare ground, including short grasslands, freshly plowed and sprouting fields	Very low; potentially suitable habitat occurs in uncultivated or recently planted fields, but occurrences from Tule Elk Reserve are almost 30 years old.
Fulvous whistling-duck *Dendrocygna bicolor*	–	SSC	Tule/cattail freshwater marsh	None; no suitable habitat is present on the project and typical range does not include the Central Valley.
Burrowing owl *Athene cunicularia*	–	SSC	Nests and forages in grasslands, agricultural lands, and other open habitats with natural or artificial burrows or friable soils	Low; row crops and vegetated fallow fields provide marginally suitable foraging habitat; could occur at staging area and along field and canal margins if suitable burrows are present.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T	E	Nests in riparian forest with developed understory; forages in riparian forest and scrub	None; no suitable habitat is present on or adjacent to the project site.
White-tailed kite *Elanus leucurus*	–	FP	Nests in woodlands and isolated trees and forages in grasslands, pasture, and agricultural fields	Moderate; agricultural fields adjacent to some pipeline segments provide potential foraging habitat, and the few large trees scattered over and near the project site may be suitable nest sites.
Swainson's hawk *Buteo swainsoni*	–	T	Nests in riparian forest and scattered trees; forages in grasslands and agricultural fields	Known to occur; agricultural fields adjacent to some pipeline segments provide potential foraging habitat, and the few large trees scattered over and near the project site may be suitable nest sites.
Northern harrier *Circus cyaneus*	–	SSC	Nests and forages in grasslands, field crops, and marshes; nests on the ground in patches of dense, often tall, vegetation	Moderate; agricultural fields adjacent to some pipeline segments provide potential foraging habitat, and field crops may be suitable for nesting.
Loggerhead shrike *Lanius ludovicianus*	–	SSC	Savannah, shrublands, and open woodlands with shrubs and small trees for nesting	Known to occur; agricultural fields adjacent to some pipeline segments provide potential foraging habitat, and the few shrubs scattered over and near the project site may be suitable for nesting.
Le Conte's thrasher *Toxostoma lecontei*	–	SSC	Dry, open scrub habitats with dense spiny vegetation	None; no suitable habitat is present on or adjacent to the project site.
Least Bell's vireo *Vireo bellii pusillus*	E	E	Structurally diverse riparian habitat with dense shrub layer	None; no suitable habitat is present on or adjacent to the project site.
Tricolored blackbird *Agelaius tricolor*	–	C	Nests in dense cattails and tules, riparian scrub, grain crops, and other low dense vegetation; forages in grasslands and agricultural fields	Moderate; nest colonies recently documented at Tule Elk Reserve; agricultural fields adjacent to some pipeline segments provide potential foraging habitat, and field crops may be suitable for nesting.

Table 2. Special-status Animals Evaluated for Potential to Occur on or Adjacent to the Project Site

Species	Status		Habitat Associations	Potential to Occur on or Adjacent to The Project Site
	Federal	State		
Yellow-headed blackbird *Xanthocephalus xanthocephalus*	–	SSC	Nests in freshwater marsh with tall emergent vegetation, typically in open areas and over relatively deep water; forages in freshwater marsh and upland habitats, including agricultural fields	Very low; nearest known nesting area is at the Buena Vista Aquatic Recreation Area, approximately 7 miles southeast of the project site; project site and immediately adjacent areas do not provide suitable nesting habitat.
Mammals				
Buena Vista Lake ornate shrew *Sorex ornatus relictus*	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.
Tulare grasshopper mouse *Onychomys torridus tularensis*	–	SSC	Dry, open scrublands	None; no suitable habitat is present on or adjacent to the project site.
Giant kangaroo rat *Dipodomys ingens*	E	E	Dry grasslands and alkali scrub with sandy loam soils	None; no suitable habitat is present on or adjacent to the project site.
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	E	E	Saltbrush and sink scrub vegetation with soft, friable soils	None; no suitable habitat is present on or adjacent to the project site.
Short-nosed kangaroo rat *Dipodomys nitratoides brevinasus*	–	SSC	Grassland and shrub habitats with friable alkali soils	None; no suitable habitat is present on or adjacent to the project site.
Nelson's antelope squirrel *Ammospermophilus nelsoni*	–	T	Grasslands and open shrubland with gullies and washes	None; no suitable habitat is present on or adjacent to the project site.
American badger *Taxidea taxus*	–	SSC	Dry, open areas in various habitats with friable soils and uncultivated ground	None; no suitable habitat is present on or adjacent to the project site.
San Joaquin kit fox *Vulpes macrotis mutica*	E	T	Primarily grasslands and sparsely vegetated shrublands with loose-textured soils; can also use open agricultural habitats	Low; habitat on and adjacent to the project site is of low quality, but individuals could occasionally travel through the site in transit to more suitable habitat elsewhere.
Western mastiff bat *Eumops perotis californicus*	–	SSC	Various open, semi-arid to arid habitats; roosts in cliff crevices, high buildings, tunnels, and trees	Low; canal structures, farm buildings, and vacant houses adjacent to the project site provide marginally suitable roost sites, and individuals could occasionally forage in the vicinity.

Notes: CNDDB = California Natural Diversity Database

[1] **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
FP = Fully Protected under the California Fish and Game Code
SSC = California Species of Special Concern

Sources: CDFW 2020; GEI Consultants, Inc. data collected in 2020; USFWS 2020

Six special-status bird species were observed during field surveys or determined to at least low potential to occur on the project site, based on current habitat conditions: burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), and tricolored blackbird (*Agelaius tricolor*). No suitable nesting habitat for tricolored blackbird or northern harrier is currently present on or adjacent to the project site. However, if grain crops are planted or tall ruderal vegetation grows in fallow fields, these species could nest in such habitat. Few potential nest sites for Swainson's hawk and white-tailed kite are present in the project vicinity, but large ornamental trees at several farm residences and facilities on and near the project site provide marginally suitable nest sites for these species (as well as common raptor species). Similarly, few potential shrub nest sites for loggerhead shrike are present, and potential for shrikes to nest on or adjacent to the project site is low. No burrows suitable for burrowing owl use were observed during the field surveys. However, there is potential for natural burrows to become established along canal and agricultural field margins and at the laydown area; materials at the laydown area also could provide suitable artificial burrows.

