INITIAL STUDY

FOR THE

MERCED BIOGAS PIPELINE EXPANSION PROJECT

CONDITIONAL USE PERMIT APPLICATION NO. CUP20-017

COUNTY OF MERCED
DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT
2222 'M' Street
Merced, CA 95340

Prepared with the Technical Assistance of:

environmental PLANNING PARTNERS, INC.
2934 Gold Plan Court, Ste. 3
Rancho Cordova, CA 95670

April 2022

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NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION
FOR THE MERCED BIOGAS PIPELINE EXPANSION PROJECT

To: Interested Persons

From: County of Merced
Department of Community and Economic Development
2222 'M' Street
Merced, CA 95340
Phone: (209) 385-7654
Brian.Guerrero@countyofmerced.com

Contact: Brian Guerrero, Development Services Coordinator

Subject: Notice of Intent to Adopt a Mitigated Negative Declaration

Merced County is the Lead Agency pursuant to the California Environmental Quality Act (CEQA) for the proposed Merced Biogas Pipeline Expansion Project. Merced County intends to adopt a Mitigated Negative Declaration for the proposed project.

The complete pipeline network would be generally located over an area centered on State Route 59 and stretching from south of the City of Merced to south of the Merced/Madera County line as described in the attached Initial Study/Mitigated Negative Declaration (IS/MND). Merced County is considering Conditional Use Permit Application No. CUP20-017 to allow the construction and operation of a biogas pipeline expansion to a previously approved dairy digester cluster.

The proposed IS/MND is available for public review from 8:30 a.m. to 4:30 p.m., Monday through Friday, at the offices of the Merced County Community and Economic Development Department (address listed above) and online at the Merced County website at:

www.co.merced.ca.us/index.aspx?nid=414

The public comment period on the IS/MND closes on May 26, 2022. Comments may be submitted to "Brian.Guerrero@countyofmerced.com" and should include the phrase "Merced Biogas Pipeline Expansion Project IS/MND" in the subject line. The public hearing for the project is tentatively scheduled to be heard at 9:00 a.m. on June 8, 2022 during the Planning Commission Meeting, located at 2222 'M' Street, Merced, CA 95340, Third Floor, Board Chambers. The live broadcast of the meeting will be also available to the public via a link on the Planning Commission page of the Merced County website:

https://www.co.merced.ca.us/411/Planning-Commission.

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Table of Contents

Appendices

Bound Separately – Available from the Merced County Department of Community and Economic Development

List of Figures

List of Tables

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INITIAL STUDY AND ENVIRONMENTAL EVALUATION

Project Title:	Merced Biogas Pipeline Expansion Project Conditional Use Permit No. CUP20-017
Project Locations:	Biogas Collection Pipelines: within private property and public right of way within south/central Merced County and north/central Madera County
Lead Agency Name and Address:	Merced County Community and Economic Development Department 2222 'M' Street Merced, CA 95340
Contact Person and Phone Number:	Brian Guerrero, Development Services Coordinator Phone: (209) 385-7654
General Plan Designation:	Agricultural (Merced County General Plan) Agricultural Exclusive (AE) (Madera County General Plan) Agricultural (A) (Madera County General Plan)
Zoning:	A-1 (General Agricultural; Merced County) ARE-40 (Agricultural Rural Exclusive – 40 Acres; Madera County) ARE-20 (Agricultural Rural Exclusive – 20 Acres; Madera County)

1. DESCRIPTION OF PROJECT

The project under evaluation in this Initial Study (IS) is expansion of a dairy digester cluster that was previously evaluated in the Initial Study / Mitigated Negative Declaration (IS/MND) for the Merced Biogas Upgrade Facility and Pipeline project, Conditional Use Permit No. CUP19-003. CUP19-003 was approved by the Merced County Planning Commission on November 20, 2019. The 2019 IS/MND for the biogas upgrade facility and pipeline project evaluated construction and operation of two biogas upgrade facility alternatives, and up to 34[1] miles of associated pipeline located in unincorporated Merced and Madera Counties. The biogas upgrade facility site selected is located in unincorporated Merced County, north of Rahilly Road and east of the Vander Woude Dairy, approximately 1.5 miles west of State Route 59. As of November 2021, construction of the biogas upgrade facility and associated pipeline evaluated in 2019 has been completed.

[1] The Initial Study for the biogas upgrade facility and pipeline project (CUP19-003) included an evaluation of up to 34 miles of biogas pipeline. The final design of the biogas upgrade facility and pipeline project includes 28.8 miles of pipeline in Merced and Madera Counties.

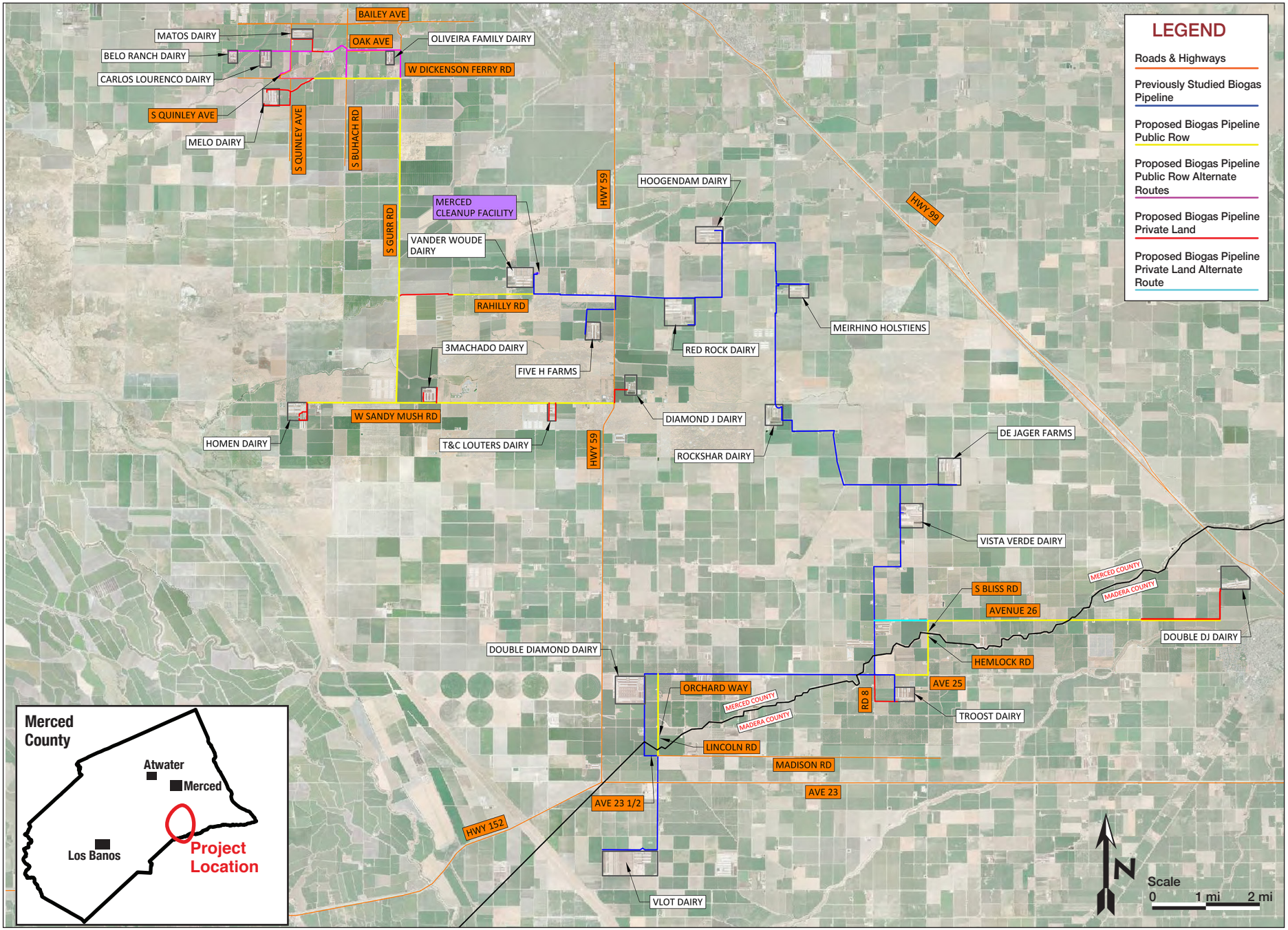
The Merced Biogas Pipeline Expansion project would involve the extension of the underground pipeline network to serve additional dairy digesters not included in the currently permitted biogas pipeline system. Approximately 39.5 miles of new pipeline is proposed, with 31.8 miles of the pipeline alignment located in Merced County, and 7.7 miles of additional pipeline located in Madera County. The proposed pipeline would transport biogas to the previously approved biogas upgrade facility from a cluster of individual dairy digesters in the surrounding area. The upgraded biomethane would be piped to an injection point with a Pacific Gas and Electric Company (PG&E) gas transmission pipeline.

This Initial Study focuses on whether the proposed biogas pipeline expansion project may cause significant effects on the environment. In particular, consistent with Section 21083.3 of the Public Resources Code, this Initial Study is intended to assess any effects on the environment, which are peculiar to the proposed project or to the parcels on which the project would be located. The Initial Study is also intended to assess whether any environmental effects of the project are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or by other means [Section 15152(d)(2) of the Guidelines for the California Environmental Quality Act (CEQA)]. If such revisions, conditions or other means are identified, they will be imposed as mitigation measures.

This initial study relies on CEQA Guidelines Sections 15064 – 15064.7 in its determination of the significance of environmental effects. According to Section 15064(f), the finding as to whether a project may have one or more significant effects shall be based on substantial evidence in the record, and that controversy alone, without substantial evidence of a significant effect, does not trigger the need for an EIR.

LOCATION

The complete pipeline network would be generally located over an area centered on State Route 59 and stretching from south of the City of Merced to south of the Merced/Madera County line (see Figure 1). This project would involve the expansion of the underground biogas pipeline alignment west and northwest of the previously approved biogas pipeline alignment, and east of the southern portion of the previously approved alignment into Madera County. The pipelines would be located predominantly on privately owned agricultural property via easements and/or within or across Merced or Madera County public rights-of-way (ROW). Table 1 lists the Assessor's Parcel Numbers (APN) for properties within which the biogas pipeline would run. Table 1 also lists APNs adjacent to which the biogas pipeline would run within the ROW. There are several alternate pipeline alignments that may run through Merced County (see Figure 1 and Table 1). See Appendix A of this Initial Study for engineered drawings showing APNs and pipeline details.



Merced Biogas Pipeline Expansion Project CUP20-017

SOURCE: Maas Energy Works 2021; Planning Partners 2021

Figure 1

Regional Location and Pipeline Alignments

Table 1	**Merced Biogas Pipeline Expansion Assessor Parcel Numbers**			
Appendix A Sheet [1]	**APN**	**Running in APN**	**Running Alongside APN in ROW**	**Notes**
Appendix A Sheet S-1	056-200-002		X	
	056-200-024		X	Belo Ranch Dairy
	056-200-017		X	
	056-200-006		X	
	056-200-018		X	Carlos Lourenco Dairy
	065-200-027		X	
	065-200-028		X	
	065-200-029		X	
	056-200-010		X	
	056-200-030		X	
	215-140-025	X	X	
	215-140-024	X	X	
	215-140-020		X	
	215-140-033	X	X	
	215-140-021		X	
	215-140-019			
	215-140-017	X		
	215-140-018			
	215-140-028		X	
	215-140-027		X	
	215-140-026		X	
	215-140-029	X		
	215-140-030		X	
	056-200-031			
	215-140-032		X	
	215-140-031		X	
	215-140-034		X	
	215-140-054		X	
	215-140-053		X	
	215-140-052		X	
	215-140-057		X	
	065-070-001		X	
	065-070-045	X	X	
	065-070-046		X	
	065-070-044		X	
	065-070-043		X	
	065-070-039		X	
	065-020-031	X	X	Melo Dairy
	215-140-005	X		

Table 1	**Merced Biogas Pipeline Expansion Assessor Parcel Numbers**			
Appendix A Sheet [1]	**APN**	**Running in APN**	**Running Alongside APN in ROW**	**Notes**
Appendix A Sheet S-2	215-140-035		X	
	215-140-016	X		
	215-140-036	X		
	215-140-039	X		
	215-140-040	X		
	215-140-015	X		
	215-140-014	X		
	215-140-041	X		
	215-140-013	X		
	215-140-042	X		Oliveira Family Dairy
	215-140-012	X		
	215-140-043	X	X	
	215-150-006		X	
	215-150-015		X	
	215-140-051		X	
	065-070-055		X	
	215-140-050		X	
	215-140-049		X	
	215-140-048		X	
	215-140-047		X	
	065-070-037		X	
	215-140-045		X	
	215-140-046		X	
	065-070-053		X	
	215-140-044		X	
	065-070-054		X	
	065-070-033		X	
	065-070-052		X	
	065-070-017		X	
	065-070-035		X	
	065-070-011		X	
Appendix A Sheet S-3	065-070-026		X	
	065-070-028		X	
	065-070-027		X	
	065-070-029		X	
	065-100-003		X	
	065-100-002		X	
	065-100-011		X	

