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Initial Study & Mitigated Negative Declaration CEQA Report

South San Joaquin Municipal Utility District

Driver Road Pipeline Project

Prepared for:

South San Joaquin Municipal Utility District

October 2024

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South San Joaquin Municipal Utility District
Driver Road Pipeline Project

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October 14, 2024

Project No. 2201103

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Acronyms and Abbreviations

Acronym and Abbreviation	Description
µg/m 3	micrograms per cubic meter
AB	Assembly Bill
APE	Area of Potential Effect
BCE	Before Common Era
CAAQS	California Ambient Air Quality Standards
CALFIRE	California Department of Forestry and Fire Protection
CAL/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resource Boards
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CRHR	California Register of Historical Resources
CVP	Central Valley Project
CVRWQCB	California Valley Regional Water Quality Control Board
CY	cubic yards
DOC	California Department of Conservation
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FKC	Friant Kern Canal
FMMP	Farmland Mapping and Monitoring Program
FRAQMD	Feather River Air Quality Management District
FTA	Federal Transit Authority
GIS	Geographic Information System
IS	Initial Study
KCFD	Kern County Fire Department

Acronym and Abbreviation	Description
KCPW	Kern County Public Works
KCSO	Kern County Sheriff's Office
LF	Linear feet
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NO_X	oxides of nitrogen
NRCS	Natural Resources Conservation Service
PM	Particulate matter
PPV	Peak particle velocity
PRC	Public Resources Code
PVC	polyvinyl chloride
ROG	reactive organic gases
SEMS	Superfund Enterprise Management System
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SMAQMD	Sacramento Metropolitan Air Quality Management District
SR	State Route
SSJMUD	Southern San Joaquin Municipal Utility District
SSJVIC	Southern San Joaquin Valley Information Center
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UBC	California Uniform Building Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geologic Survey
VdB	vibration velocity decibels
VMT	vehicle miles traveled

1.0 Introduction

The Southern San Joaquin Municipal Utility District (SSJMUD or District) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of the proposed Driver Road Pipeline Project (project or proposed project). This Initial Study was prepared pursuant to the requirements of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the State CEQA Guidelines (14 California Code of Regulations 15000 et seq.).

1.1 Purpose of the Initial Study

CEQA requires state and local agencies to consider the environmental impacts of projects they propose to carry out or over which they have discretionary authority before implementing or approving those projects. The Initial Study is a tool used to evaluate a project's effect on the physical environment. The IS considers all phases of a project (planning, implementation, and operation) when evaluating environmental impacts. The IS responses to checklist questions informs the lead agency on the type and severity (significance) of a project's impact, facilitates identification of mitigation measures and design modifications to avoid or lessen those significant impacts, and guides decision on whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration.

If a project, either individually or cumulatively, is found to have a potentially significant or significant impact, an EIR must be prepared (CEQA Guidelines, CCR Section 15064[a]). If the agency determines impacts would be less than significant, or that mitigation measures would reduce impacts to a less than significant level, a Negative Declaration (ND) or MND can be prepared. In the event an EIR is required, the findings would be used to focus the EIR contents.

In order to foster public involvement and informed decision-making, CEQA requires an IS to be circulated for review and comment by interested agencies and stakeholders. Comments on the project's environmental impacts must be considered by a lead agency during the decision to approve or deny the project.

1.2 Summary of Findings

Chapter 3, Environmental Checklist, of this document contains the analysis and discussion of potential environmental impacts of the proposed project. The checklist responses determined the project would result in no impacts on the following issue areas:

- Aesthetics
- Land Use and Planning
- Mineral Resources
- Population and Housing

- Public Services
- Recreation
- Wildfire

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

- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Transportation
- Utilities and Service Systems

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

- Biological Resources
- Cultural Resources
- Geology and Soils
- Tribal Cultural Resources
- Mandatory Findings of Significance

1.3 Document Organization

This document is divided into five key sections:

Chapter 1 Introduction describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS.

Chapter 2 Project Description identifies the project location and background, project objectives, project characteristics, construction activities, operations, and discretionary approvals required.

Chapter 3 Environmental Checklist presents an analysis of environmental issues and determines whether project implementation would result in a beneficial impact, no impact, less-than significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact, on the physical environment in each issue area.

Chapter 4 References Cited lists the references used to prepare this IS.

Chapter 5 Report Preparers identifies individuals who helped prepare or review this document.

2.0 Environmental Setting

This chapter describes the project location and background, objectives, funding, project components and operations, construction activities, and approvals that may be required.

2.1 Project Location and Background

2.1.1 Project Location

The project is located east of the City of Delano, in unincorporated Kern County, California, and is approximately 30 miles northwest of the City of Bakersfield (**Figure 2-1**). The project would be constructed approximately 2 miles east of State Route (SR) 99. The pipeline would run 0.9 mile south on Driver Road and 0.25 mile west on 9th Avenue. The project starting latitude and longitude is 35°46'59.3"N, 119°12'19.2"W and ending at 35°46'07.1"N, 119°12'35.1"W. Specific project features and alignment of the pipeline are shown in **Figure 2-2**.

2.1.2 District History and Operations

The District was formed in 1935 to obtain and deliver surface water supplies for agricultural use within its service area. The District is in the Central Valley Project (CVP's) Friant Division and receives water via the Friant Kern Canal (FKC) under contract with the United States Bureau of Reclamation (Reclamation). Current District CVP contract supplies are detailed in **Table 2-1**.

Table 2-1. Existing District CVP Contact Supplies

Water Supply	Annual Contracted Allocation (Acre-Feet)
CVP – Class 1	97,000
CVP – Class 2	45,000
Total	**142,000**

Source: GEI 2024

Over time, improved wells and CVP facility construction have supported a change from livestock focused agriculture to irrigated crops within the District. During wet years, the District could receive 100 percent of the 142,000 acre-feet of allocated water from both CVP contracts plus additional flood water if the conveyance capacity of the Friant-Kern Canal was at original, full capacity. In wet years, the District's contracted supplies exceed the volume of water needed to serve its irrigation demands, which are roughly 110,000 acre-feet. Due to the lack of existing groundwater recharge facilities, during wet years, the District may need to forego taking delivery of approximately 32,000 acre-feet of contract water supply plus available, un-storable flood water. During dry years, when CVP allocations are reduced, CVP surface water supplies are rarely able to meet irrigation demand, and growers within the District must pump groundwater to adequately irrigate their crops. See **Table 2-2** for historical deliveries from the FKC to the District.

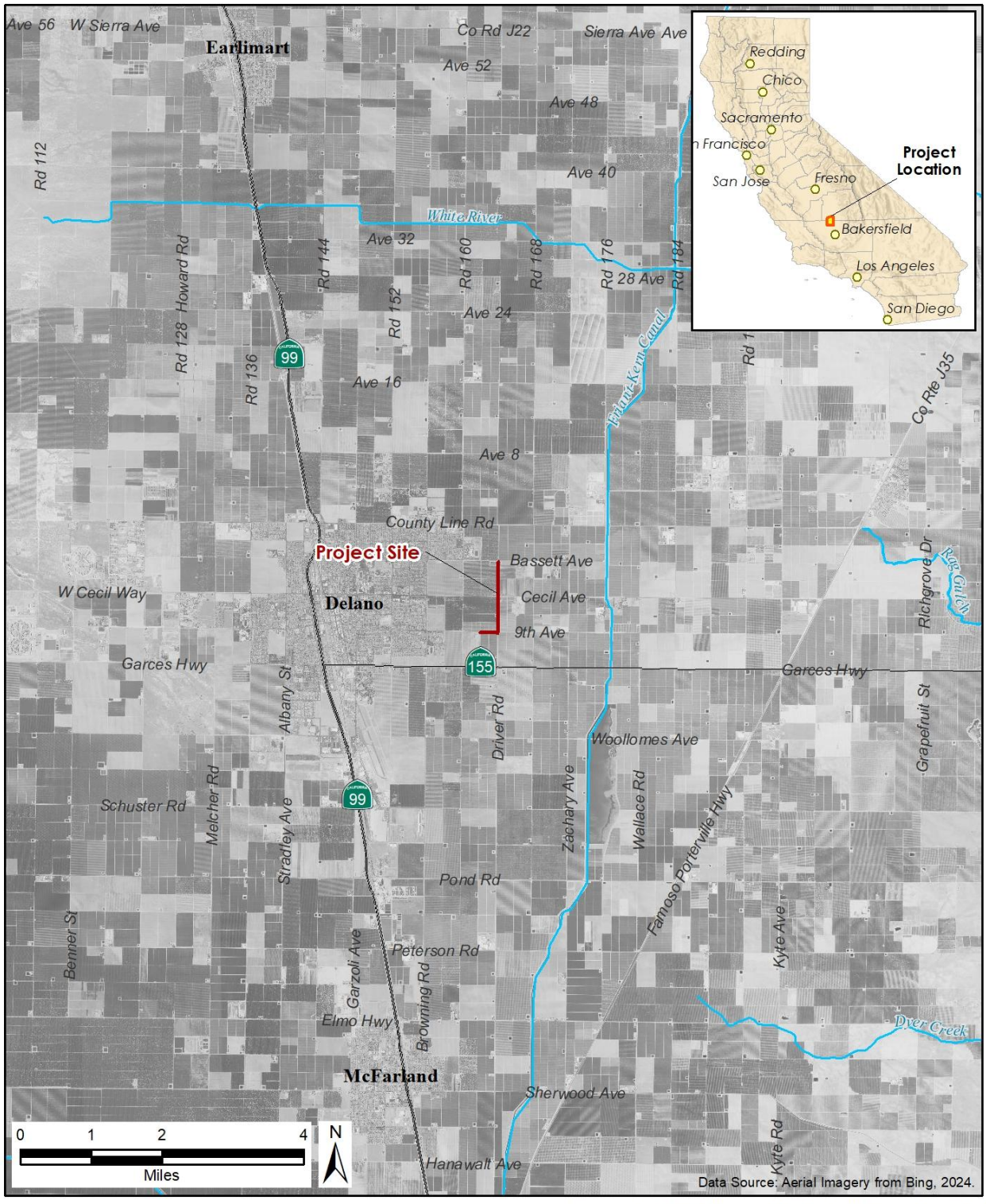

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Figure 2-1. Regional Location

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Figure 2-2. Project Location

Table 2-2. Historical Diversions from the Friant Kern Canal

Source	Average	2015	2016	2017	2018	2019	2020	2021	2022
CVP, Diversions from Friant Kern Canal	62,512	3,318	73,206	113,196	97,957	104,171	81,240	28,884	56,445

2.1.3 Groundwater Recharge Activities and Constraints

Severe statewide drought conditions between 2014-2015 reduced surface water supplies. However, between 2016-2017, CVP operations showed a spill within the Friant Division, meaning excess water supplies available to the District were recharged and stored in agreements outside of the District. However, without a developed groundwater recharge system within the District boundary, the District is unable to take advantage of the available contract water supply in excess of irrigation demand and store the water underground for future use in times of drought. Climate change may reduce surface water supply reliability as a result of more extreme drought and flood cycles. For this reason, it is important that the District make use of underground storage of wet year contract water to prepare and manage for drought years.

The District's spreading basins already constructed include Giumarra, City of Delano, Reagan, and SSJMUD In-District spreading basins (adjacent to the City of Delano). These spreading basins are part of the District's overall efforts to improve in-district Groundwater Recharge Facilities and have the capacity to recharge up to 10,000 acre-feet per year of CVP contracted water delivered via the Friant-Kern Canal. Conjunctive use is practiced by the District and neighboring districts to increase resilience during drought years. Persistent shortfalls of CVP allocations, conveyance limitations for CVP allocations, and subsequent groundwater pumping have led to decreased groundwater elevations and an increase in the cost of overall surface supplies. The District and other agencies have used existing groundwater recharge facilities in nearby districts to offset these effects. However, North Kern Water Storage District does not yet have infrastructure, capacity, and resources to return stored water to SSJMUD to meet their needed return capacity during peak irrigation season.

2.2 Project Objectives

Proposed project objectives include the following:

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

2.3 Project Funding and Water Savings

The project would be funded by a Reclamation WaterSMART Drought Response Program Grant (Tracking Number: R-DO-2024-004819).

2.4 Project Components

2.4.1 Pipelines

The proposed project would include installation of approximately 0.9-mile of 36-inch diameter polyvinyl chloride (PVC) pipeline along Driver Road, from Bassett Avenue to 9th Avenue, and would increase conveyance capacity to existing District=owned recharge ponds and continue to serve irrigation demands. The pipeline would be installed within a single trench that would be approximately 4-feet-wide and 7.5-feet-deep. The existing SSJMUD pipeline would be abandoned in-place. Two road crossings would be constructed. The first crossing would be constructed across Cecil Avenue via jack and bore, the second crossing would be constructed across 9th Avenue via open trench. Additionally, Tee pipeline connections (36" x 8" x 36") would be installed at three locations along the 36-inch diameter pipeline, including one location near the intersection of Driver Road and Basset Avenue, and two at locations along Driver Road (Figure 2-2). These turnout connections would serve adjacent growers.

Additionally, the proposed project includes replacing an approximately 0.25-mile portion of the existing 15-inch diameter pipeline on 9th Avenue with a 24-inch diameter PVC gravity pipeline to increase conveyance capacity to deliver surface water supplies to the existing District owned recharge ponds. This pipeline would be constructed within a trench approximately 3-feet-wide and 5-feet-deep. Both pipelines would convey water obtained from the Friant Kern Canal (FKC), significantly enhancing water supply reliability and drought resiliency by increasing capacity to capture an additional 4,169 acre-feet per year of wet year water for recharge.

The construction corridor for the 36-inch pipeline would be approximately 50-feet wide to accommodate trenching, access, equipment, and material, and the 24-inch pipeline would require an approximately 30-foot-wide corridor. Impact areas are summarized in **Table 2-3**. A designated staging area would be located at the intersection of Bassett Avenue and Driver Road. However, equipment and material staging would also occur along the construction corridor and other disturbed areas, such as roadways and agricultural field margins.