Two special-status mammal taxa have low potential to occur on the project site, based on habitat conditions and species range: San Joaquin kit fox (*Vulpes macrotis mutica*) and western mastiff bat (*Eumops perotis californicus*). Western mastiff bat is most likely to roost in hills west and south of the project site, though canal structures and undisturbed buildings on and adjacent to the site may provide marginally suitable artificial roost sites. If suitable roosts are available in the project vicinity, bats using such roosts could forage over the project site. The CNDDB includes many occurrences of San Joaquin kit fox in grassland and scrub habitats in the project vicinity. However, habitat associated with many of the historic occurrences has since been converted to agriculture, and all CNDDB San Joaquin kit fox records in the past 25 years are from natural habitats that remain west and south of the Kern River Flood Canal. Though not documented in the CNDDB, kit fox is also regularly documented in the eastern portion of the Kern Water Bank, approximately 15 miles east of the project site (SVB 2020). Although kit foxes occur in a variety of habitats, including row crops, orchards, and vineyards, they prefer natural open habitats with loose-textured soils, and dens typically occur in open areas with grass or scattered brush (USFWS 1998, 2010). According to habitat suitability modeling conducted over the range of San Joaquin kit fox, large areas of high suitability habitat occur south and west of the project site, and scattered smaller habitat areas are present to the east; no medium or high suitability habitat is present on the project site (Cypher et al. 2013). No potential kit fox dens were observed during the field surveys. Based on the current habitat conditions and observations made during the field surveys, potential for kit fox to occur on or near the project site is low, and kit fox dens are unlikely to be present. However, because the project site is near high suitability habitat, there is potential for foraging or transient individuals to occasionally pass through the site.

3.3 Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through the California Environmental Quality Act, the Federal Endangered Species Act (ESA), Section 1602 of the California Fish and Game Code (FGC), Section 404 of the Federal Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Sensitive habitats may be of special concern for a variety of reasons, including 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 listed as threatened or endangered under the ESA. No designated or proposed critical habitat is present on or adjacent to the project site.

3.3.2 Other Habitats Protected under Federal or State Regulations

Under CWA Section 404, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into aquatic features that qualify as waters of the United States; wetlands that support hydrophytic vegetation, hydric soil types, and wetland hydrology may also qualify for USACE jurisdiction under CWA Section 404. Under CWA Section 401, the Central Valley Regional Water Quality Control Board (RWQCB) regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards. The Central Valley RWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act; waters of the State include all surface waters and groundwater within State boundaries. In addition, all diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to the regulatory approval of CDFW pursuant to FGC Section 1602.

Because ditches and canals on the project site are used solely for irrigation delivery and do not have a significant nexus to traditionally navigable waters, they do not qualify as waters of the United States and are not subject to regulation under CWA Sections 401 and 404. Additionally, because these ditches and canals were excavated in uplands, do not coincide with historic rivers or streams, and provide very poor habitat for fish and wildlife, they are not anticipated to quality for jurisdiction under FGC Section 1602. However, CDFW sometimes claims jurisdiction over artificial waterways, despite limited habitat value. The irrigation ditches and canals are waters of the State, which routinely include surface waters in artificial channels.

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 (CDFG 2010). Within that list, CDFW identifies and ranks sensitive natural communities of special concern considered to be highly imperiled. The project site does not support any sensitive natural communities.

4. Potential Impacts

Implementing the project would result in permanent development associated with the Brite Pump Station, temporary ground disturbance within the pipeline installation corridor, and temporary disturbance in the laydown area. In general, disturbance is anticipated to be relatively minor, because pipeline installation would be limited to a relatively narrow corridor within existing roadways and adjacent agricultural lands, the Brite Pump Station and associated facilities would be constructed in an existing barren area, and staging would occur in an existing laydown area. No natural habitat would be affected by project activities, and potential vegetation removal would be limited to small areas of ruderal vegetation associated with existing roads, ditches and canals, and agricultural fields.

The impact discussions below focus on resources determined to have potential to be affected by implementing the project. Therefore, special-status species that do not have potential to occur on or near the project site (i.e., because suitable habitat is absent or the project site is outside the species' current range) are not addressed in these discussions.

3.4 Special-status Wildlife

3.4.1 Birds

Six special-status bird taxa are known or have moderate potential to occur on the project site. Because agricultural lands in the project area are dominated by orchards, few areas that provide suitable foraging habitat (e.g., alfalfa, hay, and fallow fields) are present. Therefore, a very small amount of foraging habitat for special-status birds would be affected. In addition, this habitat would primarily be along field margins adjacent to existing roadways, foraging habitat disturbance would be temporary, and a small proportion of the overall habitat would be disturbed at any one time. Therefore, such disturbance would be a minor impact on the potentially affected species.

The project site and adjacent areas currently provide marginal nesting habitat for burrowing owl, Swainson's hawk, white-tailed kite, and loggerhead shrike. Suitable nesting habitat for northern harrier and tricolored blackbird could also be present during project implementation, depending on crop types and habitat conditions at the time. Because the project site is subject to regular disturbance from agricultural activities, and project activities are anticipated to cause somewhat similar disturbance levels, potential for project implementation to result in nest failure or burrow abandonment is low. However, if occupied burrows are present along the pipeline corridor or at the pump station site or staging area, they could be destroyed and burrowing owls could be injured or killed. In addition, if active nests are present in or very close to the pipeline corridor, pump station site, or staging area, project activities could result nest abandonment, reduced care of eggs or young, or premature fledging. Depending on the species and number of individuals that are affected, burrow destruction or nest failure could be considered a substantial adverse effect.

3.4.2 Mammals

San Joaquin kit fox and western mastiff bat are the only special-status mammals with potential to occur on the project site. Foraging activities of mastiff bats that may use the project site are unlikely to be disturbed by construction activities. Based on the relatively poor quality of potential roost sites on and adjacent to the project site, maternity roosts are extremely unlikely to occur. Because western mastiff bat typically roosts in small colonies (Pierson and Rainey 1998) relatively few individuals would be affected, in the unlikely event structures on or adjacent to the project site are used as non-maternity roosting habitat and disturbed by project activities. Potential disturbance of small numbers of non-maternity roosting bats would not be considered a substantial adverse effect.

