Arvin-Edison Water Storage District

Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project

Draft Initial Study/ Mitigated Negative Declaration

April 2021

Prepared for:
Arvin-Edison Water Storage District

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Acronyms and Abbreviations

AB ..... Assembly Bill
AEWSD ..... Arvin-Edison Water Storage District
APCD ..... Air Pollution Control District
APE ..... Area of Potential Effect
APN ..... Assessor's Parcel Number
AQP ..... Air Quality Plan
ASM ..... ASM Affiliates, Inc
BRA ..... Biological Resource Assesment
BSA ..... Biological Survey Area
CalEEMod ..... California Emissions Estimator Model
CalEPA ..... California Environmental Protection Agency
Cal/OSHA ..... California Division of Occupational Safety and Health
Caltrans ..... California Department of Transportation
CARB ..... California Air Resources Board
CAAQS ..... California Ambient Air Quality Standards
CCAA ..... California Clean Air Act
CCR ..... California Code of Regulations
CDFW ..... California Department of Fish and Wildlife
CEQA ..... California Environmental Quality Act
CH_4 ..... Methane
CHRIS ..... California Historical Resources Information System
CNDDB ..... California Department of Fish and Wildlife Natural Diversity Database
CO ..... Carbon Monoxide
CO_2e ..... Carbon Dioxide Equivalent
CRHR ..... California Register of Historical Resources
DEIR ..... Draft Environmental Impact Report
District ..... Arvin-Edison Water Storage District
DTSC ..... Department of Toxic Substance Control
DWR ..... Department of Water Resources
EIR ..... Environmental Impact Report
EPA ..... U.S. Environmental Protection Agency
FEMA ..... Federal Emergency Management Agency

FMMP ..... Farmland Mapping and Monitoring Program
GAMAQI ..... Guidelines for Assessing and Mitigating Air Quality Impacts
GC ..... Government Code
GHG ..... Greenhouse Gas
GIS ..... Geographic Information System
GWSA ..... Groundwater Service Area
IS ..... Initial Study
IS/MND ..... Initial Study/Mitigated Negative Declaration
MMRP ..... Mitigation Monitoring & Reporting Program
MND ..... Mitigated Negative Declaration
MT CO_2e ..... Metric Tons of Carbon Dioxide Equivalent
NAAQS ..... National Ambient Air Quality Standards
NAHC ..... Native American Hertitage Commission
ND ..... Negative Declaration
NHPA ..... National Historic Preservation Act
NO_2 ..... Nitrogen Dioxide
NOX ..... Nitrogen Oxide
NPDES ..... National Pollutant Discharge Elimination System
NRCS ..... Natural Resources Conservation Service
NRHP ..... National Register of Historic Places
O_3 ..... Ozone
Pb ..... Lead
PG&E ..... Pacific Gas & Electric
$PM_{2.5}$ ..... Particulate Matter less than 2.5 microns in diameter
PM_{10} ..... Particulate Matter less than 10 microns in diameter
Project ..... Groundwater Service Area Project
ROG ..... Reactive Organic Gases
SCH ..... State Clearinghouse
SJVAB ..... San Joaquin Valley Air Basin
SJVAPCD ..... San Joaquin Valley Air Pollution Control District
SJVIC ..... Southern San Joaquin Valley Information Center
SO_2 ..... Sulfur Dioxide
SWPPP ..... Storm Water Pollution Prevention Plan
SWRCB ..... State Water Resources Control Board

SWSA ..... Surface Water Service Area

TAC ..... Toxic Air Contaminants

USACE ..... U.S. Army Corp of Engineers

USDA ..... U. S. Department of Agriculture

USGS ..... U. S. Geological Survey

Chapter 1 Introduction

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of Arvin-Edison Water Storage District (AEWSD or District) to address the environmental effects of the Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project (Project or proposed Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et.seq.* The District is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in the **Chapter 2 Project Description**.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq.*)-- also known as the CEQA Guidelines-- Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is ***no*** substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or

b. The IS identified potentially significant effects, but:

    1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project *as revised* may have a significant effect on the environment.

1.2 Document Format

This IS/MND contains six chapters and four appendices. **Chapter 1 Introduction**, provides an overview of the proposed Project and the CEQA process. **Chapter 2 Project Description**, provides a detailed description of proposed Project components and objectives. **Chapter 3 Impact Analysis**, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. **Chapter 4 Mitigation Monitoring and Reporting Program** (MMRP),

provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation., **Chapter 5 References** and **Chapter 6 List of Preparers**.

The CalEEMod Output Files, Biological Resources Assessment , Cultural Phase 1 Survey Report, and NRCS Soil Resource Report are provided as technical **Appendix A**, **Appendix B**, and **Appendix C**, respectively, at the end of this document.

The analyses of environmental impacts in **Chapter 3** are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

Chapter 2 Project Description

2.1 Project Background and Objectives

2.1.1 Project Title

Arvin-Edison Water Storage District Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project

2.1.2 Lead Agency Name and Address

Arvin-Edison Water Storage District
20401 E Bear Mountain Boulevard
Arvin, CA 93203

2.1.3 Contact Person and Phone Number

Lead Agency Contact
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2.1.4 Project Location

The Project area is located in central Kern County, California, southeast of the City of Bakersfield. The Project consists of up to 44 miles of non-contiguous pipeline work scattered within the Arvin Edison Water Storage District. The various portions of pipeline work are located east of Lamont, east of and within Arvin, and north of Mettler (see **Figure 2-3**). The Project area is located within various portions of five different United States Geological Survey (USGS) 7.5 minute quadrangles, Lamont, Edison, Weed Patch, Arvin and Mettler. It is in multiple sections of Township 30 South, Range 29 East, Township 31 South, Range 29 East; Township 31 South, Range 30 East; Township 32 South, Range 29 East; and Township 32 South, Range 28 East; M. D. B & M.

The Project area is located within the AEWSD, and is generally west of General Beale Road, south of Muller Road, east of Adobe Road and north of Teale Road. The pipelines are located on or adjacent to the following APNs:

446-022-17	189-170-07	503-100-06	178-170-28
446-022-19	446-010-36	189-020-12	178-201-42
446-023-23	446-010-41	189-020-14	178-201-48
446-023-28	178-230-12	189-020-30	178-230-13
446-023-30	189-030-32	189-352-04	446-043-32
446-023-31	503-042-05	189-352-31	178-350-25

189-753-07	446-010-59	446-120-01	189-030-01
189-190-09	446-010-60	446-120-02	189-030-03
178-281-04	446-010-73	446-120-14	189-030-05
189-130-22	193-120-02	446-120-15	178-350-17
189-140-05	178-282-23	446-120-27	178-202-05
178-010-20	189-753-02	178-281-05	189-753-06
178-010-21	189-340-22	189-150-07	177-260-05
178-370-02	446-022-13	193-120-04	445-042-15
178-370-03	445-041-27	446-010-04	189-120-19
178-410-02	445-042-18	178-020-03	189-020-21
178-201-35	446-041-31	178-230-21	189-020-21
178-230-09	446-041-32	178-202-22	189-020-22
178-230-07	446-042-15	446-043-08	189-020-22
503-060-41	177-250-02	446-043-10	193-150-26
445-042-41	177-280-10	189-020-31	193-150-26
503-060-02	177-280-11	189-150-05	503-042-10
189-351-90	177-280-12	189-150-11	503-080-01
189-351-94	177-280-19	189-340-50	503-080-02
189-340-24	177-280-30	189-340-49	503-080-04
189-340-27	178-260-09	189-340-45	503-080-05
189-351-93	178-281-23	189-340-46	446-042-04
503-100-07	178-282-24	503-042-09	446-042-06
189-400-09	189-020-16	503-042-30	188-390-03
446-043-06	178-220-02	178-050-13	189-030-73
503-060-10	178-220-03	178-410-03	189-020-17
189-190-10	178-220-23	189-352-09	178-230-30
189-390-01	178-220-01	189-352-11	178-281-29
189-390-02	446-023-01	189-050-01	189-050-69
189-390-03	446-023-03	189-050-21	189-050-70
189-390-04	189-070-01	189-130-34	503-042-01
189-390-05	189-070-20	193-020-01	503-042-03
189-390-06	189-070-63	193-020-03	193-130-27
189-390-07	177-290-06	193-020-04	193-150-25
189-390-15	189-352-17	193-030-01	178-220-04
503-060-12	445-041-18	193-040-03	189-352-05
446-023-18	445-041-19	193-040-04	189-352-18
446-023-19	445-041-21	193-050-01	189-352-19
446-023-22	446-010-21	193-050-03	189-352-20
189-680-23	446-010-23	193-050-05	189-352-21
446-041-16	446-010-32	193-060-01	189-352-22
177-260-02	178-350-16	193-070-06	189-352-25
177-260-03	177-290-03	193-090-01	503-060-13
177-260-12	177-290-04	193-110-01	503-060-24
188-390-01	446-010-62	189-752-26	446-022-15

189-352-02	445-042-03	503-100-05	189-030-74
189-352-08	503-060-03	189-753-11	189-030-78
503-100-03	503-060-05	178-201-05	189-030-17
503-100-04	503-060-43	189-753-08	189-030-24
178-010-19	178-410-01	446-043-05	189-030-26
189-130-29	178-281-01	178-201-06	446-043-02
189-351-15	178-281-02	189-753-10	446-043-31
177-250-08	178-220-27	189-080-01	177-250-20
177-250-11	178-230-11	189-140-14	446-043-03
177-250-18	178-230-32	503-100-01	446-031-20
177-270-08	189-753-04	503-100-02	446-031-22
177-270-18	189-753-01	178-290-05	446-043-14
178-010-31	445-041-38	503-060-27	446-043-19
178-160-24	178-281-26	503-060-28	446-042-27
178-170-25	178-340-07	503-060-29	189-020-21
178-201-22	178-340-08	177-290-05	189-020-22
178-201-47	178-350-06	189-130-23	193-150-26
178-201-50	178-350-07	178-201-30	189-352-12
446-041-18	178-350-24	189-753-09	189-352-14
189-070-39	178-350-44	189-753-05	189-753-03
446-022-06	178-350-61	446-042-07	189-050-57
189-050-64	178-350-62	178-240-58	189-050-65
189-130-05	189-030-18	446-010-31	189-050-74
189-130-06	189-030-19	177-160-14	189-150-12
189-130-08	189-030-20	446-022-23	189-400-01
189-130-14	189-050-63	177-260-04	189-400-02
189-130-21	193-150-23	177-280-34	189-400-03
189-170-01	446-042-19	177-260-25	189-400-04
189-170-04	446-042-20	177-270-16	189-400-08
189-170-06	503-060-31	178-160-23	178-010-22

2.1.5 Latitude and Longitude

The centroid of the Project area is Latitude: N 35° 12' 8.8914" Longitude: W 118° 51' 10.0074"

2.1.6 General Plan Designation

The General Plan Land Use Designation across the Project area for Kern County is: Intensive Agriculture, Mineral & Petroleum, Residential, Other/Publicly Owned Facilities (See **Figure 3-8**).

The General Plan Land Use Designation across the Project area for the City of Arvin is: Industrial, Residential, and Commercial (See **Figure 3-8**).

2.1.7 Zoning

The Zoning designation across the Project area within Kern County is: AE-20 (Exclusive Agriculture, 20-Acre Minimum) (See **Figure 3-9**).

The Zoning designation across and adjacent to the Project area within the City of Arvin is: M-2 (Light Manufacturing), M-3 (General Manufacturing), R-1 (One-Family), R-4 (Multi-Family), C-1 (Restricted Commercial), A-1 (Light Ag), A-2 (General Ag) (See **Figure 3-9**).

2.1.8 Description of Project

2.1.8.1 District Background

Arvin-Edison Water Storage District:

Arvin-Edison Water Storage District (AEWSD) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to address the potential environmental impacts of the proposed Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project(Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 et seq. AEWSD is the CEQA lead agency for this Project.

The proposed Project will be located on AEWSD property and private property. All of the proposed construction and operational activities associated with the implementation of the proposed Project are analyzed in this IS/MND pursuant to CEQA. See **Figure 2-3**.

2.1.8.2 Project Description

AEWSD currently provides surface water to irrigate lands in its Surface Water Service Area (SWSA), In-Lieu and Temporary Water service areas. The Groundwater Service Area (GWSA) historically relied on groundwater from private landowner wells for irrigation. As a result, the GWSA encompasses areas of historically low water levels and throughout the years the District has developed and maintained projects to sustainably maintain the groundwater resource. In recent years, AEWSD has delivered surface water under Temporary Water Service Contracts (Temporary Water) to certain GWSA lands that have access to existing AEWSD distribution system (canals or pipelines) when surface water supplies are available beyond the needs of the SWSA and as existing facilities allow for such Temporary Water delivery in order to maximize the use of the District's surface water supplies. The proposed Project will assist the District in complying with the Sustainable Groundwater Management Act (passed in 2014) regulations and the Project is listed in the Projects and Management Actions of the District's Groundwater Sustainability Plan (GSP)[1].

The proposed Project is for the construction of up to 44 miles of pipelines, manholes, turnouts, and associated appurtenances within AEWSD's jurisdictional boundaries. Assuming a maximum of 50' width for possible ground disturbance along the proposed pipeline construction, the Area of Potential Effect is approximately 267-acres. The Project goal is to deliver wet-period surface water to landowners who would otherwise pump groundwater in the remaining portions of the GWSA that cannot access the current distribution system. The proposed pipelines will be operated when excess surface water is available (approximately every three years) and/or during water transfers. The proposed pipelines will be mainly low-head gravity distribution pipelines ranging from 12" to 72" in diameter. The largest pipe sizes would be proportionally short distances near the heads of the branching gravity pipeline networks serving the various private agricultural fields in the area of potential effect (APE). The proposed pipeline sizes and capacities will vary depending upon the number of acres served. Pipeline sizing will follow the conservative value of approximately eight gallons per minute per acre (8 gpm/acre) and/or the AEWSD Lateral Demand Sizing Criteria. The proposed pipelines will commence from various existing AEWSD facilities, such as the Forrest Frick Pipeline, North Canal, South Canal, or other

[1] https://aewsd.org/wp-content/uploads/AEWSD-GSP-FINAL-2019-01-21.pdf

smaller lateral pipelines. A 0.75 mile open canal is also proposed from the existing Tejon Spreading Works project.

All proposed pipelines will deliver surface water to various proposed private farmland turnouts for irrigation and/or recharge purposes. Specifically, for the "DiGiorgio Unit", the project may include a recovery component whereby the existing private landowner wells can pump groundwater back into the proposed AEWSD distribution pipelines and discharge into the North Canal. The recovery option allows AEWSD to deliver water to other agricultural lands in the SWSA's when surface water supplies are in short supply, such as drought. The "DiGiorgio Unit" proposed pipeline will also connect to AEWSD's Sunset Groundwater Recharge Facility project (approved under SCH # 2020060233), so surface water can be conveyed from the North Canal to the District's Sunset Groundwater Recharge Facility.

The vast majority of proposed pipeline alignments will be installed on private agricultural property parallel to existing public county road right of way or along existing private dirt farm roads between fields/orchards using the traditional cut-and-cover construction method. Short segments of the proposed pipelines will cross public county road right of way and require an encroachment permit from Kern County. If Kern County requires through traffic during pipeline construction, some of these short pipeline segments may be constructed using the jack and bore construction method. All proposed pipeline alignments will avoid existing structures, utilities, permanent crops, and sensitive habitats whenever possible. There will be new turnouts in the canals. The canals are concrete lined. All of the pipeline laterals are buried. Within the "Tejon Unit", the new lateral pipelines will extend from a proposed earthen canal extending ¾ mile from AEWSD's Tejon Spreading Works across approximately ½ mile of AEWSD property and ¼ mile of private farmland.

2.1.8.3 Construction, Operation and Maintenance

Construction of the Project is anticipated to be completed over several years. The Project includes mobilization, site preparation, earthwork and structures and pipeline placement. Work will be done intermittently, as funding becomes available.

Construction equipment would likely include grading equipment and hauling trucks.

Generally, construction would occur between the hours of 7am and 5pm, Monday through Friday, excluding holidays. Construction would require temporary staging and storage of materials and equipment. Staging areas would be located onsite within the APE.

Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products.

Operation and maintenance of the pipelines and associated appurtenances would be performed by AEWSD's existing staff.

2.1.9 Surrounding Land Uses and Setting

The Project area is surrounded by agricultural lands, most of which is currently in production. The vast majority of proposed pipeline alignments will be installed on AEWSD property, private agricultural property parallel to existing public county road right of way or along existing private dirt farm roads between fields/orchards. A small portion of the Project area is within the City of Arvin city limits. This portion of the Project is surrounded by agricultural or vacant lands, with a residential neighborhood to the north.