Table 1	**Merced Biogas Pipeline Expansion Assessor Parcel Numbers**			
Appendix A Sheet [1]	**APN**	**Running in APN**	**Running Alongside APN in ROW**	**Notes**
Appendix A Sheet S-4	065-100-023		X	
	065-100-012	X	X	
	065-120-003		X	
	065-120-004		X	
Appendix A Sheet S-5	065-110-005		X	
	065-130-076		X	
	065-130-077		X	
	065-110-033		X	
	065-110-034		X	
	065-130-065		X	
	065-120-015		X	
Appendix A Sheet S-6	065-130-003		X	
Appendix A Sheet S-7	074-080-001	X		Homen Dairy
	074-080-025		X	
	065-120-021		X	
	074-080-043		X	
	074-080-044		X	
	074-080-030		X	
	065-120-008		X	
Appendix A Sheet S-8	065-120-009		X	
	074-080-008		X	
	065-120-016	X	X	Machado Dairy
	065-120-119	X	X	
	065-130-066		X	
	065-130-069		X	
	065-130-070		X	
	074-080-031		X	
	074-080-032		X	
	074-080-042		X	
	074-080-014		X	
	074-090-024		X	
	074-090-033		X	
Appendix A Sheet S-9 Sheet S-10	065-130-071		X	
	065-130-072		X	
	065-130-073		X	

Table 1 Merced Biogas Pipeline Expansion Assessor Parcel Numbers				
Appendix A Sheet [1]	**APN**	**Running in APN**	**Running Alongside APN in ROW**	**Notes**
	065-130-037		X	
	065-130-060		X	
	065-130-056	X	X	
	074-090-034		X	
	074-090-004		X	
	074-090-006	X	X	T&C Louters
	074-090-018		X	
	074-090-019		X	
	074-090-020		X	
	074-090-010		X	
	075-010-002		X	
	066-220-003	X		Diamond J Dairy
Appendix A Sheet S-11	075-074-001		X	Double Diamond Dairy
	075-075-005		X	
	075-075-003		X	
	075-075-004		X	
	075-075-001		X	
	075-075-017		X	
	075-075-013		X	
	075-075-014		X	
	075-090-002		X	
	020-032-015		X	Madera County
Appendix A Sheet S-12	025-040-018		X	
	025-040-015		X	
	025-040-016		X	
	025-040-010		X	
	025-050-014		X	
	025-050-012		X	
	025-100-022		X	
	025-110-001			
	025-100-024		X	Troost Dairy (Previously approved)
	025-100-027		X	
	025-100-020	X		
Appendix A Sheet S-13	075-060-026	X		
	075-080-032		X	De Jager Dairy North
	075-060-073	X		
	075-080-010		X	

Table 1 Merced Biogas Pipeline Expansion Assessor Parcel Numbers

Appendix A Sheet [1]	APN	Running in APN	Running Alongside APN in ROW	Notes
	075-120-017		X	
	075-120-006		X	
	075-140-001		X	
	075-140-014		X	
	025-050-001		X	
	025-040-002		X	
Appendix A Sheet S-14	075-140-012		X	
	075-120-041		X	
	075-140-005		X	
	075-120-009		X	
	075-140-006		X	
	075-120-012		X	
	075-120-013		X	
	075-140-009		X	
	075-140-010		X	
	025-070-001		X	
	075-120-014		X	
	025-020-011		X	
	025-070-007		X	
	025-070-006		X	
	025-020-006		X	
	025-020-010		X	
	025-080-001		X	
Appendix A Sheet S-15	025-020-008		X	
	025-090-014		X	
	025-090-002		X	
	025-090-003		X	
	025-090-012		X	
	026-170-022		X	
	025-030-007	X		
	026-110-008	X		Double DJ Dairy

Note: As indicated in the table, portions of the pipeline routes may run within both the public ROW and private easements in or adjacent to a given parcel. APN = Assessor Parcel Number; ROW = Right-of-Way.
(1) Appendix A of this Initial Study includes detailed sections showing APNs and pipeline alignment

Source: Maas Energy Works 2021.

EXISTING CONDITIONS

All of the proposed pipeline would be located within public ROW adjacent to predominantly agricultural land or on existing agricultural property (including dairy farms) within private easements as indicated in Figure 1 and Table 1. Project details such as adjacent land uses and cropping patterns could change over the course of evaluation, and from those existing at the time of this Initial Study. These changes, however, would consist of agricultural and ancillary uses consistent with the Merced County General Plan or Madera County General Plan, and each County's Zoning Code, and would not affect the analysis contained in this Initial Study.

PROJECT CHARACTERISTICS

The project sponsor has applied for Conditional Use Permit (CUP20-017) from Merced County to construct and operate up to 39.5 miles of buried biogas pipeline as the expansion of a dairy biogas collection and biomethane injection[2] project in an unincorporated area of Merced and Madera[3] Counties, California. These low-pressure SDR-21 High Density Poly Ethylene (HDPE) pipelines would be located predominantly within or across public ROW and on privately owned property via easements (see Table 2 for the proposed pipeline mileage within public ROW and private land in each County).

Table 2 Biogas Pipeline Expansion Project Mileage in Merced and Madera Counties

Proposed Biogas Pipeline	Miles		
	Merced	**Madera**	**Total**
Public ROW	19.1	4.3	23.4
Public ROW Alternate Routes	5.6	0	5.6
Private Land	6.1	3.4	9.5
Private Land Alternate Routes	1	0	1
Total Expansion Pipeline	**31.8**	**7.7**	**39.5**

Note: The previously studied 2019 Biogas Pipeline is currently under construction and includes 24.7 miles in Merced County, and 4.1 miles in Madera County, for a total of 28.8 miles of biogas pipeline.

Source: Maas Energy Works, Inc. 2021.

The gathering pipelines would connect to individual anaerobic dairy digesters[4] on existing dairy operations in the project area, and would move biogas from each dairy to the previously permitted central upgrading facility for further cleaning and upgrading, and ultimately piped to an injection point with PG&E pipelines. The individual dairy digester projects have been or will be permitted

2 Biogas collected from individual dairies would be upgraded to biomethane and injected into the regional natural gas pipeline grid as part of the project.

3 Beyond encroachment permits, there are no additional entitlements necessary for Madera County for construction and operation of the proposed 7.7 miles of pipeline in Madera County.

4 Organic materials decomposing in a warm, airless environment release biogas. Biogas production can be hastened by sealing the organic material inside a heated, airtight tank called a digester. In the digester, bacteria decompose organic materials in the absence of air leading to the subsequent release of methane and carbon dioxide.

separately with Merced and Madera counties, as a modification to the dairies' existing land use permits.

Pipeline Detail and Safety Measures

The gathering pipelines would range in size from 4 inches to 20 inches, and would be buried at least 48 inches below grade and marked with tracer wire. Pipeline routes would be restored to their original condition and uses after installation of the pipelines.

As set forth by the project applicant, the gathering pipeline system would be considered a Class 1 pipeline and would be classified as a non-jurisdictional gathering pipeline[5] in accordance with the federal Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations. All portions of the project would comply with PHMSA guidelines, 49 CFR Part 192[6], and with the California Public Utilities Commission's (CPUC) Safety Enforcement Division (SED) purview, as required by CPUC General Order 112-F[7].

Each dairy would have a blower to push gas from that dairy into the gathering lines at a pressure of no more than 20 psi. Each blower would be controlled by a central Supervisory Control And Data Acquisition (SCADA) monitoring system that would be overseen by project operators on an around-the-clock basis. When a blower increases in speed, more biogas would be pushed to the upgrading facility, and when it decreases, less biogas would be sent. The blowers would be rated to a maximum 20 psi and would not exceed that pressure. The pressure of the gathering lines would be monitored via SCADA equipment in real time to detect leaks or major failures. Each dairy site and the upgrading facility would have flow meters to monitor biogas flows and ensure pipeline safety. If at any point the biomethane is not within the PG&E Rule 21 standards, the injection valve would automatically close and no biomethane would be injected into the pipeline.

There would be an emergency stop button at each dairy site and the central hub that would immediately shut down the blowers if depressed. In the case of a blower failure, biogas would be unable to be transported from the associated digester. Other digesters may still be able to deliver their biogas to the central cleanup facility. For the associated digester, prolonged downtime would result in a build-up of biogas under the digester cover. If digester pressures increase significantly, the digester would be vented to prevent damage to the cover and uncontrolled release of biogas.

Manure as an Energy Source
Manure from livestock operations can be used an alternative energy source. An anaerobic digester will partially convert manure to energy in the form of biogas, which contains methane. At the centralized upgrade facility, the biogas from individual dairies is upgraded to biomethane, which is indistinguishable from conventional natural gas. Biomethane can be used in place of natural gas for various processes, including use by utility companies.

[5] A gathering pipeline means a pipeline that transports gas from a production facility – the dairy digester – to the biogas upgrade facility and transmission line. Class 1 is a locational classification determined by population density around the pipeline. Non-jurisdictional Class 1 lines tend to be located in the most rural areas and are not regulated by the PHMSA. Both the federal government and the states have jurisdiction over gathering pipelines.

[6] 49 CFR Part 192 regulations prescribe minimum safety requirements for pipeline facilities and the transportation of gas.

[7] CPUC General Order 112-F regulates the design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems.

Expanded Individual Dairy Digester Locations

The proposed pipeline would connect to individual dairy digesters to be installed under separate permits from Merced and Madera counties. The State of California, Central Valley Regional Water Quality Control Board (CVRWQCB) regulates dairy digester facilities in its region under Waste Discharge Requirements (WDR). Existing dairies currently covered under the WDR General Order for Existing Milk Cow Dairies (Dairy General Order) that construct and operate a manure-only digester using only manure generated onsite could retain regulatory coverage under the Dairy General Order.

These existing dairy locations shown on Figure 1 include, but may not be limited to, the following locations[8]:

- Melo Dairy - APN: 065-020-031; 1319 S. Quinley Ave., Merced CA 95340
- Homen Dairy – APN: 074-080-001; 5511 W. Sandy Mush Road, Merced, CA 95340
- 3Machado Dairy – APN: 065-120-016; 3412 W. Sandy Mush Road, Merced CA 95340
- Matos Dairy – APN: 215-140-001; 100 S. Quinley Ave., Merced CA 95341
- T & C Louters Dairy – APN: 074-090-006; 525 W. Sandy Mush Road, Merced CA 95341
- Diamond J Dairy – APN: 066-220-003; 6600 S. Highway 59, Merced CA 95341
- Oliveira Family Dairy – APN: 215-140-042; 3991 Lander Ave., Stevinson, CA 95374
- Belo Ranch Dairy – APN: 056-200-024; 511 N. Applegate Road, Merced CA 95341
- Carlos Lourenco Dairy – APN: 056-200-018; 6558 W. Oak Ave., Merced CA 95341
- De Jager Dairy North – APN: 075-080-032 and -031; 11375 Ivy Ave, Chowchilla CA 93610

Madera County Location:

- Double DJ Dairy – APN: 026-110-008; 14768 Avenue 27, Chowchilla, California 93610

The primary use of the dairy digesters would be for manure processing and biogas collection. The biogas would be produced by individual dairy digesters at ambient temperatures and just slightly above atmospheric pressure. From the digester, the biogas would be piped through a filter and condensation trap to remove any particulates and condensation. Next, it would be pulled through a condenser to lower the temperature of the gas to condense out additional moisture and dry the gas for sending down the gathering pipelines. After condensation, a biogas blower would pressurize the gas to no more than 20 pounds per square inch (psi) prior to treatment through a media-based hydrogen sulfide (H_2S) scrubber to lower the H_2S below levels hazardous to human health. After the scrubber, the gas would be sent down the gathering pipelines to the upgrading facility.

Previously Approved Project Components

While construction and operation of the biogas upgrading facility and injection point were previously evaluated and approved for CUP19-003 in 2019, a description of the basic processes are included here to facilitate understanding of the larger project operations:

[8] Previously approved dairy digester locations are also shown on Figure 1, but are not listed in detail in this document.

Previously Approved Biogas Upgrading Facility

The upgrading facility removes impurities, moisture, and gas constituents that are not suitable for injection into a PG&E pipeline. The biogas would first enter a moisture condensation trap, and then would be compressed and sent through a CO_2 stripper. The CO_2 would be vented to the atmosphere during project operations. This process would transform biogas to biomethane, which is indistinguishable from conventional natural gas. The final step would include a compressor to reach the injection pressure needed to enter a PG&E pipeline.

Previously Approved Interconnection and Injection Point

The previously approved project would install an interconnection and injection point with a PG&E gas transmission pipeline. The project would use Meter Set Assembly (MSA) equipment, which includes gas quality monitoring, odorization, measurement, and control equipment.

Projected Electricity Use and Energy from Biomethane Generation

While the proposed pipeline would not use or generate energy in and of itself, the proposed dairy digester cluster is estimated to generate biomethane that would be injected into the existing natural gas pipeline network in the area. Based on project applicant estimates, 664,296 million British Thermal Units (MMBTU) would be the dairy digester cluster's average annual biomethane production. This would equate to approximately 194,685,940 kWh per year of energy, which could increase as additional dairy digesters are added to the cluster.

Hours of Operation and Employees

The pipeline would be operational every day of the year, whenever biogas is moved from each dairy to the central upgrading facility, except during emergencies and periods of maintenance. While monitoring would be performed 24 hours a day, 7 days a week remotely via SCADA, one part-time employee would make 5-10 site visits per week for inspections and maintenance of the pipeline. Additional operation technicians or project managers may visit periodically for support.

Hazardous Materials

The construction and operation of the proposed pipeline would not result in or require the use of any unusually hazardous materials. Safety measures included as part of the low-pressure pipelines used to transport biogas are described above.

Vehicle Trips and Parking

Once operational, the proposed project pipeline is expected to generate 5-10 weekly trips by the part-time employee, and additional operational technicians or project managers may visit for support. Annually, no more than 12 additional round trips by support staff are anticipated.

Stormwater Runoff

There would be no change in drainage patterns as a result of the proposed pipelines.

Right-of-Way, Easements, and Leases

Following determination of the final pipeline route, encroachment permits for work within public ROW would be obtained and easement agreements with private property owners would be finalized.

PROJECT CONSTRUCTION AND PHASING

Construction of the proposed project is scheduled to begin approximately five months after project approval. Construction is anticipated to take approximately nine (9) months to complete. During construction, there would be a maximum of 20 employees.