Table 2-3. Project Footprint Characteristics

	Project Footprint Length (Feet)	Project Footprint Width (Feet)	Project Footprint Area (Acres)	Excavation Area Length (Feet)	Excavation Area Width (Feet)	Excavation Area (Acres)
36-inch diameter Pipeline	4752	50	5.45	4752	4	0.44
24-inch diameter pipeline	1320	30	0.91	1320	3	0.09
Turnouts	72	30	0.49	72	1.5	<0.01

Source: GEI Consultants, Inc. 2024

2.4.2 Turnouts

Three turnouts would be replaced as part of the proposed project as shown in Figure 2-2. All three turnouts would be constructed along the 36-in diameter pipeline along Driver Road and

would connect to existing grower irrigation systems via a total of 72 linear feet of 8-inch diameter pipes.

At each turnout, the proposed project would replace the existing turnout with new pipe, meter, and valves by excavating trenches approximately 1.5-feet-wide and 7-feet-deep and removing the turnout components. Impact areas are summarized in Table 2-3. The trench bottom would be prepared by compacting a bed prior to installation of new pipe. An on/off control valve, air release valve, and a water meter would be installed at each turnout. Each turnout would be connected to the existing grower's irrigation system.

Turnouts would be installed by District staff. The turnout connections would be constructed soon after the contractor crew has installed the 36-inch diameter pipeline with Tees for making the turnout connections. The construction corridor for the turnouts would be 30 feet wide. Once installation is complete, trenches would be backfilled and graded to match the existing ground surface.

2.5 Project Implementation

The proposed project would consist of construction of the proposed pipeline. This section describes the characteristics associated with the construction (including demolition) and O&M phases of the proposed project.

2.5.1 Construction Phase Characteristics

Construction Schedule and Sequencing

Construction of the project would start in Fall 2024 and would continue over approximately 120 workdays. In accordance with the Kern County Municipal Code Chapter 8.36 "Noise Control," construction activity would typically occur between the hours 6 a.m. and 9 p.m., Monday through Friday, and 8 a.m. and 6 p.m. on weekends. **Table 2-4** summarized the proposed construction activities, their estimated durations, equipment mix, maximum number of workers required, and import and export quantities.

Table 2-4. Construction Activity Overview

Construction Activity	Anticipated Types of Equipment and Number of Pieces	Anticipated Use Duration (days)	No. of Workers Required	Import Quantity	Export Quantity
Excavation	Front-end loader (1) Excavator (1) Backhoe (1) Water Truck (1) Sweeper Machine (1) Pickup Truck (3)	90	6	-	-
Removal of Existing Pipe	Excavator (1) Front-end Loader (1) Dump Truck (1)	3	3	-	1,382 CY

Construction Activity	Anticipated Types of Equipment and Number of Pieces	Anticipated Use Duration (days)	No. of Workers Required	Import Quantity	Export Quantity
Installation of New and Replacement Pipe including Backfilling	Front-end loader (1) Excavator (1) Backhoe (1) Compacting Equipment (1) Water Truck (1) Sweeper Machine (1) Pickup Trucks (3)	90	6	6,630 LF of pipeline	-
Turnout Connections	Front-end loader w/backhoe (1) Dump truck (1) Pickup Truck (1)	8	5	Pipe, meter, and valves for turnout	Haul old pipe, meter, and valves to district yard

Source: GEI Consultants, 2024

Construction Equipment and Personnel

Table 2-4 lists the construction activities, and the types and number of equipment anticipated to be used for each project activity, however, this is not indicative of the total amount of equipment that would be operated onsite at any given time. The number of construction personnel would vary depending on project activities. Construction workers would most likely come from the local workforce in Kern County.

2.6 Operation and Maintenance

Following construction activities, pipeline maintenance would be similar to activities that occur as part of the District's ongoing facility maintenance, with some changes in servicing and maintenance trips by staff. District staff are regularly onsite on adjacent lands for operations and maintenance activities of existing project facilities in the area. Therefore, it is anticipated that inspection and maintenance activities for the proposed project would primarily be coordinated and combined with existing maintenance trips. Long-term vegetation removal/maintenance would not occur as part of the project.

2.7 Regulatory Requirements, Permits, and Approvals

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

- **U.S. Department of the Interior, Bureau of Reclamation.** Approval of grant funding.

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3.0 Environmental Checklist

Project Information

1. Project title:	Driver Road Pipeline
2. Lead agency name and address:	SSJMUD
3. Contact person and phone number:	Roland Gross, 661-725-0610
4. Project location:	Kern County
5. Project sponsor's name and address:	Same as lead agency
6. General plan designation:	Intensive Agriculture
7. Zoning:	Exclusive Agriculture
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project includes installation of approximately 0.9-mile of 36-inch diameter PVC pipeline along Driver Road, from Bassett Avenue to 9th Avenue, and replacing an approximately 0.25-mile portion of the existing 15-inch diameter pipeline on 9th Avenue with a 24-inch diameter PVC gravity pipeline. Additionally, the project includes replacement of three turnouts located along the 36-inch diameter pipeline along Driver Road.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The project site is located just outside of the Delano city limits, surrounded by agricultural production.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)	Bureau of Reclamation
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.	Yes. Please refer to Section 3.18 "Tribal Cultural Resources."

Environmental Factors Potentially Affected

The environmental factors listed as "Yes" in the table below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

Determination (to be completed and signed by the Lead Agency)

On the basis of this initial evaluation:	**Yes or No?**
I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	
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 _____

Print Name _____ Title _____

Agency _____

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (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 will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for a significant impact to any resource category from project operations and maintenance of the existing and proposed facilities.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less-than-significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required. “Beneficial impact” is also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.

4. “Less-than-Significant Impact with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a “Less-than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:

    5-a. Earlier Analysis Used. Identify and state where they are available for review.

    5-b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    5-c. Mitigation Measures. For effects that are a "Less-than-Significant Impact with Mitigation Measures Incorporated," describe the mitigation measures which were

incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

    9-a. the significance criteria or threshold, if any, used to evaluate each question; and

    9-b. the mitigation measure identified, if any, to reduce the impact to less than significance.

Significance thresholds are identified for certain resources, but others are not explicitly identified because there is clearly no impact, or the checklist question itself serves as the significance threshold.

3.1 Aesthetics

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

3.1.1 Environmental Setting

The project site is located east of SR 99, just outside of the City of Delano, in unincorporated Kern County. The project site is zoned Exclusive Agriculture (Kern County GIS 2023). The project area is flat and is comprised of dirt roads, open water canals, and various agricultural crops. There are no designated scenic highways within the vicinity of the project site (Caltrans 2019). The Kern County General Plan does not establish any scenic vistas (Kern County 2009).

3.1.2 Discussion

a and b) Have a substantial adverse effect on a scenic vista? Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

There are no significant view-sheds, scenic vistas, or scenic highways located in the vicinity of the proposed project. Therefore, the project would have **no impact**.

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?

The project includes the construction of approximately 1.15 miles of pipeline and 72 feet of turnout. During construction, several vehicles and equipment would be onsite which could impact scenic views; however, the project would be constructed in a predominantly rural, undeveloped area of Kern County that does not have any scenic viewsheds. Following the completion of construction activities, all construction-related equipment would be removed and there would be no long-term changes to the visual appearance as the pipelines would be constructed underground. Additionally, turnouts are already present and the project only proposed replacement. Therefore, the project would not change existing public views. 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?

The project does not include nighttime work, nor would it create a new source of light or glare as all project features would be buried underground. There would be **no impact**.

3.2 Agriculture and Forestry Resources

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

3.2.1 Environmental Setting

The project site is zoned Exclusive Agriculture (Kern County GIS 2023). The California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) identifies lands that have agricultural value and maintains a Statewide map of agricultural lands in its Important Farmland Inventory System (DOC 2004). The Important Farmland Inventory System classifies land based upon its productive capabilities, which is based on characteristics such as fertility, slope, texture, drainage, depth, salt content, and availability of water for irrigation. The DOC monitors the conversion of farmland to and from agricultural use through its Important Farmland Inventory. Farmlands are divided into the following categories: Prime Farmland; Farmland of Statewide Importance; Unique Farmland; Farmland of Local Importance; Grazing Land; Urban and Built-up Land; and Other Land. The project site is considered Prime Farmland by the FMMP, defined as "irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops (DOC 2020). This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The Farmland in the City of Delano, adjacent to the project area, is largely used for orchard fruits, grapes, almonds, cotton and corn, with agriculture comprising a large amount of local employment (City of Delano 2005).

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. The project site is adjacent to parcels that are under Williamson Act contracts (DOC 2023).

Public Resources Code (PRC) Section 12220(g) defines "forest land" as land that can support 10 percent native tree cover and forest vegetation of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. The project site is not located in an area that meets the definition of forest land as it does not contain trees cover or forest vegetation.

3.2.2 Discussion

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?

The project site is on land designated as Prime Farmland by the FMMP. However, the pipelines and turnouts would be constructed on bare land along the agricultural edges, typically used for maintenance and vehicle movement, and therefore, would not directly overlap with agricultural production, although the construction and staging areas would be temporarily disturbed during construction. Upon completion of the project, all construction equipment would be removed, and the trenches would be backfilled and restored to pre-construction grading conditions to match the surrounding area. The proposed project would not impact agricultural production. Therefore, the impact is **less than significant.**

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

As described above, the proposed project would temporarily impact bare land along agricultural edges during construction but would not result in a conflict with ongoing agricultural use. Since the proposed project would not interfere with agricultural production, it would not be in conflict with a Williamson Act contract. This impact would be **less than significant**.

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

The project site is not designated or zoned as forest land, timberland, or timberland zoned as timberland production, therefore, no loss or conversion of forest land to non-forest land would result from the proposed project. There would be **no impact**.

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?

As discussed previously, there is no forest land on the project site and the purpose of the proposed project is to improve water conveyance and drought resiliency, which would benefit agricultural production. The proposed project would not impact farmland to such a degree that the land would be converted to non-agricultural use. Implementation of the proposed project would be on the outer edges of the parcels zoned as agriculture and would not interfere with crop production. Disturbance from construction activities would include use of heavy equipment, ground-disturbance, and staging of equipment, and would not be substantially different that normal agricultural operations or water infrastructure maintenance equipment common to the area. Therefore, this impact is considered **less than significant**.

3.3 Air Quality

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

3.3.1 Environmental Setting

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

The Federal Clean Air Act and California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resource Boards (CARB) to establish health-based air quality standards at the federal and state levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. Areas of the state are designated as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal Clean Air Act and California Clean Air Act.

An "attainment" designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A "maintenance" designation indicated that the area previously categorized as nonattainment is currently categorized as attainment for the applicable pollutant; though the area must demonstrate continued attainment for a specific number of years before it can be re-designated as an attainment area. An "unclassified" designation signifies that data does not support either an

attainment or a nonattainment status. The EPA established NAAQS in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. CAAQS and NAAQS are listed in **Table 3-2**.

Table 3.3-1. Federal and California Ambient Air Quality Standards and Attainment Status.

Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O_3)	8-hour	0.070 parts per million. (137 micrograms per cubic meter).	0.070 parts per million (137 micrograms per cubic meter.) (See Note #1.)
	1-hour	0.09 parts per million. (180 micrograms per cubic meter).	(None; see Note #2.)
Respirable Particulate Matter (PM_{10})	24-hour	50 micrograms per cubic meter.	150 micrograms per cubic meter.
	Annual Arithmetic Mean	20 micrograms per cubic meter.	(None.)
Fine Particulate Matter ($PM_{2.5}$)	24-hour	(None.)	35 micrograms per cubic meter.
	Annual Average	12 micrograms per cubic meters.	12 micrograms per cubic meter.
Carbon Monoxide	8-hour	9 parts per million. (10 milligrams per cubic meter.)	9 parts per million. (10 milligrams per cubic meter).
	1-hour	20 parts per million. (23 milligrams per cubic meter).	35 parts per million. (40 micrograms per cubic meter).
Nitrogen Dioxide	Annual Average	0.03 parts per million. (57 micrograms per cubic meters.)	0.053 parts per million. (100 micrograms per cubic meters.)
	1-hour	0.18 parts per million. (339 micrograms per cubic meters.)	0.100 parts per million. (188 micrograms per cubic meters.)
Lead	30-day Average	1.5 micrograms per cubic meters.	(None.)
	Rolling 3-Month Average	(None.)	0.15 micrograms per cubic meter.
	Quarterly Average	(None.)	1.5 micrograms per cubic meter.
Sulfur Dioxide	24-hour	0.04 parts per million. (105 micrograms per cubic meter.)	0.14 parts per million (for certain areas)
	3-hour	(None.)	(None.)
	1-hour	0.25 parts per million. (655 micrograms per cubic meter.)	0.075 parts per million. (196 micrograms per cubic meter.)
Sulfates	24-hour	25 micrograms per cubic meter.	No Federal Standard.
Hydrogen Sulfide	1-hour	0.03 parts per million. (42 micrograms per cubic meter.)	No Federal Standard.
Vinyl Chloride	24-hour	0.01 parts per million. (26 micrograms per cubic meter.)	No Federal Standard.

Notes:

#1. On October 1, 2015, the national 8-hour ozone (O_3) primary and secondary standards were lowered from 0.075 to 0.070 ppm.

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

Source: SJVAPCD 2024, EPA 2024

Under the NAAQS, Kern County is designated as extreme nonattainment for 8-hour ozone, and nonattainment for $PM_{2.5}$. Under CAAQS, Kern County is designated nonattainment for ozone, PM_{10}, and $PM_{2.5}$ (SJVAPCD 2024). The SJVAPCD has established thresholds of significance for criteria air pollutants as shown in **Table 3.3-2**.

Table 3.3-2. SJVAPCD Air Quality Thresholds of Significance for Criteria Air Pollutants

Criteria Air Pollutant	Construction and Operational Emissions (tons per year)
CO	100
NO_x	10
ROG	10
SO_x	27
PM_{10}	15
$PM_{2.5}$	15

Source: SJVAPCD 2015

3.3.2 Discussion

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

Project construction would temporarily generate criteria air pollutant emissions from exhaust associated with on-site equipment operation, material hauling, and worker vehicle trips, as well as fugitive dust from ground-disturbing activities. O&M activities would be minimal and result in negligible emissions from truck trips. Construction-related emissions were modeled using the California Emissions Estimator Model (CalEEMod) (see **Appendix A**, "Air Quality and Greenhouse Gases Data"). **Table 3.3-3** provides estimates of unmitigated annual construction-related pollutant emissions, based on maximum anticipated material hauling, equipment usage, and numbers of workdays described in Section 2.5 "Project Implementation."