Based on current habitat conditions and observations made during the field surveys, potential for San Joaquin kit fox to den on or adjacent to the project site is very low. However, if a den becomes established or transient individuals are present during project implementation, the den could be abandoned, or kit foxes could be injured or killed if they come in contact with project equipment or become trapped in pipes or trenches. Injury or death of a San Joaquin kit fox would be considered a substantial adverse effect.

3.5 Sensitive Habitats

The only potential to impact sensitive habitat is associated with the portion of pipeline that would be installed via open trench across Deep Wells Ditch. However, the pipe would be installed when the ditch is dry, and the ditch would be restored to pre-installation conditions. Therefore, there would be no impact on water quality and no change to the ditch flow, bed, channel, or bank.

3.6 Other Potential Impacts on Biological Resources

The project site is part of a much larger extent of agricultural lands and does not serve as a corridor or other primary route for wildlife movement. Because the canals are dry for much of the year and do not connect to natural waterways, they do not provide migratory corridors. The project site also is not known or anticipated to serve as a nursery site for any wildlife species. 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 project site is west of the existing Metropolitan Bakersfield Habitat Conservation Plan area and the plan area for the Bakersfield Habitat Conservation Plan that is currently in development. The site is within the area proposed to be covered by the Kern County Valley Floor Habitat Conservation Plan. A draft of the plan was issued many years ago (Kern County Planning Department 2006), but a final plan has not been released. The project site is within an extensive area of "White Zone," which is of lower conservation concern and not identified for acquisition of preserve areas. 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.

A low diversity of common birds that use agricultural habitats could nest on or adjacent to the project site. Because project activities would primarily occur in barren areas, there is minimal potential for direct destruction of active nests. However, if active nests are present on or very near the project site, pipeline installation, pump station construction, and staging activities could result nest abandonment, reduced care of eggs or young, or premature fledging. 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 FGC Section 3503. Recommended impact avoidance and minimization measures described below would reduce potential for loss of active bird nests.

5. Impact Avoidance and Minimization Measures

The best management practices (BMPs) and species-specific measures described below would avoid or minimize project-related impacts on special-status wildlife and other biological resources that are protected under State and Federal laws and regulations.

- **BMP-1:** An Environmental Awareness Program will be presented to all project personnel working in the field before project activities begin. The program will be presented by a qualified biologist with knowledge of special-status wildlife that could occur on the project site. The program will

address each species biology and habitat needs; status of each species and their regulatory protections; and measures required to reduce impacts to the species during project construction and penalties for non-compliance.

- **BMP-2:** Project activities will only occur during the day (from 30 minutes prior to sunrise and 30 minutes following sunset).

- **BMP-3:** Hazardous materials, fuels, lubricants, and solvents that spill accidentally during project-related activities will be cleaned up and removed from the project site as soon as possible, according to applicable federal, state and local regulations.

- **BMP-4:** All food-related trash items such as wrappers, cans, bottles or food scraps generated during project activities will be disposed of in closed containers and removed daily from the project site. No deliberate feeding of wildlife will be allowed.

- **BMP-5:** No domestic pets associated with project personnel will be permitted on the project site.

Implementing the following measures, consistent with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011), would further avoid and/or minimize potential project impacts on San Joaquin kit fox.

- **SJKF-1:** No more than 30 days before project activities begin in a given area, a qualified biologist will conduct a pre-construction survey to determine the potential for San Joaquin kit fox to occur in the area. If potential or known dens for San Joaquin kit fox are found, exclusion zones will be established and maintained, in accordance with the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox* (USFWS 2011).

- **SJKF-2:** To prevent kit fox entrapment during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar material at the end of each workday. If the trenches cannot be closed, one or more escape ramps of no more than a 45-degree slope will be constructed of earthen fill or created with wooden planks. 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 kit fox is discovered, project activities will stop, and escape ramps or structures will be installed immediately to allow the animal to escape.

- **SJKF-3:** All construction pipes or similar structures with a diameter of 4 inches or greater that are stored on the ground at a construction site for one or more overnight periods will be thoroughly inspected for wildlife before the pipe is buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If a potential San Joaquin kit fox is discovered inside a pipe, all project activities that could result in take will stop, a qualified biologist will be summoned to identify the species, and USFWS will be notified. If a San Joaquin kit fox is unable to escape voluntarily, USFWS will be contacted immediately to determine what actions should be taken to adequately minimize potential impacts.

- **SJKF-4:** All sightings of San Joaquin kit fox will be reported immediately to USFWS and a record of the sightings will be submitted to the CNDDB.

Implementing the following measures, consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), would avoid project-related disturbance of burrowing owls and destruction of occupied burrows.

- **BUOW-1:** A qualified biologist will assess burrowing owl habitat suitability in the area subject to direct impact and adjacent areas within 500 feet.

- **BUOW-2:** If suitable habitat or sign of burrowing owl presence is observed, a take avoidance survey will be conducted within 14 days before project activities begin near areas of suitable habitat.

- **BUOW-3:** If any occupied burrows are observed, protective buffers will be established and implemented. A qualified biologist will monitor the occupied burrows during project activities to confirm effectiveness of the buffers. 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 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. However, passive exclusion cannot 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.

Implementing the following measures would avoid project-related failure of active Swainson's Hawk nests:

- **SWHA-1:** A qualified biologist will conduct surveys of potential Swainson's hawk nesting trees within 0.25 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, a survey will be conducted within 14 days before project activities begin in a given area during the nesting season (April–August).

- **SWHA-2:** If an active nest is observed, a protective buffer will be established and implemented until the nest is no longer active. A qualified biologist will monitor the nest 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 nest to disturbance.