It is anticipated that the following pieces of equipment would be used during construction activities:

- Excavator
- Scraper
- Self-propelled compactor
- Grader
- Loader
- Air compressor
- Trencher
- Mobile generator
- Service truck
- HDPE Welding machine

The proposed pipeline construction method would be open trenching with excavators or wheel trenchers. HDPE pipe would be welded together ahead of time, the trench would be opened, pipe would be inserted, and the trench would be backfilled to 90 percent or to meet other engineers' compaction requirements. Trenched areas would be restored to their prior condition. Horizontal drilling may be required at stream, canal, or road crossings.

REQUIRED APPROVALS, OTHER PROCESSES, AND CONSULTATIONS

A listing and brief description of the regulatory permits and approvals required to implement the proposed project is provided below. This environmental document is intended to address the environmental impacts associated with all of the following decision actions and approvals.

Merced County and Other Local and Regional Agencies

Merced County

The County has the following permitting authority related to the proposed Merced Biogas Pipeline Expansion project:

- Preparation and Approval of an Initial Study / Mitigated Negative Declaration - Merced County will act as the lead agency as defined by the CEQA, and will have authority to determine if the IS/MND is adequate under CEQA.
- Approval of the Conditional Use Permit - Merced County will consider the proposed pipeline project as a "Conditional Use Permit." Conditional Use Permits are discretionary permits for uses of land that require special review to ensure that they are compatible with the neighborhood and surrounding land uses. They are considered more likely to affect surrounding land uses than uses permitted by right in a zoning district or those uses permitted under Administrative Permits.
- Encroachment Permit - Merced County would require encroachment permits for work within the County ROW.

Madera County

Madera County has the following permitting authority related to the proposed Merced Biogas Pipeline Expansion project:

- Encroachment Permit - Madera County would require encroachment permits for construction work within the public ROW.

San Joaquin Valley Air Pollution Control District

- SJVAPCD Rules and Regulations – The proposed project is subject to SJVAPCD Rules and Regulations, which may include: Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Regulation VIII, Rule 8021 (Fugitive PM_{10} Prohibitions), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

State of California

State agencies have the following permitting authority related to the proposed Merced Biogas Pipeline Expansion project:

State Water Resources Control Board

- General Construction Activity – The State Water Resources Control Board (SWRCB) has adopted a General Construction Activity Storm Water Permit for storm water discharges associated with any construction activity, including clearing, grading, excavation, reconstruction, and dredge and fill activities, that results in the disturbance of at least one acre of total land area.

Federal Government

The USDA-RD is providing financial assistance for the construction of the proposed biogas pipeline expansion, and is responsible for preparation of the Environmental Assessment in accordance with the National Environmental Policy Act (NEPA). Federal approvals required will be outlined in the NEPA analysis to be prepared for the project under separate cover.

APPLICATION OF THE 2030 MERCED COUNTY GENERAL PLAN AND MERCED COUNTY ZONING CODE

2030 Merced County General Plan

The 2030 Merced County General Plan guides economic development, land use, agriculture, transportation and circulation, public facilities and services, natural resource, recreation and cultural resources, health and safety, air quality, water, and other matters of public interest and concern. The General Plan is intended to provide for orderly growth, and to convey the community's values and expectations for the future. An EIR for the 2030 General Plan was certified and the General Plan was adopted by Merced County in December 2013. A Draft Background Report of existing environmental conditions within the County was finalized in December 2013 with certification of the General Plan EIR. The Background Report functions as the existing setting section for the General Plan EIR. The EIR, including the Background Report as updated, is used in this Initial Study and will be used in the proposed project EIR, along with other resources, to establish the existing setting for the proposed project. The General Plan EIR will serve as the first tier of

environmental analysis for the proposed project, including the evaluation of countywide and cumulative impacts. The 2030 General Plan EIR, including the Background Report, is hereby incorporated by reference pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein. A copy of the General Plan, General Plan EIR, and Background Report can be obtained at the Department of Community and Economic Development, 2222 "M" Street, Merced, CA 95340. These documents are also available for download from the Merced County General Plan website at:

https://www.co.merced.ca.us/100/General-Plan

Merced County Zoning Code

In more detail than the General Plan, the Merced County Zoning Code establishes parcel-specific requirements regarding the location, type, and intensity of land uses within the County. In the case of the Merced Biogas Pipeline Expansion project, the Merced County Zoning Code applies the A-1 (General Agricultural Zone) designation to the project site. As required by State law, this zoning district corresponds to the General Plan land use designation. The purpose of the A-1 zone is to achieve the following among other goals: 1. Provide a suitable environment for the preservation, development, and growth of agriculture; and 2. Protect the agricultural industrial community and its related uses from encroachments of non-related or incompatible uses.

Energy generation facilities are an allowed use in the A-1 zoning district upon the receipt of an Administrative Permit or Conditional Use Permit from Merced County. The project applicant has submitted an application for CUP20-017 to meet this requirement for the biogas pipeline expansion project. If the project was approved by the Planning Commission, the approval of CUP20-017 would document the County's conclusion that the proposed project is consistent with the requirements of the Zoning Code.

TIERING FROM THE 2030 MERCED COUNTY GENERAL PLAN EIR

"Tiering" refers to the relationship between a program-level EIR (where long-range programmatic cumulative impacts are the focus of the environmental analysis) and subsequent environmental analyses such as this subject document, which focus primarily on issues unique to a smaller project within the larger program or plan pursuant to Section 15168 of the State CEQA Guidelines. Through tiering, a subsequent environmental analysis can incorporate, by reference, discussion that summarizes general environmental data found in the program EIR that establishes cumulative impacts and mitigation measures, the planning context, and/or the regulatory background. These broad-based issues need not be reevaluated subsequently, having been previously identified and evaluated at the program stage.

Tiering focuses the environmental review on the project-specific significant effects that were not examined in the prior environmental review or are susceptible to substantial reduction or avoidance by specific revisions in the project, by the imposition of conditions, or by other means. Section 21093(b) of the Public Resources Code requires the tiering of environmental review whenever feasible, as determined by the Lead Agency.

In the case of the Merced Biogas Pipeline Expansion project, the environmental analysis for this Initial Study is tiered from the EIR for the 2030 Merced County General Plan. The Merced County Board of Supervisors certified the EIR and adopted the 2030 General Plan on December 10, 2013

(SCH #2011041067). The 2030 General Plan regulates the location, use, design, construction, and operation of developed land uses within the County; all existing and proposed land uses within the County are required to comply with the goals and policies of the 2030 General Plan, including the Merced Biogas Pipeline Expansion project. To reflect this, the requirements of the 2030 General Plan and conclusions of the environmental analysis contained in the 2030 General Plan EIR were incorporated in this Initial Study.

The 2030 General Plan EIR comprehensively evaluated the potential environmental effects of implementing the 2030 General Plan and from the approval of new or modified land uses. The 2030 General Plan EIR identified a number of mitigation measures that would reduce the magnitude of these potential effects. Those measures were subsequently adopted by the County in its approval of the 2030 General Plan, and a Mitigation Monitoring and Reporting Program was adopted. Because the Merced Biogas Pipeline Expansion project is consistent with, and implements, the 2030 General Plan, those previously adopted mitigation measures and conditions apply to the Merced Biogas Pipeline Expansion project, and would continue to apply after approval of the currently requested actions. Therefore, the Merced Biogas Pipeline Expansion project is related to the 2030 General Plan EIR and, pursuant to Section 15152(a) of the CEQA Guidelines, tiering of environmental documents is appropriate.

The 2030 General Plan EIR can be reviewed at the location set forth above.

Summary of the Impacts Analysis of the 2030 Merced County General Plan EIR

The 2030 Merced County General Plan EIR presents an assessment of the environmental impacts associated with the implementation of the General Plan and land uses developed consistent with the Plan in Merced County. The EIR evaluated the environmental impacts of the Plan on a comprehensive basis, including discussion of the full range of impacts that would occur because of future development. The EIR identified potential significant environmental impacts arising from implementation of the General Plan and land uses developed consistent with the Plan for the following issue areas:

Aesthetics: light and glare; and cumulative impacts to visual quality.

Agriculture and Forestry: conversion of Important Farmland to non-agriculture use; conflict with zoning for agricultural use or provisions of the Williamson Act; land use changes that would result in conversion of farmland to non-agricultural uses from urban development; land use changes that would result in conversion of farmland to non-agricultural uses due to the Minor Subdivision of Rural Parcels or due to inadequate parcel sizes; and cumulative impacts to agricultural resources.

Air Quality: operational emissions of PM_{10} and $PM_{2.5}$ associated with General Plan buildout; health risks associated with locating sensitive receptors near high volume roads; cumulative impacts to air quality.

Biological Resources: adverse effects to special status species and sensitive habitats due to conversion of farmlands and open space; adverse effect on wetlands, riparian habitat, and other sensitive natural communities; loss or modification of federally protected wetlands; interference with animal movement/migration patterns; cumulative impacts to biological resources.

Cultural Resources: adverse changes to the significance of a historical resource; adverse change in the significance of archaeological resources, paleontological resources, unique geological features, or disturbances to human remains; degradation or loss of traditional cultural properties where Native American customs and traditions are practiced; cumulative impacts to cultural resources.

Geology: use of septic tanks or alternative wastewater disposal systems in unfit soils that may result in increased nutrients or other pollutants reaching and damaging groundwater resources.

Global Climate Change: increase in GHG emissions associated with 2030 General Plan buildout; increase in GHG emissions that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions; cumulative impacts to global climate change.

Hazards and Hazardous Materials: projects located on a site that is included on a list of hazardous materials sites resulting in a significant hazard to the public or to the environment; projects located within an airport land use plan or within the vicinity of a public or private airport resulting in a safety hazard for people working or residing in the area.

Hydrology and Water Quality: depletion of groundwater supplies or interference with groundwater recharge; modification of surface water drainage patterns resulting in detrimental flooding or substantial erosion or siltation; cumulative impacts to hydrology and water quality.

Land Use Compatibility: physical division of an established community.

Mineral Resources: loss of mineral resources; and cumulative loss of mineral resources.

Noise: permanent increase in ambient noise levels; traffic noise level increases at existing sensitive uses caused by development consistent with the 2030 General Plan; exposure of people to, or generation of excessive groundborne vibration or groundborne noise levels; cumulative impacts to noise.

Population and Housing: inducement of population growth, directly or indirectly.

Transportation and Circulation: conflict with an applicable plan, ordinance or policy establishing measures of effectiveness of county roads, State Highways, or streets within incorporated cities in Merced County; increase hazards due to a design feature or incompatible uses; inadequate emergency access; conflict with policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or decrease the performance or safety of those facilities; cumulative impacts to transportation and circulation.

Utilities and Service Systems: sufficient water supply resources available to accommodate continued development through buildout of the 2030 General Plan; cumulative impacts to utilities and service systems.

Other CEQA Topics: cumulative impacts to growth inducement and irreversible environmental changes.

CEQA REQUIREMENTS FOR PROJECTS CONSISTENT WITH THE GENERAL PLAN AND ZONING

CEQA has special requirements for projects that are consistent with a General Plan or Zoning. Section 15183 of the State CEQA Guidelines states:

a) CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:
   1) Are peculiar to the project or the parcel on which the project would be located,
   2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent,
   3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or
   4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR.

c) If an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards, as contemplated by subdivision (C) below, then an additional EIR need not be prepared for the project solely on the basis of that impact.

d) This section shall apply only to projects which meet the following conditions:
   1) The project is consistent with:
      A. A community plan adopted as part of a general plan,
      B. A zoning action which zoned or designated the parcel on which the project would be located to accommodate a particular density of development, or
      C. A general plan of a local agency, and
   2) An EIR was certified by the lead agency for the zoning action, the community plan, or the general plan.

CONCLUSION ON THE APPLICATION OF SECTION 15183 TO THE PROPOSED MERCED BIOGAS PIPELINE EXPANSION PROJECT

As noted above, Merced County adopted the Merced County 2030 General Plan in December 2013. Prior to the County's actions to consider and approve the 2030 General Plan, the Board of Supervisors adopted findings and certified the EIR prepared for the General Plan. In approving the 2030 General Plan, the Board also adopted a land use plan and policies to implement the General Plan. As indicated above, the proposed Merced Biogas Pipeline Expansion project is consistent with the land use and density requirements of the General Plan and the Zoning Code.

The proposed Merced Biogas Pipeline Expansion project thereby meets the requirements of Section 15183 (d) of the State CEQA Guidelines in that the project is consistent with the Merced County 2030 General Plan for which an EIR was prepared and certified. In compliance with Section 15183, this Initial Study will focus only on those impacts that are peculiar to the project or its site, were not previously assessed in the 2030 General Plan EIR whether site-specific or cumulative, or that would be more severe than assessed in the General Plan EIR.

2. ENVIRONMENTAL ANALYSIS

PURPOSE AND LEGAL BASIS FOR THE INITIAL STUDY

As a public disclosure document, this Initial Study also provides local decision makers and the public with information regarding the environmental impacts associated with the proposed project. According to Section 15063 of the CEQA Guidelines, the purpose of an Initial Study is to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration.
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
3. Assist in the preparation of an EIR, if one is required by:
    a. Focusing the EIR on the effects determined to be significant,
    b. Identifying the effects determined not to be significant,
    c. Explaining the reasons for determining that potentially significant effects would not be significant, and
    d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
4. Facilitate environmental assessment early in the design of a project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
6. Eliminate unnecessary EIRs.
7. Determine whether a previously prepared EIR could be used with the project.