Table 3.3-3. Estimated Construction-related Criteria Pollutant Emissions

Construction year	PM2.5 (tons per year) unmitigated/mitigated	PM10 (tons per year) unmitigated/mitigated	NOx (tons per year) unmitigated/mitigated	ROG (tons per year) unmitigated/mitigated
Year 1 (2024)	0.02	0.02	0.45	0.05
SJVAPCD Threshold	15	15	10	10
Exceeds Threshold?	No	No	No	No
Year 2 (2025)	0.02	0.01	0.32	0.03
SJVAPCD Threshold	15	15	10	10
Exceeds Threshold?	No	No	No	No

Notes: ROG=reactive organic gases; NO_x=oxides of nitrogen; PM_{10}=particulate matter with aerodynamic diameter less than 10 micrometers; FRAQMD=Feather River Air Quality Management District

The project would not exceed SJVAPCD thresholds of significance for criteria air pollutant emissions. Additionally, minimal additional emissions would be generated during operations given the infrequent maintenance required and the ability to coordinate and combine maintenance trips with existing maintenance trips. However, the District is required to comply with SJVAPCD Regulation VIII "Fugitive PM_{10} Prohibition," which requires actions to prevent, reduce, or mitigate anthropogenic fugitive dust emissions (SJVAPCD 2015). Regulation VIII specifies the following measures to control fugitive dust:

- Apply water to unpaved surfaces and areas
- Use non-toxic chemical or organic dust suppressants on unpaved roads and traffic areas
- Limit or reduce vehicle speed on unpaved roads and traffic areas
- Maintain areas in a stabilized condition by restricting vehicle access
- Install wind barriers
- During high winds, cease outdoor activities that disturb the soil.
- Keep bulk materials sufficiently wet when handling
- Store and handle materials in a three-sided structure
- When storing bulk materials, apply water to the surface or cover the storage pile with a tarp
- Don't overload haul trucks. Overloaded trucks are likely to spill bulk materials
- Cover haul trucks with a tarp or other suitable cover. Or, wet the top of the load enough to limit visible dust emissions
- Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site
- Prevent trackout by installing a trackout control device
- Clean up trackout at least once a day. If along a busy road or highway, clean up trackout immediately
- Monitor dust-generating activities and implement appropriate measures for maximum dust control

Additionally, for construction projects that disturb equal to or greater than 1-acre of surface area (total project disturbance is 6.85 acres), the District recommends compliance with a District approved Dust Control Plan or Construction Notification form, before issuance of the first grading permit.

The project would not result in criteria air pollutants above the SJVAPCD threshold of significance. Additionally, implementing Regulation VIII specified measures, as well as compliance with a District approved Dust Control Plan or Construction Notification form, would

further reduce criteria air pollutants. Therefore, the project would result in a **less-than-significant** impact.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project's air quality impacts. These people include children, older adults, any person with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

During construction, most PM emissions are released in the form of fugitive dust during ground disturbance activities. PM emissions are also generated in the form of equipment exhaust and re-entrained road dust from vehicle travel. Impacts from PM emissions would be temporary and would go back to pre-project conditions after completing the construction phase of the proposed project. Additionally, the project area is remote in nature, with only one nearby rural residence located immediately adjacent to the project site, at the intersection of Driver Road and Cecil Avenue. The District would comply with Regulation VIII "Fugitive PM_{10} Prohibitions," and would not result in long-term exposure of substantial pollutant concentrations. Therefore, the project would result in a **less-than-significant** impact.

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

Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory, and respiratory reactions, nausea, vomiting, headaches). The construction of the pipelines would not generate any odor that would adversely affect a substantial number of people. There would be **no impact**.

3.4 Biological Resources

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

3.4.1 Environmental Setting

Information presented in this environmental setting is based on review of biological resource databases and publications, observations made during a biological field survey conducted by GEI Consultants, Inc. in June 2024, and information gathered for previous District projects.

3.4.1.1 Habitat and Land Cover Types

The project site and surrounding areas are almost entirely comprised of agricultural land (primarily orchard) and associated facilities, and rural residences. All orchards are actively cultivated or maintained, and road shoulders are compacted and barren. Two detention basins occur east of Driver Road at the corners of Bassett Avenue and Cecil Avenue; these basins were dry and surrounded by partially burned ruderal vegetation at the time of the survey. One detention basin west of Driver Road between Cecil Avenue and 9th Avenue contained water at the time of the survey; this basin and the immediately surrounding area are barren of vegetation. Inundation of all three basins in recent years is evident on aerial imagery from Google Earth®. An existing storage area on the southwest corner of Driver Road and Bassett Avenue is proposed for equipment staging during project construction; this area is heavily disturbed and was also barren of vegetation at the time of the field survey.

Ruderal vegetation occurs predominately east of Driver Road along the boundary of the project site. Portions of detention basins east of Driver Road also support ruderal vegetation. These ruderal areas consist of non-native annual grasses and forbs common to this habitat in the region, including wild oat (*Avena fatua*), bristly ox-tongue (*Helminthotheca echioides*), sprangletop (*Leptochloa panicea*), alfalfa (*Medicago sativa*), rabbitsfoot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), horse nettle (*Solanum eleagnifolium*).

Open water habitat occurs in the detention basins. Water is present in one of the basins throughout the year.

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under CEQA, California Fish and Game Code, California Endangered Species Act, Federal ESA, the CWA, and Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

For purposes of this analysis, special-status species include plants and animals in one or more of the following categories:

- Taxa (i.e., taxonomic categories or groups) officially listed, candidates for listing, or proposed for listing under ESA or CESA as endangered, threatened, or rare
- Taxa that meet the criteria for listing, even if not currently included on any list, as described in State CEQA Guidelines California Code of Regulations Section 15380
- Wildlife identified by CDFW as species of special concern
- Species listed as Fully Protected under the CFGC
- Plant taxa considered by CDFW to be "rare, threatened, or endangered in California (i.e., List 1B and 2B plants)

The California Natural Diversity Database (CNDDB) (CDFW 2024) and online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2024) were reviewed for information on special-status plants and animals that have been documented in the project vicinity. These reviews included the *Delano East, Delano West, Deepwell Ranch, Ducor, Richgrove, McFarland, Pixley, Pond,* and *Sausalito School* U.S. Geologic Survey 7.5-minute quadrangles. A list of resources under USFWS jurisdiction that could occur in the project vicinity was obtained from the Information for Planning and Conservation website (USFWS 2024a). Database search results and the USFWS species list are provided in **Appendix B, "Biological Database Results."** A summary of the relevant results is presented below.

Plants

Special-status plants included in the CNDDB and/or online Inventory of Rare and Endangered Vascular Plants of California search results were evaluated for their potential to occur on the project site (the USFWS species list did not include any plants). All of these species are restricted to alkaline soils or scrub, grassland, or wetland habitat types. Based on observations made during the field surveys, no special-status plants have potential to occur on or adjacent to the project sites, because no suitable habitat for them is present.

Wildlife

Special-status wildlife taxa included in the CNDDB search results and/or on the USFWS species list were evaluated for potential to occur on or adjacent to the project site. As with the plant species, most of these species were determined to have no potential to occur because of restricted distribution, lack of suitable habitat, or limited dispersal distances. For example, ruderal habitat is not suitable for species sensitive invertebrates such as vernal pool fairy shrimp (*Branchinecta lynchi*) and western pond turtle (*Actinemys marmorata*) that occur in wetlands, and crotch bumble bee (*Bombus crotchii*), and blunt-nosed leopard lizard (*Gambilia sila*) that occurs in grassland and open scrubland with suitable food plants. Similarly, the project site does not provide nectar habitat for monarch butterfly (*Danaus plexippus*) and is very unlikely to provide suitable larval host plants; no monarchs or host plants are known from the region (Xerces Society, et al. 2024). Lastly, fallowed agricultural fields with ruderal vegetation do not provide suitable habitat of San Joaquin coachwhip (*Masticophis flagellum ruddocki*), coast horned lizard (*Phrynosoma blainvillii*), and Bakersfield legless lizard (*Anniella grinnelli*).

In addition, the project site is outside the current range of Kern brook lamprey (*Lampetra hubbsi*) and Buena Vista Lake ornate shrew (*Sorex ornatus relictus*). Species with potentially suitable habitat occurring on or adjacent to the project site were evaluated in further detail and are discussed below.

Amphibians

One special-status amphibian, the Western spadefoot, had moderate potential to occur in the project site and can be found in ephemeral aquatic features and upland agricultural fields. Western spadefoot is Federally proposed threatened and a California Species of Special Concern. There are several occurrences of western spadefoot documented in the CNDDB (CDFW 2024) from Kern County and several unprocessed CNDDB reported occurrences from approximately

3.5 miles southwest of the project site. The nearest and most recent known occurrence of Western spadefoot is from a barren roadside swale adjacent to the FKC approximately 2 miles northeast of the project site (CDFW 2024).

Reptiles

The CNDDB does not include any recent occurrences of reptiles in the project vicinity. Nearby occurrences are from many decades ago, and more recent occurrences are primarily from remnant valley floor natural habitat and foothill grasslands. Habitat conditions suitable for special-status reptiles are absent in the project vicinity.

Birds

Three special-status bird species have low to moderate potential to occur on or adjacent to the project site: burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsonii*), and tricolored blackbird (*Agelaius tricolor*). Swainson's hawk is State-listed as threatened; tricolored blackbird is State-listed as threatened and burrowing owl is a California Species of Special Concern. Potentially suitable habitat for burrowing owl is limited to uncultivated fields and ruderal habitat adjacent to the project site. No suitable nesting habitat for tricolored blackbird was present on or adjacent to the project site during the field surveys. However, if grain crops or extensive areas of tall ruderal vegetation (e.g., in the fallow fields) are present on or near the project site during project activities, there is some potential for these species to nest in such habitat. Large trees within one mile of the project provide marginally suitable nest sites for Swainson's hawk (as well as common raptor species), although this species is not known to nest in this area. Kern County is at the south end of the Swainson's hawk breeding range, and the species occurs sparsely in this region.

Mammals

Two special-status mammals were evaluated further for potential to occur on or adjacent to the project site: American badger (*Taxidea taxus*) and San Joaquin kit fox (*Vulpes macrotis mutica*). San Joaquin kit fox is Federally listed as endangered; this species occurs primarily in grasslands and sparsely vegetated shrublands with loose-textured soils but is also known from agricultural and urban areas. Most CNDDB occurrences from the region were documented in the 1970s; three known occurrences of San Joaquin kit fox documented within 2.5 miles of the project site. One documented occurrence from 2005 of a known den, burrows, scat, and prey remains was observed in a fallow agricultural field approximately 1.8 miles south of the project site. Two known occurrences documented almost 50 years ago included roadkill and a sighting of kit fox crossing a road approximately 1.5 miles northwest and 2.3 miles southwest of the project site, respectively. There are no known occurrences overlapping the project site (CNDDB 2024). The American badger is listed as a California Species of Special Concern. American badger occurs primarily in dry, open washes and streams with friable soils and uncultivated ground; badgers frequently reuse old burrows but also often dig new dens. There are no CNDDB occurrences for these species within 5 miles of the project site, and most occurrences in the larger region are restricted to remnant valley floor natural habitat and/or foothill grasslands. Tipton kangaroo rat and Tulare grasshopper mouse were determined to not have potential to occur on or adjacent to

the project site due to their apparent absence from the project vicinity, lack of suitable on-site habitat, and limited dispersal distances. Additionally, ground squirrel burrows were absent in ruderal habitat during the field surveys.

Sensitive Habitats

No critical habitat for Federally listed species or State-designated natural communities of special concern are present on or adjacent to the project site (USFWS 2024b). Because the nearby detention basins are used solely for irrigation storage and do not have a significant nexus to traditionally navigable waters, they do not qualify as potentially jurisdictional waters of the United States and are not protected under the Clean Water Act.

3.4.2 Discussion

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

Based on observations made during the field survey, habitat for special-status plants is absent from the project site, and no special-status plants have potential to occur on or adjacent to the project site. Therefore, there would be no impact on special-status plants.

Based on the review of existing documentation, habitat requirements of each species, and habitat evaluations made during field survey, most of the wildlife species also have no potential to occur on or adjacent to the project site. Because the project site does not support natural vegetation or aquatic habitat, suitable habitat for most of the species considered is absent. Despite the poor habitat conditions for most wildlife species, several have some low degree of potential to occur on or near the project site. These species are discussed further below. No special-status wildlife species were observed during the field surveys.

Special-status amphibians. Western spadefoot has potential to occur in the project vicinity. Western spadefoot emerge from their burrows to forage and breed in ephemeral pools following seasonal rains in winter and spring. No burrows were identified on or adjacent to the project site during the field surveys. However, if the nearby detention basins contain water during the breeding season (December to March) and the fallowed fields remain uncultivated during project activities, there is potential for the western spadefoot to disperse into the project site. Additionally, ground disturbing activities could cause damage to burrows, or result in take of individual spadefoot would be considered a **significant** impact. The following mitigation measures have been identified to address this impact.

> **Mitigation Measure BIO-1: Conduct Focused Survey and Implement Measures to Minimize Potential for Impacts on Western Spadefoot.**
>
> To minimize potential effects of project construction of Western Spadefoot, the District will ensure that the following measure are implemented.

If project activities must occur during a time when the project site may support suitable habitat for breeding western spadefoot (November 1 to March 31), a qualified biologist will conduct a survey of all inundated potential western spadefoot breeding areas within 3 days before construction activities occur within 50 feet of breeding habitat and/or after potential breeding habitat becomes inundated. If any areas are determined to be occupied by western spadefoot, a 50-foot no-disturbance buffer will be implemented around the occupied breeding habitat, and the buffer boundary will be staked or fenced under the supervision of a qualified biologist.

No more than 30 days before Project activities begin, a qualified biologist will conduct a pre-construction survey to determine the potential for western spadefoot to occur on or near the project site. If potential burrows or signs of spadefoot are found, exclusion zones will be established and maintained at a distance determine by a qualified biologist.

All covered or uncovered excavations will be inspected for the presence of Western spadefoot at the beginning, middle, and end of each day. Before trenches are filled, they will be inspected for trapped animals. Before tranches are filled, they will be inspected for trapped animals. If a spadefoot is found, the USFWS will be notified to determine what actions should be taken to adequately minimize impacts.

Timing: During project construction activities

Responsibility: SSJMUD and construction contractor(s)

Implementing Mitigation Measure BIO-2 would require a preconstruction survey, as well as a focused survey for Western spadefoot, if construction activities would occur during the breeding season. If Western spadefoots are found during surveys, additional avoidance measures such as establishing buffers and exclusion zones and covering excavation areas would be implemented during construction. Therefore, this impact would be reduced to **less-than-significant with mitigation incorporated**.