2.1.10 Other Public Agencies Whose Approval May Be Required

Permits that may be required:

- State Water Resources Control Board – NPDES Construction General Permit
- San Joaquin Valley Air Pollution Control District – Rules and Regulations (Regulation VIII, Rule 9510, Rule 4641)
- Kern County – Encroachment Permits
- City of Arvin – Encroachment Permits

2.1.11 Consultation with California Native American Tribes

Assembly Bill 52 (AB 52; codified at Public Resources Code Section 21080.3.1, *et seq.*) requires that a lead agency, within 14 days of determining that it would undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement would be made.

The District has not received any written correspondence from a Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of proposed projects. All Tribal correspondence is discussed in further detail in sections **3.5** and **3.18** of **Chapter 3**.

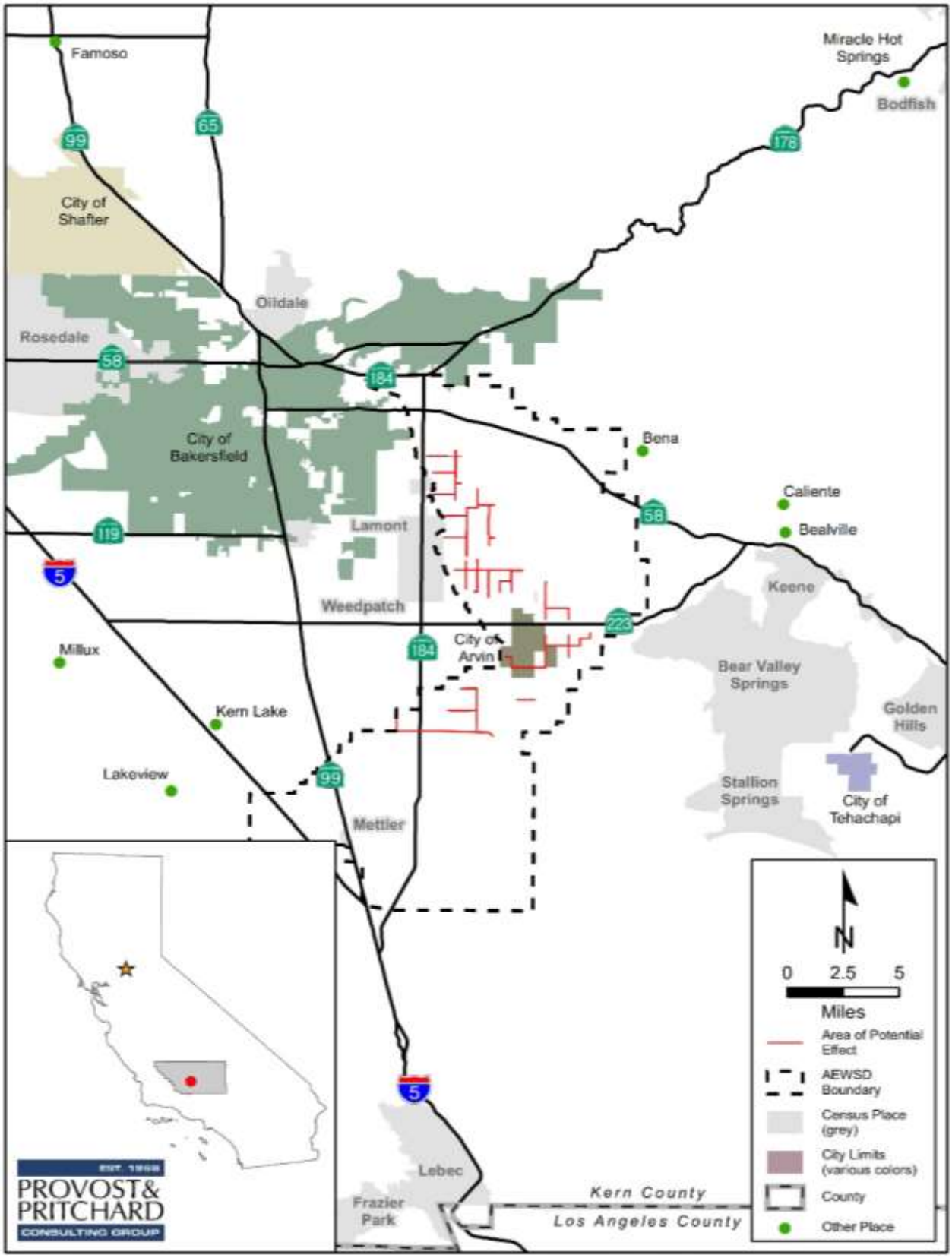

Figure 2-1. Regional Vicinity Map

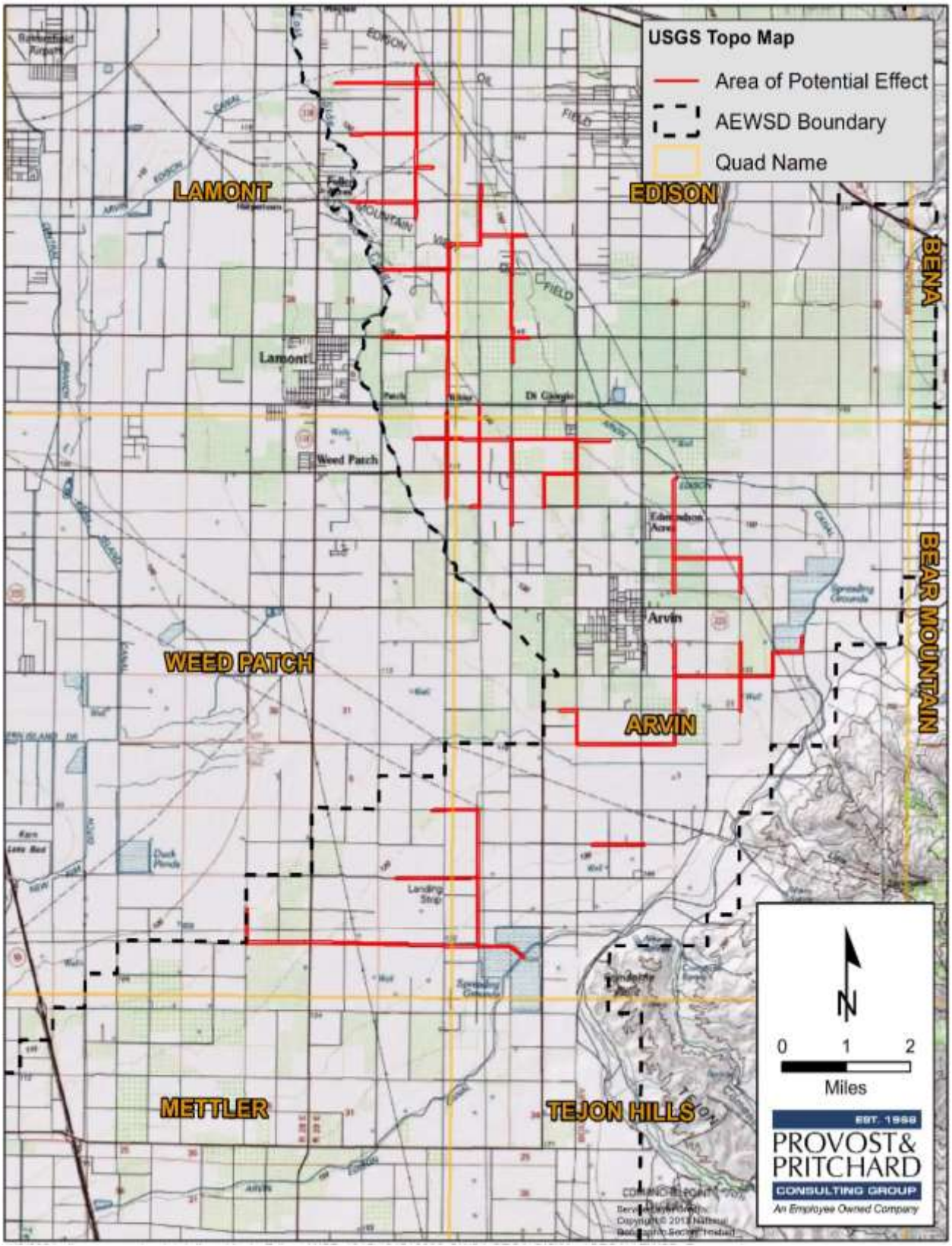

Figure 2-2. Topographic Quadrangle Map

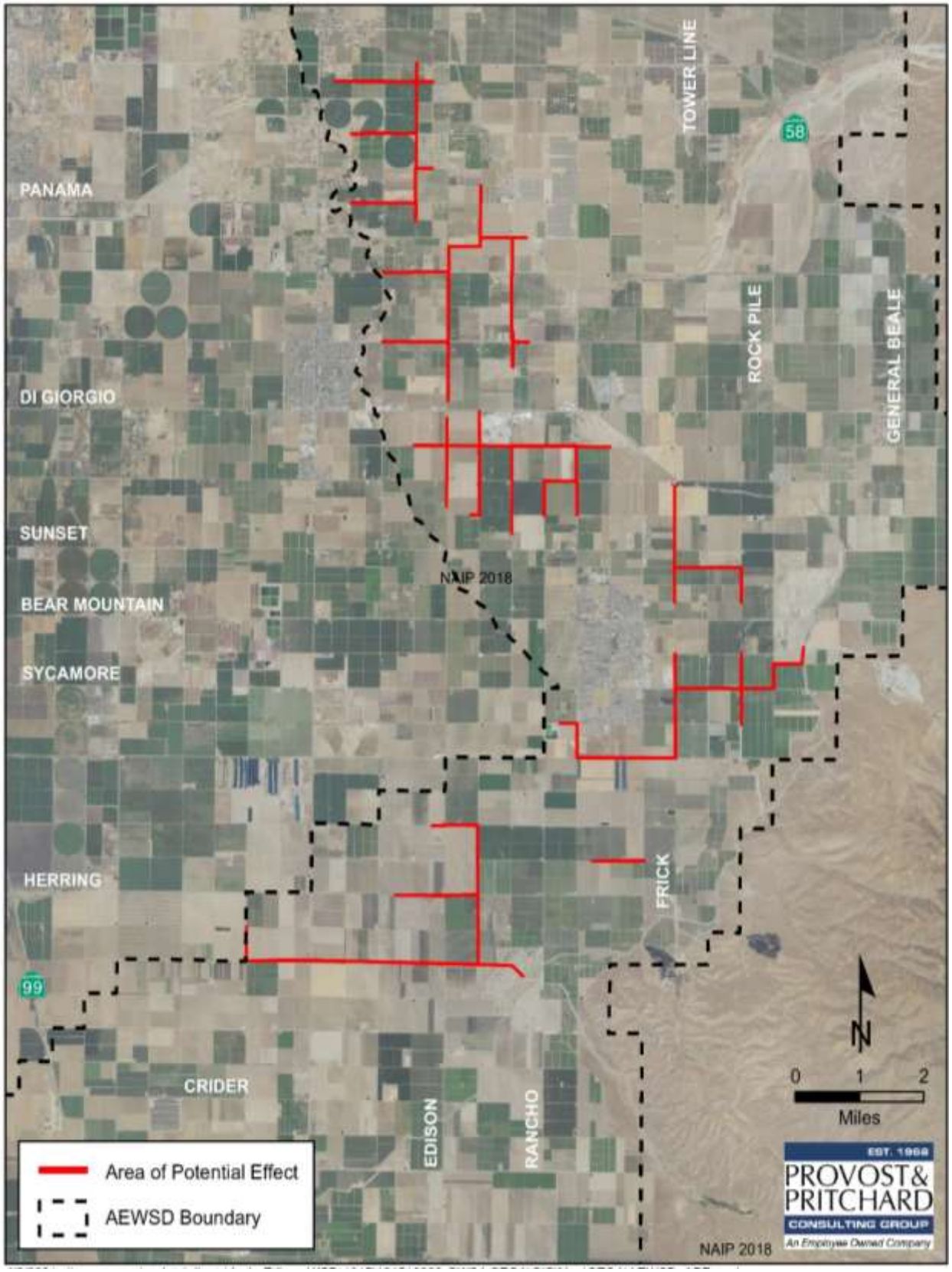

Figure 2-3. Area of Potential Effect with AEWSD Boundary.

2.2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation/Traffic	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there would 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 would be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ 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.

☐ 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 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.

_____ _____

Signature Date

_____

Printed Name/Position

Chapter 3 Impact Analysis

3.1 Aesthetics

Table 3-1. Aesthetics Impacts

Aesthetics				
Except as provided in Public Resources Code Section 21099, would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
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 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?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

3.1.1 Environmental Setting

The Project area is a few miles west of the Sierra-Tehachapi foothills within the land use jurisdiction of County of Kern and the City of Arvin. (see **Figure 2-1**). Topographically, the Project area is at an elevation of approximately 400 feet above mean sea level. The existing land uses surrounding the Project area are predominantly agriculture. (vineyards, oranges, almonds, potatoes, carrots, and a variety of annual crops (peppers, onions, melons).

3.1.2 Impact Assessment

a) Have a substantial adverse effect on a scenic vista?

No Impact. The Project will construct up to 44 miles of pipelines, manholes and turnouts. These will largely be within road right of way or on private property. The pipelines will be underground and any above ground infrastructure will be consistent with the agricultural aesthetic of the area. The Project will not alter any views in the Project area. There would be no impact.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The Scenic Highway Program protects and enhances California's natural scenic beauty by allowing county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program. One scenic corridor State route is located near the Project area: State Route 58. According to Caltrans, Highway 58 is classified as an Eligible State Scenic Highway. Highway 58 is approximately 1.5 miles from the northern end of the Project. The majority of Project construction will be

underground, therefore making visibility between the Project and the highway a non-issue. There would be no impact.

c) Would the project, 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?

No Impact. The Project area is predominantly surrounded by agricultural land used for crops. The construction of the pipelines, manholes and turnouts will be similar in visual character to the surrounding landscape and would not degrade the existing visual character or quality of the area or its surroundings. There would be no impact.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. The Project does not involve any new lighting or surfaces that could cause glare. There would be no impact.

3.2 Agriculture and Forestry Resources

Table 3-2. Agriculture and Forestry Resources Impacts

Agriculture and Forest Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.2.1 Environmental Setting

The Project is located in the California's Central San Joaquin Valley. Specifically, within an unincorporated area in Kern County. Kern County is located within California's agricultural heartland. A wide range of commodities are grown in the county, with major production of milk, poultry, livestock, and other animal commodities, row crops, nuts and fruit tree crops, and vegetables. For crop year 2019, Kern County's top commodities were almonds, grapes and citrus.[2] Rich soil, irrigation water, Mediterranean climate and steady access to local, national and global markets make this possible.

3.2.2 Impact Assessment

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?

No Impact. The Farmland Mapping and Monitoring Program produces maps and statistical data used for analyzing impacts to California's agriculture resources. These maps are updated on a biennial basis with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. The farmland maps

[2] 2019 Kern County Agricultural Crop Report. crop2019.pdf (kernag.com)Accessed January 2021

identify eight land use categories, five of which are agriculture related: prime agriculture, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. The land use categories onsite and in the proximity of the Project are summarized below:

- *PRIME FARMLAND (P): Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.*
- *FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.*
- *FARMLAND OF LOCAL IMPORTANCE (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.*

As demonstrated in **Figure 3-1**, the FMMP and according to the Kern County General Plan various portions of the Project area is currently zoned as Exclusive Agriculture. The proposed Project would be compatible with the goals and policies of the Kern County General Plan for protecting agricultural resources by enabling the District to deliver wet-period surface water to landowners and would reduce the need for ground water pumping and also the potential for District lands to be converted to residential, commercial or other non-agricultural uses including fallowing. Water infrastructure is a permitted use in agricultural zoning districts and agricultural preserves. Local land use authorities do not recognize the proposed Project as a conversion of farmland to non-agricultural use, but rather see the project as an agricultural or agricultural support operation. The proposed Project would not indirectly induce loss of farmland in the Project area, as is typical of projects that convert agricultural lands to residential or commercial uses. By providing more surface water accessibility, and reducing ground water pumping, more groundwater will be available to sustain otherwise declining groundwater levels and support agricultural resources in the region, and thereby avoid eventual fallowing or conversion to non-agriculture uses that may occur without the Project particularly in light of the Sustainable Groundwater Management Act (SGMA) of 2014. Accordingly, there would be no conversion to non-agricultural use. There would be no impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The vast majority of proposed pipeline alignments will be installed on private agricultural property parallel to existing public county road right of way or along existing private dirt farm roads between fields/orchards using the traditional cut-and-cover construction method. The installation of pipelines is an allowed use on land with Williamson Act Contracts[3]. Implementation of the Project will not result in a conflict with existing zoning for agricultural use, nor will it conflict with Williamson Act contracts of agricultural uses in the vicinity. There would be no impact.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The site is not zoned for forestry and is not forested. The Project vicinity is dominated by active agricultural land. The Project would not impact forest land. There is no impact.