INITIAL ENVIRONMENTAL CHECKLIST

Following each major environmental category and topic in the Initial Study, there are four determinations by which to judge the project's impact. These categories and their meanings are shown below:

"No Impact" means that it is anticipated that the project will not affect the physical environment on or around the project area. It therefore does not warrant mitigation measures.

"Less-than-Significant Impact" means the project is anticipated to affect the physical environment on and around the project area, however to a less-than-significant degree, and therefore not warranting mitigation measures.

"Less than Significant with Mitigation Incorporated" applies to impacts where the incorporation of mitigation measures into a project has reduced an effect from "Potentially Significant" to "Less Than Significant." In such cases, and with such projects, mitigation measures will be provided including a brief explanation of how they reduce the effect to a less-than-significant level.

"Potentially Significant Impact" means there is substantial evidence that an effect is significant, and no mitigation is possible.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, including several impacts that are "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

ENVIRONMENTAL SETTING AND EVALUATION OF POTENTIAL IMPACTS

Responses to the following questions and related discussion indicate whether or not the proposed project would have or would potentially have a significant adverse impact on the environment, either directly or indirectly, or individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section XXI below.

I. AESTHETICS

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

ENVIRONMENTAL SETTING

The primary scenic resource within Merced County is the rural and agricultural landscape of non-urbanized areas of the county. Due to the relatively flat topography, short- and mid-range views are limited to agricultural uses, including pasture, row crops, and orchards. Long-range views feature the Coastal ranges and the Sierra Nevada foothills. (Merced County 2013a)

The areas surrounding the project alignment are characterized by agricultural uses, and their associated accessory buildings and residences. Viewers along the proposed pipeline alignment are limited to motorists on perimeter roadways and residents of surrounding agricultural facilities and operations. (Google Earth 2021)

Neither the project alignment nor the views to or from the alignment have been designated as an important scenic resource by Merced County or any other public agency. No state or locally designated scenic highway has been identified in the vicinity of the project area (Caltrans 2021). State Route 152 and Interstate 5 in the western portion of the county are designated scenic routes, but they are situated are over 25 miles west of the project alignment.

ENVIRONMENTAL EVALUATION

Question (a) Scenic vista: No Impact. Given the lack of distinctive topographical features in the project vicinity, the project alignment is not located in an area with scenic vistas. The agricultural-related facilities and associated residences in the vicinity are existing uses, and are considered common to the area. No designated scenic vista is visible from the project alignment, nor is the project alignment visible from any nearby scenic vista. The pipelines would be buried underground and any area disturbed by trenching during pipeline installation would be restored to its prior condition. Because the proposed project would not be unique to the surrounding visual setting, pipeline construction impacts would be temporary, and overall project implementation would not affect a scenic vista. No impact would result with implementation of the project, and no mitigation would be required.

Question (b) Scenic resources: No Impact. No state- or locally-designated scenic highway is visible from the pipeline alignment, nor are the areas of the pipeline alignment visible from any nearby designated scenic highway. The nearest designated State Scenic Highway, Interstate 5, is over 25 miles to the west of the project alignment. In addition, no scenic highways are designated within the project area in the Merced County 2030 General Plan or the Madera County General Plan. Because the project alignment is not located within the viewshed of a designated scenic highway, there would be no damage to scenic resources within a scenic highway. No impact would result with implementation of the proposed project, and no mitigation would be required.

Question (c) Visual character: Less-than-significant Impact. Developed agricultural facilities are the predominant scenic features in the rural area of the proposed project. Construction of the pipeline project would result in a temporary change in the scenic character of area roadways, while equipment and supplies are used and stored in the vicinity of the trenching and other construction activities. Once completed, all infrastructure would be underground, and the visual and scenic character of the project vicinity roadways would be similar to existing conditions.

Since the proposed project is consistent with the existing and planned agricultural uses of the area, and the pipeline would be underground upon project completion, implementation of the project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. This would be a less-than-significant impact, and no mitigation would be required.

Question (d) New source of light or glare: Less-than-significant Impact. Existing sources of night lighting in the project vicinity include security lighting from nearby animal confinement facilities and lights from rural residential uses. County standards require that all new lighting be directed away from or be properly shaded to eliminate light trespass or glare within a project or onto surrounding properties. The proposed transmission pipeline would be placed underground and would not result in additional light or glare. Therefore, the project would not result in new lighting with adverse light and glare effects, and no mitigation would be required.

II. AGRICULTURE AND FORESTRY RESOURCES

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

ENVIRONMENTAL SETTING

Pipeline construction would occur on private lands and within the public right of way. Areas within Merced County where pipeline construction would be conducted are designated Agricultural by the 2030 Merced County General Plan, and zoned A-1 (General Agricultural) by the Merced County Zoning Code (Merced County 2021). Within Madera County, parcels within and adjacent to pipeline routes are designated by the Madera County General Plan as Agricultural Exclusive and Agricultural, with a small area identified as High Industrial near State Route 152 and Lincoln Avenue. Zoning within the affected area of Madera County is ARE-40 (Agriculture, Rural, Exclusive, (40 acre)), with smaller areas zoned ARE-20 (Agriculture, Rural, Exclusive, (20 acre)), and IH (Industrial, Urban or Rural, Heavy). (Madera County 2021)

The California Department of Conservation (DOC) provides data and services to support the preservation of agricultural land in agricultural uses. The Farmland Mapping and Monitoring Program's Important Farmlands Maps[1] of Merced and Madera County reflect that the proposed pipeline alignment crosses the following farmland types: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Confined Animal Agriculture (DOC 2016).

The Natural Resources Conservation Service (NRCS) provides agricultural ratings for soils in the project area in the Merced County Soil Survey. The soils of the proposed project area are characteristic of those found in poorly drained alluvial fans and flood plains along the San Joaquin and its tributaries. The soil associations within the project area include Pachappa-Grangeville, and, on the low terraces, San Joaquin-Madera soils (Napton 2021).

[1] The Important Farmland Map uses a classification system that combines technical soil ratings from the Natural Resources Conservation Service digital soil data and current land use. The minimum land use mapping unit is 10 acres unless specified.

There are no forest lands, timberland, or timberland zoned Timberland Production in Merced County (CDFW 2015).

ENVIRONMENTAL EVALUATION

The proposed biogas gathering pipelines would be located predominantly on privately owned agricultural property via easements and/or within or across Merced or Madera County public rights-of-way. Following construction of the pipeline network, all property would be restored to pre-construction conditions.

Question (a) Convert farmland to non-agricultural use: Less-than-significant Impact. Project pipelines would be located within existing privately owned agricultural property or within or across the public right-of-way, and would not affect adjacent farmlands. Because the pipeline would be constructed outside of active farmlands, construction of the proposed facilities would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, and a less-than-significant impact would result. No mitigation would be required.

Question (b) Conflict with zoning for agricultural use: Less-than-significant Impact. The 2030 Merced County and Madera County General Plans and Zoning Ordinances designate the project area predominantly for agricultural uses. The proposed project includes the extension of an existing biogas pipeline network, an agricultural support use. Adjacent properties are also in agricultural uses, primarily field crops and animal confinement facilities. No feature of the project would preclude or limit the agricultural use of adjoining parcels. Thus, the proposed project would permit the continuation of existing agricultural uses consistent with County policies, and would not conflict with adjacent agricultural and/or non-agricultural uses. A less-than-significant impact would result, and no mitigation would be required.

Questions (c) through (e) Conflict with zoning for or loss of farmland, forest land, or timber land: No Impact. The proposed pipeline areas are not zoned for forest lands or timberland production by either Merced or Madera Counties, and no such lands exist along the alignment or in the vicinity. Thus, there would be no loss of forest land or conversion of forest land to non-forest use. The proposed pipeline would not result in any change to the existing environment that could result in the conversion of farmland to non-agricultural use. Because the proposed project would not conflict with any existing forest land or timberland production zoning, and no changes associated with the project are proposed that would result in the conversion of existing farmland, forest land, or timber lands, no impact would occur. No mitigation would be required.

III. AIR QUALITY

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

ENVIRONMENTAL SETTING

Air quality influences public health and welfare, the economy, and quality of life. Air pollutants have the potential to adversely impact public health, the production and quality of agricultural crops, visibility, native vegetation, and buildings and structures.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. EPA, the federal agency that administers the Federal Clean Air Act (CAA) of 1970, as amended, has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the CAA, California has adopted more stringent state ambient air quality standards (SAAQS), and expanded the number of air constituents regulated.

Both Merced County and Madera County are located in the San Joaquin Valley Air Basin (SJVAB). Under both the federal and state CAAs, the SJVAPCD regulates air quality. As required by the California Clean Air Act (CCAA), the SJVAPCD has published various air quality planning documents, including Rules and Regulations, to comply with the federal and state AAQS. Air Quality Attainment Plans (AQAP), prepared by the SJVAPCD, are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the EPA.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An "attainment" designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once.

The EPA designates areas for ozone (O_3), carbon monoxide (CO), and nitrogen dioxide (NO_2) as either "Does not meet the primary standards," "Cannot be classified," or "Better than national standards." For sulfur dioxide (SO_2), areas are designated as "Does not meet the primary standards," "Does not meet secondary standards," "Cannot be classified," or "Better than national standards." Of the criteria pollutants, the Air Basin is in nonattainment for ozone, $PM_{2.5}$, and state PM_{10}.

Criteria Air Pollutants

The criteria pollutants of most interest in the San Joaquin Valley are ozone and particulates (dust). Ozone is not emitted directly into the environment, but is generated from complex chemical reactions between reactive organic gases (ROG), or non-methane hydrocarbons, and oxides of nitrogen (NO_X) that occur in the presence of sunlight. ROG and NO_X generators in Merced County include motor vehicles, recreational boats, other transportation sources, and industrial processes. Ozone exposure causes eye irritation and damage to lung tissue in humans. Ozone also harms vegetation, reduces crop yields, and accelerates deterioration of paints, finishes, rubber products, plastics, and fabrics. Research also shows that children exposed to unhealthful levels of ozone suffer decreased lung function growth and increased asthma.

PM_{10}, or inhalable particulate matter, is a complex mixture of primary or directly emitted particles, and secondary particles or aerosol droplets formed in the atmosphere by precursor chemicals. The main sources of fugitive dust are unpaved roads, paved roads, and construction. Additional sources of PM_{10} include fires, industrial processes, mobile sources, fuel combustion, agriculture, miscellaneous sources, and solvents. Health studies link particulate pollution to sudden death in infants as well as adults with heart and lung ailments, shortening lives by years. Exposure to airborne particles also aggravates respiratory illnesses like asthma, bronchitis, emphysema, and pneumonia.

$PM_{2.5}$ is atmospheric particulate matter having a particle size less than 2.5 microns (μm) in diameter. These particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. These small particles can be inhaled into the lungs and have the potential to cause health-related impacts in sensitive persons.

Other Air Emissions of Concern

Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels such as coal, diesel, and biogas. SO_2 is also a precursor to the formation of atmospheric sulfate, particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. SO_2 is a major component of the group of gaseous sulfurous compounds commonly referred to as sulfur oxides (SOx).

Hydrogen sulfide (H_2S) is generated by the anaerobic decomposition of manure and other organic material. It is emitted naturally in geothermal areas and is also associated with certain industrial processes. Exposure to low concentrations of H_2S may cause irritation to eyes, nose, or throat. Exposure to higher concentrations (typically at work settings) can cause olfactory fatigue, respiratory paralysis, and death. However, no health effects have been found in humans exposed to typical environmental concentrations.

SJVAPCD Rules and Regulations

All projects are subject to SJVAPCD rules in effect at the time of construction. A complete listing of current rules is available at www.valleyair.org. These rules and regulations may include compliance with the SJVAPCD's Regulation VIII (Fugitive PM10 Prohibitions), Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 4002 (National Emissions Standards for Hazardous Air Pollutants), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule

4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), and other applicable regulations.

Significance Thresholds

The SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) (SJVAPCD 2015) has established thresholds for certain criteria pollutants for determining whether a project would have a significant air quality impact. Construction and operational emissions are calculated separately. The SJVAPCD significance thresholds are presented in Table 3.

Table 3 SJVAPCD Significance Thresholds – Criteria Pollutants

Pollutant/Precursor	Threshold of Significance		
	Construction Emissions (*tons/year*)	Operational Emissions	
		Permitted Equipment and Activities (*tons/year*)	Non-Permitted Equipment and Activities (*tons/year*)
Reactive Organic Gases (ROG)	10	10	10
Oxides of Nitrogen (NO_X)	10	10	10
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15
Carbon Monoxide (CO)	100	100	100
Sulfur Oxide (SOx)	27	27	27

Notes: The significance of the impacts of the emissions from construction, operational non- permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period.

Source: San Joaquin Valley Air Pollution Control District "Guidance for Assessing and Mitigating Air Quality Impacts" 2015.

The SJVAPCD's GAMAQI includes screening-level thresholds for construction and operational emissions to help determine when an ambient air quality analysis (AAQA) must be performed. An AAQA would entail the use of air dispersion modeling to determine whether emission increases from a project will cause or contribute to a violation of the CAAQS or NAAQS. The SJVAPCD's AAQA screening-level thresholds are 100 pounds per day of any criteria pollutant; projects with emissions in excess of this threshold would require dispersion modeling, while projects below this threshold are presumed to not result in a violation of the CAAQS or NAAQS.