Special-status reptiles. Based on observations made during the field survey, habitat for special-status reptiles is absent from the Project site, and no special-status reptiles have potential to occur on or adjacent to the project site. Therefore, there would be no impact on special-status reptiles.

Special-status birds. Burrowing owl, Swainson's hawk, and tricolored blackbird have potential to occur in the project vicinity, however, no suitable nesting habitat for tricolored blackbird or Swainson's Hawk was present on or adjacent to the project site during the field surveys. However, if grain crops or extensive areas of tall ruderal vegetation (e.g., in fallow fields) are present near the project site during construction activities, there is potential for these species to nest in such habitat. Ruderal habitat in and/or near project site provides potentially suitable habitat for burrowing owl; no concentrations of ground squirrel burrows were observed during the field surveys.

Because project activities would be limited to existing roadways and canal and orchard/field margins, potential for nests of special-status species to be directly destroyed is absent. In addition, the project site is subject to regular disturbance from existing agricultural activities

and/or road traffic, and project disturbance would be similar in intensity to existing agricultural activities. Therefore, the potential for project-related disturbance to result in nest failure or burrow abandonment is low. However, if an active nest or occupied burrow is present on or very close to the project site, construction activities could result in burrow or nest destruction or abandonment, reduced care of eggs or young, or premature fledging. Depending on the species and number of individuals that are affected, burrow abandonment or nest failure is considered a **significant** impact. The following mitigation measures have been identified to address this impact.

Mitigation Measure BIO-2: Conduct Focused Surveys for Burrowing Owls and Avoid Loss of Occupied Burrows.

To minimize potential effects of Project construction on burrowing owl, the District will ensure that the following measures are implemented, consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012).

- A qualified biologist will assess burrowing owl habitat suitability in the area subject to direct impact and adjacent areas within 500 feet. If suitable habitat or sign of burrowing owl presence is observed, a take avoidance survey will be conducted within 14 days before Project activities begin. If any occupied burrows are observed, protective buffers will be established and implemented. A qualified biologist will monitor the occupied burrows during Project activities to confirm effectiveness of the buffers. The size of the buffer will depend on type and intensity of Project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the owls to disturbance.

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

Timing: During project construction activities

Responsibility: SSJMUD and construction contractor(s)

Mitigation Measure BIO-3: Conduct Focused Surveys for Nesting Swainson's Hawk, Tri-Colored Blackbird, and other Special-status Birds and Common Birds, and Implement Buffers Around Active Nests.

To minimize potential effects of Project construction on nesting Swainson's hawk or tri-colored blackbird, other special-status birds and common raptors, the District will ensure that the following measures are implemented:

- A qualified biologist will conduct surveys of potential Swainson's hawk or tril-nesting trees within 0.25 mile of the Project site. To the extent practicable, depending on timing of Project initiation, surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000). At a minimum, a survey will be conducted within 14 days before Project activities begin near suitable nest trees during the nesting season (April–August).

- If an active Swainson's hawk nest is observed, a protective buffer will be established and implemented until the nest is no longer active. A qualified biologist will monitor the nest during Project activities to confirm effectiveness of the buffer. The size of the buffer will depend on type and intensity of Project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to disturbance.

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

- If any active bird nests are documented in the area that would be directly disturbed by Project activities or active nests of tricolored blackbird, white-tailed kite, northern harrier, and common raptors are documented within 500 feet, protective buffers will be established and implemented until the nests are no longer active. A qualified biologist will monitor the nests during Project activities to confirm effectiveness of the buffers. The size of the buffers will depend on type and intensity of Project disturbance, presence of visual buffers, and other variables that could affect susceptibility of the nest to disturbance.

  Timing: During project construction activities

  Responsibility: SSJMUD and construction contractor(s)

Implementing Mitigation Measures BIO-2 and BIO-3 would require pre-construction surveys conducted by a qualified biologist. If suitable habitat or signs of special-status birds present at the site during surveys, additional avoidance measures, such as establishing appropriate buffers, biological monitoring during construction, and potentially relocation would be implemented. Therefore, this impact would be reduced to **less-than-significant with mitigation incorporated**.

Special-status mammals. San Joaquin kit fox and American badger have potential to occur in the project vicinity, although potential for occupied dens on or adjacent to the project site is low due to the relatively poor habitat quality, San Joaquin kit fox could travel through the project site. If a kit fox or American badger are present during project activities, they could be injured or killed if struck by a project vehicle or equipment or become trapped in pipes or trenches. In the very unlikely event that an occupied den or burrow is present adjacent to a project site, project-related disturbance could result in den or burrow abandonment. However, very few individuals,

if any, would be affected. Because the San Joaquin kit fox is listed as an endangered species, potential to injure or kill even one individual is considered a **significant** impact. The following mitigation measures have been identified to address this impact.

Mitigation Measure BIO-4: Conduct Focused Surveys and Implement Measures to Minimize Potential for Impacts on San Joaquin Kit Fox.

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

- An Environmental Awareness Program will be presented to all project personnel working in the field before Project activities begin. The program will be presented by a qualified biologist with knowledge of special-status wildlife that could occur on the Project sites. The program will address each species' biology and habitat needs; status of each species and their regulatory protections; and measures required to reduce impacts to the species during Project construction.

- To prevent wildlife entrapment during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with plywood or similar material at the end of each workday. If the trenches cannot be closed, one or more escape ramps of no more than a 45-degree slope will be constructed of earthen fill or created with wooden planks. All covered or uncovered excavations will be inspected at the beginning, middle, and end of each day. Before trenches are filled, they will be inspected for trapped animals. If a trapped or injured animal is discovered, Project activities will stop, and escape ramps or structures will be installed immediately to allow the animal(s) to escape.

- All construction pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight period will be thoroughly inspected for wildlife before the pipe is buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If an animal is discovered inside a pipe, the pipe will not be moved, and the animal will be allowed to leave on its own.

- All food-related trash items such as wrappers, cans, bottles or food scraps generated during Project activities will be disposed of in closed containers and removed daily from the Project site. No deliberate feeding of wildlife will be allowed, and no domestic pets associated with Project personnel will be permitted on the Project site.

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

  Timing: During project construction activities

Responsibility: SSJMUD and construction contractor(s)

Implementing BIO-4 would require a pre-construction survey conducted by a qualified biologist, covering excavated areas and any structures with a diameter of 4-inches or more, and removal of trash and debris from the project site. Additionally, an Environmental Awareness Program will be presented to all project personnel. Therefore, this impact would be reduced to **less-than-significant with mitigation incorporated**.

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

The project sites do not support any riparian habitat, designated critical habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations; there would be **no impact** on these resources.

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

Aquatic habitat within the project vicinity is limited to detention basins that are heavily maintained, generally lack vegetation, and provide very poor aquatic habitat. No construction or project activities are proposed in the detention basins. Therefore, the project would have **no impact**.

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

The project site consists of agricultural lands, and ruderal land along roadways, and does not serve as a corridor or other primary route for wildlife movement. Although terrestrial wildlife likely travels along the FKC, agricultural lands adjacent to the project site typically provide equally suitable movement opportunities to the project site. In addition, project activities would only occur during the day, while most wildlife movement would likely be at night. The project site is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the proposed project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. This impact would be **less than significant**.

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

The Kern County General Plan includes several policies and implementation measures designed to protect and conserve threatened and endangered species and oak trees (Kern County 2004). No oak trees are present on the project site, and the project has no potential to conflict with Kern County's General Plan oak retention policy. The Kern County General Plan requires discretionary projects to consider effects to biological resources and wildlife agency comments

during the CEQA process; this is consistent with the CEQA process being implemented by the District for the proposed project. Therefore, implementing the proposed project would not conflict with any local policies or ordinances protecting biological resources, and there would be **no impact**.

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

The project site is north of the existing Metropolitan Bakersfield Habitat Conservation Plan (HCP) area and would not conflict with its provisions. The project site is within the plan area for the potential Kern Valley Floor HCP. However, a draft was issued many years ago (Kern County Planning Department 2006), and a final plan has not been released. There is no indication that the HCP will be finalized and adopted before the proposed project is implemented. Therefore, implementing the proposed project would not conflict with any provisions of an adopted HCP or other conservation plan and there would be **no impact**.

3.5 Cultural Resources

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

3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance. CEQA defines a "historical resource" as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR).

Native American Precontact Setting

The cultural chronology constructed for the Sacramento Valley and Delta regions is often extended to the San Joaquin Valley. The chronology is called the Central California Taxonomic System and was originally based almost entirely on artifact types and frequency but was later refined with updated temporal information (Fredrickson 1974, 1994). Period age ranges have been further refined and are presented here adjusted to modern radiocarbon calibration curves (calibrated years Before Common Era [cal BCE] and calibrated years in the Common Era [cal CE]), following the scheme of Rosenthal et al. (2007).

The Paleo-Indian Period (11,550-8550 cal BCE)

There is little evidence for terminal Pleistocene-early Holocene habitation in the San Joaquin Valley. Changing climate at the end of the Pleistocene brought floods, which covered much of the Central Valley with layers of alluvial soils that buried evidence of human occupation. People living in the San Joaquin Valley during this time are thought to have been hunters and foragers, living in small groups and travelling often from camp to camp in response to seasonal availability of resources. Sites are expected to have been primarily located along lakesides (Fredrickson 1994).

The Middle Archaic (5550-550 cal BCE)

Towards the end of the Middle Archaic period, settlement patterns became more stable, especially along river corridors (Rosenthal et al. 2007). During the Middle and Upper Archaic periods, the Windmiller Pattern was common throughout the Central Valley (Moratto 1984), extending south as far as Buena Vista Lake (Rosenthal et al. 2007). This archaeological pattern is identified by burial style in which individuals were interred in extended positions, oriented towards the west, and often buried with artifacts such as quartz crystals, red pigment (ochre or cinnabar), Olivella shell beads (particularly types A1a and L), abalone (Haliotis) beads (type M) and pendants, stone pipes, charmstones, large, leaf-shaped projectile points associated with the atlatl, bone tools (e.g., awls, needles, strigles), baked-clay net weights, and ground stone tools (mortars, pestles, millingstones, and manos) (Moratto 1984).

The Upper Archaic (550 cal BCE to cal CE 1100)

The Upper Archaic period began at roughly the same time as the Late Holocene, ushering in a period of cooler, wetter conditions. More alluvium was deposited over the earlier archaeological sites as rivers and lakes grew and flooded. Cultural diversity and complexity both developed during the Upper Archaic, and new variation is seen in burial contexts, artifact styles, bead types, and ground stone tool forms.

While many sites dating to the Upper Archaic have been recorded in the Sacramento Valley and northern San Joaquin Valley, very few have been found from the southern San Joaquin Valley where the project is located (Rosenthal et al. 2007).

The Emergent Period (cal CE 1100 to the Historic Era)

The Emergent Period was a time of economic diversity, including the expansion of trade networks, increased social inequity, and the introduction of clamshell disc beads as a kind of currency (Fredrickson 1994). The introduction of bow and arrow technology resulted in the development of several new styles of small projectile points. In the southern San Joaquin Valley, Cottonwood projectile points were the most common.

Historic Context

Kern County

Kern County was established in 1866, and Bakersfield became the county seat in 1874. In 1851, gold was discovered near the Kern River and gold mining became a dominant activity in the county. Agriculture and sheep and cattle raising were introduced in the late 19th and early 20th century. In time, the locals constructed small canals and ditches to allow for farming (Hoover et al 1990; Morgan 1914:43-44). By the 1860s, oil was discovered in the county and within a decade, the Southern Pacific Railroad and the San Francisco and San Joaquin Valley Railroad arrived in the area (Morgan 1914:35). Starting in the 1930s, Kern County became home to thousands of settlers who fled the Dust Bowl in the Midwest. Agriculture and oil remained a mainstay of the county through the 20th century. Presently, the economy of the county is largely based on agriculture and petroleum extraction.

CVP and Irrigation in the San Joaquin Valley

The San Joaquin Valley contains the southern two-thirds of California's Central Valley. Irrigation transformed the San Joaquin Valley landscape and created one of the nation's most productive agricultural region (Galloway and Riley 1999:23). During the 1850s and 1870s, most settlers in the San Joaquin Valley were not interested in irrigated agricultural as they were concentrating on cattle ranching or dry wheat farming. Cattle barons Miller and Lux amassed a vast amount of land in the San Joaquin Valley for their cattle ranching empire that included large-scale irrigation of 150,000 acres of their 700,000 acres, for pasturage (JRP and Caltrans 2000:19-20).

By the early 20th century, much of the flow of the Kern River was redirected through canals and ditches and by 1910 all the surface-water supplies in the San Joaquin Valley were diverted, which resulted in the development of ground-water resources. These wells gradually depleted the water levels in the region, which then led to the requirement of pumps to bring the water to the surface. By 1955, nearly one-fourth of the total ground water obtained for irrigation in the U.S. was pumped in the Valley, a trend that continued into the 1960s. The CVP was developed in the mid-20th century, in part, to address groundwater levels and irrigation concerns in the Central Valley. Federal responsibility for the CVP was under the leadership of Bureau of Reclamation (Bailey 2007:28). The initial elements of the CVP were completed in the early 1950s (JRP and Caltrans 2000:74). These elements consisted of a system of canals, laterals, pumping stations, wells, and storage dams that worked together to irrigate nearby farmland. With the completion of federal and state projects, including the DMC and FKC in 1951, and the California Aqueduct during the 1960s, the irrigation of agricultural crops became more affordable for farmers. The 20th century improvements in water management also allowed for the introduction of more diverse crops throughout the Valley. (Autobee 1994:7-8; Bunse et al. 1996; Galloway and Riley 1999:23-24, 27-29).

The Friant Division within the CVP (the other two divisions include the Shasta and Contra Costa Divisions) helps stabilize groundwater levels and provide water to the top agricultural-producing counties in the state: Fresno, Tulare, and Kern (Autobee 1994:2). The system also includes numerous laterals that extend throughout the region to irrigate agricultural land.

3.5.2 Discussion

The cultural resources investigations completed to support this analysis included a records search conducted at the Southern San Joaquin Valley Information Center (SSJVIC) of the project area, which includes the project site and a 0.5-radius. The records search was requested by GEI archaeologist Amy L. Wolpert, MA, on June 24, 2024. The SSJVIC letter response (SSJVIC File No.: 24-268) indicated that no cultural resources had been reported within the project area.