[3] Kern County Agricultural Preserve Standard Uniform Rules. FORM 505 - Agricultural Preserve Uniform Rules.pdf Accessed January 2021.

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?

No Impact. Any impacts regarding the potential conversion of farmland due to the Project's location have been discussed in the analysis of Impacts a) and b). There would be no impact.

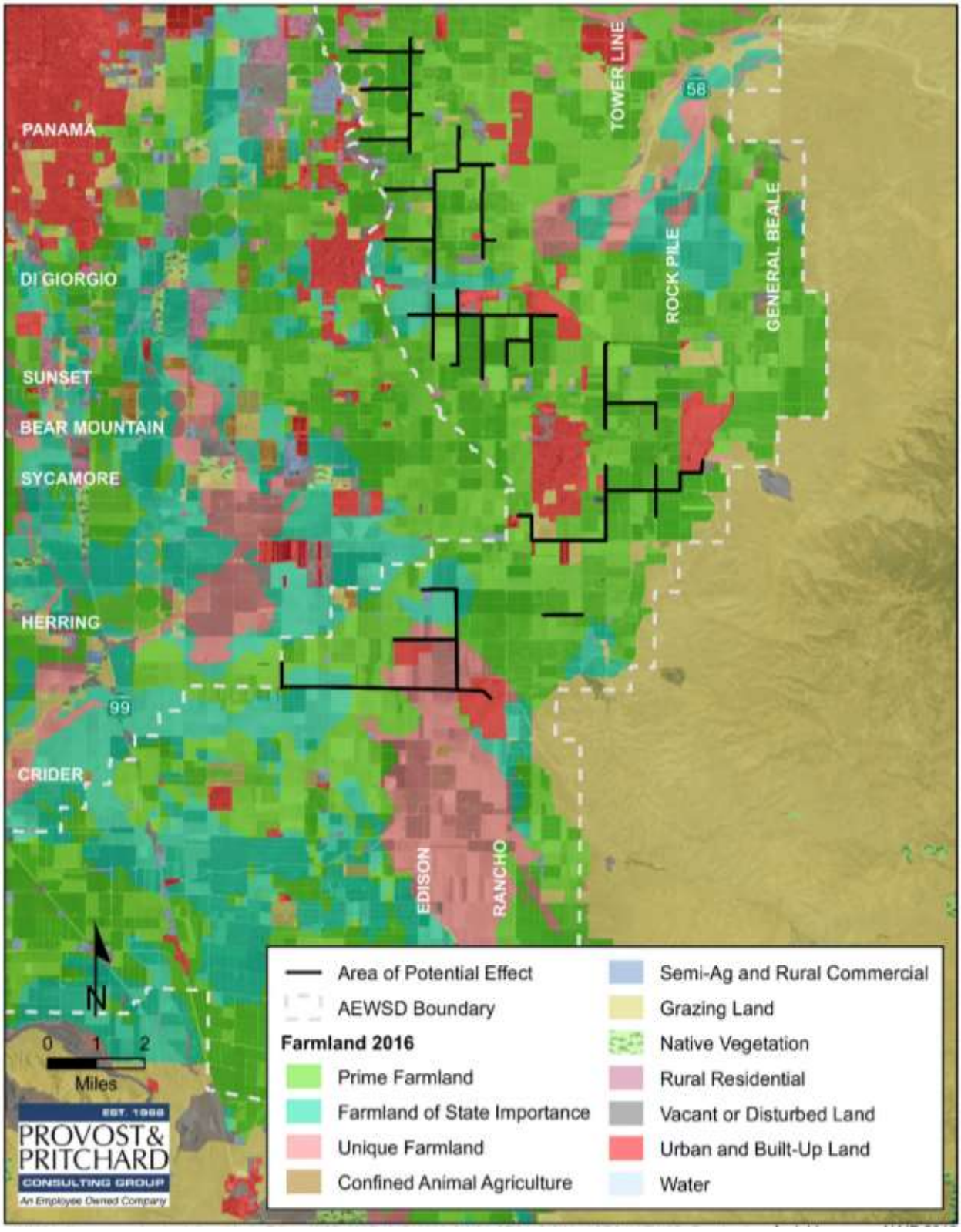

Figure 3-1. Farmland Designation Map

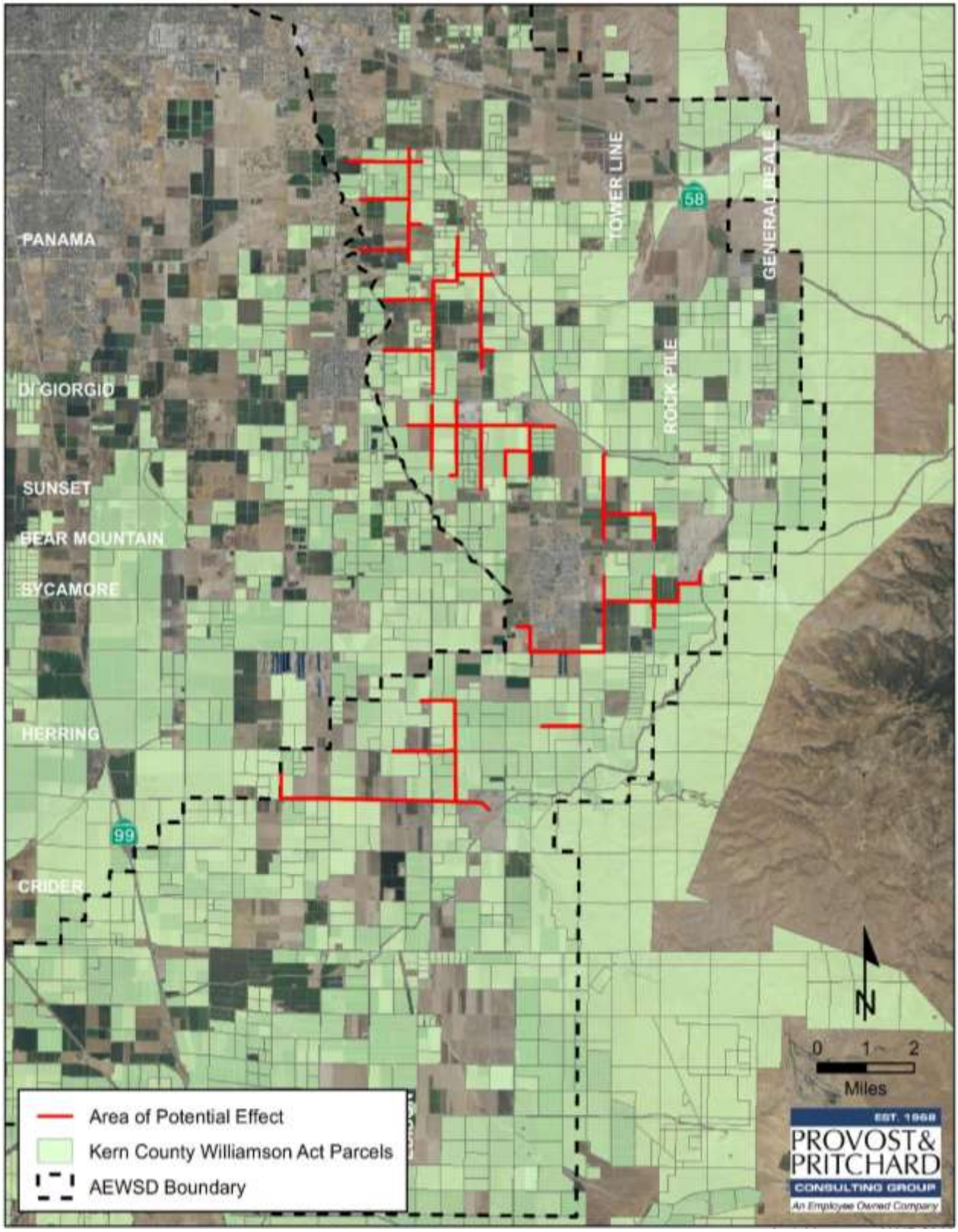

Figure 3-2. Williamson Act Parcel Map

3.3 Air Quality

Table 3-3. Air Quality Impacts

Air Quality					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:		**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☐	☒

3.3.1 Environmental Setting

The Project is located in the San Joaquin Valley Air Basin (SJVAB or air basin). The San Joaquin Valley Air Pollution Control District (SJVAPCD) provides Guidelines for Assessing and Mitigating Air Quality Impacts (GAMAQI) for quantification of emissions and evaluation of potential impacts to air resources[4] and Guidance for Land-Use Agencies in addressing greenhouse gas (GHG) Emission Impacts for New Projects under CEQA.[5]

3.3.1.1 Regulatory Attainment Designations

Under the California Clean Air Act (CCAA), the California Air Resources Board (CARB) is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national

[4] SJVAPCD GAMAQI https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF. Accessed July 2020.
[5] Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf Accessed September 2020.

standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The State and national attainment status designations pertaining to the SJVAB are summarized in **Table 3-4**. The SJVAB is currently designated as a nonattainment area with respect to the State PM_{10} standard, ozone, and $PM_{2.5}$ standards. The SJVAB is designated nonattainment for the NAAQS 8-hour ozone and $PM_{2.5}$ standards. On September 25, 2008, the EPA re-designated the San Joaquin Valley to attainment status for the PM_{10} NAAQS and approved the PM_{10} Maintenance Plan.

Table 3-4. Summary of Ambient Air Quality Standards and Attainment Designation

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment (Extreme)**
Particulate Matter (PM_{10})	AAM	20 µg/m^3	Nonattainment	–	Attainment
	24-hour	50 µg/m^3		150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	Nonattainment	12 µg/m^3	Nonattainment
	24-hour	No Standard		35 µg/m^3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m^3	
Sulfates (SO_4)	24-hour	25 µg/m^3	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01 ppm (26 µg/m^3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf*
*** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard September 2020.*
****Secondary Standard*
Source: CARB 2015; SJVAPCD 2015

3.3.2 Methodology of Determining the Significance of Air Quality Impacts

Conclusions in this Air Quality Impact Assessment rely on model calculations (CalEEMod version 2016.3.2), and information found in the CalEEMod Output Files (**Appendix A**). The sections below detail these conclusions and recommendations and utilize its conclusions in the impact determinations.

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD published the GAMAQI. This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are included in **Table 3-7** through **Table 3-8** to provide for a comparative significance determination.

Assessment of the significance of project air quality impacts may be considered on a regional or localized level. Determination of project impacts on achieving the goal of air quality plans and evaluating impacts related to emissions of criteria pollutants are considered on both regional and localized levels in this analysis. Evaluation of impacts to sensitive receptors considers the project's localized criteria pollutant emissions in this analysis. Sources of the project's localized criteria pollutant emissions would include: reactive organic gases (ROG), Nitrogen oxides (NO_x), $PM_{2.5}$, PM_{10}, CO, NO_2, and Toxic Air Contaminants (TACs) which include acetaldehyde, benzene, 1.3 butadiene, carbon tetrachloride, hexavalent chromium, paradichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter a complex mixture of substances.

3.3.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were estimated using CalEEMod. The emissions modeling includes emissions generated by construction and grading equipment most commonly associated with the site work, equipment delivery, and vehicle, equipment, and worker fuel usage. In reality two years construction time will take place intermittently over multiple years. For simplicity, emissions were quantified based on a construction schedule and construction equipment requirements that would occur over approximately 24 consecutive months. If anything, this approach is more conservative and shows emissions that would be higher than the reality of spreading construction out intermittently over multiple years. All remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix A**.

The SJVAPCD is responsible for controlling emissions primarily from stationary sources. However, the SJVAPCD also coordinates with the APCD's eight county Councils of Government (COGs) or Metropolitan Planning Organizations (MPOs) that are responsible for regional transportation planning and funding programs. The COG and MPO Transportation Planning Programs are used by SJVAPCD in its responsibilities in developing, updating, and implementing air quality attainment plans for the air basin. The SJVAPCD has adopted ozone plans and particulate matter plans for purposes of controlling harmful emissions and achieving attainment of state and national attainment standards. A project that would exceed established thresholds for criteria pollutants would be considered to have a significant impact on the implementation of air quality plans and would also constitute a cumulatively considerable net increase of criteria pollutants for which the air basin is in non-attainment.

Construction of the Project is expected to begin after Project approval with full buildout completed in 2026. The results of the emissions modeling for the Project are presented in **Table 3-5.**

Table 3-5. Short-Term - Construction-Generated Emissions of Criteria Air Pollutants

Year	Annual Emissions (Tons/Year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2022	0.3980	4.1680	2.4401	2.2038	1.0081
2023	0.2732	2.6927	2.5349	0.9580	0.2942
2024	0.0317	0.2966	0.4343	0.0148	0.0149
Maximum Annual Proposed Project Emissions:	**0.3980**	**4.1680**	**2.5349**	**2.2038**	**1.0081**
SJVAPCD Significance Thresholds:	***10***	***10***	***100***	***15***	***15***
Exceed SJVAPCD Thresholds?	***No***	***No***	***No***	***No***	***No***

3.3.2.2 Long-Term - Operational Emissions

The unmitigated long-term operational emissions for the Project are listed in **Table 3-6**. Operational emissions would occur over the lifetime of the Project and result from two main Project-specific sources: District maintenance, and motor vehicles (operations and maintenance crew) usage categorized as mobile sources in the table. Area source emissions are defined as emissions resulting from landscaping and painting. Energy source emissions would be from things on the site that require additional power. Completion of some portions of the Project is expected as early as 2022 and was used as the Project buildout modeling year as a conservative assumption. The SJVAPCD considers construction and operational assumptions separately when making significance determinations. Modeling assumptions and output files are included in **Appendix A**.

Table 3-6. Unmitigated Long-Term Operational Emissions

Source	Annual Emissions (Tons/Year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	0.9946	<0.01	<0.01	<0.01	<0.01
Energy:	0.00	*0.00*	*0.00*	0.00	0.00
Mobile	0.00	*0.00*	*0.00*	0.00	0.00
Total Operational Emissions Any Year	**0.9946**	**<0.01**	**<0.01**	**<0.01**	**<0.01**
SJVAPCD Significance Thresholds:	***10***	***10***	***100***	***15***	***15***
Exceed SJVAPCD Thresholds?	***No***	***No***	***No***	***No***	***No***

3.3.3 Screening Thresholds for Determining Impacts to Sensitive Receptors

Impacts to sensitive receptors would occur primarily during Project construction. Construction activities could produce short-term emissions that have the potential in large concentrations to contribute to cancer risk over a 70-year exposure period. The Air Quality and GHG reports (**Appendix A**) provide technical information on the types of pollutants that have the potential to affect sensitive receptors.

The SJVAB includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with Rule 9510 and implementation of all applicable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern are NO_x, CO, PM_{10}, and $PM_{2.5}$. There is no localized emission standard for ROG and

most types of ROG are not toxic and have no health-based standard, however, ROG was included for informational purposes only.

Table 3-7 lists the maximum daily air pollutant emissions generated by the Project during construction.

Table 3-7. Maximum Daily Air Pollutant Emissions During Construction

Maximum Daily Emissions by Year	Emissions (Pounds/Daily)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction 2022	4.2668	46.4491	31.3344	20.2761	11.8562
Construction 2023	3.6949	38.8874	29.4566	17.3057	5.8829
Construction 2024	1.0981	10.2310	14.9632	0.6755	0.5139
Maximum Daily Proposed Project Emissions:	**4.2668**	**46.4491**	**31.3344**	**20.2761**	**11.8562**
SJVAPCD Screening Thresholds	***100***	***100***	***100***	***100***	***100***

Operational emission would begin to accrue upon completion of the Project. Portions of the Project are anticipated to be completed as early as 2022. **Table 3-8** lists the maximum daily air pollutant emissions generated by the Project during its operation.

Table 3-8. Maximum Daily Air Pollutant Emissions During Operation

Maximum Daily Emissions	Emissions (Pounds/Daily)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	5.4513	<0.01	0.0272	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00
Total Daily Emissions	**5.4513**	**<0.01**	**0.0272**	**<0.01**	**<0.01**
SJVAPCD Screening Thresholds	***100***	***100***	***100***	***100***	***100***
Exceed SJVAPCD Thresholds?	***No***	***No***	***No***	***No***	***No***

Table 3-7 and **Table 3-8** demonstrate the Project's impacts as evaluated against SJVAPCD screening thresholds for criteria pollutant emissions used to determine significance in accordance with health-based standards would not exceed and would be considerably below the significance thresholds.

3.3.4 Impact Assessment

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, the Air Quality and GHG report (Appendix A) assumed the following criteria for determining Project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs?