ENVIRONMENTAL ANALYSIS

Question (a) Conflict with air quality plan: Less-than-significant Impact with Mitigation. As stated above in the discussion of the regulatory environment, for nonattainment criteria pollutants, the SJVAPCD has attainment plans in place that identify strategies to bring regional emissions into compliance with federal and state air quality standards. These plans include the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards*, the *2007 PM10 Maintenance Plan*, the *2016 Plan for the 2008 8-Hour Ozone Standard*, and the *2013 Plan for the Revoked 1-Hour Ozone Standard.*

The policies and provisions of the SJVAPCD, the 2030 Merced County General Plan, and the Madera County General Plan control air quality impacts from the proposed project. The proposed project would result in the installation of underground biogas pipelines, and would not conflict with the Agricultural land use designation of the area of the project alignment set forth by the 2030

Merced County General Plan. Similarly, the proposed biogas pipeline would not conflict with the Madera County land use designations of Agricultural Exclusive or Heavy Industrial. Thus, the proposed pipeline expansion project would be consistent with the land use assumptions used by the SJVAPCD in drafting the air quality attainment plans.

The proposed project would be subject to SJVAPCD Rules and Regulations. To ensure project compliance with applicable SJVAPCD Rules and Regulations, the following mitigation measure would be required:

Mitigation Measure AQ-1:

> Prior to the release of the first-issued building permit, the applicant shall provide to the County a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form in compliance with Regulation VIII – Fugitive Dust PM_{10} Prohibitions. Additional applicable SJVAPCD Rules and Regulations may include: Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), and Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The project applicant will be required to implement measures of applicable SJVAPCD Rules and Regulations as noted.

Implementation of Mitigation Measure AQ-1 would require compliance with applicable Rules and Regulations of the SJVAPCD as described above, and ensure the proposed project would not conflict with or obstruct implementation of any SJVAB attainment plan or the SIP. Therefore, a less-than-significant impact would result, and no additional mitigation would be required.

Question (b) Net increase of criteria pollutant: Less-than-significant Impact with Mitigation. Implementation of the proposed project would result in short-term (construction) and long-term (operations) air pollutant emissions, including ROG, CO, SO_2, NO_X, and fugitive dust.

Construction

The individual components of construction emissions include employee trips, exhaust emissions from construction equipment, and fugitive dust emissions. Activities proposed for construction that would result in air emissions include the installation of approximately 39.5 miles of new buried biogas gathering lines. Construction-related emissions were estimated using the SMAQMD Roadway Construction Emissions Model (Version 9.0) (see Appendix A). During construction, there would be a maximum of 20 employees during the nine months of construction.

A summary of construction-related criteria emissions in tons per year for the project is shown in Table 4 below. Construction of the proposed project would produce maximum annual emissions of 0.78 tons of ROG, 6.26 tons of NO_X, and 0.68 tons of PM_{10}. Construction of the proposed project is not anticipated to exceed the significance criteria of 10 tons/year of ROG, 10 tons/year of NOx, or 15 tons/year for PM_{10}.

Table 4 Construction Related Emissions

	ROG (tons/year)	**NO_X** (tons/year)	**CO** (tons/year)	**SO_2** (tons/year)	**PM_{10}** (tons/year)	**$PM_{2.5}$** (tons/year)
Pipeline	0.78	6.26	5.47	0.01	0.68	0.33
SJVAPCD Significance Criteria	10	10	100	27	15	15
Criterion Exceeded?	No	No	n/a	n/a	No	n/a

Notes: Calculations completed in November 2021.
Since some amount of pipeline would be laid within the roadway, default assumptions for a road widening project were used and modified with project details as appropriate.
Source: Planning Partners, 2021.

Although the proposed project would not exceed SJVAPCD significance thresholds, the applicant would still be required to comply with Regulation VIII and all applicable SJVAPCD Rules and Regulations. A summary of control measures for construction and other earthmoving activities that would generate fugitive dust are included in Regulation VIII as follows:

Pre-Activity:
- Pre-water site sufficient to limit VDE to 20% opacity, and
- Phase work to reduce the amount of disturbed surface area at any one time.

During Active Operations:
- Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity; or
- Construct and maintain wind barriers sufficient to limit VDE to 20% opacity. If utilizing wind barriers, control measure above shall also be implemented.
- Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.

Temporary Stabilization During Periods of Inactivity:
- Restrict vehicular access to the area; and
- Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.53 of Rule 8011.

Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites:
- Limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
- Post speed limit signs that meet State and federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.

Wind Generated Fugitive Dust Requirements:
- Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20% opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
- Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.

To ensure project compliance with applicable SJVAPCD Rules and Regulations regarding construction, the following mitigation measure would be required:

Mitigation Measure AQ-2:

> Implement Mitigation Measure AQ-1, which would require that the project comply with all applicable SJVAPCD regulations.

Compliance with Regulation VIII and all other applicable SJVAPCD Rules and Regulations as described above and required in Mitigation Measure AQ-2 would ensure that the proposed construction-related emissions are reduced, and would not exceed SJVAPCD significance criteria.

Operations

Once operational, one part-time employee would make 5-10 site visits per week for inspections and maintenance of the pipeline. Annually, no more than 12 additional round trips by support staff are anticipated beyond the part-time employee trips. Beyond the employee trips, the proposed pipeline would not result in operational emissions. Based on the low-level of estimated increase in trips, project specific emissions of criteria pollutants are not expected to exceed SJVAPCD significance thresholds of 10 tons/year of NOx, 10 tons/year ROG, and 15 tons/year of PM_{10}. This would be a less-than-significant impact, and no mitigation would be required.

Summary

Because project construction and operation emissions of criteria pollutants are not expected to exceed SJVAPCD significance thresholds, and the proposed project would comply with applicable SJVAPCD Rules and Regulations as required in Mitigation Measure AQ-2, the project would not emit air pollutants that would result in a cumulatively considerable net increase in any criteria pollutant. A less-than-significant impact would result, and no additional mitigation would be required.

Questions (c) and (d) Expose sensitive receptors to substantial pollutant concentrations / Result in other emissions: Less-than-significant Impact. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside. Existing land uses immediately surrounding the 39.5-mile pipeline alignment include single-family residences.

During construction, some odors and hazardous pollutants could result from vehicles and equipment using diesel fuels. Construction vehicles would be required to limit idling time compliant with the ARB guidelines. Cancer risk associated with diesel exhaust exposure is typically associated with chronic exposure. As described above, the SJVAPCD's AAQA screening-level thresholds are 100 pounds per day of any criteria pollutant; projects with emissions in excess of this threshold would require dispersion modeling, while projects below this threshold are presumed to not result in a violation of the CAAQS or NAAQS. As estimated by the SMAQMD Road Construction Emissions Model (see Appendix A), the maximum daily rate of NOx emissions during construction would be 64.59 pounds per day, which would be less than the 100 pounds per day threshold. In this case, an ambient air quality analysis would not be required for any construction related criteria pollutant emissions. Because the level of overall emissions would be low, and the duration of emissions would be temporary, cancer risk and odors from diesel exhaust during construction would be considered less than significant.

The proposed project consists of up to 39.5 miles of buried pipeline within the existing public right-of-way or within private easements, which would not result in the generation of additional odors or emissions of toxic air emissions. Therefore, implementation of the proposed project would not result in toxic odors from project operations.

Because no substantial levels of air pollutant emissions would occur during construction or operation activities, and no adverse levels of toxic air emissions would occur, the proposed project would not expose sensitive receptors to substantial air pollutant concentrations or create emissions leading to odors. This would be a less-than-significant impact, and no mitigation would be required.

Naturally Occurring Asbestos

Naturally occurring asbestos is not a potential concern in the project area. For more information, see Section IX, *Hazards and Hazardous Materials*.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?		**X**		
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?		**X**		
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 site?			**X**	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
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?				**X**

This analysis is based on and summarizes the *Biological Resources Reconnaissance Survey and CEQA Analysis, Merced Biogas Pipeline Expansion Project,* prepared by Padre Associates, Inc. (Padre) (December 2021), included as Appendix C of this Initial Study (bound separately).

Padre evaluated the potential biological resources impacts of the proposed Merced Biogas Pipeline Expansion project through a review of available data and field surveys. Prior to the field surveys, Padre conducted a query of California Natural Diversity Database (CNDDB) for the five USGS topographic quadrangles that the project occurs in (Atwater, Sandy Mush, El Nido, Plainsburg, and Bliss Ranch 7.5-minute quadrangles) and for the seven surrounding USGS 7.5-minute topographic quadrangles (Arena, Merced, Planada, Santa Rita Bridge, Chowchilla, Turner Ranch, and LeGrand) (CDFW 2021).

Padre also conducted a query of the California Native Plant Society's Electronic Inventory (CNPS 2021) for the same quadrangles to provide additional information on plant species of concern that may occur within the project site and surrounding vicinity. A list of federally listed Threatened and Endangered Species was obtained from the USFWS (Consultation Code: 08ESMF00-2022-SLI-0223) (USFWS 2021a). An unofficial species list was obtained from the National Marine Fisheries Service (NMFS) for the five quadrangles that the project occurs within (NMFS 2021). A query of the National Wetland Inventory (NWI) was reviewed for information regarding mapped waters and wetlands in the project area (USFWS 2021b).

The results of the literature review were used to identify known occurrences of special-status plant and animal species in the project vicinity and to identify potentially sensitive and regulated habitat.

Padre conducted a biological reconnaissance survey of the proposed pipeline alignment locations on November 9 and 10, 2021. The purpose of the survey was to characterize general biological resources supported by the project site and evaluate the potential for sensitive biological resources to occur on the site and that may be affected by implementation of the proposed project. A survey corridor of 50 feet on either side of the proposed alignment (assumed to be in the roadway) was used to allow for flexibility in location of the pipeline placement during construction; however, in many cases some portion of the 100-foot survey corridor was inaccessible for direct survey because it was located on private property, outside the roadway easements, and behind fence lines.

The reconnaissance survey consisted of investigation of the project alignment, including windshield surveys of portions of the pipeline alignment in developed or disturbed lands and pedestrian surveys of overland segments of pipeline, waterway crossings, and other potentially sensitive habitat areas (e.g., portions of the project site adjacent to federally designated Critical Habitat for vernal pool species). The survey included evaluating primary vegetative cover types, a general assessment of habitat suitability for known local wildlife, and recording observed plant and animal species.

ENVIRONMENTAL SETTING

The proposed project occurs primarily in agricultural lands, with proposed pipeline alignments occurring in privately owned farm roads, on the shoulder of paved public roads, and several short overland segments through agricultural fields. The proposed pipeline alignment crosses 33 drainages, some of which are natural streams and others that are agricultural ditches with potential for connectivity to off-site waterways. Smaller agricultural ditch crossings (e.g., field perimeter v-ditches) that do not have any connectivity to off-site drainages were not mapped or considered drainage crossings for the purposes of impact analysis. Although the entire pipeline alignment occurs primarily within lands currently in agricultural production, within existing roadways, or in disturbed lands adjacent to existing roadways, there are several locations where undeveloped lands occur immediately adjacent to the proposed pipeline alignments and within the survey corridor. In some cases, these undeveloped lands support vernal pool and swale habitat that could potentially support sensitive and listed vernal pool species, and at one location, the pipeline alignment is immediately adjacent to conservation bank property that is managed to support and promote occurrences of listed species in order to sell habitat mitigation credits. There are also several locations where groves of trees or mature riparian corridors occur in close proximity to the pipeline alignment that would be considered suitable raptor or passerine nesting habitat.

Vegetation

The majority of the project area consists of lands involved in agricultural production, dairy farms, and disturbed habitat with ruderal vegetation along roadway shoulders. The agricultural fields primarily consist of alfalfa, corn, grain crops, and orchard crops. Disturbed areas and road shoulders support annual grassland and ruderal cover types. Dominant species observed in annual grasslands and ruderal habitat include ripgut grass, wild oat, Hare barley, Bermuda grass, redstem filaree, radish, yellow star-thistle, cheeseweed, and puncturevine. A complete list of plant species observed during field surveys appears in Table 1 of Appendix C (bound separately).

There are several natural drainage crossings throughout the pipeline alignments. At these crossings, the vegetation communities observed were a mix of natural riparian forests and shrublands, emergent vegetation, and annual grassland cover types. Dominant species observed at these drainage crossings varied from crossing to crossing, but include common species such as narrow-leaved willow, water smartweed, Himalayan blackberry, tule, broad-leaved cattail, and giant. A complete list of plant species observed during field surveys is compiled in Table 1 of Appendix C.

Wildlife

Wildlife observed at the project site were characteristic of the region, and typical of species that would be expected in agricultural lands or annual grassland habitat. Some of these species include house finch, northern mockingbird, brewer's blackbird, red-winged blackbird, western kingbird, and California horned lark. At the drainage crossings and in riparian habitat species observed included carp, bullfrog, bushtit, marsh wren, American goldfinch, cliff swallow, raccoon, coyote, and North American river otter. Species occurring in agricultural ponds or dairy treatment ponds include killdeer, greater yellowlegs, least sandpiper, great egret, and snowy egret. Raptors observed soaring above the project site include red-tailed hawk, northern harrier, and turkey vultures. A complete list of species observed on the project site appears in Table 2 of Appendix C.

Sensitive Habitats, Special-Status Plants, and Special-Status Wildlife

A list of special-status plant and animal species that historically occurred in the vicinity of the project site was compiled using the resources discussed above. The species identified from these data sources were further assessed for their potential to occur within the project site based upon previously documented occurrences, their habitat requirements, and the quality and extent of any available habitat within the site. One sensitive natural community, 30 special-status plants, and 37 special-status wildlife species have been recorded in the quadrangles surrounding the project site. See Table 3 and Figure 3 of Appendix C for a complete list of special-status species potentially occurring in the vicinity of the proposed project site, including an analysis of the probably of occurrence on the site.

Sensitive Habitats

Sensitive natural communities are those that are considered rare within the region, support sensitive plant and/or wildlife species, or function as corridors for wildlife movement. The sensitive natural community recorded in the area is Northern Claypan Vernal Pool. Vernal pool habitat and designated Critical Habitat for vernal pool species occur adjacent to the project site in several locations (along Sandy Mush Road and Rahilly Road).