GEI requested the Native American Heritage Commission (NAHC) to conduct a Sacred Lands File (SLF) search and provide a Native American Contacts List for the project on June 10, 2024. Results of this request were received June 26, 2024. The NAHC returned a negative results letter for the SLF search request. SSJMUD has received no notification from culturally affiliated Tribes in their service area regarding consultation with California Native American Tribes per

Assembly Bill (AB 52). Therefore, SSJMUD did not send AB 52 consultation letters regarding the project.

GEI conducted a desktop study to document the soils and geologic context of the project area to understand the sensitivity for deeply buried cultural resources. The study found that the entire project area is situated on Wasco soils which are latest Holocene in age and up to 5.4 deep underlain by an older Pleistocene landscape, and therefore has high archaeological sensitivity for deeply buried archaeological resources. However, examination of General Land Office plat maps and historic era topographical maps do not indicate any structures in the area or indication of possible Native American habitation. The project area, however, has had decades of ground disturbance from both agricultural use and road construction. Overall, upper soils are highly disturbed, likely any resources in the upper portions now lack context, but deeper levels may still be intact.

GEI archaeologists Amy Wolpert, MA and Andrea Nardin, MA, GEI archaeologists Amy Wolpert, MA and Andrea Nardin, MA, conducted a pedestrian survey of the project area on June 18, 2024. Field notes and photographs for archaeological resources were recorded with a Wildnote digital data form system for the project. Digital maps used on Google Earth TM were used to ensure adequate survey coverage. GEI architectural historian, Lena Phillibe, BA, recorded historic era built environment resources through written notes and photographs as part of the built environment survey of the APE.

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

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

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

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

As used in California PRC Section 21083.2, the term "unique archaeological resource" refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- has a special and particular quality such as being the oldest of its type or the best available example of its type
- is directly associated with a scientifically recognized important prehistoric or historic event or person

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

Three historic-era built environment resources were identified in the project area: a segment of Driver Road, a segment of 9th Avenue, and a portion of the Friant-Kern Distribution Systems Lateral 119.6. None of the resources appears to be eligible for the CRHR, therefore there are no historical resources per CEQA. There would be **no impact.**

The cultural resources investigation did not identify any archaeological resources within the project area, either during the records search or pedestrian survey. The SLF search conducted by the NAHC also yielded negative results. The geoarchaeological study did find the area to have high sensitivity for buried archaeological resources but the area itself has been highly disturbed by agricultural use and road construction; it is unlikely that intact archeological deposits exist within the upper 4 to 5 feet of the project area. Therefore, the likelihood of encountering cultural resources during project construction is low. Nevertheless, the possibility remains that archaeological resources may be discovered during project-related ground-disturbing activities. Therefore, this impact would be **potentially significant**. Mitigation Measure CR-1 presented below has been identified to address this impact.

> **Mitigation Measure CR-1: Address Previously Undiscovered Historical Resources, Archaeological Resources, and Tribal Cultural Resources.**
>
> SSJMUD shall implement measures to reduce or avoid impacts on undiscovered historic properties and archaeological resources. If buried or previously unidentified historic properties or archaeological resources are discovered during project construction, all work within a 100-foot-radius of the find shall cease. SJMUD shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed in coordination with

interested Native American Tribes providing recommendations and with SSJMUD and shall be completed before project activities continue in the vicinity of the find.

Timing: During project construction activities

Responsibility: SSJMUD and construction contractor(s)

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historical resources to a less than significant level because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with CCR Section 15064.5. Therefore, the project would have a **less-than-significant impact with mitigation incorporated**.

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

No human remains are known to have been discovered in the project vicinity, and there is no indication from the records searches or pedestrian survey that human remains are present on the project site. Therefore, it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground-disturbance activities on the project site. However, in the event that human remains, including those interred outside of formal cemeteries and including associated items and materials, are discovered during subsurface activities, the human remains and associated items and materials could be inadvertently damaged. Therefore, a **potentially significant** impact would occur. Mitigation Measure CR-2 presented below has been identified to address this impact.

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

SSJMUD shall implement the following measures to reduce or avoid potential impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground disturbance in the area of the burial and within a 100-foot radius, shall halt and the Kern County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub Law 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive Federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. SSJMUD shall ensure that the procedures for the treatment of

Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During project construction activities

Responsibility: SSJMUD and construction contractor(s)

Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains to a less than significant level because the find would be treated or investigated in accordance with State and Federal laws. Therefore, the project would have a **less-than-significant impact with mitigation incorporated.**

3.6 Energy

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

3.6.1 Environmental Setting

Electricity and natural gas in Kern County are supplied by Pacific Gas and Electric (PG&E), Southern California Edison, and Southern California Gas (Kern County, 2004). According to the California Energy Commission, Kern County consumed approximately 14,861 million kilowatts per hour in 2022 (CEC 2022).

3.6.2 Discussion

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

The project would involve the use of gas- and diesel-fueled vehicles and equipment during construction activities, and the import and export of materials to and from the project site. See Table 2-4 within Chapter 2.5, "Project Implementation," for information regarding construction equipment usage and import/export during each stage of construction of the proposed project. Construction activities would occur over a maximum one-year construction period.

The project's use of energy resources during construction would be non-recoverable but temporary and would not include unnecessary, inefficient, or wasteful energy use because the contractor would use typical construction methods. Project construction would temporarily increase fuel consumption; however, it is anticipated that fuel would only be used to the extent it is needed to complete construction activities and would not be consumed in a wasteful manner during construction. Additionally, the selected construction contractor(s) would use the best available engineering techniques, construction practices, and equipment operating procedures. Therefore, the impact would be **less than significant**.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Kern County does not have a local plan for renewable energy or energy efficiency, however, the State's Climate Commitment is to reduce reliance on non-renewable energy sources with clean energy targets of 90 percent by 2035 and 95 percent by 2040, advancing the state's trajectory to 100 percent clean energy by 2045 (State of California 2022). The project would not include a permanent increase in energy usage, therefore, the project would not conflict or obstruct the State's Climate Commitment. The impact would be **less than significant**.

3.7 Geology and Soils

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

3.7.1 Environmental Setting

Geology and Soils

The geology of the project site is characterized by Pleistocene-Holocene age marine and nonmarine sedimentary rocks, consisting of alluvium, lake, playa, and terrace deposits (CGS 2015, Smith 1964). The Natural Resource Conservation Service maps the soils at the project site as Wasco sandy loam which is characterized as well drained with very low runoff potential (NRCS 2024).

Seismic and Geologic Hazards

Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different segments of the same fault. Ground rupture is considered more likely along active faults. The project area is not within a Alquist-Priolo Fault Rupture Hazard Zone, as designated through the Alquist-Priolo Earthquake Fault Zoning Act, and no mapped active faults are known to pass through the immediate project vicinity (CGS 2024).

Areas most susceptible to intense ground shaking are those located closest to an earthquake-generating fault, and areas underlain by thick, loosely unconsolidated, and saturated sediments. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. Kern County is located in one of the more seismically active areas of California and may, at any time, be subject to moderate-to-severe ground shaking (Kern County 2009). The nearest active fault line to the project site is the Pond Fault, located approximately 6 miles southwest of the project site (CGS 2015).

Landslides and Liquefaction

Liquefaction is a phenomenon 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. Liquefaction most often occurs in areas underlain by young alluvium where the groundwater table is higher than 50 feet below the ground surface. (Kern County 2004). The Central Valley area of western Kern County, which the project site is located in, is comprised of thick, unconsolidated, coarse-textured alluvial sediments, with a great depth to groundwater. Therefore, the project site does not present a major risk for liquefaction.

Landslides are deep-seated ground failures (several tens to hundreds of feet deep) in which a large section of a slope detaches and slides downhill. The project site is not located in a steep area and does not present a risk for landslides.

Geologic Hazards

Expansive Soils

Expansive soils are predominantly comprised fine-grained, cohesive clay soils, that expand when moisture is added and tend to lose their ability to support foundations of structures (Kern County 2004). Expansion is measured by shrink-swell potential, which is the volume change in soil with a gain in moisture. Soils with a moderate to high shrink-swell potential can cause damage to roads, buildings, and infrastructure (NRCS 2004). Soils present at the site are not considered expansive soils.

Land Subsidence

Subsidence is the gradual settling or sudden sinking of the ground surface resulting from subsurface movement of earth materials. Land subsidence is occurring with the San Joaquin Valley due to the withdrawal of large volumes of fluids from underground reservoirs and the addition of surface water to certain types of soils (Kern County 2004).

Paleontological Resources

Paleontological resources are the fossilized remains or impressions of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils). They are valuable, nonrenewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. The project site is underlain by Pleistocene and Holocene age rock composed of alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated (CGS 2015).

3.7.2 Discussion

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 California Geological Survey Special Publication 42.)

The project site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no known active faults within or adjacent to the project site. Therefore, the project would have no effect on surface fault ruptures or increase risk of loss, injury, or death from surface fault ruptures. **No impact** would occur.

ii) Strong seismic ground shaking

While Kern County is one of the more seismically active areas of California, there are no active faults located within or adjacent to the project site. The nearest known active fault is the Pond Fault, located approximately 6 miles southwest of the project site.

During construction activities, ground shaking could expose persons working in the project area to seismic hazards while operating heavy equipment. The District and its contractors would be required to adhere to all California Division of Occupational Safety and Health (Cal/OSHA) requirements for working within active construction sites that would ensure the safety of all construction workers onsite.

The proposed project does not include permanent structures that would house people. The proposed project components would not pose a direct risk to people during seismic activity. Further, the proposed project design would comply with the California Uniform Building Code (UBC) which is based on, but more detailed and stringent than, the Federal UBC. Chapter 18 of the California UBC regulates excavation and geotechnical considerations, and Appendix J of the California UBC addresses grading, excavation, fill, drainage, and erosion control considerations (UpCodes 2024). There would be no significant impact to people or structures from any seismic-related activity as a result of implementation of the proposed project. This impact would be **less than significant**.

iii and iv) Seismic-related ground failure, including liquefaction, or Landsides?

The project area is not located within a liquefaction zone, and soil types within the project area are not typically associated with liquefaction; therefore, the risk of liquefaction to occur at the project site is considered low.

The project area is not located within a known landslide hazard area; and is not located on a steep slope prone to landslides. Therefore, the risk of landslides to occur at the project site is considered low. The District and its contractors would be required to adhere to all CAL/OSHA requirements for working within active construction sites that would ensure the safety of all construction workers onsite. Additionally, as discussed previously, the proposed project design would comply with the California UBC, which regulates the design of projects to reduce potential seismic hazards, including slopes where landfalls could occur. There would be no significant impact to people or structures from potential landslide activity as a result of implementation of the proposed project. This impact would be **less than significant**.

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

Construction activities would result in short-term soil disturbance and could expose disturbed areas if a storm event occurs during construction. Rainfall of sufficient intensity could dislodge soil particles from the soil surface. If particles are dislodged and the storm is large enough to generate runoff, substantial localized erosion could occur. In addition, soil disturbance could result in substantial loss of topsoil from wind erosion.

The District would prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws. The SWPPP would identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events, techniques to control pollutant discharge, and an erosion control plan. Topsoil may be stripped and stockpiled onsite for later reuse.

Additionally, the District is required to comply with SJVAPCD Regulation VIII "Fugitive PM_{10} Prohibition," which requires actions to prevent, reduce, or mitigate anthropogenic fugitive dust emissions, and the District recommends compliance with a District approved Dust Control Plan or Construction Notification form which would further minimize the loss of topsoil during construction. With the implementation of a SWPPP as well as associated construction techniques and BMPs, a Dust Control Plan, and compliance with SJVAPCD Regulation VIII "Fugitive PM10 Prohibitions," the impacts from the proposed project would be **less than significant**.

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?

Refer to Questions (a.ii) and (a.iii and iv) above. During project construction activities, unstable soils could expose persons working in the project area to hazards while operating heavy equipment. The District and its contractors would be required to adhere to all Cal/OSHA requirements for working within active construction sites that would ensure the safety of all construction workers onsite.

As discussed previously, the proposed project design would comply with the California UBC, which regulates the design of projects to reduce potential hazards, including landslides, lateral spreading, subsidence, liquefaction or collapse. Therefore, relative to existing conditions, the proposed project would not expose people or structures to new potential substantial adverse effects related to unstable soils. Impacts would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

As described above, the project area's soils are predominantly made up of sandy loams, which are not typically expansive. Therefore, it is unlikely that the proposed project would result in direct or indirect risks to life or property as a result of being located on expansive soil. Furthermore, as discussed above, the proposed project design would comply with the California UBC, which regulates the design of projects to reduce potential impacts, including building upon expansive soils. Additionally, the proposed project does not include any habitable buildings that could pose a risk to life. For these reasons, this impact would be l**ess than significant**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project would not require the use of septic tanks or alternative wastewater disposal systems. During project implementation, the District or the contractor may have portable toilet facilities available onsite temporarily for use by construction workers. Once project-related construction activities are concluded, such portable facilities would be removed, and the wastewater properly handled and disposed in accordance with all applicable laws and regulations. There would be **no impact** associated with wastewater disposal.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

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

> **Mitigation Measure GEO-1: Avoid and Minimize Potential Effects on Paleontological Resources.**
>
> In the event that a paleontological resource is uncovered during project implementation, all ground-disturbing work within 165 feet (50 meters) of the discovery will be halted. A qualified paleontologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, no further effort will be required. If the resource cannot be avoided and may be subject to further impact, a qualified paleontologist will evaluate the resource and determine whether it is "unique" under CEQA, Appendix G, part VII. If the resource is determined not to be unique, work may resume in the area. If the resource is determined to be a unique paleontological resource, work will remain halted, and the paleontologist and the District will identify methods to ensure that no substantial adverse change would occur to the significance of the resource pursuant to CEQA. Preservation in place (i.e., avoidance) is the preferred method of mitigation for impacts to paleontological resources and will be required unless there are other equally effective methods. Other methods may be used but must ensure that the fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. All recovered fossils will be curated at an accredited and permanent scientific institution according to Society of Vertebrate Paleontology standard guidelines. Work may resume upon completion of resource treatment, as verified by a qualified paleontologist.
>
> **Timing:** During project construction activities
>
> **Responsibility:** SSJMUD and construction contractor(s)

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

3.8 Greenhouse Gas Emissions

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

3.8.1 Environmental Setting

GHG emissions are defined as Carbon Dioxide, Methane, Nitrous Oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. Senate Bill 32 (Health & Safety Code § 38566) set a Statewide emission reduction mandate of 40 percent below 1990 levels by 2030. CARB was appointed to develop policies to achieve this goal. Additionally, Executive Order B-55-18 set a target of Statewide carbon neutrality by 2045 (State of California 2022). In 2022, CARB published an updated Climate Change Scoping Plan, the 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022).