Whether this criterion is met is determined by comparison of Project emissions to the regional and localized thresholds identified by the SJVAPCD for regional and local air pollutants.

2. Will the project comply with applicable control measures set forth in the AQPs?

   The primary control measures applicable to development projects in the SJVAPCD is the required compliance with *Regulation VIII-Fugitive PM_{10} Prohibitions* and *Rule 9510-Indirect Source Review*.

Regional air quality impacts and attainment of standards are the result of cumulative impacts of all emission sources within the air basin. Individual projects are generally not large enough to contribute measurably to an existing violation of air quality standards. Therefore, the cumulative impact of the Project is important because it is based on its cumulative contribution combined with one or more other closely related past, present, and reasonably foreseeable probably future projects emitting similar emissions. Because of the region's non-attainment status for ozone, $PM_{2.5}$, and $PM_{10,}$ if Project generated emission of either of the ozone precursor pollutants ROG, NO_x, PM_{10}, or $PM_{2.5}$ would exceed the SJVAPCD's significance thresholds, then the Project would be considered to contribute to violations of the applicable standards and conflict with the attainment plans. As demonstrated in **Table 3-5** for construction-generated emissions, and in **Table 3-6**, operational emissions of criteria pollutants would not exceed the SJVAPCD's significance thresholds. Therefore, the Project will not contribute to air quality violations in conflict with attainment plans.

As stated in No. 2 above, the AQP contains a number of control measures, including *Regulation VIII-Fugitive PM_{10} Prohibitions* and *Rule 9510-Indirect Source Review* which are applicable to the Project. Both of these are adopted by the SJVAPCD and constitute enforceable requirements with which the Project must comply. The Project is expected to comply with all applicable SJVAPCD rules and regulations; therefore, the Project complies with the criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plans and the impact would be less than significant.

b) Would the project 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?

Less than Significant Impact. To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emission of non-attainment pollutants must be below the SJVAPCD's regional significance thresholds.

   This is an approach recommended by the SJVAPCD in its GAMAQI.

2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations.

   This is an approach consistent with Section 15130(b) of the CEQA Guidelines.

3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the non-attainment pollutants.

   This approach correlates the significance of the regional analysis with health effects, consistent with the court decision in Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1219-20.

As discussed in impact question a) above, Project generated emissions are below the SJVAPCD's regional significance thresholds and the Project is consistent with current air quality attainment plans including control measures and regulations.

With respect to cumulative health impacts, the air basin is in non-attainment for ozone, $PM_{2.5}$, and PM_{10} (state only), which means that the background levels of those pollutants are at times higher than the ambient air

quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illnesses (the infirm)). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience adverse health effects. Since the air basin is already in non-attainment, it is considered to have an existing significant cumulative health impact without the Project. The issue is whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable.

The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As demonstrated in **Table 3-7** and **Table 3-8,** the project would not exceed the SJVAPCD's significance thresholds and its cumulatively considerable impacts would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive receptors are those who are sensitive to air pollution, including children, the elderly, and the infirm. The SJVAPCD considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest existing off-site sensitive receptors are rural single-family homes located on adjacent properties. Sensitive receptors, including schools and residences, are located within one mile of the Project area.

As demonstrated in **Table 3-7** and **Table 3-8**, the Project would not exceed the SJVAPCD's thresholds established in accordance with health-based standard for determining significance of criteria pollutant emissions. Therefore, in accordance with these standards, the Project would have a less than significant impact related to exposure of sensitive receptors to substantial pollutant concentrations.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roaster, asphalt batch plants, and rendering plants, among other uses. The Project does not include any of these activities or land uses. The Project would therefore have no impact with respect to generation of emissions leading to odors or other adverse or objectionable emissions.

3.4 Biological Resources

Table 3-9. Biological Resources Impacts

Biological Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.4.1 Environmental Setting

Reconnaissance-level field surveys of the Project were conducted by Rincon Biologist Brooke Fletcher (on August 20, 21, 25, and 27 and December 16, 2020). A combination of windshield and pedestrian surveys were conducted along the entire project alignment, plus a 100-foot buffer on either side. Rincon also conducted a literature review to characterize the nature and extent of biological resources on and adjacent to the Project area. This included queries of U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation system (IPaC; UFWS 2020a), CDFW California Natural Diversity Database (CNDDB; 2020a), and California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants of California (2020). The full Biological Resources Assessment (BRA) can be found in **Appendix B**. Most of the information in this section is taken directly from the BRA.

The proposed Project alignment runs exclusively through previously disturbed areas and no native vegetation communities are present within the Biological Survey Area (BSA). The majority of pipeline installation for the project will occur within existing unpaved agricultural roads or the right of way (ROW) of existing paved roads. The majority of land surrounding the pipeline alignment consists of tilled and cultivated agricultural fields. The following land cover types exist within the Project area: Agriculture, Ruderal, and Developed.

Based on the CNDDB query of the project area and the surrounding twenty USGS quads, 36 special-status animal species were evaluated for their potential to occur within the BSA (**Appendix B**). Of these, 24 are not expected to occur, based on CNDDB occurrence records and lack of species-specific suitable habitat. Seven special-status animal species have a low potential to occur, two have a moderate potential to occur, two have a high potential to occur, and one CDFW WL species, Cooper's hawk (Accipiter cooperii), was present within the BSA at the time of the field survey.

Table 3-8 provides a list of all special-status animal species with potential to occur within the project area as well as their status. Each of these species is discussed in further in **Appendix B**.

Table 3-10. List of Special Status Animal Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Status
Low Potential to Occur		
Blunt-nosed leopard lizard	Gambelia sila	FE, SE
California glossy snake	Arizona elegans occidentalis	SSC
Coast horned lizard	Phrynosoma blainvillii	SSC
Nelson's antelope squirrel	Ammospermophilus nelsoni	ST
San Joaquin coachwhip	Masticophis flagellum ruddocki	SSC
Tehachapi pocket mouse	Perognathus alticola inexpectatus	SSC
Moderate Potential to Occur		
American badger	Taxidea taxus	SSC
San Joaquin kit fox	Vulpes macrotis mutica	FE, ST
High Potential to Occur		
Burrowing owl	Athene cunicularia	SSC
Swainson's hawk	Buteo swainsoni	ST
Present		
Cooper's hawk	Accipiter cooperii	WL

SSC = CDFW Species of Special Concern
FE = Federal Endangerment
SE = State Endangered
FT = Federal Threatened
ST = State Threatened
WL = Watch List

3.4.2 Impact Assessment

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?

Less than Significant with Mitigation Incorporated.

Special-status Plants

No special-status plant species have potential to occur within the BSA. Therefore, the project is not expected to have a significant impact on any special-status plant species.

Special-status Wildlife

Construction activity associated with the project could include vegetation removal, trenching, pipe installation, equipment and vehicle staging, parking, construction noise and construction staging. These activities have the potential to directly impact special-status wildlife species and/or their habitat. Wildlife species may be injured or killed by construction activity if present during construction. Wildlife present in the project area or in adjacent areas could be impacted by construction noise and activity if that activity causes individuals to abandon breeding activity, disrupts foraging behavior, or increases competition for resources. Many of the special-status animal species with potential to occur within the BSA rely on burrow habitat, and burrows present within the project area could also be impacted by project activities. Special-status animal species with a low potential to occur within the BSA include blunt-nosed leopard lizard, California glossy snake, coast horned lizard, Nelson's antelope squirrel, San Joaquin coachwhip, Tehachapi pocket mouse, and Tipton kangaroo rat. Special-status animal species with moderate potential to occur within the BSA include American badger and San Joaquin kit fox. Special-status animal species with a high potential to occur within the BSA include burrowing owl and Swainson's hawk. A Cooper's hawk was observed within the BSA during the field reconnaissance surveys and is therefore present.

Suitable habitat for nesting birds exists within the BSA and adjacent areas and should project activities occur during nesting bird season (February 1 through September 15), then vegetation removal and noise associated with construction activities could significantly impact nesting special-status birds, as well as nesting birds protected by the MBTA and CFGC.

The following mitigation measures are recommended to reduce potential impacts to special-status wildlife species to less than significant.

Mitigation Measures for Special-status Wildlife Species

BIO-1(a) Worker Environmental Awareness Program (WEAP): Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them.

BIO-1(b) General Wildlife Pre-construction Surveys: Pre-construction clearance surveys for all special-status wildlife species shall be conducted within 30 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat. The surveys shall cover the entire disturbance footprint plus a minimum 100-foot buffer within suitable habitat, where permissible, and should identify all special-status animal species that may occur on-site. Any non-listed special-status

animals observed within the project area during the survey should be relocated by a qualified biologist to a safe location within suitable habitat as near to the project area as possible. If listed species that utilize burrows, such as blunt-nosed leopard lizard, Tipton kangaroo rat, and Nelson's antelope squirrel are detected during the preconstruction survey, all suitable burrows will be flagged for avoidance by a minimum distance of 50 feet, as described in BIO-1(c) below. If listed avian species, such as Swainson's hawk are detected during the preconstruction survey, active nests shall be protected with a disturbance-free buffer as described in BIO-1(f) below. If San Joaquin kit fox individuals or known or potential dens are detected during the preconstruction survey, dens will be monitored and protected with a disturbance-free buffer, as described in BIO-1(e) below. If complete avoidance of listed species and their nests, dens, or burrows is infeasible, the project proponent shall immediately contact CDFW and USFWS regarding incidental take permits.

BIO-1(c) Focused Burrow Survey: Concurrent with the general wildlife pre-construction survey described above, a qualified biologist shall conduct a focused burrow survey within 30 days prior to the initiation of ground disturbance. All burrows within the proposed project pipeline alignments will be inspected for the potential presence of special-status animal species that utilize burrows, including American badger, Nelson's antelope squirrel, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin coachwhip, and coast horned lizard. If no special-status species are suspected to occupy any burrows within the project alignment, no further actions are required. If any special-status species, or their sign, are detected within burrows during the pre-construction burrow survey, then those burrows should be mapped and flagged for avoidance by minimum distance of 50 feet. If complete avoidance of burrows potentially occupied by a listed species is infeasible, the project proponent shall immediately contact CDFW and USFWS regarding incidental take permits.

BIO-1(d) Mitigation Measures for Burrowing Owl: A qualified biologist shall conduct pre-construction surveys prior to ground disturbance activities to confirm the presence/absence of burrowing owls. Pre-construction surveys shall be conducted during the appropriate time of day to maximize detectability within 30 days prior to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owls are detected during the pre-construction clearance surveys, the following measures shall apply:

- Avoidance buffers during the breeding and non-breeding season should be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures.
- If avoidance of burrowing owls is not feasible, then additional measures such as passive relocation during the nonbreeding season should be implemented, in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993).

BIO-1(e) Mitigation Measures for San Joaquin Kit Fox

- A pre-construction clearance survey for San Joaquin kit fox shall also be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire study area and all accessible undeveloped habitat within 200 feet, in accordance with the USFWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. If any known or potential dens are detected, the den(s) shall be monitored for a minimum of three consecutive nights with remote-sensing cameras or tracking medium to evaluate current use. If San Joaquin kit fox use is observed, the den should be avoided by the recommended buffers outlined in the USFWS 2011 Standardized Recommendations, and the project proponent shall immediately notify USFWS and CDFW regarding incidental take permits.

- Construction activities shall adhere to the avoidance and minimization measures outlined in the USFWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance, outlined below:
    - Project-related vehicles should observe a 20-mph speed limit in all study areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside of designated study areas should be prohibited.
    - To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS should be notified within three days of the discovery.
    - All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from a construction or project site.
    - No firearms or pets should be allowed on the project site.
    - Use of rodenticides and herbicides in study areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.

BIO-1(f) Mitigation Measures for Swainson's Hawk, Cooper's Hawk, and Nesting Birds: Ground disturbance and vegetation removal activities shall be restricted to the non-breeding season (September 16 to January 31) when feasible. For ground disturbance and vegetation removal activities occurring during the bird nesting season (February 1 to September 15), general pre-construction nesting bird surveys shall be conducted by a qualified biologist (including for, but not limited to, Cooper's hawk and Swainson's hawk), within 30 days prior to the initiation of construction activities. Surveys shall include the disturbance area plus a 200-foot buffer for passerine species, a 500-foot buffer for raptors, and a 0.5-mile buffer for Swainson's hawk. If active nests are located, an appropriate avoidance buffer shall be established within which no work activity will be allowed which would impact these nests. The avoidance buffer would be established by the qualified biologist on a case-by-case basis based on the species and site conditions. In no cases should the buffer be smaller than 50 feet for non-raptor bird species or 200 feet for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. If State-listed threatened Swainson's hawks are documented nesting within 500 feet of construction activities, CDFW should be consulted on appropriate avoidance and minimization methods. The buffer area(s) should be closed to all construction personnel and equipment until juveniles have fledged and/or the nest is inactive. A qualified biologist should confirm that breeding/nesting is complete, and the nest is no longer active prior to removal of the buffer. If work within a buffer area cannot be avoided, then a qualified biologist will be present to monitor all project activities that occur within the buffer. The biological monitor will evaluate the nesting avian species for signs of disturbance and will have the ability to stop work.

Implementation of the above mitigation measures will reduce the Project's potential impacts to special status species to a less than significant level and will ensure compliance with local, State, and federal policies and regulations protecting these species.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. There are no sensitive plant communities, including riparian habitat, and no designated critical habitat within the project area or surrounding 100-foot buffer. Therefore, there will be no impact on sensitive plant communities or critical habitats.

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?

Less than Significant Impact with Mitigation Incorporated. The proposed project alignment intersects the following potentially jurisdictional waterways: Tejon Creek, Caliente Creek, East Side Canal, Arvin-Edison Canal, an unnamed agricultural drainage that runs parallel to Millux Road, an unnamed wetland area associated the unnamed drainage, two unnamed lakes used for groundwater recharge by the District, and multiple freshwater emergent ponds and wetlands excavated for agricultural purposes. The entire proposed pipeline installation alignment occurs along existing roads and previously disturbed areas and impacts to waterways should be minimal. Avoidance of potentially jurisdictional waterways is recommended, where feasible. Should avoidance of these waterways be unavoidable, then federal and/or State jurisdiction would be determined during a formal jurisdictional delineation performed by a qualified biologist. Impacts and specific mitigation measures would then be decided by agencies determined to have jurisdiction.

Mitigation Measures for Jurisdictional Waters and Wetlands

BIO-2 Jurisdictional Delineation: The Project shall be designed to avoid potentially jurisdictional aquatic features where feasible. If impacts to potentially jurisdictional features are unavoidable, the project proponent shall retain a qualified biologist to conduct a jurisdictional delineation to determine the extent of CDFW, USACE, and/or RWQCB jurisdiction. The delineation will be conducted in accordance with the requirements set forth by each agency. If the delineation determines that the project will result in impacts to a water of the State, then the project proponent shall submit an application to RWQCB for a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature also falls under federal jurisdiction). If the delineation determines that the project will result in impacts to features considered within CDFW's jurisdiction, then the project proponent will submit a Notification of Lake or Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC. If the delineation determines that the project will result in impacts to a water of the U.S., the project proponent shall submit a permit application to USACE, pursuant to Section 404 of the CWA. The project proponent shall abide by all permit conditions, and compensatory mitigation for all impacts to waters of the U.S., waters of the State and features subject to CDFW jurisdiction shall be completed at the ratio required in the applicable permits.

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

No Impact. There are no wildlife movement corridors, or habitat linkages mapped within the BSA. The Project alignment overlaps with one Essential Connectivity Area (ECA) in the easternmost portion of the BSA (**Appendix B**). However, this overlap is small and no permanent impacts to wildlife movement corridors will result from Project activities. The region is dominated by agricultural production and subject to frequent disturbance which would impede or deter dispersal and migratory movements. Additionally, the proposed

alignment does not contain features, such as riparian vegetation, that are typically associated with wildlife movement corridors. Furthermore, Project activities do not include the placement of fencing or any other barriers to wildlife. No significant wildlife movement corridors exist within the Project area or surrounding 100-foot buffer and proposed project activities would not significantly impede wildlife movement. Therefore, there would be no impacts to wildlife movement due to project activities and no additional measures are recommended.

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

No Impact. No trees will be removed as a part of this project. The Project will be implemented in accordance with the goals and policies of the Kern County General Plan. There would be no impact.

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

No Impact. The northern part of the Project area lies within the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP). This Project does not require a discretionary development permit, and Project activities do not constitute covered activities under the MBHCP. Therefore, the proposed Project would not conflict with any Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State Habitat Conservation Plan. There would be no impact.

Figure 3-3. Photo 1

View across Muller Road of the northernmost portion of the proposed pipeline alignment. The alignment follows a compacted dirt access road within citrus orchards in this portion of the BSA.