Special-Status Species

A number of special-status species may occur on or adjacent to the proposed pipeline alignments associated with this project. These include: rare plants, vernal pool branchiopods (fairy shrimp and tadpole shrimp), valley elderberry longhorn beetle, California tiger salamander, western spadefoot, giant garter snake, western pond turtle, tricolored blackbird, burrowing owl, Swainson's hawk, Northern harrier, San Joaquin kit fox (SJKF), and American badger.

Numerous Swainson's hawk and tricolored blackbird occurrences have been reported within five miles of the project site and could nest near the project site and forage within the crop lands. Although no Swainson's hawks were observed during surveys, Swainson's hawk are abundant in the

project area and were not observed during the November surveys due to their absence in the area during the winter months. Although no tricolored blackbirds were observed at the project site, they have been known to nest within silage and/or triticale fields associated with dairy farms. Burrowing owl is known to occur within grazed grassland near the pipeline alignment and numerous burrow clusters suitable for burrowing owl inhabitation were observed during field surveys. The project site does provide potential nesting and foraging habitat for a number of additional sensitive wildlife species including Swainson's hawk and various species of raptors and migratory birds that are protected by the Migratory Bird Treaty Act.

There were no blue elderberry shrubs, potential habitat for the valley elderberry longhorn beetle, observed in the vicinity of the project alignment. The surveys were conducted outside of the blooming window of blue elderberry, so identification of the shrub is more difficult, and detection is less likely, particularly in densely vegetated areas. There is potential for blue elderberry to be growing within the riparian corridors of some of the more densely vegetated riparian crossings (Bear Creek, Black Rascal Creek, Owen's Creek, and Duck Slough) that were not observed during November surveys.

Occurrences of California tiger salamander (CTS), western spadefoot, and listed vernal pool branchiopods are recorded within known vernal pool habitat at two mitigation bank locations within five miles of the site, and potential vernal pool grassland habitat occurs in several locations adjacent to the proposed pipeline alignment. Potential habitat for aquatic reptiles including giant garter snake and western pond turtle occur in agricultural ponds/ditches and natural creeks; however adjacent upland habitat for these species is limited due to the expansive agricultural lands involved in crop production in the project area.

Very little ground squirrel activity or ground squirrel burrows were observed along the roadways where the pipeline alignments are proposed. This reduces the potential that burrowing species, such as burrowing owl, American badger, and SJKF, or summer refugia habitat for CTS, would occur on the pipeline alignment within the direct impact area. However, there were significant burrow colonies observed in the grasslands along Sandy Mush Road that would provide suitable habitat for these burrowing species. No sign of SJKF was observed and the species is widely recognized to be eradicated from its northern range. Agricultural access roads, open or fallow fields, and irrigation ditches and canals provide an important corridor for the movements of mammals such as American badger and SJKF, if present in the region.

Waters and Wetlands

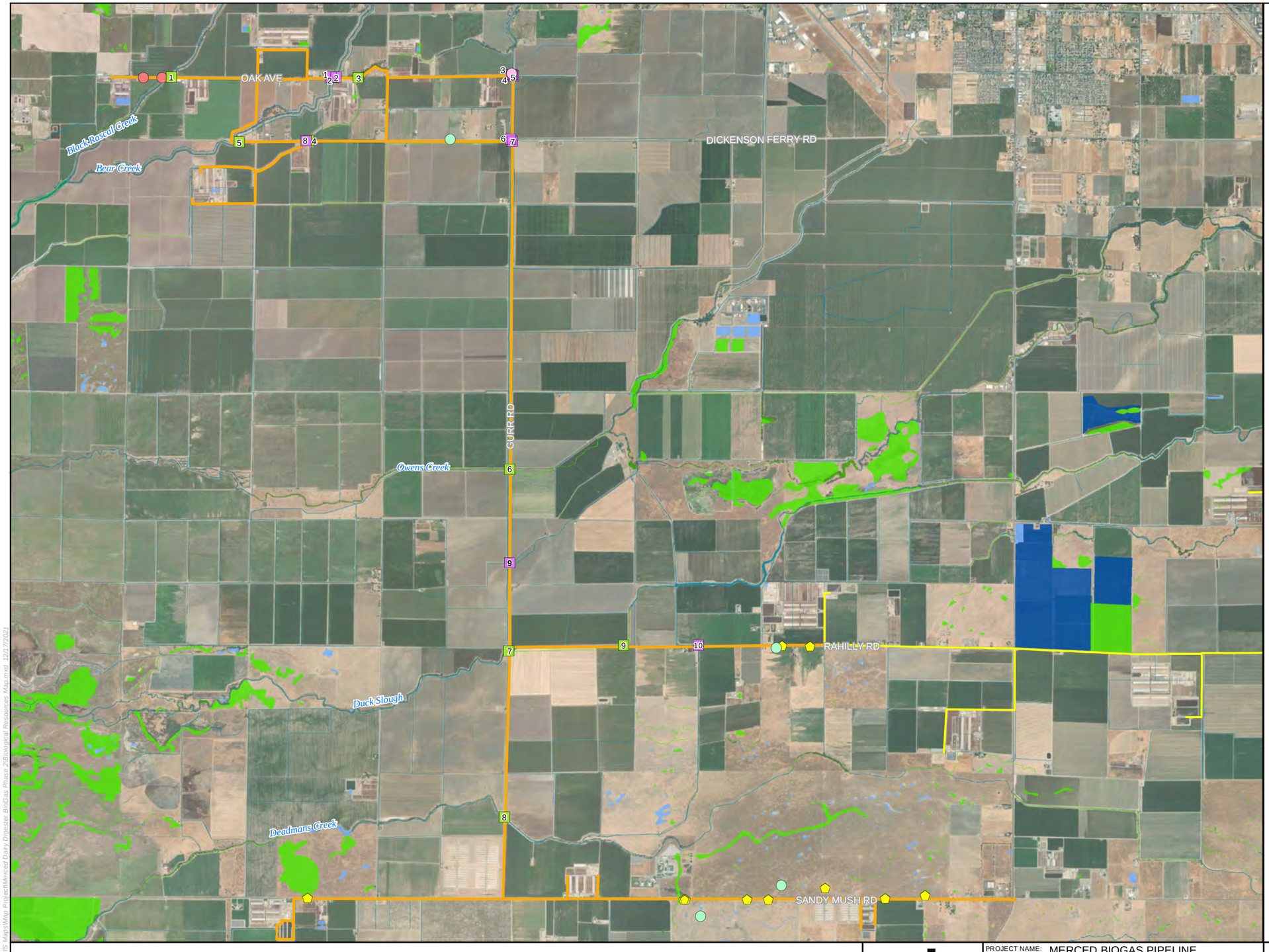
At the time of the reconnaissance survey, the site was examined for evidence of regulated habitats, such as waters and wetlands, potentially under regulatory authority of the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act. The National Wetland Inventory (NWI) map for the project area was reviewed to assist in the identification of waters and wetlands on the Site (USFWS 2021b). A total of 33 waterway crossings were mapped during the NWI data review, and identified during field surveys. The crossings include 11 natural drainages and 22 agricultural ditches. All drainage crossings appeared to extend beyond the cropped fields, and are potentially connected to jurisdictional waterways outside of the project alignment or are part of a larger regional irrigation system. The NWI map also depicts freshwater emergent wetlands throughout the vernal pool grassland areas, some of which occur within 100 feet of the pipeline alignments. See Figures 2a and 2b.

The pipeline alignments cross several natural waterways and named waterways. The named natural waterway crossings include: Bear Creek, Black Rascal Creek, Owens Creek, Deadman's Creek, Duck Slough, and the Chowchilla River. The pipeline alignment crosses the Chowchilla River, Bear Creek, and Duck Slough at two locations each. Following is a summary of the notable named natural drainage crossing locations starting in the northwestern corner of the pipeline alignment and moving to the southeast. See Figures 2a and 2b for the location of each of the eight natural drainages described below.

- ND-1: The crossing of Black Rascal Creek occurs on Oak Avenue in the northwestern corner of the pipeline alignment. Oak Avenue is a concrete bridge crossing over Black Rascal Creek.
- ND-2: The northern crossing of Bear Creek also occurs on Oak Avenue and is a concrete bridge similar to the one at ND-1.
- ND-5: The southern crossing of Bear Creek is on West Dickenson Ferry Road.
- ND-6: The Owen's Creek crossing is located on Gurr Road. Gurr Road crosses over Owen's Creek with a small concrete bridge.
- ND-7: The western crossing of Duck Slough is located on Gurr Road near the western terminus of Rahilly Road. Gurr Road crosses Duck Slough with a concrete bridge.
- ND-8: The Deadman's Creek crossing is located on the southern end of Gurr Road near the intersection of Sandy Mush Road.
- ND-10: The western crossing of the Chowchilla River is located on the southeastern portion of the pipeline alignment on Road 9 / Bliss Road south of the intersection of Avenue 26.
- ND-11: The eastern crossing of the Chowchilla River is a concrete bridge crossing located on Avenue 26 / Faust Road.

Several of the agricultural drainage crossings are large canal features such as the Deane Canal that was conveying swiftly moving water along Gurr Road. Some of the agricultural ditches support vegetated banks and some do not, and some of the larger canals have concrete lined channels at box culvert crossing locations. All drainage crossings depicted in Figure 2a and 2b were all potentially connected to Traditional Navigable Waters of the U.S. (TNW) or tributaries of TNWs, and as such are potentially jurisdictional waters of the U.S. under Corps jurisdiction. See Appendix D of the Biological Reconnaissance Report (Appendix C of this document, bound separately) for additional details about all 33 mapped drainage crossings.

There are undeveloped and undisturbed grasslands supporting vernal pools and swales south of Rahilly Road, and on both the north and south sides of Sandy Mush Road. The grasslands on both sides of Sandy Mush Road are designated as Critical Habitat for federally listed vernal pool species including Colusa grass, vernal pool fairy shrimp, and vernal pool tadpole shrimp. There are numerous locations where vernal pools occur within 100 feet of the roadway and pipeline alignment, and several locations where vernal pools or swales occur in close proximity within 20 feet of the shoulder of the road. The vernal pools observed from the road were all inaccessible for surveys due to their location behind fences on private property; however, vernal pool indicators were visible through binoculars including plant species gradation, low topography, and changes in vegetative cover percentages. Segments of the pipeline alignment with high vernal pool sensitivity are noted on Figures 2a and 2b, and in several cases the edge of vernal pool habitat occurs within 25 feet of the existing roadway.



LEGEND:

Biogas Pipeline Expansion Biological Resources

- Agricultural Ditch or Canal Crossing (AD)
- Large burrow cluster
- Natural Drainage Crossing (ND)
- Potential Population of *Sagittaria* sp.
- Vernal Pool
- Wet Meadow
- Biogas Pipeline (Expansion Alignment)
- Biogas Pipeline (Existing Alignment)

National Wetland Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- County Boundary

N

0 2,100 4,200
FEET

Source: Esri Online Imagery Basemap, BioGas Engineering, USFWS
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Notes: NWI= National Wetland Inventory.
This map was created for informational and display purposes only.

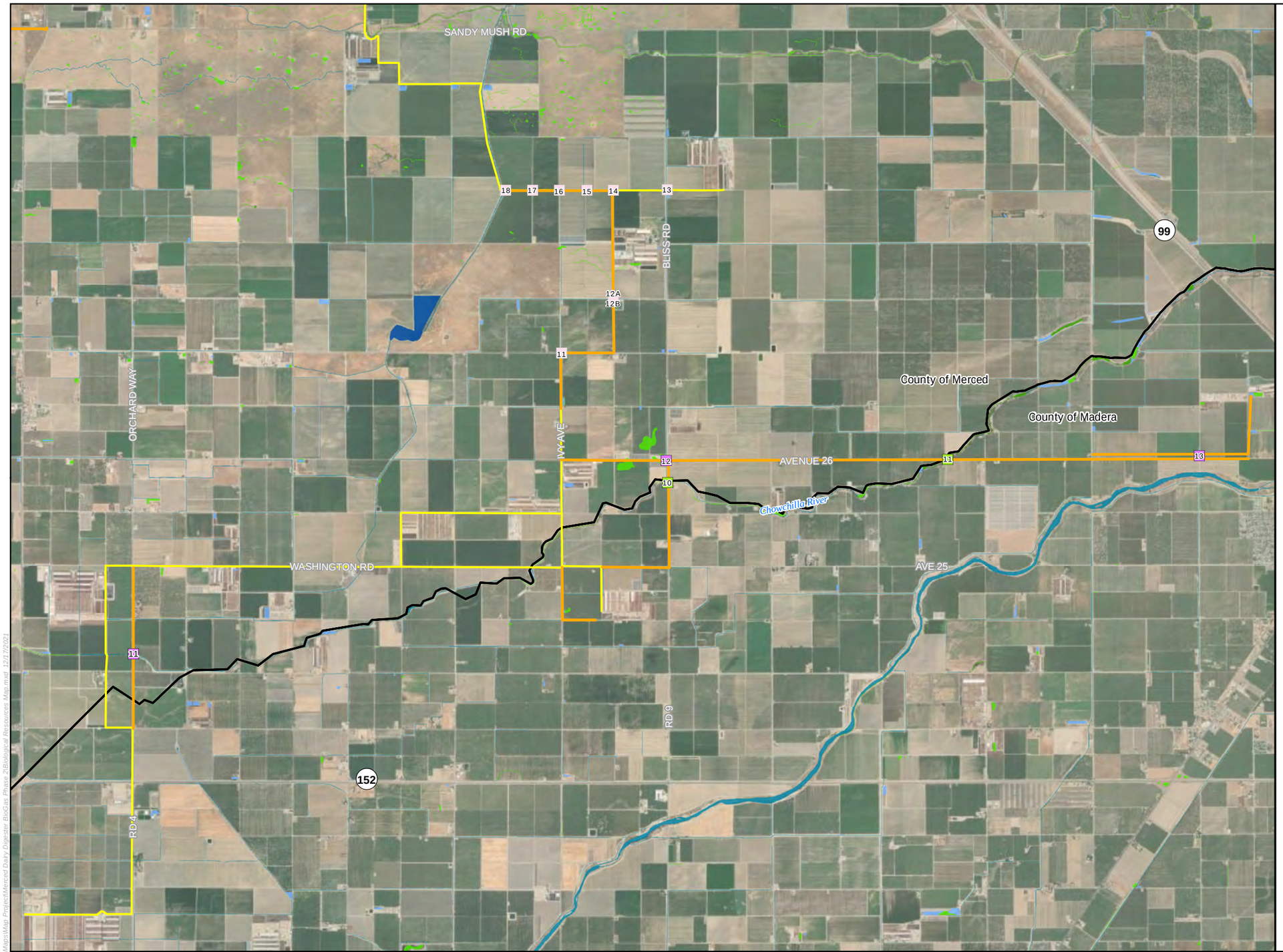
padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME: MERCED BIOGAS PIPELINE EXPANSION PROJECT MERCED AND MADERA COUNTY, CA
PROJECT NUMBER: 2102-1061
DATE: December 2021