Implementing the following measures would minimize potential for project-related loss of active nests of other birds:

- **NEST-1:** A qualified biologist will conduct surveys of suitable nesting habitat that would be directly disturbed by project activities and suitable nesting habitat for white-tailed kite, northern harrier, loggerhead shrike, tricolored blackbird, and common raptors, if present within 500 feet of project activities. Surveys will be conducted within 14 days before beginning project activities begin in a given area during the nesting season (February-August).

- **NEST-2:** If any active nests are observed, protective buffers will be established and implemented until the nests are no longer active. A qualified biologist will monitor the nest 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 nest to disturbance.

6. References

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_____. 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.

_____. 2020 (August 5). *IPAC Resource List*. Generated at https://ecos.fws.gov/ipac/.

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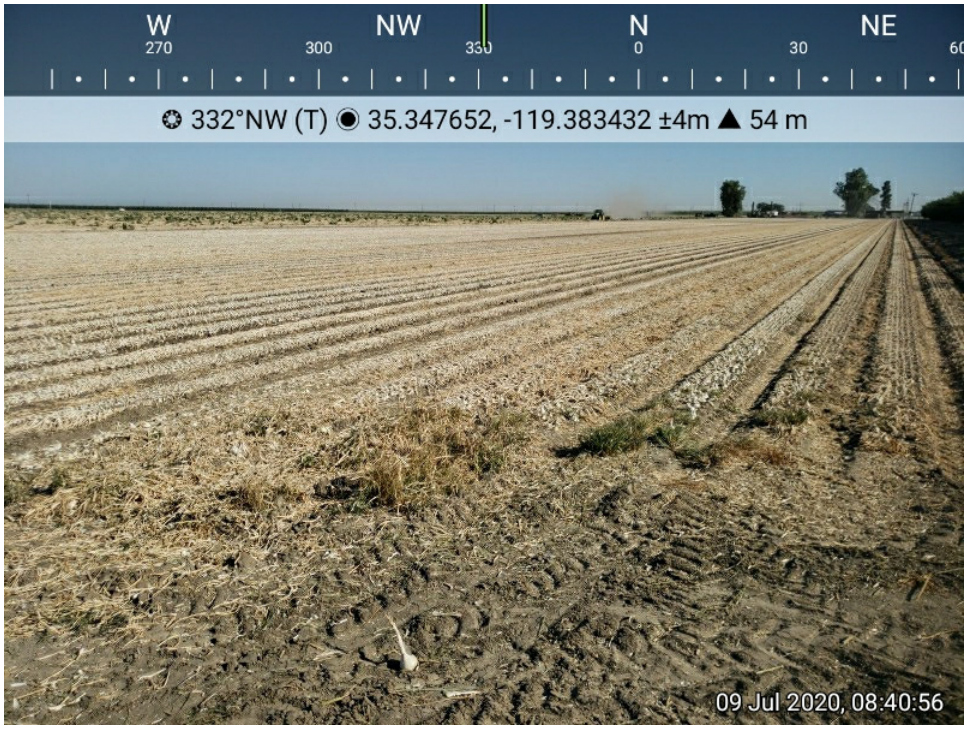
Appendix A. Representative Photographs of the Project Site

Orchard adjacent to pipeline route in eastern portion of project site.

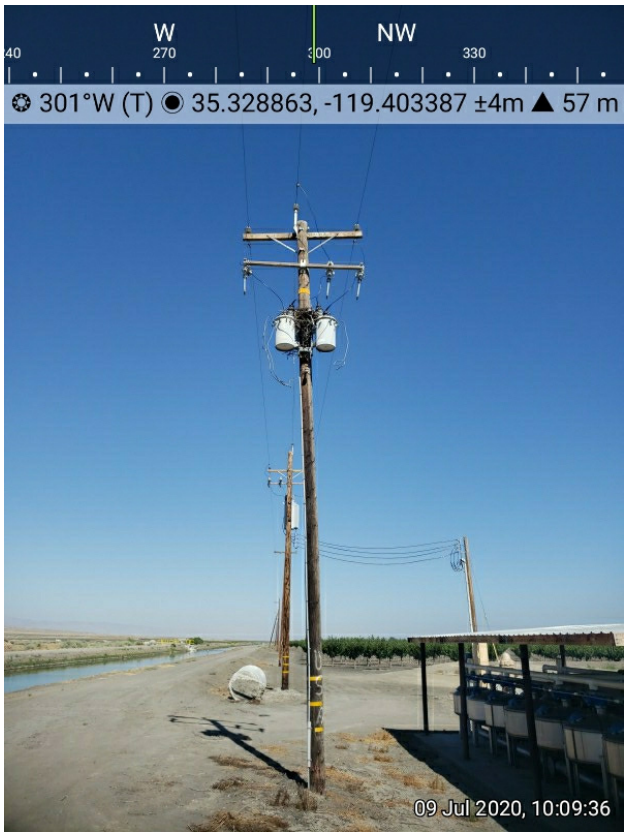


Field crop adjacent to pipeline route in eastern portion of project site.