Figure 3-4. Photo 2

View of the proposed pipeline alignment south of Muller Road. The alignment follows a compacted dirt access road between citrus orchards and sorghum fields in this portion of the BSA.

Figure 3-5. Photo 3

View of the proposed pipeline alignment in the northeastern portion of the BSA. Ruderal areas between cultivated orchards and fields could provide suitable habitat for some special-status species.

Figure 3-6. Photo 4

View of the proposed pipeline alignment along Teale Road, near the southwest corner of the BSA. Invasive

3.5 Cultural Resources

Table 3-11. Cultural Resources Impacts

Cultural Resources					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The Project area lies within Kern County, which occupies an archeologically and historically rich part of the San Joaquin Valley.

3.5.2 Methodology

A Cultural Phase 1 Survey Report and Addendum was prepared for the Project area by ASM Affiliates, Inc (ASM) in January 2021. The original report covered 71.8 miles of proposed pipelines, manholes and turnouts. Subsequently the Project was redesigned covering only 44 miles, with less than a mile being an area that was not previously covered in the original survey and report. ASM has an obligation to report all findings from the original report to the Southern San Joaquin Valley Information Center (SSJVIC), therefore they provided two reports, the original and the addendum per the direction of Kern County. The impacts discussed in this section are directly related to the 44 miles included in the Project as it is designed today. But both the original report and the addendum are provided in **Appendix C** at the end of this document. The report and the addendum documents whether historic properties, as defined by NHPA Section 106, or historical resources, as defined by the CEQA Guidelines, which mandates that government agencies consider the impacts of their actions on the environment, including cultural resources. Impacts were analyzed using the methodologies listed below. Most of the analysis in this section comes entirely from the cultural resource inventory report which can be found in its entirety in **Appendix C** at the end of this document.

3.5.2.1 Records Search

At ASM's request, the SSJVIC of the CHRIS at California State University, Bakersfield, performed a records search on August 10, 2020, to identify previously recorded resources and prior surveys within the APE and surrounding 0.5-mile radius. SSJVIC staff completed searches of the Historic Property Data File, NRHP, CRHR, listings of California Historical Landmarks, California Inventory of Historic Resources, and the California Points of Historical Interest database (**Appendix C**).

3.5.2.2 Field Survey

The Phase I survey fieldwork was conducted in August, September and December 2020. The study area consists of up to 44-mi of proposed pipelines, manholes, turnouts, and other appurtenances with an added 50 foot

survey buffer on both sides of the pipeline route, resulting in a study area that is 860-ac. The study area was surveyed using parallel transects spaced at 15-m intervals along the pipeline routes.

A total of nine cultural resources (six previously recorded and three newly identified) were recorded during the survey. The six previously recorded resources include segments of Tejon Highway (P-15-003545), segments of the Arvin-Edison Canal (P-15-007994), a historic water well (P-15-020334), and segments of three transmission lines (P-15-017243, -017582, and -019115). The two newly identified resources include one historical water conveyance system and one isolated artifacts. All were given temporary field designations. The newly identified water conveyance system (AEWSD-RA-1) is a segment of Tejon Creek. (**Appendix C**).

3.5.3 Impact Assessment

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant Impact with Mitigation Incorporated. A Phase I cultural resource survey was conducted for the re-designed AEWSD GWSA Pipeline Project, Kern County, California. This involved a pedestrian survey of approximately 44-mi of pipeline, manholes and turnouts representing a 533-ac study area. A records search was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield. This indicated that 19 previous archaeological surveys had been completed that covered portions of the study area. An additional 24 previous archaeological surveys had been conducted within a 0.5-mi radius. The records search indicates that 6 cultural resources, all historical Euro-American structures, are known to exist within the study area, with an additional 17 cultural resources within 0.5-mi.

The survey fieldwork was conducted in August, September and December 2020, with parallel transects spaced at 15-meter intervals walked across the study area. A total of eight resources (six previously recorded and two newly identified) were recorded during the survey. The site records for the six previously recorded resources were updated during the survey. These include segments of Tejon Highway (P-15-003545), segments of the Arvin-Edison Canal (P-15-007994), a historic water well (P-15-020334), and segments of three transmission lines (P-15-017243, -017582, and -019115). The two newly identified resources recorded during the survey include one site and an isolated artifact, which were given temporary field designations. The newly identified site (AEWSD-RA-1) consists of a segment of Tejon Creek, while the isolated artifact (AEWSD-ISO-2) is a projectile point.

A full discussion regarding each of these resources can be found in Appendix C. Recommendations for the re-designed 44-mi pipeline Project area are as follows:

Tejon Highway (P-15-003545) – This contemporary road follows the original wagon route from Rose Station and the Tejon Ranch to Arvin. Although the creation and use of this route was associated with a significant historical event, the settlement of the southern San Joaquin Valley, and thus could qualify it for NRHP/CRHR eligibility under Criterion A/1, this is now an improved road that is regularly maintained by Kern County. Although it retains its location, it lacks integrity of design, materials, workmanship, setting, feeling and association. It is recommended as not NRHP/CRHR eligible under any criteria due to this loss of integrity. Construction on or within this resource therefore does not represent an adverse impact to a significant or unique cultural resource.

Arvin-Edison Canal (P-15-007994) - This resource was recorded and evaluated for NRHP/CRHR eligibility in 2015. This evaluation concluded that: "The AEWSD water delivery, recharge, and storage system does not appear to meet NRHP" eligibility under any of the four criteria (Smallwood et al. 2015:37-39). We concur with this recommendation. Construction on or within this resource therefore does not represent an adverse impact to a significant or unique cultural resource.

Big Creek Hydroelectric System Historic District (P-15007994, -017582 and -019115) - Segments of three previously recorded cultural resources within the Project area represent contributing elements of the BCHSHD, which was listed on the NRHP and CRHR in 2016, and thus represents a significant historical resource under CEQA. These three resources, however, are overhead transmission lines that cross the AEWSD pipeline route. Construction of the pipeline and its associated components will not materially affect these powerlines and will not result in adverse impacts to this historic district.

Kirschemann Water Well (P-15-020334) – This well, constructed circa 1956, was recorded in 2018 and recommended as not NRHP/CRHR eligible. We concur with that recommendation.

AEWSD-RA-1 (Tejon Creek) – This newly recorded cultural resource is an earthen canal that was constructed in the mid-twentieth century. It is not associated with an important historical event (Criterion A/1) or person (Criterion B/2), is a common property type that is not notable in terms of engineering, design, construction or materials (Criterion C/3), and does not have research potential (Criterion D/1). It is recommended as not NRHP/CRHR eligible.

AEWSD-ISO-2 - Isolated artifacts are categorically not NRHP/CRHR eligible and do not constitute significant or unique cultural resources.

Based on these assessments, the proposed AEWSD Project does not have the potential to result in adverse impacts to significant or unique historical resources or historic properties. No additional cultural resources work is recommended for this Project. However, in the unlikely event that cultural resources are encountered during Project construction or use, implementation of mitigation measure **CUL-1** would reduce impacts to less than significant.

Mitigation Measures:

CUL-1 (Archaeological Resources)

In the event that archaeological remains are encountered at any time during development or ground-moving activities within the entire project area, all work in the vicinity of the find shall halt until a qualified archaeologist can assess the discovery. The District shall implement all recommendations of the archaeologist necessary to avoid or reduce to a less than significant level potential impacts to cultural resource. Appropriate actions could include a Data Recovery Plan or preservation in place.

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

Less than Significant Impact with Mitigation Incorporated. No formal cemeteries or other places of human internment are known to exist on the Project site; however, in accordance with Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98, if human remains are uncovered, Mitigation Measure CUL-3 would be implemented.

CUL-2 (Human remains)

If human remains are uncovered, or in any other case when human remains are discovered during construction, the Kern County Coroner is to be notified to arrange their proper treatment and disposition. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC would then identify the Most Likely Descendent who would determine the manner in which the remains are treated.

3.6 Energy

Table 3-12. Energy Impacts

Energy					
	Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.6.1 Environmental Setting

PG&E and Southern California Gas are the primary energy utility purveyors and distributors within Kern County and near AEWSD. PG&E and Southern California Gas have sufficient energy supplies to supply the growth that has occurred in Kern County. Much of the energy consumed in the region is for agriculture, residential, commercial, and transportation purposes.

Construction equipment and construction worker vehicles operated during Project excavation and construction would use fossil fuels. This increased fuel consumption would be temporary and would cease at the end of the construction activity, and it would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from Project construction are not expected to have appreciable impacts on energy resources.

3.6.2 Impact Assessment

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? And;

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. Operation of the Project would directly consume a negligible amount of energy. Thus, energy use during operation would be similar to, or less than, existing conditions. Construction of the Project would require energy use, but this use would not be wasteful or inefficient, nor would it require significant electric power or natural gas facilities. Energy used during construction would allow the operation of the multi-use path, which, as discussed above, could result in a reduction of long-term energy use. No features of the Project would conflict with or obstruct state or local plans for renewable energy or energy efficiency. The Project would not require the relocation or construction of new or expanded electric power or natural gas facilities. The impact on energy use and energy plans would be less than significant.

3.7 Geology and Soils

Table 3-13. Geology and Soils Impacts

Geology and Soils				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: 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 Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.7.1 Environmental Setting

The Project is located in the south-central region of Kern County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada Range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years ago) alluvium. The sedimentary formations are steeply upturned along the western margin due to the uplifted Sierra

Nevada Range.[6] From the time the Valley first began to form, sediments derived from erosion of igneous and metamorphic rocks and Fresno marine sediments in the surrounding mountains have been transported into the Valley by streams.

Using the USDA NRCS soil survey of the Project area, an analysis of the soils onsite was performed (**Appendix B**). 17 soil units were mapped within the Project area, but only five of these soil types underlie the majority of the area within the Project area: Granoso loamy sand, 0 to 2 percent slopes; Granoso loamy sand, loamy substratum, 0 to 2 percent slopes; Delano sandy loam, 0 to 2 percent slopes; Hesperia sandy loam, 0 to 2 percent slopes; and Kimberlina fine sandy loam, 0 to 2 percent slopes MLRA 17. Of the 17 soils mapped within the BSA, ten are on the National Hydric Soils List (**Appendix B**). Hydric soils can occur in wetlands or other areas with surface or groundwater and may provide habitat for hydrophytic plants, though these soils may also occur in upland areas. The proposed pipeline alignment runs through agriculture areas and roadsides and would occur primarily on non-native fill. **Table 3-14** describes each of the 17 soil units found within the Project area.

Table 3-14. Soils of the Project area

Soils Series	Parent Material	Drainage Class	Hydric?
Bakersfield fine sandy loam, drained, 0 to 1 percent slopes	Alluvium derived from granitoid rock	Somewhat poorly drained	Yes
Granoso loamy sand, 0 to 2 percent slopes	Alluvium derived from mixed rock sources	Somewhat excessively drained	Yes
Granoso loamy sand, loamy substratum, 0 to 2 percent slope	Alluvium derived from mixed rock sources	Somewhat excessively drained	Yes
Granoso sandy loam, 0 to 2 percent slopes, overwash	Alluvium derived from mixed rock sources	Somewhat excessively drained	Yes
DiGiorgio sandy clay loam, 0 to 2 percent slopes	Alluvium derived from granite	Well drained	No
Cerini loam, 0 to 2 percent slopes	Alluvium derived from granitoid rock	Well drained	No
Delano sandy loam, 0 to 2 percent slopes	Alluvium derived from granite	Well drained	No
Hesperia sandy loam, 0 to 2 percent slopes	Alluvium derived from granitoid	Well drained	Yes
Hesperia sandy loam, 0 to 2 percent slopes	Alluvium derived from granitoid	Well drained	Yes
Kimberlina fine sandy loam, 0 to 2 percent slopes MLRA 17	Alluvium derived from igneous and sedimentary rock	Well drained	Yes
Hesperia loamy sandy, 0 to 2 percent slopes	Alluvium derived from granitoid	Well drained	Yes
Hesperia sandy loam, 0 to 2 percent slopes	Alluvium derived from granitoid	Well drained	Yes

[6] Harden, D.R. 1998, California Geology, Prentice Hall, 479 pages

Soils Series	Parent Material	Drainage Class	Hydric?
Whitewolf loamy sand, 2 to 5 percent slopes	Alluvium derived from granite	Somewhat excessively drained	No
Kimberlina fine sandy loam, 0 to 2 percent slopes MLRA 17	Alluvium derived from igneous and sedimentary rock	Well drained	No
Wasco sandy loam	Alluvium derived from granite	Well drained	No
Whitewolf coarse sandy loam, 0 to 2 percent slopes	Alluvium derived from granitoid rock	Somewhat excessively drained	No
Vineland-Bakersfield complex, 0 to 1 percent slopes, drained	Alluvium derived from granitoid rock	Somewhat excessively drained	Yes

3.7.1.1 Faults and Seismicity

The Project area is not located within an Alquist-Priolo Earthquake Fault Zone and no named faults cut through the local soil at the proposed pipeline locations. The nearest major fault is the Garlock Fault, located approximately 16 miles southeast of the Project area. A smaller fault zone, the White Wolf Fault is approximately one mile east/southeast of the area.

3.7.1.2 Liquefaction

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. According to the Kern County General Plan Update Environmental Impact Report, the soil formations throughout much of Kern County, are comprised of thick, unconsolidated, coarse-textured alluvial sediments composed of gravel, sand and silt of granitic composition. Due to the great depth to groundwater in the desert area, liquefaction does not present a major potential hazard within the Kern County area.[7]

3.7.1.3 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of ground water, oil, or natural gas. These areas are typically composed of open-textured soils that become saturated. These areas are high in silt or clay content. The Project area is comprised of many soil types, as shown in the table below. These soils are mostly well drained to excessively well drained

3.7.1.4 Dam and Levee Failure

Lake Isabella is located approximately 35 miles northeast of the Project area. According to the Kern County General Plan DEIR[8], the area is outside of the inundation zone for Lake Isabella.

[7] Kern County Revised General Plan Update. Recirculated Draft Program EIR. January 2004. Page 4-I-8.
[8] Kern County DEIR. Kern County General Plan Revised Program EIR - Volume 1, Chapters 1-8 Accessed January 2021.

3.7.2 Impact Assessment

a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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 Division of Mines and Geology Special Publication 42.

No Impact. The Project area is not located within an Alquist-Priolo Earthquake Fault Zone and no named faults cut through the local soil at the proposed pipeline locations. There would be no impact.

a-ii) Strong seismic ground shaking?

No Impact. The Alquist-Priolo Fault Zone maps show two named faults within close proximity to the Project area: the White Wolf Fault about one mile to the east/southeast and the Garlock Fault about 16 miles to the Southeast; however, the proposed facilities are subject to seismic activity from the faults in and around the Districts, as are the existing facilities. To minimize or eliminate the possibility of structural damage, the Project elements would be designed and constructed in accordance with accepted engineering standards and methods. The basic design of the Project would follow the design successfully used for existing facilities, including earth berms and control structures. No habitable structures will be built as part of this Project. As a result, the Project would not result in or expose people to potential additional impacts involving seismic shaking. There would be no impact.

a-iii) Seismic-related ground failure, including liquefaction?

No Impact. Seismic-related ground failures, such as ruptures, lateral spreading, ground lurching, seiches, or mudslides, are unlikely to occur in the Project area because of its relatively stable geologic formation and distance to active faults. Because the Project area is generally level and does not involve the construction of any habitable structures, the Project would not expose people or structures to potential substantial effects associated with seismic-related ground failure, including liquefaction. Therefore, there will be no impact.

a-iv) Landslides?

No Impact. No geologic landforms exist on or near the site that would result in a landslide event. The surrounding topography is very flat. There would be no impact.

b) Result in substantial soil erosion or the loss of topsoil?

No Impact. The Project will involve excavation work in order to place the pipelines throughout the District. However, it is anticipated that most of these pipelines will be covered. Soil usage will be balanced on site, with no export or import of soil. The redistribution of material will not result in additional erosion or loss of material, therefore there will be no impact.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. Substantial grade change would not occur in the topography to the point where the Project would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, subsidence, liquefaction or collapse. All of the pipelines would be underground upon completion of construction. There would be no impact.

d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?

No Impact. The Project does not include the development of structures or facilities that could be affected by expansive soils or expose people to substantial risks to life or property. Furthermore, the Project would be consistent with the California Building Standards Code. There would be no impact.

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?

No Impact. The Project does not include the use of septic tanks or other alternative waste water disposal system. There would be no impact.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact. Paleontological resources are fossilized remains of flora and fauna and associate deposits. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) Section 15126.4(a)(1)). PRC Section 5097.5 (see above) also applies to paleontological resources.

Unique paleontological resources or sites or unique geological features have not been identified in the Project area. Therefore impacts would be less than significant.