GHGs are present in the atmosphere naturally, released by natural and human-caused sources, and formed from secondary reactions taking place in the atmosphere. Evidence has shown that GHG emissions from locations around the world contribute to global climate change, which could have drastic impacts related to flooding and other natural disasters, agriculture, habitats, water supply, and the economy.

Kern County has not adopted a local plan for reducing GHG emissions. The SJVAPCD has adopted the *Guidance for Valley Land-use Agencies Addressing GHG Emissions Impacts for New Projects under CEQA* (SJVAPCD 2009). The guidance addresses stationary source projects and development projects. Projects complying with an approved GHG emission reduction plan or mitigation program would be determined to have a less-than-significant impact to atmospheric GHG levels (SJVAPCD 2009).

3.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The SJVAPCD has not established CEQA thresholds of significance for GHG emissions. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 metric tons of carbon dioxide equivalent per year (CO_2e) for construction related GHG emissions (SMAQMD 2020). In the absence of a local threshold in

Kern County, the SMAQMD threshold is being used to evaluate the significance of GHG emissions.

Project construction would temporarily generate GHG emissions from exhaust associated with on-site equipment operation, material hauling, and worker vehicle trips. Construction-related GHG emissions were modeled using CalEEMod (see Appendix A). **Table 3.8-1** provides estimates of metric tons of CO_2e per year. These estimated construction-related project emissions would not exceed the threshold of 1,100 metric tons of CO_2e in 2024 and 2025. O&M activities would be minimal and result in negligible emissions. Therefore, this impact would be **less than significant**.

Table 3.8-1. Estimated Construction-related Greenhouse Gas Emissions

Construction Year	2024	2025
Carbon Dioxide Equivalent Emissions (metric tons)	100	71.1
Significance Threshold	1,100	1,100
Exceeds Threshold?	No	No

Sources: Results of air pollutant emissions modeling conducted by GEI Consultants Inc. in 2022, Sacramento Metropolitan Air Quality Management District 2020

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

Kern County does not have an adopted local GHG reduction plan; however, the project would not conflict with State emissions reduction plans, policies, or regulations as discussed above in response to checklist question (a). Therefore, there would be **no impact.**

3.9 Hazards and Hazardous Materials

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

3.9.1 Environmental Setting

Hazardous Material Sites

The database search included all data sources included in the Cortese List (enumerated in PRC Section 65962.5). These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Resources Control Board (SWRCB); the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the

California Department of Toxic Substances Control (DTSC); and EPA's Superfund Site database (DTSC 2024a and 2024b, SWRCB 2024a and 2024b, CalEPA 2024, EPA 2024). There were no hazardous materials sites identified within 0.25 mile of the project site locations. The project site is not located in an area identified as more likely to contain naturally-occuring asbestos by the California Department of Conservation (DOC 2000). This issue is not discussed further in this IS.

Schools

There are no schools located within 0.25 mile of the project site. The nearest school facility to the project site is Wonderful College Prep Academy, which is located approximately 0.3 miles west of the project site.

Airports

There are no airports located within 2 miles of the project site. The nearest airport is the Delano Municipal Airport, which is located approximately 2.25 miles southwest of the project site. This airport does not have any scheduled airline services. Additionally, the Delano Municipal Airport does not have an adopted airport land use plan, however, the City of Delano General Plan includes compatibility criteria (City of Delano 2005).

Emergency Operations, Response and Evacuation

Kern County has not adopted an Emergency Response Plan or Emergency Evacuation Plan that is relevant to the proposed project.

Wildland Fires

The project site is not located in a State Responsibility Area or an area designated as a high- or very high- fire severity zone (CAL FIRE 2023).

3.9.2 Discussion

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

Proposed project construction activities would involve the storage, transport, and use of small amounts of hazardous substances necessary to operate and maintain construction vehicles and equipment such as oils, lubricants, and fuel. The routine use or an accidental spill of these hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment. However, the transport and use of hazardous materials are strictly regulated by local, State, and Federal agencies to minimize adverse hazards from accidental release. The EPA, DTSC, California Highway Patrol (CHP) and Caltrans implement and enforce State and Federal laws regarding hazardous material transportation. Contractors would be required to use, store, and dispose of any hazardous materials in accordance with all applicable regulations.

Furthermore, project workers handling hazardous materials are required to adhere to Occupational Safety and Health and Cal/OSHA health and safety requirements. Since compliance with existing hazardous materials regulations and programs are mandatory, project construction activities are not expected to create a potentially significant hazard to construction workers, the public, or the environment. The proposed project would not involve routine or long-term transport or disposal of hazardous materials, after construction. Therefore, this impact would be **less than significant**.

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

Because there are no schools within 0.25 mile of the project area, implementation of the proposed project would not have the potential to emit hazardous emissions or handle hazards near a school. 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?

The project site is not identified on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. 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?

The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The project would comply with all compatibility criteria outlined in the City of Delano General Plan There would be **no impact**.

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

The project would not include any road closures or significantly increase vehicles on roadways; therefore, it would not impair or physically interfere with emergency response or evacuation. Additionally, Kern County does not have an adopted emergency response plan or emergency 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?

The project site is not located in an area designated as a high- or very-high fire hazard severity zone (CAL FIRE 2023). There would be **no impact**.

3.10 Hydrology and Water Quality

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

3.10.1 Environmental Setting

Water Quality

The project site is located in the Tulare Lake Hydrologic Basin Planning Area within the South Valley Flood Hydrologic Unit as designated by the CVRWQCB (2018). In accordance with

Clean Water Act Section 303, water quality standards for this basin are contained in the Water Quality Control Plan for the Tulare Lake Basin. There are no water bodies on the project site that appear on the 303(d) list as an impaired water.

Groundwater

The project site is located within the San Joaquin Valley Basin (5-022) near the eastern edge of the Kern County Groundwater Subbasin about 23 miles north of Bakersfield (DWR 2020). The subbasin is bounded on the north by the Kern County line and the Pleasant Valley, Tulare Lake, and Tule groundwater subbasins, on the east and southeast by the Sierra Nevada foothills and Tehachapi Mountains, and on the west and southwest by the San Emigdio Mountains and the Temblor Range. The project site is located within a Bulletin 118 designated groundwater basin and is located within a groundwater basin designated as High Priority and Critically Overdrafted (DWR 2020).

Flood Management

A small portion of the project site is located in a Federal Emergency Management Agency Zone A (1% annual chance of flooding), while the majority of the project site is located in Zone X (Area of Minimal Flood Hazard) (FEMA 2008). The project is not located in a coastal area and is outside of a tsunami hazard zone.

3.10.2 Discussion

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

The project would not affect water quality in the immediate vicinity of areas disturbed by construction activities since there are no nearby waterways. However, the District would obtain coverage under the National Pollutant Discharge Elimination System general construction activities permit, which requires the preparation of a SWPPP. The project would comply with all BMPs outlined in the SWPPP, which would ensure water quality is not substantially degraded. Therefore, this impact would be **less than significant**.

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

The project would not include the use of groundwater. Additionally, the proposed project is not expected to encounter groundwater based on the excavation depths needed for installation of the pipeline. Therefore, there would be **no impact** to regional groundwater levels or rate of groundwater recharge.

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, ii, iii, iv) Result in substantial erosion or siltation on- or off-site; Substantially increase the rate or amount of surface runoff in a manner which would result in flooding

on- or offsite; Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or Impede or redirect flood flows?

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

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

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

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

The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The proposed project consists of the construction of approximately 1.1 miles of pipeline to increase water conveyance and water supply reliability. There would be **no impact**.

3.11 Land Use and Planning

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

3.11.1 Environmental Setting

The project site is located in unincorporated Kern County on land designated for intensive agriculture and zoned for exclusive agriculture (Kern County GIS 2023). The project site is located just outside of the Delano city limits, surrounded by agricultural production. Farmland surrounding the City of Delano typically grows orchard fruits, grapes, almonds, cotton, and corn (City of Delano, 2005).

3.11.2 Discussion

a) Physically divide an established the community?

The project would not divide an established community as the project site is not located within an established community and would not include the construction of any permanent, linear above ground physical structures. The physical division of an established community refers to the construction of a feature such as an interstate highway or railroad tracks, or removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area. There would be **no impact.**

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?

Construction of the proposed project would occur on the outer edges of agricultural parcels, along barren land typically used as access corridors by farmers. This land is not used for avoidance or mitigating an environmental effect; therefore, the project would have **no impact**.

3.12 Mineral Resources

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

3.12.1 Environmental Setting

In compliance with the Surface and Mining Reclamation Act, the California Geologic Survey established a Mineral Resource Zones (MRZ) classification system to denote location and significance of key extractive resources. Lands throughout Kern County are classified as MRZs of varying significance. The MRZ categories are as follows:

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data.
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

The project site is in the Bakersfield Production-Consumption Region and is designated as MRZ-3 (DOC 2022). The are no significant mineral deposits present in the city of Delano adjacent to the project area (City of Delano 2005). The USGS' Mineral Resources Data System does not identify the project site as having a history of mineral extraction (USGS 2023). The Kern County Geographic Information System (GIS) Database includes a planning layer which designated various local areas as Mineral Resource Recovery Sites based off the County's General Plan. The project site is not located within one of these locally important mineral resource areas (Kern County GIS 2023).

3.12.2 Discussion

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

The proposed project includes the installation of two pipelines and three turnouts which would be constructed in previously disturbed areas such as bare land along the edges of agricultural fields and dirt roads. The project site is designated as MRZ-3. The project site is not identified as having known mineral resources that are of value to the region or State. Additionally, the project site has been heavily disturbed by agricultural production. The implementation of the proposed Project would not impede future access to subsurface mineral resources of regional importance and would not result in a loss of known mineral resources of value to the region or State. 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?

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

3.13 Noise

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

3.13.1 Environmental Setting

The project site is located in a rural portion of unincorporated Kern County. The closest sensitive receptor is a rural residence located immediately adjacent to the project site, at the intersection of Driver Road and Cecil Avenue. The project site is surrounded by agricultural land including orchards and row crops, which help to dissipate noise.

The Kern County Noise Ordinance limits construction noise to between 6 a.m. and 9 p.m. on weekdays and 8 a.m. and 9 p.m. on weekends, which is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site, if the construction site is within 1,000 feet of an occupied residential dwelling. (Kern County 2024).

3.13.2 Discussion

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

A temporary increase in noise levels would occur during daytime hours due to construction related noise. Noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time. The project would generate construction noise from

equipment operating at the project site, from the transport of construction workers, construction materials, and equipment to and from the project site.

During each stage of construction, there would be a different mix of equipment. As such, construction activity noise levels at or near the project area would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment. The list of equipment that may be used for project construction activities is shown in **Table 3.13-1**. As shown, noise levels generated at 50 feet from the equipment (reference levels) would range from 75 to 81 dB(A). See Section 3.3, "Air Quality" for information regarding sensitive receptors.

Table 3.13-1. Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Typical Noise Levels (dB) Lmax at 50 Feet
Backhoe	80
Dump Truck	76
Excavator	81
Compactor	80
Front-end Loader	80
Pick-up Truck	75
Sweeper Machine	N/A

Notes: dB = decibels; Lmax = maximum instantaneous sound level;
Leq = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)
Source: Construction equipment list based on Federal Highway Administration 2018, adapted by GEI in 2022

There is one rural residence located within 50 feet of the project site. However, given the linear nature of the project, noise would only be generated at one point for a short period of time and the predicted noise levels in Table 3.13-1 would diminish notably with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 81 dBA Leq measured at 50 feet from the noise source to the receptor would reduce to 76 dBA Leq at 100 feet from the source to the receptor and reduce by another 6 dBA Leq to 70 dBA Leq at 200 feet from the source to the receptor. Further, project-related construction would occur during times of the day when receptors are least sensitive to noise exposure as required by standards adopted by Kern County. Minimal noise would be generated during O&M activities from inspection the pipeline, as needed. For these reasons, noise impacts are considered to be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Implementing the proposed project would generate low levels of groundborne vibration and groundborne noise levels due to the operation of construction equipment. Groundborne vibrations propagate though the ground and rapidly diminish in intensity with increasing distance from the source. No high-impact activities, such as pile driving or blasting, would be used during construction. The closest sensitive receptor (residential structure) is approximately 75 feet from the construction corridor.

The Federal Transport Authority (FTA) has established groundborne vibration level threshold for structural damage to engineered concrete and masonry (0.30 inch per second peak particle velocity [PPV]) and groundborne noise level threshold for annoyance to residence and buildings where people normally sleep (72 vibration velocity decibels [VdB]) (FTA 2018). As shown in **Table 3.13-1**, based on the estimated vibration levels of 0.089 inches per second PPV and 87 VdB, at a distance of 25 feet, the maximum groundborne noise level at the nearest residential structure would be 72 VdB, which is equal to the vibration annoyance threshold, and the maximum groundborne vibration level is 0.019 inches per second PPV, which is significantly less than the ground borne vibration threshold for structural damage. Also, it's important to note that due to the linear nature of the project, groundborne vibration and noise would only be generated at one point for a very short time and would diminish with distance. Additionally, the project does not include any nighttime work, therefore, residences would not be disturbed during normal sleeping hours. This impact would be **less than significant**.

Table 3.13-1. Representative Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 feet (in/sec)	Estimated Peak Particle Velocity at Nearest Residential Structure	Vibration Noise at 25 feet	Estimated Vibration Noise at Nearest Residential Structure
Large Bulldozer	0.089	0.019	87	72
Small Bulldozer	0.003	0.000	58	43

Source: FTA 2018

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

The project is located more than 2 miles from the nearest public airport or private airstrip. Therefore, the project would not expose people to excess noise levels due to the proximity to a public airport or private airstrip. **No impact** would occur.

3.14 Population and Housing

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

3.14.1 Environmental Setting

The project site is located east of the City of Delano, in unincorporated Kern County, and is approximately 30 miles northwest of the City of Bakersfield (**Figure 2-1**). The population of the Kern County was estimated to be 913,820 as of July 1, 2023 (U.S. Census Bureau 2023).