BIOLOGICAL RESOURCES MAP

FIGURE 2A

Z:\GIS Projects\GIS Maps\Map Project\Merced Dairy Digester BioGas Phase 2\Biological Resources Map.mxd 12/17/2021



LEGEND:

Biogas Pipeline Expansion Biological Resources

- Agricultural Ditch or Canal Crossing (AD)
- Natural Drainage Crossing (ND)
- Biogas Pipeline (Expansion Alignment)
- Biogas Pipeline (Existing Alignment)

Biogas Pipeline Existing Alignment Biological Resources

- Agricultural Ditch or Canal Crossing (Existing Alignment with Updates)

National Wetland Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine
- County Boundary

N

0 2,500 5,000
FEET

Source: Esri Online Imagery Basemap, BioGas Engineering, USFWS
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
Notes: NWI= National Wetland Inventory.
This map was created for informational and display purposes only.

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME: MERCED BIOGAS PIPELINE EXPANSION PROJECT MERCED AND MADERA COUNTY, CA

PROJECT NUMBER: 2102-1061

DATE: December 2021

BIOLOGICAL RESOURCES MAP

FIGURE 2B

Z:\GIS Projects\GIS Maps\Map Project\Merced Dairy Digester BioGas Phase 2\Biological Resources Map.mxd 12/17/2021

Local Habitat Conservation Plans

No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been approved within Merced County.

ENVIRONMENTAL EVALUATION

Approval of the Merced Biogas Pipeline Expansion project would involve the temporary disturbance of up to 39.5 linear miles of pipeline alignment within agricultural lands, existing farm roads, and on the shoulder of County roads for the construction of the biogas gathering lines using trench excavation methods. Construction of the pipelines would require the crossing of up to 33 drainages, which may be completed through trench excavation or by horizontal directional drilling, depending on the location and feasibility of bridge mounted crossings.

Because the precise disturbance footprint and construction methodology has not yet been determined, the impact analysis considers that all biological resources occurring within the survey corridor could be directly or indirectly impacted and provides a range of recommended mitigation measures to address all potential impact and mitigation scenarios.

Question (a) Adverse effect on special-status species: Less-than-significant Impact with Mitigation.

Plants

The likelihood of occurrence of special-status plant species along the alignment and within the pipeline disturbance area is considered extremely low due to a lack of suitable habitat within agricultural lands routinely disturbed for crop cultivation and developed roadways. Additionally, the likelihood of special-status plant species occurring within farm roads or on County road shoulders is also extremely low due to lack of suitable habitat and high level of disturbance. However, special-status plant species are known to occur in in the region, and 17 special-status plant species associated with vernal pools and swales have the potential to occur in vernal pool and swale habitat near the site, and several wetland plant species have the potential to occur in drainage crossings (CNPS 2021; CDFW 2021). At several locations (e.g., grazed pasture and conservation bank lands along Sandy Mush Road and Rahilly Road) vernal pool and swale habitat occurs within the survey area and potential impact area that could provide suitable habitat for special-status vernal pool plant species. Additionally, there is one special-status plant species associated with freshwater wetlands that could potentially occur in freshwater wetlands within the drainage crossing locations.

Because of this, there is some potential for project related impact to special-status plants at waterway crossings, particularly the natural drainages but potentially in ditches, or in vernal pools and swales occurring in the vernal pool grasslands along Sandy Mush Road and Rahilly Road. Special-status plants that could occur in natural drainages or vernal pools and swales include alkali milk-vetch, heartscale, brittlescale, vernal pool smallscale, succulent owl's-clover, recurved larkspur, dwarf downingia, Delta button-celery, Spiny-sepaled button celery, San Joaquin spearscale, Boggs Lake hedge hyssop, alkali-sink goldfields, Coulter's goldfields, Shining navarretia, prostrate vernal pool navarretia, Colusa grass, San Joaquin Valley Orcutt grass, Hairy orcutt grass, California alkali grass, Sanford's arrowhead, Wright's trichocoronis, and Greene's tuctoria (as shown in Table 3 of Appendix C). Depending on impact footprint and construction methods used for pipeline installation at the natural drainage locations, implementation of the project may have an impact on special-status plants:

Mitigation Measure BIO-1:

A. If pipeline installation at the natural drainage crossing locations and the earthen agricultural ditch crossing locations are avoided using alternate alignments, bridge mounted crossings, or installed using boring techniques or open cut trench excavation within the disturbed or paved roadway or shoulder, and all ground disturbance is located in developed lands and/or upland areas outside of potential special-status plant species habitat, implementation of the project is expected to have a less than significant impact to special-status plants, and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of roadway.

B. If pipeline installation at the natural drainage crossings and/or earthen agricultural ditch crossings involves trench excavation across the waterways (creeks, channels, swales, earthen ditches), or any other ground disturbance within natural waterway crossings or vernal pools and swales, even if conducted when dry, the following measures will be implemented:

1. Pre-construction special-status species plant surveys shall be conducted in waterway crossing impact areas prior to initiating project activities. All surveys will be conducted in accordance with agency approved survey protocols. If no special-status species are identified in protocol surveys, no mitigation is required.
2. If special-status plants are identified within project impact areas, one of the following measures shall apply:

   2.1 If feasible, the project will be adjusted to avoid impacts to special-status plants. If adjustment of construction areas or methods is not feasible, the applicant will develop species-specific measures to minimize the effects of construction. This may include: seasonal construction restrictions, erection of protective barriers, collection and relocation of individual plants or seeds, site monitoring during construction, site restoration, and/or implementation of construction practices that would avoid specific areas.

   2.2 If there is no feasible alternative to the disturbance to special-status plants, the applicant will mitigate for impacts to special-status plants. All impacts associated with pipeline installation are expected to be short-term, temporary impacts that would be restored to pre-project conditions upon completion of construction. The applicant shall prepare a site restoration plan that provides for plant salvage and replanting, seed collection and replanting, and/or topsoil collection and replacement as appropriate for species identified within the project impact area. The final restoration plan would, at a minimum, restore the temporary impact areas to pre-project conditions that would support special-status species populations. The restored habitat would be monitored consistent with the requirements of the site restoration plan to ensure that performance criteria established are achieved and maintained through the monitoring period. No permanent impact to special-status plants will occur.

3. If listed species are identified (e.g., federal- or state-listed endangered, threatened, or candidate species) the applicant will consult with the USFWS and/or CDFW to secure proper authorization. Any project component that would jeopardize the continued existence of a listed plant species will be eliminated from consideration.

Because implementation of Mitigation Measure BIO-1 would require preconstruction plant surveys; consultation with resource agencies, if necessary; avoidance measures during construction; or habitat conservation; potential impacts to rare plants would be minimized to less-than-significant levels. No additional mitigation would be required.

Wildlife

Vernal Pool Branchiopods (VPB)

The proposed pipeline alignment would be constructed within farm roads and on the road shoulders adjacent to County roads. In some locations the pipeline alignment on the shoulder of existing County Roads is adjacent to undeveloped grasslands that support vernal pool and swale habitat and vernal pool conservation bank lands. The areas where pipeline construction occurs adjacent to vernal pool grasslands include: Sandy Mush Road (vernal pool grasslands occur on both sides of road at this location) and Rahilly Road (vernal pool grasslands occur on south side of road at this location). In these locations there could be direct or indirect impact to listed vernal pool branchiopod species (fairy shrimp and tadpole shrimp) potentially occurring in vernal pool or swale habitat, depending on the construction methodology employed to install the pipeline in these locations.

The pipeline alignment along Sandy Mush Road is proposed in or on the shoulder of the existing paved roadway. Construction of the pipeline alignment on this road will involve construction in close proximity to vernal pool habitat in two distinct segments. At the western limits of the pipeline alignment along Sandy Mush Road, by the Homen Dairy, vernal pool habitat occurs on the north side of the road in an undeveloped grassland. At this location, the pipeline would be constructed on the south side of Sandy Mush Road east of the entrance to the Homen Dairy in order to provide additional buffer and a developed roadway barrier between pipeline construction activities and habitat suitable for listed vernal pool species.

Further east on Sandy Mush Road, starting approximately at the Merced County Correctional Center, undeveloped grasslands supporting vernal pool and swale habitat occur on both the north and south sides of the road. The vernal pool grassland habitat continues on both sides of Sandy Mush Road for the majority of the pipeline alignment to the eastern limits at Los Banos Highway.

Construction of the pipeline alignment in this portion of the project is in close proximity to vernal pool grasslands owned by conservation banks and managed to support and promote occurrences of listed species. Vernal pool and swale habitat occurs within 100 feet of the roadway and in some cases, less than 30 feet from the roadway. These features were behind fences on private property and inaccessible for survey but based on habitat suitability observations made from the fence line and known occurrences in the area this vernal pool grassland is highly likely to support federally listed vernal pool branchiopods (VPB), such as the vernal pool fairy shrimp (VPFS), Conservancy fairy shrimp, or vernal pool tadpole shrimp (VPTS). The grassland habitat in this portion of the pipeline alignment is designated as Critical Habitat for Colusa grass, VPFS, and VPTS and vernal pools and swales in these areas could support federally listed vernal pool species (USFWS 2006).

The pipeline alignment along Rahilly Road is proposed in or on the shoulder of the existing paved roadway. At the Vander Woude Dairy location, on the south side of Rahilly Road, there is grazed pastureland that supports vernal pool habitat with vernal pools that occur near the fence line. At this location, the pipeline would be constructed on the north side of Rahilly Road west of the entrance to the Vander Woude Dairy in order to provide additional buffer and a developed roadway barrier

between pipeline construction activities and habitat suitable for listed vernal pool species. Immediately adjacent to the east side of the grazed pasture is a vernal pool grassland that is designated as Critical Habitat for Colusa grass, VPFS, and VPTS (Unit 14J). The vernal pool habitat in the grazed pastureland could support federally listed vernal pool species (USFWS 2006).

The USFWS typically requires a 250-foot setback for vernal pool habitat occupied by listed branchiopod species for full avoidance of potential direct and indirect effects of a project, unless the reach of indirect effects can be determined definitively to be less than 250 feet (USFWS 1996). Encroachment on vernal pools could result in alteration or loss of the vernal pool contributing watershed or damage to the subsurface impervious layer that supports seasonal inundation of the feature. Because protocol-level surveys have not been completed for presence/absence of VPBs in the vernal pools and swales within 250 feet of the pipeline alignment, and because VPBs are known to occur in vernal pool habitat on conservation bank lands along Sandy Mush Road, we assume listed VPBs are present in vernal pool habitat within 250 feet of the roadway and measures for full avoidance of direct and indirect impacts to listed VPB are necessary. Location of the pipeline construction within disturbed or paved roadway or shoulder, or within previously disturbed agricultural lands on the opposite side of the road from sensitive vernal pool habitat along Rahilly Road will ensure avoidance of indirect impact to listed species due to the existing developed roadway barrier between pipeline construction activities and sensitive vernal pool habitat. For the purposes of this discussion, the prescribed locations defined for full avoidance of direct and indirect impacts to listed VPBs include the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Rahilly Road on the north side of the roadway at the Vander Woude Dairy property; the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Sandy Mush Road on the south side of the roadway at the Homen Dairy property; and within the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of the roadway on Sandy Mush Road from the Merced County Correctional Facility to Los Banos Highway (vernal pool grasslands on both sides).

Construction of the pipeline could directly impact listed VPBs if the pipeline is installed using trench excavation methodology at the drainage swale crossings or indirectly impact listed VPBs if the pipeline is installed using methodologies involving ground disturbance and excavation in close proximity to vernal pools or swales that provide suitable habitat for listed vernal pool species. This would be a significant impact, and the following mitigation would be required:

Mitigation Measure BIO-2:

Construction of the pipeline alignment along Rahilly Road and Sandy Mush Road may require the following mitigation measures for direct or indirect impacts on VPBs depending on pipeline location and construction methodologies used:

A. If pipeline installation-related ground disturbance is entirely located within the paved roadway or disturbed shoulder on Sandy Mush Road between the Merced County Correctional Facility and Los Banos Highway; pipeline installation at the western limits of the alignment on Sand Mush Road near Homen Dairy is sited on the south side of the paved roadway (opposite grassland areas supporting vernal pool habitat); and pipeline installation along Rahilly Road is sited on the north side of the paved roadway at the Vander Woude Dairy property (opposite the grassland areas supporting vernal pool habitat); then implementation of the project is expected to have a less than significant impact to VPBs, and no mitigation is required. For the purposes of this discussion, the prescribed locations defined for full avoidance of direct and indirect impacts to listed VPBs include the paved

section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Rahilly Road on the north side of the roadway at the Vander Woude Dairy; the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on the south side of Sandy Mush Road by the Homen Dairy; and within the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on Sandy Mush Road from the Merced County Correctional Facility to Los Banos Highway where vernal pool grassland occurs on both sides of the roadway.