3.8 Greenhouse Gas Emissions

Table 3-15. Greenhouse Gas Emissions Impacts

Greenhouse Gas Emissions					
Would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.8.1 Environmental Setting

The Earth's climate has been warming for the past century. Experts believe this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the Earth. As the infrared energy is absorbed, the air surrounding the Earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past 35 years, with 16 of the 17 warmest years on record occurring since 2001. Not only was 2016 the warmest year on record, but eight of the 12 months that make up the year—from January through September, with the exception of June—were the warmest on record for those respective months. October, November, and December of 2016 were the second warmest of those months on record—in all three cases, behind records set in 2015.[9] Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

3.8.1.1 Greenhouse Gases

Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

[9] NASA, NOAA Data Show 2016 Warmest Year on Record Globally. https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally. January 18, 2017. Accessed 14 February 2020.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

3.8.1.2 Effects of Climate Change

The impacts of climate change have yet to fully manifest. A hotter planet is causing the sea level to rise, disease to spread to non-endemic areas, as well as more frequent and severe storms, heat events, and air pollution episodes. Also affected are agricultural production, the water supply, the sustainability of ecosystems, and therefore the economy. The magnitude of these impacts is unknown.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

3.8.2 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report (**Appendix A**) was prepared in October 2020. The sections below detail the methodology of the report and its conclusions.

3.8.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated using CalEEmod, Version 2016.3.2. Emissions' modeling was assumed to occur over an approximate 24 month period and covering a site area of approximately 44 miles of pipeline (approximately 267 acres). Remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix A**.

3.8.2.2 Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature. Any necessary maintenance would take place during the Districts current maintenance schedule and would not require special trips. The project may use flow meters at five locations. The electrical usage for this would be minimal resulting in less than 56 kW/hrs per year. Modeling assumptions and output files are included in **Appendix A**.

3.8.3 Impact Assessment

3.8.3.1 Thresholds of Significance

In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*[10], proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

Bay Area Air Quality Management District's Thresholds for Significance: Bay Area Air Quality Management District's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce Statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant. Although the proposed Project is not located in the Bay Area, the Bay Area Air Quality Management District's thresholds for significance are based on the Statewide AB 32 objectives, are scientifically supported and are more appropriate to assess potential impacts related to GHG emissions. For land use development projects, the threshold is compliance with a qualified GHG Reduction Strategy or annual emissions less than 1,100 metric tons per year (MT/yr) of CO_2e. For stationary source projects, such as those requiring a permit from a local air district to operate, the threshold is 10,000 MT/yr of CO2e. Although the BAAQMD thresholds are generally intended for ongoing sources of emissions (e.g., manufacturing facilities, refineries), their use in CEQA is appropriate for construction projects that occur over a relatively short period and contribute a relatively low total amount of GHGs, as compared to a land use development project that would generate substantial annual emissions indefinitely.

[10] Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf Accessed September 2020

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? And;

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact.

Short-Term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3-16**. As indicated, construction of the Project would generate a total of 905.2172 $MTCO_2e$. over several years of construction. These emissions are totaled and amortized over 30 years and added to the operational emissions in **Table 3-17** below.

Table 3-16. Short-Term Construction-Generated GHG Emissions

Year	Emissions (MT CO_2e)[1]
2022	414.3637
2023	428.4677
2024	62.3858
Amortized over 30 years	*30.17*

1. *Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to* ***Appendix A*** *for modeling results and assumptions. Totals may not sum due to rounding.*

Long-Term Operational Emissions

Estimated long-term operational emissions are summarized in **Table 3-17**.

Table 3-17. Long-Term Operational GHG Emissions

	Emissions (MT CO_2e)[1]
Estimated Annual Operation CO2e Emissions	0.014
Amortized Construction Emissions	30.17
Total Estimated Annual Operational CO2e Emissions	30.19
*AB 32 Consistency Threshold for Land-Use Development Projects**	*1,100*
Exceed Threshold?	*No*

1. *Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to* ***Appendix A*** *for modeling results and assumptions. Totals may not sum due to rounding.*

* As published in the Bay Area Air Quality Management District's CEQA Air Quality Guidelines. Available online at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en Accessed September 2020.

The District does not have an adopted GHG plan or MT/yr thresholds for CO_2e. The San Joaquin Valley Air Pollution Control District (SJVAPCD) CEQA guidance for GHG emissions recommends that a project not be considered to have a significant impact if it complies with an applicable air quality plan, results in a 29% reduction from business as usual (BAU) GHG emissions (2004 levels), or implements applicable Best Performance Standards (BPS). The SJVAPCD metrics (reduction from BAU, implementation of BPS) are not appropriate for this Project. The thresholds provided by the Bay Area Air Quality Management District, while not in our area, are very stringent and based on Statewide AB 32 objectives. Because they are designed to avoid significant impacts from global climate change, which occurs at a global scale, they do not depend on site-specific characteristics. The District has determined that the Bay Area Air Quality Management District's

thresholds are the most appropriate threshold for this Project, which has predominantly short-term construction emissions, and extremely low operational emissions (30.19 CO_2e). Any impacts would be less than significant.

3.9 Hazards and Hazardous Materials

Table 3-18. Hazards and Hazardous Materials Impacts

Hazards and Hazardous Materials					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g)	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

3.9.1 Environmental Setting

3.9.1.1 Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board (SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense (DOD) sites, and Land Disposal program.

A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on January 17, 2021 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project area or immediate surrounding vicinity.

1.1.1.1 Airports

The Bakersfield Municipal Airport is located approximately five miles west, and the Creekside Water Ski Community airstrip is approximately 1.2 miles west of the Project.

1.1.1.2 Sensitive Receptors

Rural residences are scattered along the 44 miles of project pipeline proposed.

3.9.2 Impact Assessment

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? and;

No Impact. There would be no transport, use or disposal of hazardous materials associates with Project construction or operation. There would be no impact.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. The Project would not create a significant hazard to the public or the environment as the Project would not discharge hazardous materials into the environment. Furthermore, construction activities will require implementation of a SWPPP and compliance with all Cal/OSHA regulations in order to reduce the potential for accidental release of hazardous substances into the environment. There would be no impact.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are school sites within one mile of various segments of proposed pipeline. The Project does not involve any toxic chemicals, would not emit hazardous emissions, involve hazardous materials, or create a hazard to the schools in any way. There would be no impact.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. There would be no impact.

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

No Impact. The Project does not involve the construction of any habitable structures, therefore the Project would not result in a safety hazard for people residing or working in the Project area. There would be no impact.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The vast majority of proposed pipeline alignments will be installed on private agricultural property parallel to existing public county road right of way or along existing private dirt farm roads between fields/orchards using the traditional cut-and-cover construction method. Short segments of the proposed pipelines will cross public county road right of way and may require an encroachment permit from Kern

County. If Kern County requires through traffic during pipeline construction, some of these short pipeline segments may be constructed using the jack and bore construction method. The Project would not interfere with implementation of an emergency response plan or evacuation plan. There would be no impact.

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project area and the surrounding lands are in agricultural, recreational, or rural residential uses and are not considered wildlands. The Project area is not located in any wildland fire areas. The Project also does not propose the construction of any habitable structures. The impact would be no impact.

3.10 Hydrology and Water Quality

Table 3-19. Hydrology and Water Quality Impacts

Hydrology and Water Quality					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
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:				
	i) result in substantial erosion or siltation on- or off-site;	☐	☐	☐	☒
	ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☐	☒
	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	☐	☐	☐	☒
iv)	impede or redirect flood flows?	☐	☐	☐	☒
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.10.1 Environmental Setting

Water resources in Kern County include many natural rivers and streams, man-made surface water conveyance structures, and groundwater. Kern County's groundwater and surface water management is accomplished through various combinations of public and private water entities, including the Bureau of Reclamation, water utility companies, and local irrigation districts, all of which are governed by State and federal regulations.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. The Central Valley receives an average of 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The Project is located in the Central Valley region of the State Water Resource Board. According to the U.S. Geological Survey (USGS) classification system, the Project is located within the Middle Kern-Upper Tehachapi

watershed; Hydrologic Unit Code (HUC): 18030003, and spans three sub-watersheds: Lake Paulina (HUC 180300030604), Kern Island Canal-Frontal Kern Lake Bed (HUC 180300031201), and Caparell Creek-Frontal Kern Lake Bed (HUC 180300031000) [11] The Project area lies entirely within the Kern Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[12]

3.10.2 Impact Assessment

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

No Impact. The State Water Resources Control Board (SWRCB) requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for projects that disturb one or more acres of soil. A SWPPP involves site planning and scheduling, limiting disturbed soil areas, and determining best management practices to minimize the risk of pollution and sediments being discharged from construction sites. Implementation of the SWPPP would minimize the potential for the Project to substantially alter the existing drainage pattern in a manner that would result in substantial erosion or siltation onsite or offsite.

The Project would not violate any water quality standards and would not impact waste discharge requirements. Furthermore, construction activities will require implementation of a SWPPP and compliance with all Cal/OSHA regulations in order to reduce the potential for accidental release of pollutants or hazardous substances into surface water or groundwater. There would be no impact.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin?

No Impact. The Project area is located in the Kern County basin of the Tulare Lake Region, an area significantly affected by overdraft. The Project would involve the expansion of Temporary Water Service Contracts as it would provide more landowners access to the District's wet period surface water. This would allow more landowners to utilize surface water from the District and would help to reduce groundwater pumping and consequently assist in stabilizing the groundwater table. As a result the net change in groundwater recharge potential surrounding the Project area would be positive. The pipelines would provide a benefit to groundwater with additional recharge. There would be no impact.

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:

c-i) result in substantial erosion or siltation on- or off-site;

c-ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;

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

c-iv) impede or redirect flood flows?

No Impact. Drainage patterns would not change as a result of Project build out. The Project will not alter the run-off from the surrounding areas. There would be no impact.

[11] Appendix B. Biological Resources Assessment. December 2020.
[12] DWR Bulletin 118 Groundwater Basin Boundary Assessment Tool. https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118 Accessed January 2021.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The Project is not located in an area at risk of tsunami or seiche. According to the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) for Community Number 06029C2325E, 06029C2350E, 06029C2775E, 06029C2750E, and 06029C3150E dated September 26, 2008, portions of the proposed pipeline is located within the 100 Year Flood Zone (see **Figure 3-7**); however the construction of housing or habitable structures is not a part of the proposed Project and there are no homes or offices in the immediate Project area. There would be no impact.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. Since the Project will be providing better access to surface water to landowners throughout the District, it will reduce groundwater pumping. The effect on groundwater levels and quality in the area is expected to be improved. There would be no impact.

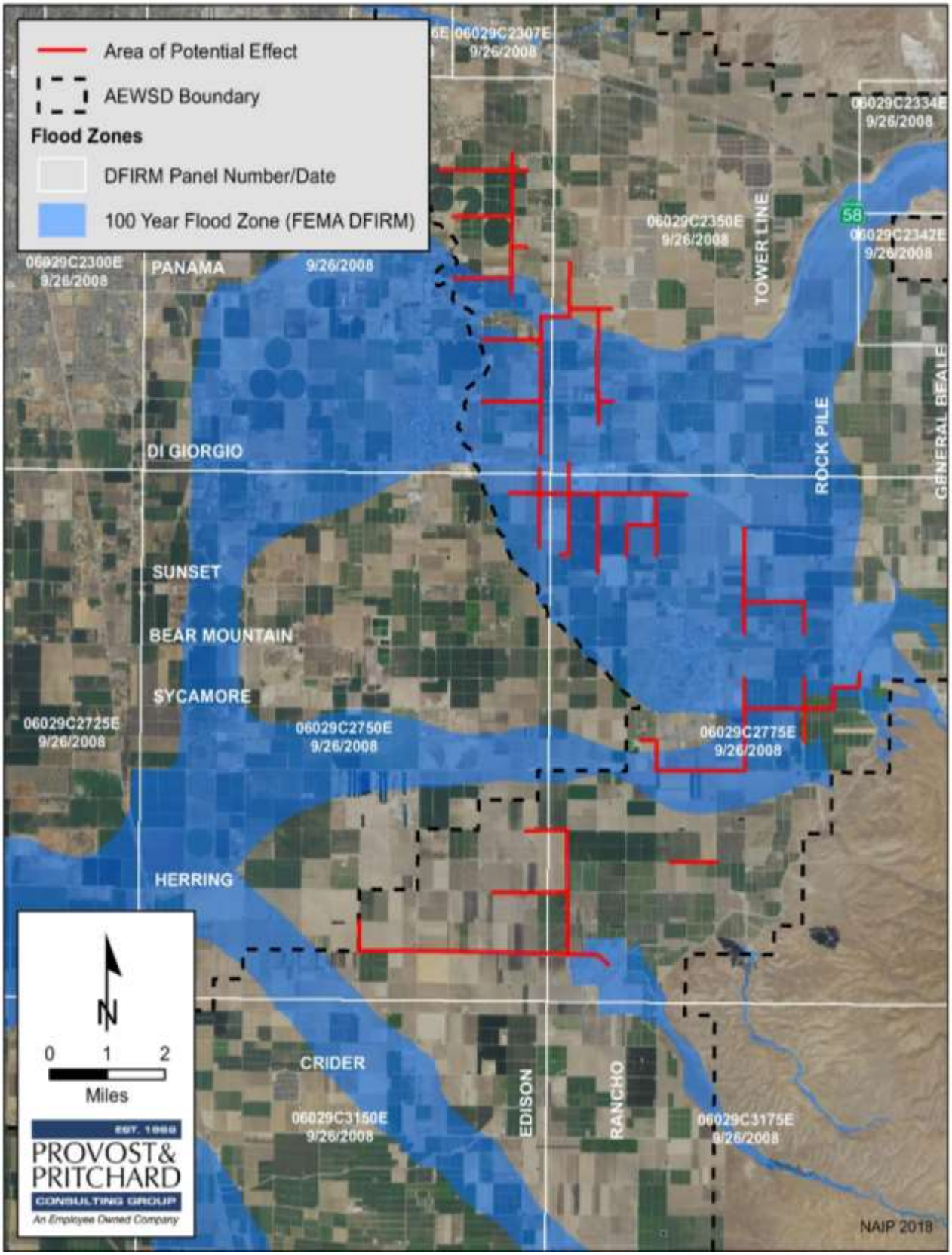

Figure 3-7. FEMA Flood Map

3.11 Land Use and Planning

Table 3-20. Land Use and Planning Impacts

Land Use and Planning					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.11.1 Environmental Setting

The Project is located within an unincorporated area of central Kern County. Up to 44 miles of pipeline are scattered throughout rural areas south of Bakersfield (**Figure 2-1**). The Project area is surrounded by agricultural lands, sparse rural residences, one City of Arvin neighborhood, and local water infrastructure.

The majority of the Project is located within land zoned AE-20 (Exclusive Agriculture, 20-Acre minimum), by Kern County. The Kern County General Plan Land Use Map designates this area as Agriculture. All adjacent properties are similar zoning and General Plan designations. The segments of the Project that are located within the City of Arvin are zoned or adjacent to M-2 (Light Manufacturing), M-3 (General Manufacturing), R-1 (One-Family), R-4 (Multi-Family), C-1 (Restricted Commercial), A-1 (Light Ag), A-2 (General Ag) (See **Figure 3-9**).

3.11.2 Impact Assessment

a) Would the project physically divide an established community?

No Impact. The Project is located in an agricultural setting in the southeastern portion of the San Joaquin Valley. The Project pipelines will all be underground and therefore would not physically divide any established community. There would be no impact.

b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The Project involves the construction and operation of underground pipelines for transport of surface water for irrigation and/or recharge purposes which is consistent with the land use within the vicinity. Therefore, the Project would not conflict with any applicable plans, policies, or regulations. There would be no impact.