3.14.2 Discussion

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

The proposed project does not include the construction of new homes or businesses that could directly or indirectly affect the population. While there would be approximately six construction workers temporarily onsite, it is anticipated that construction workers would come from the existing labor pool within Kern County. As such, the proposed project would not require construction of housing to accommodate workers, since they would commute to the sites. Following construction activities, the project would not result in an increase in population. Therefore, the project would have **no impact**.

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

The project site is located within an agricultural area with one residence immediately adjacent to the project site near the intersection of Driver Rd and Cecil Ave. There is a suburban neighborhood and school located approximately 0.3 miles west along Basset Ave from the project site. No residences would be condemned or displaced by the proposed project. Therefore, the proposed project would not displace people or housing necessitating the construction of replacement housing elsewhere. There would be **no impact**.

3.15 Public Services

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

3.15.1 Environmental Setting

The Kern County Fire Department provides fire protection to residents of the unincorporated areas of Kern County, and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (KCFD 2023). The Kern County Fire Department participates in the State Master Mutual Aid System and has operating agreements with the United States Department of Agriculture Forest Service, Sequoia and Los Padres National Forests, the Bakersfield and Cal Desert Districts of the Bureau of Land Management, California Department of Forestry and Fire Protection, and the United States Fish and Wildlife Service. The cooperation of these agencies allows for consistent protection in Kern County (KCFD 2022).

The Kern County Sheriff Office and California Highway Patrol provide law enforcement services for unincorporated Kern County (KCSO 2023). The Delano Police Department provides services to the project area (City of Delano, 2005).

The nearest school facility to the project site is Wonderful College Prep Academy, which is located approximately 0.3 miles west of the project site. Veneto Park is located approximately 0.8 miles northwest of the project site.

3.15.2 Discussion

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

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

3.16 Recreation

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

3.16.1 Environmental Setting

The project site is located in an undeveloped portion of Kern County, surrounded by agricultural production. There are no recreational facilities near the project site. The nearest recreational area is Veneto Park, which includes a playground and exercise equipment, and is located approximately 0.8 miles northwest of the project area.

3.16.2 Discussion

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

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

3.17 Transportation

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

3.17.1 Environmental Setting

The project site is located in undeveloped Kern County, surrounded by agricultural production. Kern County includes two major transportation corridors, with Interstate 5 and SR 99 connecting Kern County to northern and southern California. East- and west-bound traffic is accommodated on SR 58 and SR 46. The project site can be accessed via SR 99, and local roads.

3.17.2 Discussion

a and b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Construction of the proposed project would temporarily increase vehicle miles traveled on the existing transportation network. A local workforce from the surrounding towns and the City of Bakersfield would travel to and from the site during the construction phase. A small number of truck trips would be required to haul materials to and from the construction site. Additionally, the project would generate 6 daily truck trips from workers commuting during construction. Following the completion of construction activities, all construction related trips would cease. The temporary increase in vehicle miles traveled (VMT) would not represent a substantial change from existing conditions due to the relatively small number of truck trips and the relatively short duration of construction activities. There would be minimal vehicle trips associated with project O&M activities from inspection of the pipelines, as needed.

The project would not conflict with a program, ordinances, or polices addressing circulations, nor would it be inconsistent with the with CEQA Guidelines Section 15064.3, subdivision (b)

because the majority of VMT generated from the project would be temporary with minimal increase in VMT during operations. Therefore, this impact is considered **less than significant**.

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

The project would not introduce incompatible uses on any roadways as roadway construction is not included as part of this project. There would be **no impact**.

d) Result in inadequate emergency access?

Construction of the proposed project would result in an increase in the number of trucks traveling to and from the project site during construction. However, this increase would be temporary and would not require a large number of trucks traveling along local roadways at one time. Construction of the proposed project would require two road crossings: the first being across Cecil Avenue via jack and bore, the second being across 9th Avenue via open trench. During road crossings, one-lane road closure is likely to occur. However, a one-way flagger would be used to maintain access through the construction site, therefore, full road closure would not occur. This impact would be **less than significant**.

3.18 Tribal Cultural Resources

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

3.18.1 Environmental Setting

Ethnohistoric Context

The project is situated in the ethnographic territory of the Southern Valley Yokuts, more specifically the Koyeti or Wowol, who occupied the channels of the Kern River Delta (Wallace 1978). Neighboring Southern Valley Yokuts tribes, all within the Tulare Lake Basin, included the Choynok, Chunut, Yawelami, and Hometwali. Cook estimates before European contact the Southern San Joaquin Valley population was 6,900 people (Cook 1955:44).

The Yokuts economy in the area depended heavily on fishing, waterfowl, and gathering shellfish, roots, and seeds. Reflecting the importance of fish resources, fish were caught in different ways: fish were dragged to shore by individuals on a tule raft using long nets attached to a pole; individuals would dive with nets; people used bottomless baskets; communal drives would steer fish into stick pens; a wide, flat tule boat with a fishing hole in the center was used to spear fish; and fish were speared through holes cut in natural tule mats formed on the lakeshore. Basket traps, poisons, the bow and arrow, and spearing scaffolds were also used (Gayton 1948:14-15; Wallace 1978). Waterfowl, other water-based animals, and a wide variety of plant resources were also important to the economy for food resources (Gayton 1948:15-16; Wallace 1978).

Several types of structures were built by the Yokuts in the region. The most basic were single family houses with oval floors and tule mats on a wooden frame. Communities arranged homes in a single row. There were also long, steep-roofed communal houses used by the Southern Valley Yokuts, including the Wowol, that could house up to 10 families. Interior space was

partitioned by mats for individual families. Domestic activities like cooking were done underneath a shaded porch at the front of the long house. There was little in terms of furnishing inside the house, with family belongings hanging from rafters (Gayton 1948:11-13; Wallace 1978).

Today many of the representatives of the Yokuts associate themselves with the Tule River Indian Tribe of California. They are striving to regain and retain their native heritage. The Tribe provide space for cultural interactions and classes ranging from language, learning different dialects of the language that have been passed down from the elders to the new generations, to cultural practices such as acorn making, milk weed fiber making, and traditional songs (Tule River Tribe 2024).

3.18.2 Tribal Consultation

Although no California Native American Tribes had previously contacted the District to request consultation on projects under AB 52 (PRC Section 21080.3.1), on behalf of the District, GEI sent a request to the Native American Heritage Commission (NAHC) asking for a search of its Sacred Lands File for the project vicinity. The NAHC responded on June 26, 2024, stating that the search did not indicate the presence of a Native American cultural resource in the vicinity of the project site.

The District has received no notification from culturally affiliated Tribes in their service area regarding consultation with California Native American Tribes per AB 52. Therefore, the District did not send AB 52 consultation letters regarding the project.

3.18.3 Discussion

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

Tribal Cultural Resources are either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that is either in or eligible for inclusion in the CRHR or a local historic register; or (2) a resource that the lead agency, at its discretion and supported by substantial evidence, chooses to treat as a Tribal Cultural Resource. In addition, a cultural landscape may also qualify as a Tribal Cultural Resource if it meets the criteria to be eligible for inclusion in the CRHR and is geographically defined in terms of the size and scope of the landscape. Other historical resources (as described in California PRC 21084.1), unique archaeological resources (as defined in California PRC 21083.2[g]), and non-

unique archaeological resources (as described in California PRC 21083.2[h]) may also be a Tribal Cultural Resource, if they meet CRHR eligibility criteria.

The records search did not identify any previously recorded resources within the project area. The pedestrian survey also failed to identify any resources that might be associated with Tribal Cultural Resources. An inquiry at the NAHC did not identify any previously reported resources in their Sacred Lands File search. Nevertheless, it is possible if unlikely that Tribal Cultural Resources may exist within the project footprint, and these resources may be inadvertently discovered during project-related ground-disturbing activities. This would be a potentially significant impact. Mitigation Measures CR-1 and CR-2, presented in section 3.5.2, have been identified to address this impact.

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

See section 3.5.2 for full text of this mitigation measure.

Timing: During project construction activities

Responsibility: District and construction contractor(s)

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

See section 3.5.2 for full text of this mitigation measure.

Timing: During project construction activities

Responsibility: District and construction contractor(s)

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown tribal cultural resources to a less than significant level because the find would be assessed by an archaeologist with California Native American Tribes given the opportunity to provide input and consideration, and the treatment or investigation would be conducted in accordance with CCR Section 15064.5. Implementing Mitigation Measure CR-2 would reduce the potentially significant impact related to discovery of human remains, and therefore potentially to Tribal Cultural Resources, to a less than significant level because the find would be treated or investigated in accordance with State laws. Therefore, the project would have a **less-than-significant impact with mitigation incorporated**.

3.19 Utilities and Service Systems

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

3.19.1 Environmental Setting

Electricity services in Kern County are provided by PG&E, Southern California Edison, and Southern California Gas (Kern County 2004). Wastewater in the unincorporate portion of Kern County is managed through local septic tanks. The Kern County Public Works Department currently owns and operates seven recycling and sanitary landfills, six transfer stations, and one bin site (KCPW 2023). The closest landfill is the Shafter Landfill, located approximately 28.9 miles from the project area with a maximum capacity of 21.9 million cubic yards (City of Delano 2005). There are existing overhead electrical lines and power poles located primarily along the east side and intermittently along the west side of Driver Road and along both sides of 9th Avenue.

3.19.2 Discussion

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?

The proposed project would require a limited use of water during construction activities for dust suppression purposes. New water facilities or expansion of existing facilities would not be required to support the proposed project as no water would be needed following construction. No wastewater treatment facilities would be installed as part of the proposed project. Implementing the proposed project would not require new electric power, natural gas, or telecommunications facilities. As stated above in Section 3.10, "Hydrology and Water Quality", the proposed project would not substantially alter the local drainage pattern of the project area. As such, the proposed project would not require the construction or expansion of new storm water drainage facilities. There would be no construction of utility infrastructure associated with the proposed project, and the project would have **no impact**.

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

The proposed project may require a limited use of water during construction activities for dust suppression purposes. However, this water supply would be trucked to and from the project site. No additional permanent water supply would be required to operate the proposed project. There would be **no impact**.

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

See Question (a) above. The project would not generate a significant amount of wastewater. There would be **no impact.**

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

The proposed project would not create substantial amounts of solid waste, and as such would not exceed the capacity of local infrastructure. Minimal waste would be generated during construction and no increase in waste production would occur during the operation of the project. The project would comply with federal, state, and local management and reduction statues and regulations related to solid waste. This impact would be **less than significant**.

3.20 Wildfire

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

3.20.1 Environmental Setting

The project site is not located in a State Responsibility Area or a very high fire hazard severity zone (CALFIRE 2023). The Kern County Fire Department provides fire protection for residents of the unincorporated areas of the County and the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Tehachapi and Wasco (Kern County 2004).

3.20.2 Discussion

a, b, c, and d) Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not located in or near a State Responsibility Area or a very high fire hazard severity zone. The project would include constructing new and replacement pipelines. The project would not result in an increase in the number of users at the site that could impair

emergency response or evacuation. Additionally, the short-term, temporary nature of construction and the intermittent nature of material off drop-off via large trucks at the project site would not pose a risk to emergency response or evacuation during an emergency. The project would not require any infrastructure that would exacerbate fire risk or the risk of flooding, slope instability, or drainage changes. There would be **no impact**.

3.21 Mandatory Findings of Significance

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

3.21.1 Discussion

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

The analysis conducted in this IS concludes that implementation of the proposed project would not have a significant impact on the environment with the implementation of mitigation measures. As evaluated in Chapter 3.4, "Biological Resources," impacts on biological resources would be less than significant or less-than-significant with mitigation incorporated. The proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Chapter 3.5, "Cultural Resources," the proposed project would not eliminate important examples of the major

periods of California history or prehistory. Therefore, project impacts would be **less-than-significant with mitigation incorporated**.

Once constructed, operation of the proposed project would have no long-term permanent impacts to biological or cultural resources.

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

A cumulative impact could occur if the proposed project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects for each resource area. No direct significant impacts were identified for the proposed project that could not be mitigated to a less than significant level. However, when combined with other projects within the vicinity, the proposed project may result in contribution to a potentially significant cumulative impact.

The proposed project would result in no potential impacts to aesthetics, land use and planning, mineral resources, population and housing, public services, recreation, and wildfire. Additionally, impacts would be less than significant for agriculture and forestry, air quality, energy, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, and utilities and service systems.

Potential impacts to biological resources, cultural resources, geology and soils, and tribal cultural resources would only occur during construction of the proposed project. These potential construction impacts would be short term and occur over the approximate 1-year construction period. The project work itself would occur within the construction corridor and would be contained such that off-site impacts do not occur. As a result, the impacts of the proposed project would not combine together with other related projects in the vicinity to produce a significant environmental impact. Therefore, operation of the proposed project would not contribute to long-term cumulative impacts and their contribution to impacts would be less than cumulatively considerable.

Implementation of mitigation measures listed within Section 3.4, "Biological Resources," Section 3.5, "Cultural Resources," and Section 3.18, "Tribal Cultural Resources," would reduce project impacts to sensitive natural resources. Impacts related to biological resources, cultural resources, and tribal cultural resources would be less than cumulatively considerable. Therefore, the proposed project would not result in any impacts that would be cumulatively considerable resulting from the proposed project. Cumulative impacts would be considered **less-than-significant with mitigation incorporated**.

c) Would the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed project would not result in substantial adverse effects, either direct or indirect, on human beings. The project would provide a more reliable water supply to farmers located within the District's boundaries. As described in Section 3.3, "Air Quality," air emissions associated with the proposed project would not result in adverse health effects to sensitive receptors. Furthermore, as described in Section 3.13, "Noise," construction noise would not result in adverse effects to sensitive receptors. Impacts to human beings would be **less than significant.**

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3.21 Mandatory Findings of Significance

No references cited.