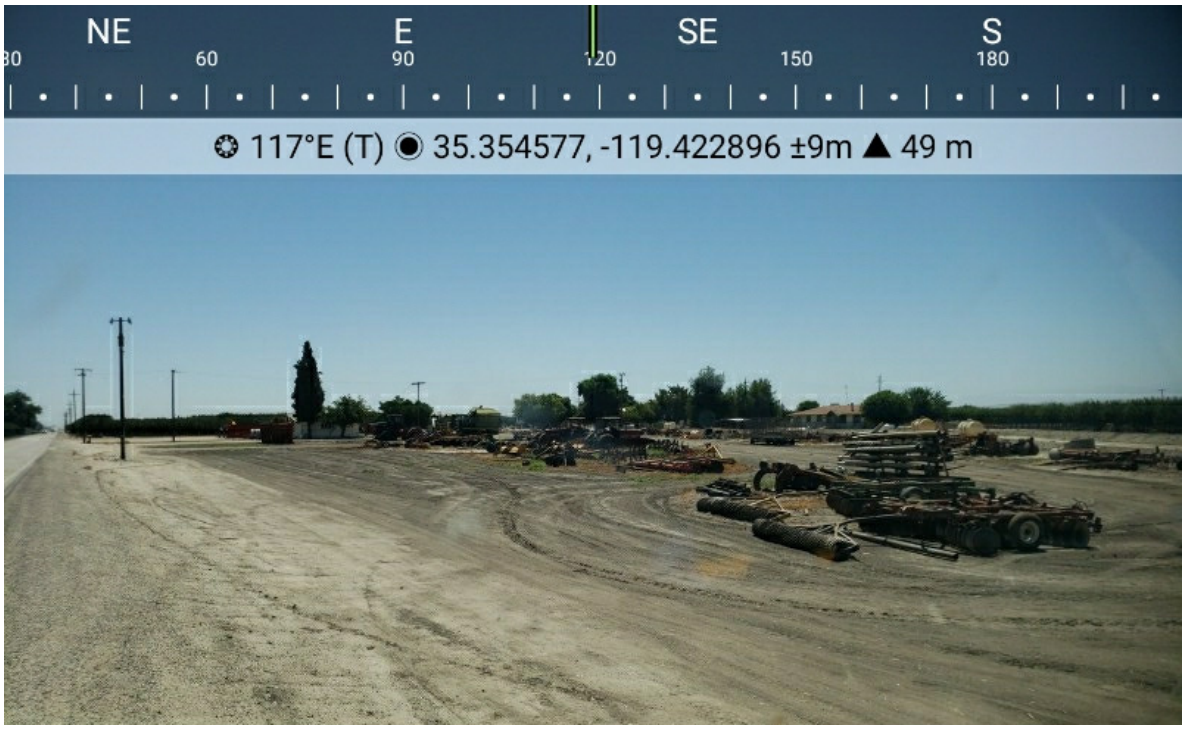
Pipeline route in eastern portion of project site.

Rural residence adjacent to pipeline route in eastern portion of project site.

Orchard and row crop along pipeline route in southern portion of project site.

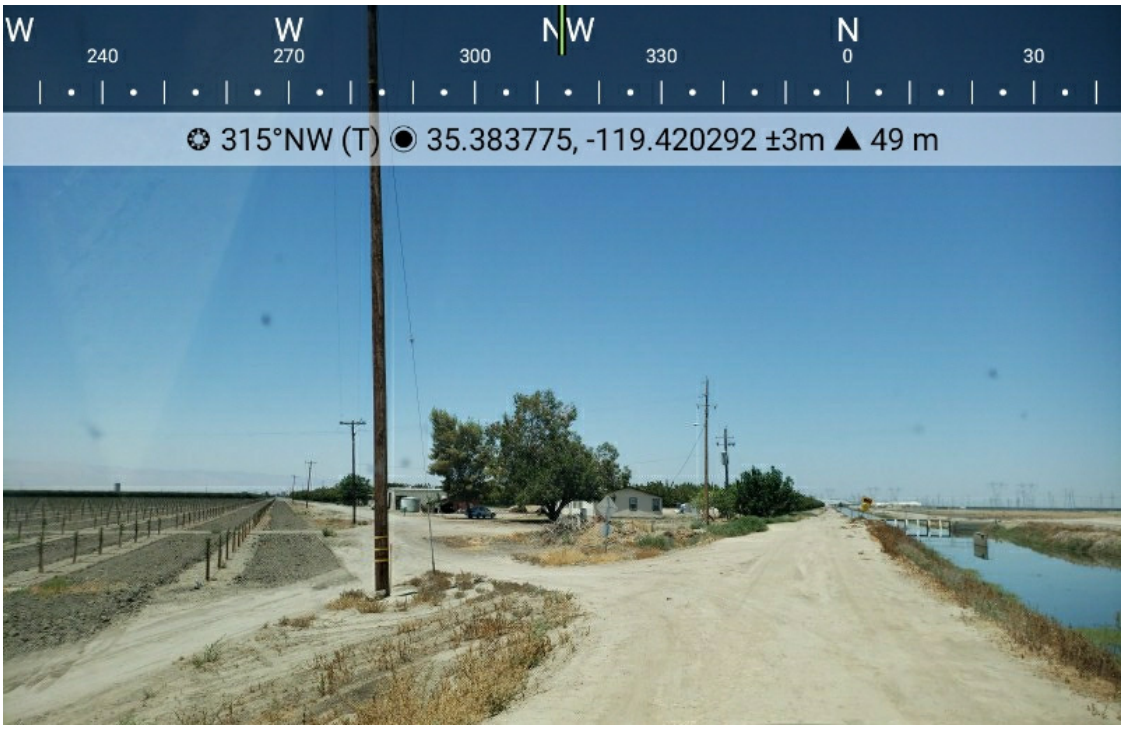


Pipeline route at southern edge of project site.