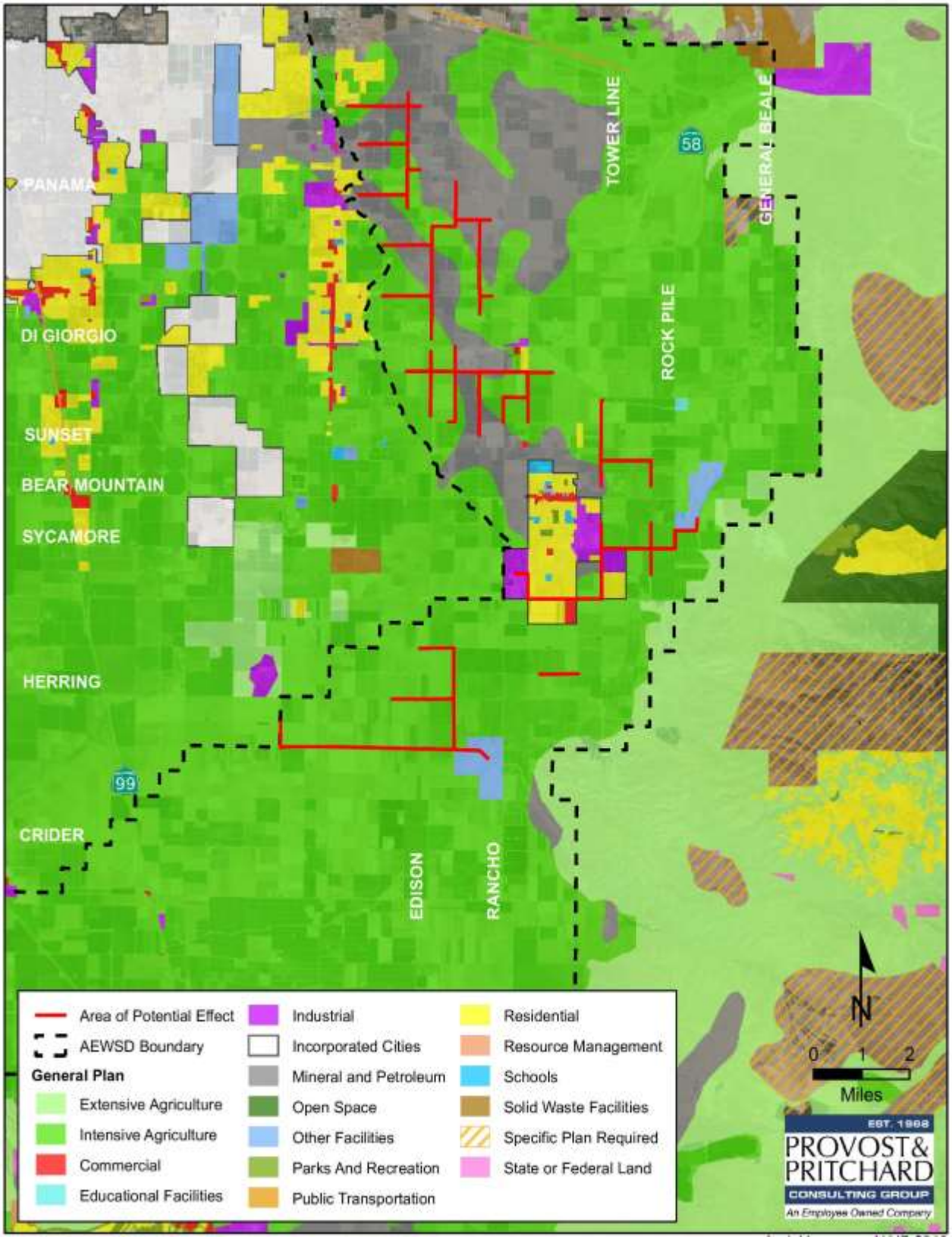

Figure 3-8. Kern County General Plan Land Use Designation Map

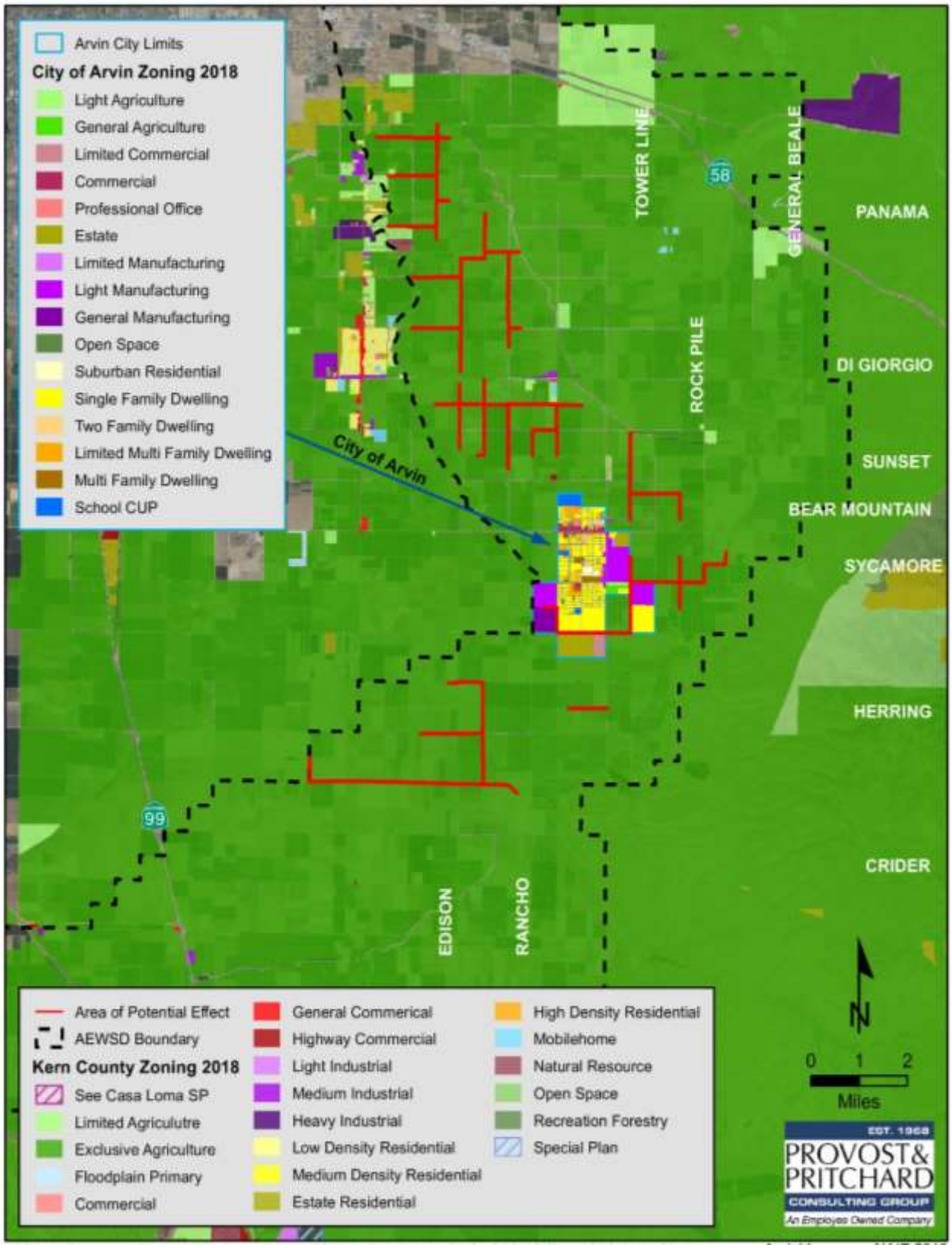

Figure 3-9. Kern County Zoning Map

3.12 Mineral Resources

Table 3-21. Mineral Resources Impacts

Mineral Resources					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 Environmental Setting

Kern County is one of the largest producers of mineral products in California with a production value of almost one-quarter of the State's total. The principal mineral product is petroleum (an organic derivative material) and related products, which contributes about 75% of the total valuation of all County mineral products. The remainder is comprised of borax, cement products, sand and gravel, and other construction and gem-like minerals[13].

California Department of Conservation's Division of Oil, Gas, and Geothermal Resources maintains a database of oil wells in the Project area (DOGGR). According to the DOGGR Well Finder there oil 112 wells within two hundred feet of the Project area, 19 are listed as active. There are no active wells within the Project area.

There are no known current or historic mineral resource extraction or recovery operations in the Project area nor are there any known significant mineral resources onsite.

3.12.2 Impact Assessment

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The Kern County General Plan (2004) includes a Land Use/Conservation/Open Space Element (Chapter 1), which identifies Mineral and Petroleum areas (Map Code 8.4) that contain "productive petroleum fields, natural gas, geothermal resources and mineral deposits of regional and statewide importance". According to the map, the Project area is not located in a Mineral Resource Zone. The Project would not result in the loss of an known available mineral resource. There would be no impact.

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

No Impact. The California Surface Mining and Reclamation Act of 1975 (SMARA) was created to address protecting the state's need for a continuing supply of mineral resources, while protecting public an environmental health. SMARA requires that all cities incorporate into their general plans mapped mineral resource designations approved by the State Mining and Geology Board. The State Geologist classifies land in California based on availability of mineral resources. Because available aggregate construction material is limited, five designations have been established for the classification of sand, gravel and crushed rock resources:

[13] Kern County DEIR, Section 4.8. Kern County General Plan Revised Program EIR - Volume 1, Chapters 1-8 Accessed January 2021.

Scientific Resource, Mineral Resource Zone 1, Mineral Resources Zone 2, and Mineral Resource Zone 3, and Mineral Resource Zone 4.

According to the Data Basin maps, the proposed Project is not within any Mineral Resource Zones.[14] Therefore, implementation of the Project would not result in the loss of availability of a known mineral resource since no known mineral resources occur in this area. Furthermore, the Project area has not been designated as a locally important mineral resource recovery site by a general plan, specific plan, or land use plan. There would be no impact.

[14] Data Basin Maps. Mineral Resource Zones for Kern County | Data Basin Accessed January, 2021

3.13 Noise

Table 3-22. Noise Impacts

Noise					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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 applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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 two 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?	☐	☐	☐	☒

3.13.1 Environmental Setting

The Project area is located in an unincorporated area of Kern County, dominated by agricultural production. Residential development is sparse and spread out located on neighboring parcels. The Bakersfield Municipal Airport is located approximately five miles west, and the Creekside Water Ski Community Airport is located approximately 1.2 miles west of the Project area.

3.13.2 Impact Assessment

a) Would the project result in 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 applicable standards of other agencies?

Less than Significant Impact. Construction of the Project will involve temporary noise sources, originating predominately from off-road construction equipment, such as excavators, backhoes, graders, skid steers, loaders, and hauling trucks. The Project is located on and adjacent to agricultural lands, accustomed to similar noises associated with farm equipment. The Project will comply with the Kern County Municipal Code[15] limiting construction activities to the hours of 6 am to 9 pm, Monday through Friday, and 8 am to 9 pm on weekends, when construction activities are located within 1,000 feet of an occupied residential dwelling. Similarly, portions of the Project that are within the City of Arvin will comply with City of Arvin Municipal Code[16] which states workovers and other maintenance, including replacement in kind, shall not be permitted after 9:00 p.m. and before 6:00 a.m. or during Saturdays, Sundays or legal holidays, except in the event of an emergency as approved by the city manager. Operational maintenance activities would be on an as-needed basis with routine monitoring performed by existing staff and would not generate significant new noise. Operational maintenance activities would be consistent with baseline noise conditions routinely experienced

[15] Kern County Noise Control Ordinance. Chapter 8.36 - NOISE CONTROL | Code of Ordinances | Kern County, CA | Municode Library Section8.36.020 (H). Accessed January 2021.
[16] City of Arvin

on site due to agricultural production. Any impacts would be mild and temporary and therefore, less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. The Project is located in an area dominated by agricultural production, which includes the use of off-road equipment and ground-disturbing activities on a regular basis. The majority of construction will involve grading and trenching work and would be completed intermittently over five years. Conditions created by Project-related construction activities would not vary substantially from the baseline conditions routinely experienced onsite and would be temporary. As stated in a) above, the Project will comply with County and City of Arvin requirements regarding construction noise. Any impacts would be less than significant.

c) For a project located within the vicinity of a private air strip or 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 expose people residing or working in the project area to excessive noise levels? and,

No Impact. The nearest airport, the Creekside Airport, is over approximately 1.2 miles away from the Project. The Project does not involve the development of habitable structures or require the presence of permanent staff onsite. Therefore, the Project would not expose people residing or working in the project area to excessive noise levels. There would be no impact.

3.14 Population and Housing

Table 3-23. Population and Housing Impacts

Population and Housing					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

Most of the the Project is located within an unincorporated area in Kern County. The Project area is surrounded by agricultural lands, rural residential uses, one City of Arvin neighborhood and water infrastructure. The Project will be predominately constructed on private agricultural property parallel to existing public county road right of way or along existing private drift farm roads between fields and orchards, short segments will cross public county road right of way.

3.14.2 Impact Assessment

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? No Impact. The Project does not involve new housing or businesses, nor does it involve new infrastructure that could induce population growth. Therefore, the Project would not induce population growth. There would be no impact.

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

No Impact. The Project would not induce population growth. No housing or people would be displaced by the Project. There would be no impact.

3.15 Public Services

Table 3-24. Public Services Impacts

Public Services					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
	Fire protection?	☐	☐	☐	☒
	Police protection?	☐	☐	☐	☒
	Schools?	☐	☐	☐	☒
	Parks?	☐	☐	☐	☒
	Other public facilities?	☐	☐	☐	☒

3.15.1 Environmental Setting

Fire Protection: The nearest fire stations to the Project area are Kern County Fire Department, Station 54 Arvin, and Station 51 Lamont, they are approximately one mile west, and one mile southwest of the Project area, respectively.

Police Protection: The nearest public safety services are provided by Kern County Sheriff's Office and the City of Arvin Police Department. The Sheriff's nearest substation is located approximately one mile from the Project Area. The Arvin Police Department is also located approximately one mile from the Project Area.

Schools: There are seven schools within one mile of the Project area: Mountain View Middle, Myrtle Avenue Elementary, Nueva Continuation High, Arvin High, Haven Drive Middle, Sierra Vista Elementary, and El Camino Elementary.

Parks: There are five parks within one mile of the Project area: Bear Mountain Park, Lamont Park, Kovacevich Park, DiGiorgio County Park, and Smothermon Park.

Landfills: The nearest landfill to the Project area is the Bena Landfill, which is approximately seven miles northeast of the Project area.

3.15.2 Impact Assessment

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

No Impact. The Project would not rely on the addition or alteration of any public services. The Project parcels are mainly within rural unincorporated land in Kern County, with a small portion of the Project pipeline running through City of Arvin in a mostly agricultural area, with a residential neighborhood to the north. The Project would have minimal needs for public services and would receive any needed services from existing agencies and departments. There would be no impact.

3.16 Recreation

Table 3-25. Recreation Impacts

Recreation					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project 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?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.16.1 Environmental Setting

Kern County has several regional parks, as well as State and national parks, national forest, wilderness areas, and other resources. Regional recreational facilities within the County include ten developed and three undeveloped park sites, five fishing access areas, and boating facility. Additionally, the City of Arvin has six parks. There are no parks adjacent to the Project.

3.16.2 Impact Assessment

a) Would the project 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? And;

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. No recreational facilities are adjacent to the Project pipelines. The Project would not increase population in the area and would therefore would not increase the demand for recreational facilities nor put a strain on the existing recreational facilities. This Project would not include or require recreational facilities. There would be no impact.

3.17 Transportation

Table 3-26. Transportation/Traffic Impacts

Transportation/Traffic					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Environmental Setting

The Project area is within an unincorporated area in Kern County and a small portion of the City of Arvin. The vast majority of proposed pipeline alignments will be installed on private agricultural property parallel to existing public county road right of way or along existing private dirt farm roads between fields/orchards using the traditional cut-and-cover construction method. Short segments of the proposed pipelines will cross public road right of way and may require an encroachment permit from Kern County or the City of Arvin. Traffic generation after Project implementation would be minimal and dedicated to maintenance on an as-needed basis.

3.17.2 Impact Assessment

a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? And;

b) Would the project conflict or be inconsistent with CEQA Guidelines section 150643. Subdivision (b)?

Less than Significant Impact. The Project does not require construction of any new roadways. The Project operations and maintenance would normally be completed by personnel already traveling by the site conducting other District duties and would therefore not materially exceed baseline conditions. Construction traffic would be temporary in nature over several years. There are no transit, pedestrian, or bicycle facilities in the vicinity of the Project and the need for any would not be necessitated by the Project. The Project would not conflict with any plan, ordinance, or policy regarding circulation. These impacts would be less than significant.

Construction associated with the Project would be restricted to the Project area, should the pipeline need to cross a County or City road, the Project would get an encroachment permit, and would utilize jack and bore to go under the existing roadway. Any construction-related impacts would be temporary and there would be no impacts to the surrounding transportation network.

There is no population growth associated with the Project, nor would implementation of the Project result in an increase of staff or drivers utilizing roadways in the area. Therefore, implementation of the Project would not increase the demand for any changes to congestion management programs or interfere with existing level

of service standards during the operational phase. Construction-related roadway interferences would be less than significant in nature.

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. No new roadway design features are associated with the Project. As mentioned in Impact Assessments a and b above, all potential disturbances to roadways would be temporary. Therefore, there would be no impact.

d) Result in inadequate emergency access?

Less than Significant Impact. As mentioned above in Impact Assessments a, b, and c, the Project does not propose new roadway design features or permanent alterations to roadways. All potential disturbances to roadways during construction would be temporary. Road closures and detours are not anticipated as part of the construction phase of the Project. The operational phase of the Project would have no effect on roadways or emergency access. Therefore, overall potential Project-related impacts to emergency access on local roadways would be considered less than significant.