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Appendix A Air Quality and Greenhouse Gases Data

Driver Pipeline Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Driver Pipeline
Construction Start Date	10/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.10
Precipitation (days)	23.0
Location	35.76914964986916, -119.20624859397748
County	Kern-San Joaquin
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2948
EDFZ	9
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.25

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	1.00	Mile	13.5	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.21	1.86	17.0	26.3	0.04	0.71	1.09	1.36	0.65	0.30	0.66	—	5,827	5,827	0.16	0.67	0.26	6,029
Mit.	2.21	1.86	17.0	26.3	0.04	0.71	1.09	1.36	0.65	0.30	0.66	—	5,827	5,827	0.16	0.67	0.26	6,029
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.26	2.45	3.71	0.01	0.10	0.01	0.11	0.09	< 0.005	0.10	—	600	600	0.02	0.01	0.05	604
Mit.	0.31	0.26	2.45	3.71	0.01	0.10	0.01	0.11	0.09	< 0.005	0.10	—	600	600	0.02	0.01	0.05	604
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.06	0.05	0.45	0.68	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	—	99.4	99.4	< 0.005	< 0.005	0.01	100
Mit.	0.06	0.05	0.45	0.68	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	—	99.4	99.4	< 0.005	< 0.005	0.01	100
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.21	1.86	17.0	26.3	0.04	0.71	1.09	1.36	0.65	0.30	0.66	—	5,827	5,827	0.16	0.67	0.26	6,029
2025	2.07	1.74	16.4	26.3	0.04	0.60	0.02	0.62	0.55	0.01	0.56	—	3,973	3,973	0.16	0.04	< 0.005	3,990
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.26	2.45	3.71	0.01	0.10	0.01	0.11	0.09	< 0.005	0.10	—	600	600	0.02	0.01	0.05	604
2025	0.22	0.19	1.76	2.83	< 0.005	0.06	< 0.005	0.07	0.06	< 0.005	0.06	—	428	428	0.02	< 0.005	0.01	429
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.45	0.68	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	—	99.4	99.4	< 0.005	< 0.005	0.01	100
2025	0.04	0.03	0.32	0.52	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	70.8	70.8	< 0.005	< 0.005	< 0.005	71.1

2.3. Construction Emissions by Year, Mitigated

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

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

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.21	1.86	17.0	26.3	0.04	0.71	1.09	1.36	0.65	0.30	0.66	—	5,827	5,827	0.16	0.67	0.26	6,029
2025	2.07	1.74	16.4	26.3	0.04	0.60	0.02	0.62	0.55	0.01	0.56	—	3,973	3,973	0.16	0.04	< 0.005	3,990
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.26	2.45	3.71	0.01	0.10	0.01	0.11	0.09	< 0.005	0.10	—	600	600	0.02	0.01	0.05	604
2025	0.22	0.19	1.76	2.83	< 0.005	0.06	< 0.005	0.07	0.06	< 0.005	0.06	—	428	428	0.02	< 0.005	0.01	429
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.45	0.68	< 0.005	0.02	< 0.005	0.02	0.02	< 0.005	0.02	—	99.4	99.4	< 0.005	< 0.005	0.01	100
2025	0.04	0.03	0.32	0.52	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	70.8	70.8	< 0.005	< 0.005	< 0.005	71.1

3. Construction Emissions Details

3.1. Excavation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.91	8.34	13.0	0.02	0.35	—	0.35	0.32	—	0.32	—	1,935	1,935	0.08	0.02	—	1,941
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.16	1.81	< 0.005	0.05	—	0.05	0.04	—	0.04	—	269	269	0.01	< 0.005	—	270
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.5	44.5	< 0.005	< 0.005	—	44.7
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Excavation (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.91	8.34	13.0	0.02	0.35	—	0.35	0.32	—	0.32	—	1,935	1,935	0.08	0.02	—	1,941
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.16	1.81	< 0.005	0.05	—	0.05	0.04	—	0.04	—	269	269	0.01	< 0.005	—	270

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	44.5	44.5	< 0.005	< 0.005	—	44.7
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Excavation (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.85	8.01	13.0	0.02	0.30	—	0.30	0.27	—	0.27	—	1,935	1,935	0.08	0.02	—	1,941
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.86	1.40	< 0.005	0.03	—	0.03	0.03	—	0.03	—	208	208	0.01	< 0.005	—	209
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.5	34.5	< 0.005	< 0.005	—	34.6

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Excavation (2025) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.85	8.01	13.0	0.02	0.30	—	0.30	0.27	—	0.27	—	1,935	1,935	0.08	0.02	—	1,941
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.86	1.40	< 0.005	0.03	—	0.03	0.03	—	0.03	—	208	208	0.01	< 0.005	—	209
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.5	34.5	< 0.005	< 0.005	—	34.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Removal of Existing Pipe (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.68	5.16	5.94	0.02	0.19	—	0.19	0.18	—	0.18	—	1,762	1,762	0.07	0.01	—	1,768

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.5	14.5	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.40	2.40	< 0.005	< 0.005	—	2.41
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.13	0.07	5.14	1.08	0.03	0.08	1.07	1.15	0.08	0.29	0.37	—	4,065	4,065	0.03	0.65	0.26	4,261

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.4	33.4	< 0.005	0.01	0.03	35.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.53	5.53	< 0.005	< 0.005	0.01	5.80

3.6. Removal of Existing Pipe (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	0.68	5.16	5.94	0.02	0.19	—	0.19	0.18	—	0.18	—	1,762	1,762	0.07	0.01	—	1,768
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.5	14.5	< 0.005	< 0.005	—	14.5

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.40	2.40	< 0.005	< 0.005	—	2.41
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.13	0.07	5.14	1.08	0.03	0.08	1.07	1.15	0.08	0.29	0.37	—	4,065	4,065	0.03	0.65	0.26	4,261
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.4	33.4	< 0.005	0.01	0.03	35.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.53	5.53	< 0.005	< 0.005	0.01	5.80

3.7. Installation of New and Replacement Pipeline (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.59	13.3	0.02	0.36	—	0.36	0.33	—	0.33	—	1,969	1,969	0.08	0.02	—	1,976
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.19	1.84	< 0.005	0.05	—	0.05	0.05	—	0.05	—	274	274	0.01	< 0.005	—	275
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.3	45.3	< 0.005	< 0.005	—	45.5

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	70.5	70.5	< 0.005	0.01	< 0.005	73.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.79	9.79	< 0.005	< 0.005	0.01	10.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	1.70

3.8. Installation of New and Replacement Pipeline (2024) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.94	8.59	13.3	0.02	0.36	—	0.36	0.33	—	0.33	—	1,969	1,969	0.08	0.02	—	1,976
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.19	1.84	< 0.005	0.05	—	0.05	0.05	—	0.05	—	274	274	0.01	< 0.005	—	275
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.3	45.3	< 0.005	< 0.005	—	45.5
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	70.5	70.5	< 0.005	0.01	< 0.005	73.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.79	9.79	< 0.005	< 0.005	0.01	10.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	1.70

3.9. Installation of New and Replacement Pipeline (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	8.26	13.2	0.02	0.31	—	0.31	0.28	—	0.28	—	1,969	1,969	0.08	0.02	—	1,976

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	1.42	< 0.005	0.03	—	0.03	0.03	—	0.03	—	212	212	0.01	< 0.005	—	213
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.1	35.1	< 0.005	< 0.005	—	35.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69.1	69.1	< 0.005	0.01	< 0.005	72.4

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.44	7.44	< 0.005	< 0.005	0.01	7.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.29

3.10. Installation of New and Replacement Pipeline (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	8.26	13.2	0.02	0.31	—	0.31	0.28	—	0.28	—	1,969	1,969	0.08	0.02	—	1,976
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.89	1.42	< 0.005	0.03	—	0.03	0.03	—	0.03	—	212	212	0.01	< 0.005	—	213

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.1	35.1	< 0.005	< 0.005	—	35.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.09	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69.1	69.1	< 0.005	0.01	< 0.005	72.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.44	7.44	< 0.005	< 0.005	0.01	7.80
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.23	1.23	< 0.005	< 0.005	< 0.005	1.29

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Excavation	Linear, Grading & Excavation	10/22/2024	2/24/2025	5.00	90.0	—

Removal of Existing Pipe	Linear, Grading & Excavation	10/1/2024	10/3/2024	5.00	3.00	—
Installation of New and Replacement Pipeline	Linear, Grading & Excavation	10/22/2024	2/24/2025	5.00	90.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Excavation	Other Material Handling Equipment	Diesel	Average	3.00	8.00	93.0	0.40
Removal of Existing Pipe	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Removal of Existing Pipe	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Removal of Existing Pipe	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Installation of New and Replacement Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Installation of New and Replacement Pipeline	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Installation of New and Replacement Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Installation of New and Replacement Pipeline	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43

Installation of New and Replacement Pipeline	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Installation of New and Replacement Pipeline	Other Material Handling Equipment	Diesel	Average	3.00	8.00	93.0	0.40

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavation	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Excavation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Excavation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Excavation	Other Material Handling Equipment	Diesel	Average	3.00	8.00	93.0	0.40
Removal of Existing Pipe	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Removal of Existing Pipe	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Removal of Existing Pipe	Off-Highway Trucks	Diesel	Average	1.00	8.00	376	0.38
Installation of New and Replacement Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Installation of New and Replacement Pipeline	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Installation of New and Replacement Pipeline	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Installation of New and Replacement Pipeline	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Installation of New and Replacement Pipeline	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46

Installation of New and Replacement Pipeline	Other Material Handling Equipment	Diesel	Average	3.00	8.00	93.0	0.40

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Excavation	—	—	—	—
Excavation	Worker	0.00	17.3	LDA,LDT1,LDT2
Excavation	Vendor	0.00	10.6	HHDT,MHDT
Excavation	Hauling	0.00	20.0	HHDT
Excavation	Onsite truck	—	—	HHDT
Removal of Existing Pipe	—	—	—	—
Removal of Existing Pipe	Worker	0.00	17.3	LDA,LDT1,LDT2
Removal of Existing Pipe	Vendor	0.00	10.6	HHDT,MHDT
Removal of Existing Pipe	Hauling	57.7	20.0	HHDT
Removal of Existing Pipe	Onsite truck	—	—	HHDT
Installation of New and Replacement Pipeline	—	—	—	—
Installation of New and Replacement Pipeline	Worker	0.00	17.3	LDA,LDT1,LDT2
Installation of New and Replacement Pipeline	Vendor	0.00	10.6	HHDT,MHDT
Installation of New and Replacement Pipeline	Hauling	1.00	20.0	HHDT
Installation of New and Replacement Pipeline	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Excavation	—	—	—	—
Excavation	Worker	0.00	17.3	LDA,LDT1,LDT2
Excavation	Vendor	0.00	10.6	HHDT,MHDT
Excavation	Hauling	0.00	20.0	HHDT
Excavation	Onsite truck	—	—	HHDT
Removal of Existing Pipe	—	—	—	—
Removal of Existing Pipe	Worker	0.00	17.3	LDA,LDT1,LDT2
Removal of Existing Pipe	Vendor	0.00	10.6	HHDT,MHDT
Removal of Existing Pipe	Hauling	57.7	20.0	HHDT
Removal of Existing Pipe	Onsite truck	—	—	HHDT
Installation of New and Replacement Pipeline	—	—	—	—
Installation of New and Replacement Pipeline	Worker	0.00	17.3	LDA,LDT1,LDT2
Installation of New and Replacement Pipeline	Vendor	0.00	10.6	HHDT,MHDT
Installation of New and Replacement Pipeline	Hauling	1.00	20.0	HHDT
Installation of New and Replacement Pipeline	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

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

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Excavation	0.00	0.00	13.5	0.00	—
Removal of Existing Pipe	0.00	1,382	13.5	0.00	—
Installation of New and Replacement Pipeline	0.00	0.00	13.5	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	13.5	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.1	annual days of extreme heat

Extreme Precipitation	0.90	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	82.5
AQ-PM	95.2
AQ-DPM	19.6
Drinking Water	96.6
Lead Risk Housing	32.3
Pesticides	95.5

Toxic Releases	21.9
Traffic	3.60
Effect Indicators	—
CleanUp Sites	74.5
Groundwater	78.6
Haz Waste Facilities/Generators	95.8
Impaired Water Bodies	0.00
Solid Waste	97.6
Sensitive Population	—
Asthma	52.6
Cardio-vascular	93.6
Low Birth Weights	70.2
Socioeconomic Factor Indicators	—
Education	93.0
Housing	5.01
Linguistic	88.0
Poverty	78.0
Unemployment	98.7

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	19.2865392
Employed	9.713845759
Median HI	34.89028615
Education	—

Bachelor's or higher	13.64044655
High school enrollment	27.10124471
Preschool enrollment	47.26036186
Transportation	—
Auto Access	88.68215065
Active commuting	15.46259464
Social	—
2-parent households	82.08648787
Voting	12.947517
Neighborhood	—
Alcohol availability	90.36314641
Park access	11.17669704
Retail density	1.924804312
Supermarket access	10.41960734
Tree canopy	2.604901835
Housing	—
Homeownership	69.69074811
Housing habitability	47.47850635
Low-inc homeowner severe housing cost burden	45.38688567
Low-inc renter severe housing cost burden	38.11112537
Uncrowded housing	18.00333633
Health Outcomes	—
Insured adults	7.404080585
Arthritis	0.0
Asthma ER Admissions	40.3
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	18.9
Cognitively Disabled	92.5
Physically Disabled	73.0
Heart Attack ER Admissions	28.1
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	69.7
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	87.4
English Speaking	9.5
Foreign-born	86.5
Outdoor Workers	1.1
Climate Change Adaptive Capacity	—

Impervious Surface Cover	85.1
Traffic Density	10.2
Traffic Access	0.0
Other Indices	—
Hardship	84.5
Other Decision Support	—
2016 Voting	12.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	93.0
Healthy Places Index Score for Project Location (b)	18.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Construction: Construction Phases	Construction schedule provided by the District.
Construction: Off-Road Equipment	Construction equipment provided from enginner.
Construction: Trips and VMT	Number of haul trips calculated based on linear feet of pipeline.

Appendix B Biological Database Results

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 07/13/2024 02:12:47 UTC
Project Code: 2024-0115787
Project Name: Driver Road Pipeline Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2024-0115787
Project Name: Driver Road Pipeline Project
Project Type: Stormwater Discharge
Project Description: water conveyance
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.775933949999995,-119.20513945,14z

Counties: Kern County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Buena Vista Lake Ornate Shrew *Sorex ornatus relictus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1610	Endangered
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat *Dipodomys nitratoides nitratoides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

REPTILES

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Western Spadefoot *Spea hammondii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRUSTACEANS

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/498

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: County of Kern
Name: Devin Barry
Address: 11010 White Rock Road, Suite 200
City: Rancho Cordova
State: CA
Zip: 95670
Email devinbarry33@gmail.com
Phone: 5108096152