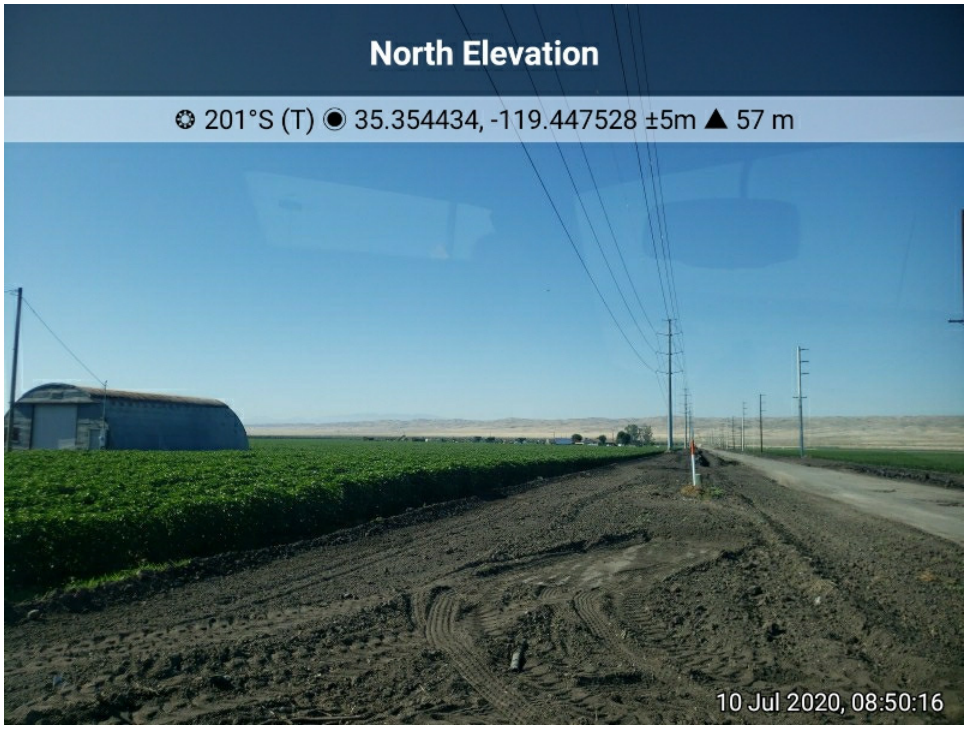


Residential and agricultural storage area adjacent to pipeline route in central portion of project site.

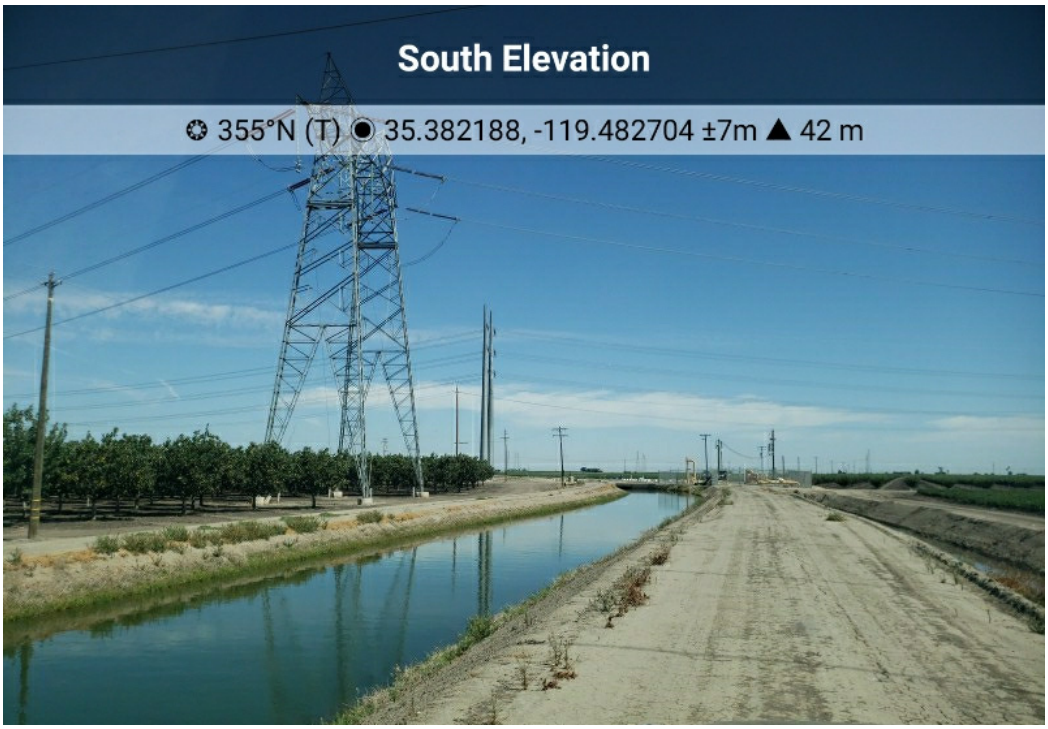
Row crop and canal adjacent to pipeline route in central portion of project site.



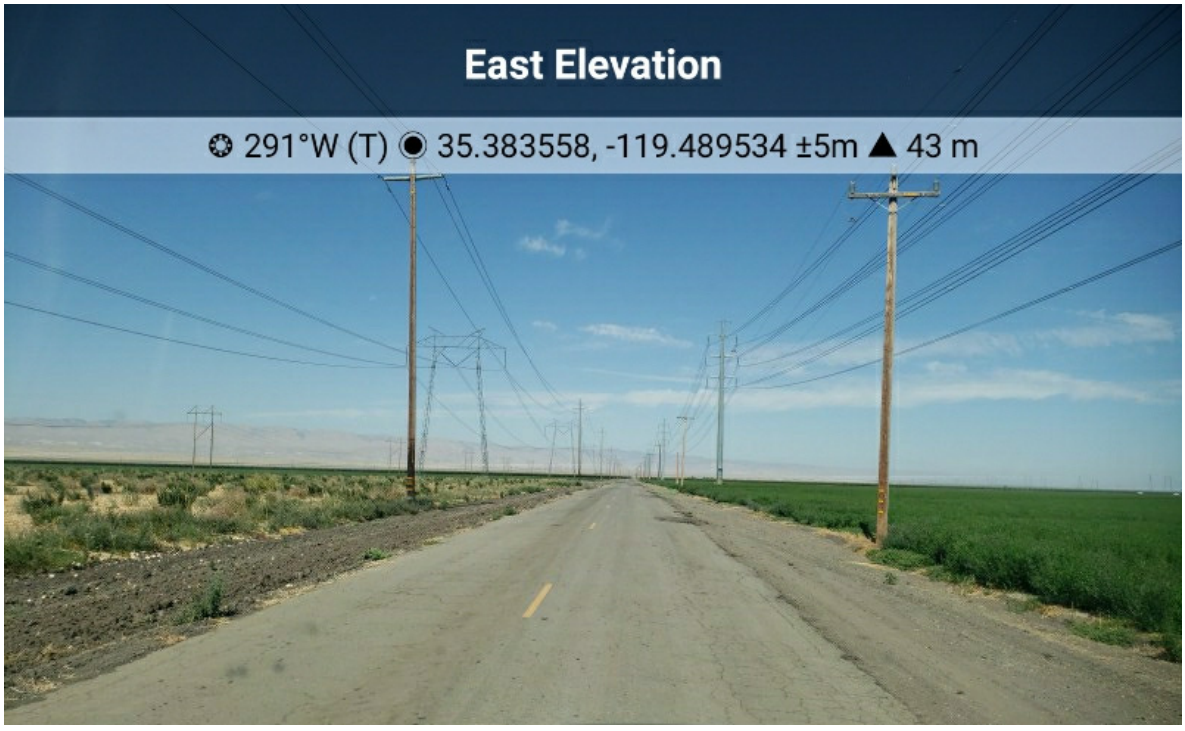
Residences and agricultural buildings adjacent to pipeline route in northern portion of project site.