3.18 Tribal Cultural Resources

Table 3-27. Tribal Cultural Resources Impacts

Tribal Cultural Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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:	☐	☒	☐	☐
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. 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 Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

3.18.1 Environmental Setting

The Project area is in the Southern Valley Yokuts ethnographic territory. Kroeber (1925: Plate 47) indicates that the study area most likely lies in Hometwoli Yokuts territory with the principal historic village for this group being Pohalin Tinliu, located on the south shore of Kern Lake. Similarly, Latta (1977) shows Pohalin Tínleu (Kroeber's Pohalin Tinliu) as the nearest village to the study area; however, he indicates that village was in Halaumne (i.e., Yaulumne) Yokuts territory. Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokuts people continue to reside in the southern San Joaquin Valley today (**Appendix C**).

3.18.2 Impact Assessment

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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:

a-i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k) and,

a-ii) 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 Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation Incorporated. The District, as a public lead agency has not received any formal requests for notification from any State tribes, pursuant to AB52. ASM consulted the NAHC Sacred Lands files and no tribal cultural resources are known within the study area. Outreach to tribes and tribal organizations also failed to identify tribal cultural resources in or adjacent to the study area.

The NAHC responded to ASM's request on July 28, 2020, with negative findings for the Sacred Lands File search of the APE; however, they caution that the absence of information in the Sacred Lands File does not indicate the absence of Native American cultural resources within the APE. The NAHC provided a list of tribal representatives for outreach to local tribal groups regarding any sites of cultural or spiritual significance in the APE. Contacts recommended by the NAHC included:

- *Chairperson Elizabeth D. Kipp, Big Sandy Rancheria of Western Mono Indians;*
- *Chairperson Carol Bill, Cold Springs Rancheria;*
- *Chairperson Robert Ledger Sr., Dumna Wo-Wah Tribal Government;*
- *Tribal Chair Benjamin Charley Jr., Dunlap Band of Mono Indians,*
- *Tribal Secretary Dirk Charley, Dunlap Band of Mono Indians,*
- *Stan Alec, Kings River Choinumni Farm Tribe,*
- *Chairperson Ron Goode, North Fork Mono Tribe,*
- *Chairwoman Claudia Gonzales, Picayune Rancheria of Chukchansi Indians,*
- *Chairperson Leo Sisco, Santa Rosa Rancheria Tachi Yokut Tribe,*
- *Chairperson Leanne Walker-Grant, Table Mountain Rancheria,*
- *Cultural Resources Director, Bob Pennell, Table Mountain Rancheria,*
- *Chairperson David Alvarez, Traditional Choinumni Tribe,*
- *Cultural Resources Rick Osborne, Traditional Choinumni Tribe, and*
- *Chairperson Kenneth Woodrow, Wuksache Indian Tribe/Eshom Valley Band*

On August 18, 2020, ASM prepared and mailed an outreach letter to each of the contacts identified by the NAHC and kept a log of all responses. The outreach letter is standard best practices within cultural resource management and is not part of AB 52 or NHPA Section 106 government-to-government consultation. ASM's record of correspondence is included in **Appendix C**.

Although the site did not have findings during the Sacred Lands File search, it is still possible that tribal cultural resources could be found during construction. Therefore, in order to reduce any impacts to less than significant, *CUL-1* and *CUL-2* will be implemented.

3.19 Utilities and Service Systems

Table 3-28. Utilities and Service Systems Impacts

Utilities and Service Systems					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c)	Result in a determination by the wastewater treatment provider which 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?	☐	☐	☐	☒
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 reductions goals?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

3.19.1 Environmental Setting

3.19.1.1 Water Supply

The Project lies entirely within the Kern County and White Wolf Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.[17] Declines in groundwater basin storage and groundwater overdraft are recurring problems in the Central Valley. Measures for ensuring the continued availability of groundwater to meet demands have been identified and planned in several areas of the county. The measures include groundwater conservation and recharge, and supplementing or replacing groundwater sources for irrigation with surface water.

3.19.2 Impact Assessment

a) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Project operation would not generate any wastewater, nor would it require any water treatment. No new water or wastewater facilities would be needed. There would be no impact.

[17] DWR Bulletin 118 Groundwater Basin Boundary Assessment Tool. https://gis.water.ca.gov/app/bbat/ Accessed March 22, 2019.

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

No Impact. No new or expanded water entitlements would be required for the Project. All waters transported by the Project would be done within the Districts' existing water contracts and/or rights. There would be no impact.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. As discussed in Impact a) above, the Project would not generate wastewater. There would be no impact.

d) Would the project 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?

Less than Significant Impact. Construction of the Project would generate minimal solid waste (trash) from temporary construction activities. However, this trash is expected to be collected regularly by contractors and legally disposed of in landfills with sufficient permitted capacity. Any impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The proposed Project would comply with any federal, state, and local regulations for any solid waste during construction. The Project would not generate any solid waste during operation. There is no impact.

3.20 Wildfire

Table 3-29. Wildfire Impacts

Wildfire					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
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 uncontrollable spread of wildfire?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.20.1 Environmental Setting

The Project is located on unincorporated land in Kern County. The Project area is in a flat rural area of the Central San Joaquin Valley. The construction would involve up to 44 miles of pipeline, totaling approximately 267-acres in size with most construction taking place within road right of ways. No structures are being constructed as part of the Project, and the Project is not considered to be population growth inducing.

3.20.2 Impact Assessment

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? And;

b) Would the project, due to slope, prevailing winds, or other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire? And;

c) Would the project 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? And;

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

No Impact. Portions of the Project area are less than one mile from the moderate state responsibility zone. The Project involves the installation of up to 44 miles of pipeline and associated water infrastructure. There will be no habitable structures built, the Project area is relatively level and most of the Project will be underground. Therefore, the Project would not impact any emergency response plan or evacuation plan. It would not have any occupants and would therefore not expose people to pollutant concentrations from wildfire or uncontrolled spread of wildfire. No new infrastructure would need to be constructed to reduce fire risks as a result of the Project, and no people or structures would be exposed to flooding or landslides as a result of the Project. There would be no impacts.

3.21 CEQA Mandatory Findings of Significance

Table 3-30. Mandatory Findings of Significance Impacts

Mandatory Findings of Significance				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does 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)?	☐	☒	☐	☐
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

3.21.1 Impact Assessment

a) Does 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigation Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, would have a less than significant effect on the environment. The potential for impacts to biological resources and cultural resources from the implementation of the proposed Project would be less than significant with the incorporation of the mitigation measures discussed in **Chapter 4 Mitigation Monitoring and Reporting Program**. Accordingly, the Project would involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory.

b) Does 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)?

Less than Significant Impact with Mitigation Incorporated. CEQA Guidelines Section 15064(i) States that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. As discussed above, the Project would not result in any impacts individually limited. Any cumulatively considerable impacts given the compliance with applicable codes, ordinances, laws, mitigation measures and other required regulations would reduce the magnitude of any Project impacts to a less than significant level.

c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

No Impact. The Project would include the construction of approximately up to 44 miles of pipeline, manholes and turnouts. The Project in and of itself would not create a significant hazard to the public or the environment. On the contrary, implementation of the Project would provide better access to surface water to landowners within AEWSD. Construction-related air quality/dust exposure impacts could occur temporarily as a result of project construction. However, implementation of basic regulatory requirements identified in this IS/MND would ensure that impacts are less than significant. The Project would not result in substantial adverse effects on human beings, either directly or indirectly from implementation of the Project. There is no impact.

Chapter 4 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Expansion of District Distribution System Pipelines into Groundwater Service Area Lands Project (Project) in Kern County. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 4-1 presents the mitigation measures identified for the proposed Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of **Table 4-1** identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns would be used by AEWSD to ensure that individual mitigation measures have been complied with and monitored.

Table 4-1. Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Biological Resources					
BIO-1(a) Worker Environmental Awareness Program (WEAP):					
Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the construction area. The specifics of this program shall include identification of the sensitive species, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees shall sign a form provided by the trainer indicating they have attended the WEAP and understand the information presented to them.	Prior to construction	During nesting season	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	
BIO-1(b) General Wildlife Pre-construction Surveys:					
Pre-construction clearance surveys for all special-status wildlife species shall be conducted within 30 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat. The surveys shall cover the entire disturbance footprint plus a minimum 100-foot buffer within suitable habitat, where permissible, and should identify all special-status animal species that may occur on-site. Any non-listed special-status animals observed within the project area during the survey should be relocated by a qualified biologist to a safe location within suitable habitat as near to the project area as possible. If listed species that utilize burrows, such as blunt-nosed leopard lizard, Tipton kangaroo rat, and Nelson's antelope squirrel are detected during the preconstruction survey, all suitable burrows will be flagged for avoidance by a minimum distance of 50 feet, as described in BIO-1(c) below. If listed avian species, such as Swainson's hawk are detected during the preconstruction survey, active nests shall be protected with a disturbance-free buffer as described in BIO-1(f) below. If San Joaquin kit fox individuals or known or potential dens are detected during the preconstruction survey, dens will be monitored and protected with a disturbance-free buffer, as described in BIO-1(e) below. If complete avoidance of listed species and their nests, dens, or burrows is infeasible, the project proponent shall immediately contact CDFW and USFWS regarding incidental take permits.	Within 30 days prior to the start of construction (including staging and mobilization) in areas of suitable habitat	During ground disturbing activities	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
BIO-1(c) Focused Burrow Survey:					
Concurrent with the general wildlife pre-construction survey described above, a qualified biologist shall conduct a focused burrow survey within 30 days prior to the initiation of ground disturbance. All burrows within the proposed project pipeline alignments will be inspected for the potential presence of special-status animal species that utilize burrows, including American badger, Nelson's antelope squirrel, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin coachwhip, and coast horned lizard. If no special-status species are suspected to occupy any burrows within the project alignment, no further actions are required. If any special-status species, or their sign, are detected within burrows during the pre-construction burrow survey, then those burrows should be mapped and flagged for avoidance by minimum distance of 50 feet. If complete avoidance of burrows potentially occupied by a listed species is infeasible, the project proponent shall immediately contact CDFW and USFWS regarding incidental take permits.	Within 30 days prior to the initiation of ground disturbance	During ground disturbing activities	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	
BIO-1(d) Mitigation Measures for Burrowing Owl:					
A qualified biologist shall conduct pre-construction surveys prior to ground disturbance activities to confirm the presence/absence of burrowing owls. Pre-construction surveys shall be conducted during the appropriate time of day to maximize detectability within 30 days prior to construction and ground disturbance activities. If no burrowing owls are observed, no further actions are required. If burrowing owls are detected during the pre-construction clearance surveys, the following measures shall apply: • Avoidance buffers during the breeding and non-breeding season should be implemented in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993) minimization mitigation measures. • If avoidance of burrowing owls is not feasible, then additional measures such as passive relocation during the nonbreeding season should be implemented, in consultation with CDFW. In addition, a Burrowing Owl Exclusion Plan and Mitigation and Monitoring Plan will be developed by a qualified biologist in accordance with the CDFW (2012) and Burrowing Owl Consortium (1993).	Prior to ground disturbance activities	During ground disturbing activities	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	
BIO-1(e) Mitigation Measures for San Joaquin Kit Fox					
• *A pre-construction clearance survey for San Joaquin kit fox shall also be conducted not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities. The survey areas shall include the entire study area and all accessible undeveloped habitat within 200 feet, in accordance with the USFWS 2011 Standardized*	Not less than 14 days and not more than 30 days prior to the initiation of ground-disturbing activities	During ground disturbing activities	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. If any known or potential dens are detected, the den(s) shall be monitored for a minimum of three consecutive nights with remote-sensing cameras or tracking medium to evaluate current use. If San Joaquin kit fox use is observed, the den should be avoided by the recommended buffers outlined in the USFWS 2011 Standardized Recommendations, and the project proponent shall immediately notify USFWS and CDFW regarding incidental take permits. • *Construction activities shall adhere to the avoidance and minimization measures outlined in the USFWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance, outlined below:* o *Project-related vehicles should observe a 20-mph speed limit in all study areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction should be minimized. Off-road traffic outside of designated study areas should be prohibited.* o *To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2 feet deep should be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS should be notified within three days of the discovery.* o *All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in closed containers and removed at least once a week from a construction or project site.* o *No firearms or pets should be allowed on the project site.* o *Use of rodenticides and herbicides in study areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S.*					

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of proven lower risk to kit fox.					
BIO-1(f) Mitigation Measures for Swainson's Hawk, Cooper's Hawk, and Nesting Birds:					
Ground disturbance and vegetation removal activities shall be restricted to the non-breeding season (September 16 to January 31) when feasible. For ground disturbance and vegetation removal activities occurring during the bird nesting season (February 1 to September 15), general pre-construction nesting bird surveys shall be conducted by a qualified biologist (including for, but not limited to, Cooper's hawk and Swainson's hawk), within 30 days prior to the initiation of construction activities. Surveys shall include the disturbance area plus a 200-foot buffer for passerine species, a 500-foot buffer for raptors, and a 0.5-mile buffer for Swainson's hawk. If active nests are located, an appropriate avoidance buffer shall be established within which no work activity will be allowed which would impact these nests. The avoidance buffer would be established by the qualified biologist on a case-by-case basis based on the species and site conditions. In no cases should the buffer be smaller than 50 feet for non-raptor bird species or 200 feet for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. If State-listed threatened Swainson's hawks are documented nesting within 500 feet of construction activities, CDFW should be consulted on appropriate avoidance and minimization methods. The buffer area(s) should be closed to all construction personnel and equipment until juveniles have fledged and/or the nest is inactive. A qualified biologist should confirm that breeding/nesting is complete, and the nest is no longer active prior to removal of the buffer. If work within a buffer area cannot be avoided, then a qualified biologist will be present to monitor all project activities that occur within the buffer. The biological monitor will evaluate the nesting avian species for signs of disturbance and will have the ability to stop work.	Ground disturbance and vegetation removal activities shall be restricted to the non-breeding season (September 16 to January 31) when feasible. For ground disturbance and vegetation removal activities occurring during the bird nesting season (February 1 to September 15), general pre-construction nesting bird surveys shall be conducted by a qualified biologist (including for, but not limited to, Cooper's hawk and Swainson's hawk), within 30 days prior to the initiation of construction activities	Prior to ground disturbing activities and the start of construction	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	
BIO-2 Jurisdictional Delineation:					
The project shall be designed to avoid potentially jurisdictional aquatic features where feasible. If impacts to potentially jurisdictional features are unavoidable, the project proponent shall retain a qualified biologist to conduct a jurisdictional delineation to determine the extent of CDFW, USACE, and/or RWQCB jurisdiction. The delineation will be conducted in accordance with the requirements set forth by each agency. If the delineation determines that the project will result in impacts to	If impacts to potentially jurisdictional features are unavoidable	Prior to ground disturbing activities and the start of construction	AEWSD with assistance of a qualified biological subconsultant	By subconsultant report to AEWSD	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**
a water of the State, then the project proponent shall submit an application to RWQCB for a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature also falls under federal jurisdiction). If the delineation determines that the project will result in impacts to features considered within CDFW's jurisdiction, then the project proponent will submit a Notification of Lake or Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC. If the delineation determines that the project will result in impacts to a water of the U.S., the project proponent shall submit a permit application to USACE, pursuant to Section 404 of the CWA. The project proponent shall abide by all permit conditions, and compensatory mitigation for all impacts to waters of the U.S., waters of the State and features subject to CDFW jurisdiction shall be completed at the ratio required in the applicable permits.					
Cultural Resources					
CUL-1: Archaeological Resources					
In the event that archaeological resources are encountered at any time during development or ground-moving activities within the entire project area, all work in the vicinity of the find shall halt until a qualified archaeologist can assess the discovery. The District shall implement all recommendations of the archaeologist necessary to avoid or reduce to a less than significant level potential impacts to cultural resource. Appropriate actions could include a Data Recovery Plan or preservation in place.	During ground disturbing activities and in the event potential archaeological artifacts or resources are uncovered	Daily during ground disturbing activities	AEWSD with assistance of a qualified cultural subconsultant	By subconsultant /contractor reports to AEWSD	
CUL-2: Human Remains					
If human remains are uncovered, or in any other case when human remains are discovered during construction, the Kern County Coroner is to be notified to arrange proper treatment and disposition. If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC would then identify the Most Likely Descendent who would determine the manner in which the remains are treated.	During ground disturbing activities and in the event human remains are uncovered	Daily during ground disturbing activities	AEWSD with assistance of a qualified cultural subconsultant	By subconsultant /contractor reports to AEWSD, Kern County Coroner notification and report, and notification to NAHC, if applicable	

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Appendix A

CalEEMod Output Files

Appendix B

Biological Resources Assessment

Appendix C

Cultural Phase 1 Survey Report