Pipeline route in south-central portion of project site.



Pipeline route in northwestern portion of project site.



Pipeline route in northwestern portion of project site.

Appendix B. Special-status Species Query Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (East Elk Hills (3511934) OR Taft (3511924) OR Mouth of Kern (3511923) OR Tupman (3511933) OR Rio Bravo (3511943) OR Wasco (3511953) OR Wasco SW (3511954) OR Semitropic (3511955) OR Lokern (3511945) OR West Elk Hills (3511935) OR Fellows (3511925))
 AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Astragalus hornii var. hornii Horn's milk-vetch	PDFAB0F421	None	None	GUT1	S1	1B.1
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex cordulata var. erecticaulis Earlimart orache	PDCHE042V0	None	None	G3T1	S1	1B.2
Atriplex coronata var. vallicola Lost Hills crownscale	PDCHE04371	None	None	G4T3	S3	1B.2
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Atriplex subtilis subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
Caulanthus californicus California jewelflower	PDBRA31010	Endangered	Endangered	G1	S1	1B.1
Cirsium crassicaule slough thistle	PDAST2E0U0	None	None	G1	S1	1B.1
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Eremalche parryi ssp. kernensis Kern mallow	PDMAL0C031	Endangered	None	G3G4T3	S3	1B.2
Eriastrum hooveri Hoover's eriastrum	PDPLM03070	Delisted	None	G3	S3	4.2
Eriogonum temblorense Temblor buckwheat	PDPGN085P0	None	None	G2	S2	1B.2
Eschscholzia lemmonii ssp. kernensis Tejon poppy	PDPAP0A071	None	None	G5T2	S2	1B.1
Lasthenia chrysantha alkali-sink goldfields	PDAST5L030	None	None	G2	S2	1B.1
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Madia radiata showy golden madia	PDAST650E0	None	None	G3	S3	1B.1
Monolopia congdonii San Joaquin woollythreads	PDASTA8010	Endangered	None	G2	S2	1B.2
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
Stylocline citroleum oil neststraw	PDAST8Y070	None	None	G3	S3	1B.1

Record Count: 19

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

25 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3511934, 3511944, 3511924, 3511923, 3511933, 3511943, 3511953, 3511954, 3511955, 3511945 3511935 and 3511925;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium howellii var. howellii	Howell's onion	Alliaceae	perennial bulbiferous herb	Mar-Apr	4.3	S3	G3G4T3
Amsinckia furcata	forked fiddleneck	Boraginaceae	annual herb	Feb-May	4.2	S4	G4
Astragalus hornii var. hornii	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	1B.1	S1	G4G5T1T2
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex cordulata var. erecticaulis	Earlimart orache	Chenopodiaceae	annual herb	Aug-Sep(Nov)	1B.2	S1	G3T1
Atriplex coronata var. coronata	crownscale	Chenopodiaceae	annual herb	Mar-Oct	4.2	S3	G4T3
Atriplex coronata var. vallicola	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	1B.2	S2	G4T2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	Jun,Aug,Sep(Oct)	1B.2	S1	G1
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Caulanthus californicus	California jewelflower	Brassicaceae	annual herb	Feb-May	1B.1	S1	G1
Cirsium crassicaule	slough thistle	Asteraceae	annual / perennial herb	May-Aug	1B.1	S1	G1
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Eremalche parryi ssp. kernensis	Kern mallow	Malvaceae	annual herb	Jan,Mar,Apr,May(Feb)	1B.2	S3	G3G4T3
Eriastrum hooveri	Hoover's eriastrum	Polemoniaceae	annual herb	(Feb)Mar-Jul	4.2	S3	G3
Eriogonum gossypinum	cottony	Polygonaceae	annual herb	Mar-Sep	4.2	S3S4	G3G4

	buckwheat						
Eriogonum temblorense	Temblor buckwheat	Polygonaceae	annual herb	(Apr)May-Sep	1B.2	S2	G2
Eschscholzia lemmonii ssp. kernensis	Tejon poppy	Papaveraceae	annual herb	(Feb)Mar-May	1B.1	S2	G5T2
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	1B.1	S2	G4T2
Layia munzii	Munz's tidy-tips	Asteraceae	annual herb	Mar-Apr	1B.2	S2	G2
Madia radiata	showy golden madia	Asteraceae	annual herb	Mar-May	1B.1	S3	G3
Monolopia congdonii	San Joaquin woollythreads	Asteraceae	annual herb	(Jan)Feb-May	1B.2	S2	G2
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
Stylocline citroleum	oil neststraw	Asteraceae	annual herb	Mar-Apr	1B.1	S3	G3
Trichostema ovatum	San Joaquin bluecurls	Lamiaceae	annual herb	Jul-Oct	4.2	S3	G3

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 05 August 2020].

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (East Elk Hills (3511934) OR Taft (3511924) OR Mouth of Kern (3511923) OR Tupman (3511933) OR Rio Bravo (3511943) OR Wasco (3511953) OR Wasco SW (3511954) OR Semitropic (3511955) OR Lokern (3511945) OR West Elk Hills (3511935) OR Fellows (3511925))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
Ammospermophilus nelsoni Nelson's antelope squirrel	AMAFB04040	None	Threatened	G2	S2S3	
Anniella alexanderae Temblor legless lizard	ARACC01030	None	None	G1	S1	SSC
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Charadrius alexandrinus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
Charadrius montanus mountain plover	ABNNB03100	None	None	G3	S2S3	SSC
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Dendrocygna bicolor fulvous whistling-duck	ABNJB01010	None	None	G5	S1	SSC
Dipodomys ingens giant kangaroo rat	AMAFD03080	Endangered	Endangered	G1G2	S1S2	
Dipodomys nitratoides brevinasus short-nosed kangaroo rat	AMAFD03153	None	None	G3T1T2	S1S2	SSC
Dipodomys nitratoides nitratoides Tipton kangaroo rat	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Gambelia sila blunt-nosed leopard lizard	ARACF07010	Endangered	Endangered	G1	S1	FP
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lytta hoppingi Hopping's blister beetle	IICOL4C010	None	None	G1G2	S1S2	
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S2?	SSC
Onychomys torridus tularensis Tulare grasshopper mouse	AMAFF06021	None	None	G5T1T2	S1S2	SSC
Perognathus inornatus San Joaquin pocket mouse	AMAFD01060	None	None	G2G3	S2S3	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Plegadis chihi white-faced ibis	ABNGE02020	None	None	G5	S3S4	WL
Protodufourea zavortinki Zavortink's protodufourea bee	IIHYM77020	None	None	G1	S1	
Sorex ornatus relictus Buena Vista Lake ornate shrew	AMABA01102	Endangered	None	G5T1	S1	SSC
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Toxostoma lecontei Le Conte's thrasher	ABPBK06100	None	None	G4	S3	SSC
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 34

IPaC **U.S. Fish & Wildlife Service**

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

Buena Vista Pipeline Project

LOCATION

Kern County, California

DESCRIPTION

Pipeline installation project in the Buena Vista Water Storage 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

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[1] 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[2]).

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.
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

Buena Vista Lake Ornate Shrew Sorex ornatus relictus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1610

Giant Kangaroo Rat Dipodomys ingens — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6051

San Joaquin Kit Fox Vulpes macrotis mutica — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2873

Tipton Kangaroo Rat Dipodomys nitratoides nitratoides — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7247

Reptiles

NAME	STATUS

Blunt-nosed Leopard Lizard Gambelia silus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/625

Giant Garter Snake Thamnophis gigas — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4482

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/321

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Kern Mallow Eremalche kernensis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1731	Endangered
San Joaquin Wooly-threads Monolopia (=Lembertia) congdonii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3746	Endangered

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.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Common Yellowthroat Geothlypis trichas sinuosa This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Le Conte's Thrasher toxostoma lecontei — Breeds Feb 15 to Jun 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8969

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For

example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

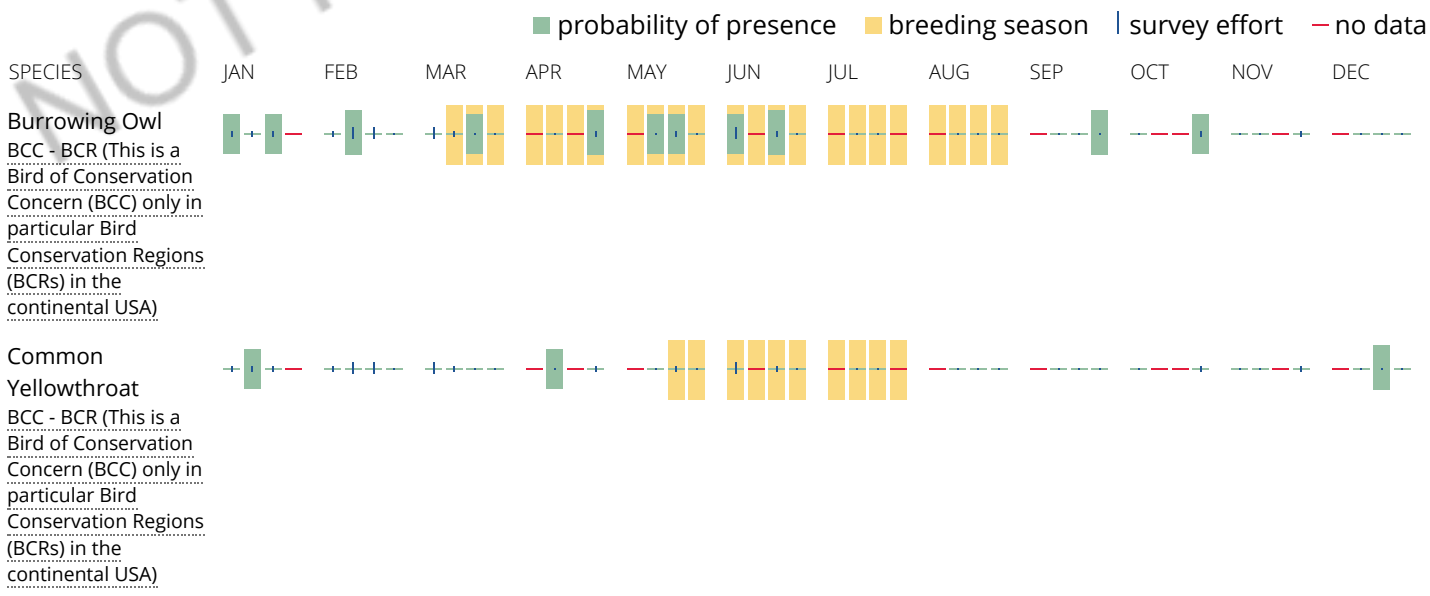
Breeding Season (▬)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

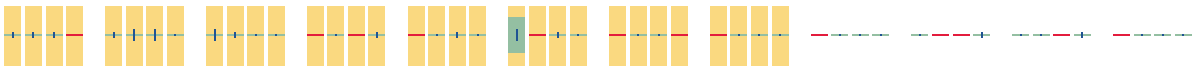
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



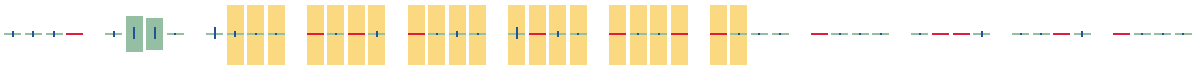
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Le Conte's Thrasher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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 and/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 migratory birds potentially occurring 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 AKN Phenology 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 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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.

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

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 POND

- PUBFx

RIVERINE

- R2UBHx
- R4SBCx
- R5UBFx
- R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

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 tuberficid 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.