B. If full avoidance of direct or indirect impact to VPB habitat as outlined in BIO-2A is not feasible the following mitigation scenarios may apply:
    1. If installation of the pipeline involves excavation in grassland areas within 250 feet of vernal pools or swales that provide suitable habitat for VPBs and without any disturbed or developed land barriers (e.g., disturbed or paved roadway) between construction activities and suitable VPB habitat, there is potential for indirect impact to listed VPBs through alteration of the watershed or damage to subsurface impervious layer, and the following measures shall be implemented:
        (a) Applicant shall consult with USFWS prior to implementation of the project to obtain all required regulatory permits and authorizations for potential indirect impact to listed species.
        (b) All work will be conducted during the dry season when potential habitat features on or near the proposed pipeline installation areas are dry.
        (c) Adequate fencing will be placed and maintained around any vernal pool habitat not approved for impact to prevent encroachment.
        (d) Environmental Awareness Training Program will include information regarding the presence of listed VPB species and the importance of avoiding impacts to these species and their habitat.
        (e) A USFWS-approved biologist will monitor pipeline installation activities in potential VPB habitat or in proximity to known or potential VPB habitat to ensure that no unnecessary take or destruction of habitat occurs. The biologist will have authority to stop activities if necessary, to implement appropriate corrective measures.
        (f) Storm water BMPs (silt fencing and straw waddles) will be placed around excavations and dirt stockpiles to reduce potential for erosion and sedimentation into potential VPB habitat features.
        (g) No application of water (e.g., dust suppression) will occur in vernal pool habitat without additional measures (such as barriers and/or use of low flow water truck nozzles) in place to keep water out of potential or known VPB habitat features during the dry season.
        (h) Any groundwater encountered within the trench excavation will be pumped into a water truck or other containment device and will be discharged offsite or in upland areas outside of vernal pool grassland habitat.

No excavation directly within vernal pool or swale habitat is planned; therefore, direct habitat modification is not expected, and vernal pool habitat restoration or compensatory mitigation is not required. Because implementation of Mitigation Measure BIO-2 would require consultation with resource agencies, avoidance and protection measures during construction, an Environmental Awareness Training Program, and monitoring by a USFWS-approved biologist, potential impacts to vernal pool branchiopods would be minimized to less-than-significant levels. No additional mitigation would be required.

Valley Elderberry Longhorn Beetle

No blue elderberry shrubs were identified along the pipeline alignment; however, there is suitable riparian habitat for blue elderberry shrubs on several drainage crossings and surveys were conducted in November when blue elderberry shrubs have no leaves or flowers making identification of individual shrubs in dense riparian cover difficult. There may be elderberry shrubs present within dense riparian habitat along stream crossings and within 165 feet of the pipeline alignment, though none were identified immediately adjacent to pipeline crossing locations.

In accordance with The Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017), construction activities within 50 meters (165 feet) of an elderberry plant with a stem diameter greater than one-inch at the base is considered a potential impact. Avoidance and minimization measures are recommended to minimize effects to VELB and/or its habitat. Normally, limited activities and temporary disturbance may occur within 165 feet of an elderberry shrub, provided a 20-foot buffer is fenced and disturbance prohibited within that 20-foot area, avoidance and minimization measures are applied, and temporary disturbance is restored following construction. Because surveys were conducted during the winter dormant season, occurrence of blue elderberry shrubs within 165 feet of pipeline construction cannot be ruled out and installation of the pipeline may encroach to within 165 feet of potential VELB habitat but would avoid the 20-foot core area of the shrub since none were identified immediately adjacent to pipeline crossing locations. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-3:

A. Construction of the pipeline may require excavation within 165 feet of a blue elderberry shrub providing suitable habitat for the VELB. To conclusively determine occurrence of blue elderberry shrubs within 165 feet of the pipeline alignment and apply appropriate mitigation measures, additional surveys for blue elderberry shrubs shall be performed within 165 feet of drainage crossings with riparian cover during the blue elderberry blooming period (March through July) when the blue elderberry shrub is detectable in dense riparian vegetation. If no blue elderberry shrubs occur within 165 feet of the pipeline alignment, no mitigation is required.

B. If surveys conducted during the blooming period indicate that blue elderberry shrubs occur within 165 feet of the pipeline alignment, a minimum 20-foot exclusion zone extending from the dripline of the shrub shall be maintained during construction. Consistent with measures outlined by the USFWS to mitigate potential impacts to VELB when working within 165 feet of a blue elderberry shrub, but outside the 20-foot core area, the following measures shall be implemented:

    1. Applicant shall consult with USFWS prior to implementation of the project to obtain all regulatory permits and authorizations for potential impact to listed species.
    2. Fence and flag elderberry shrubs to be avoided and provide a minimum setback of at least 20 feet from the dripline of each elderberry plant for ground disturbance activities (e.g., trenching) to ensure that activities will not damage or kill the elderberry shrub.
    3. Brief the contractors and key employees of the need to avoid any impacts to the elderberry plants, and to advise them of penalties associated with damage or destruction of the plants. Instruct work crew about the status of the VELB and the need to protect its elderberry host plant, and possible penalties for non-compliance with avoidance and minimization measures.

4. A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project and should be determined in coordination with the USFWS biologist.
5. As much as feasible, all activities within 165 feet of an elderberry shrub, will be conducted outside the flight season of the VELB (March-July).
6. Continue to protect both core and buffer avoidance areas after construction from adverse effects of the project.
7. No insecticides, herbicides, fertilizers, or other chemicals that might harm the VELB or its host plant should be used within 100 feet of any elderberry plant with a stem measuring 1.0 inch or greater in diameter at ground level.
8. Mechanical vegetation removal within the dripline of an elderberry shrub will be limited to the season when adult VELB are not active (August-February) and will avoid damaging the elderberry.
9. Erosion control will be implemented, and the affected construction area will be revegetated with appropriate native plants.

Because implementation of Mitigation Measure BIO-3 would require a minimum 20-foot exclusion zone, and avoidance and minimization measures as outlined in USFWS Guidelines, direct habitat modification is not anticipated, and potential impacts to VELB would be minimized to less-than-significant levels. No additional mitigation would be required.

California Tiger Salamander / Western Spadefoot

The majority of aquatic habitat within the project site consists of intermittent creeks, seasonal swales, and agricultural ditches and canals. None of the aquatic habitat occurring within the project site would provide suitable breeding habitat for California tiger salamander (CTS) or western spadefoot; however, there is suitable aquatic breeding habitat for these species in pools and ponds occurring within the vernal pool grasslands adjacent to the alignment and within one mile of the project site. Additionally, the drainages (channels and swales) within the grassland habitat along Sandy Mush Road could provide suitable dispersal habitat for CTS and/or western spadefoot through the project site, and vernal pool grasslands occurring adjacent to the pipeline alignment along Sandy Mush Road and Rahilly Road could provide suitable upland and dispersal habitat for these amphibian species.

There are known occurrences of CTS and western spadefoot at two mitigation banks located on Sandy Mush Road. The Deadman Creek Mitigation Bank is located adjacent to the project alignment along Sandy Mush Road and the Dutchman Creek Mitigation Bank is located approximately 0.5-mile east of the eastern limits of the pipeline expansion alignment on Sandy Mush Road. There is also a known occurrence of CTS from 1994 in the vernal pool grassland at the Merced National Wildlife Refuge located approximately 0.5-mile southwest of the western limits of the pipeline expansion alignment on Sandy Mush Road (CDFW 2021). No major barriers or land disturbances are located between the known occurrences of CTS and western spadefoot at Deadman Creek Mitigation Bank and the pipeline alignment along Sandy Mush Road, Rahilly Road, and the southern portion of S. Gurr Road. Active agricultural land occurs between the Dutchman Creek and the Merced National Wildlife Refuge CTS occurrences and the pipeline alignment.

No burrow habitat or other suitable summer refugia for these species were observed on the pipeline alignment within disturbed or paved roadway and road shoulders during field surveys; therefore, the impact area associated with pipeline construction does not provide non-nonbreeding or upland habitat on site.

Placement of the pipeline alignment within the pavement or on the highly compacted shoulder of developed roadways in portions of the alignment that are adjacent to the vernal pool grassland habitat that could support CTS and/or western spadefoot minimizes the potential for impact to these species; however, because of the presence of known breeding and upland habitat within vernal pool grasslands adjacent to the pipeline alignment, the project could impact CTS or western spadefoot. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-4:

A. If pipeline installation on Sandy Mush Road, Rahilly Road adjacent to vernal pool grasslands, and on S. Gurr Road at the Deadman Creek (ND-8) drainage crossing are designed to avoid impact to suitable amphibian dispersal habitat through installation techniques involving bridge attachment, boring under the drainage, or by using open cut trench excavation only within the disturbed or paved roadway or shoulder, and all ground disturbance is located in developed lands outside of potential amphibian dispersal corridors, then implementation of the project is expected to have a less than significant impact to CTS and western spadefoot, and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Rahilly Road on the north side of the roadway at the Vander Woude Dairy; the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on the south side of Sandy Mush Road by the Homen Dairy; and within the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on Sandy Mush Road from the Merced County Correctional Facility to Los Banos Highway where vernal pool grassland occurs on both sides of the roadway.

B. If pipeline installation on Sandy Mush Road, Rahilly Road adjacent to vernal pool grasslands, and on S. Gurr Road at the Deadman Creek (ND-8) drainage crossing involves trench excavation or any other ground disturbance within the drainage crossing or vernal pool grasslands, the following measures shall be implemented:

    1. Construction for pipeline installation at the drainage crossing and/or in vernal pool grasslands will be completed during the dry season when amphibians are not expected to be dispersing and are expected to be in their summer refugia (June 15 and October 31).
    2. A pre-construction survey for CTS and western spadefoot will be conducted by a qualified biologist along pipeline segments in vernal pool grassland habitat and drainage crossing locations focused on identification of burrows or other suitable summer refugia that may be impacted by pipeline installation. Surveys will be completed within 48 hours prior the onset of work activities in these locations.
    3. If CTS and/or western spadefoot is observed or burrows or other suitable summer refugia are identified within the construction work area, the biologist will coordinate with CDFW and USFWS to ensure that the individuals are not harmed. If burrow excavation and/or relocation of amphibians is necessary, they will be relocated the shortest distance possible to a location that contains suitable habitat that will not be affected by activities

associated with the proposed project. Any burrow excavation and amphibian relocation must be pre-approved by the USFWS and CDFW and be conducted by an agency approved permitted biologist.

Because implementation of Mitigation Measure BIO-4 would require pre-construction surveys, consultation with resource agencies, and seasonal construction period limitations, potential impacts to California Tiger Salamander / Western Spadefoot would be minimized to less-than-significant levels. No additional mitigation would be required.

Giant Garter Snake

The majority of agricultural ditches and natural waterways within the project site do not contain the three habitat components necessary to support giant garter snake (GGS), which include: aquatic habitat with emergent vegetation and a prey base, an upland component near aquatic habitat for thermoregulation and summer shelter in burrows, and an upland refugia component for use as winter hibernacula (USFWS 1993). All of the natural waterways within the project area including the Chowchilla River, Deadman's Creek, and Bear Creek are intermittent and would not provide sufficient summer aquatic habitat for the GGS. Agricultural ditches and canals have managed flows and some may support summer water; however, ditches and canals are routinely disturbed and don't support emergent bankside vegetation necessary for GGS refuge. Additionally, the majority of waterways and agricultural ditches within the project sites are surrounded by cropland with high levels of disturbance that would not offer sufficient upland habitat for GGS. Consequently, there would be no impacts to the giant garter snake, and no mitigation would be required.

Western Pond Turtle

Some of the aquatic habitat within or near the project site could provide suitable habitat for western pond turtle. Suitable habitat for western pond turtle includes aquatic habitat with basking sites available for thermoregulation and nearby upland breeding habitat. Examples of potential western pond turtle habitat include Black Rascal Creek, Bear Creek, Duck Slough, Deane Canal, unnamed drainages, and agricultural ponds. There is one historic occurrence of western pond turtle in Dutchman Creek near Sandy Mush Road approximately 0.5 miles from the pipeline alignment. Because of the proximity of the project to potential western pond turtle habitat and the potential for project impacts at drainage crossings during construction of the pipeline, there is potential for impact to the western pond turtle. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-5:

A. If pipeline installation at any of the drainage crossing locations are installed using drilling techniques or open cut trench excavation within the disturbed or paved roadway or shoulder, and all ground disturbance is located in upland areas outside of potential pond turtle habitat or the drainage crossing are dry at the time of construction, implementation of the project is expected to have a less than significant impact to western pond turtle and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of the road.

B. If pipeline installation at any of the drainage locations involves trench excavation across the waterways with water present (creeks, channels, swales), or any other ground disturbance within natural waterway crossings or vernal pools and swales, the following measures will be implemented:

    1. A qualified biologist shall conduct preconstruction surveys for western pond turtles if construction activities will result in impacts to any of the drainages. Surveys shall be conducted within 48 hours of the start of construction at these locations.
    2. If western pond turtle is found within the construction work area the biologist will coordinate with CDFW to ensure that the turtles are not harmed. If relocation of individuals is necessary, turtles will be relocated the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. Relocation of turtles will be pre-approved by the CDFW and will be conducted by an agency approved biologist.

Because implementation of Mitigation Measure BIO-5 would require preconstruction surveys and consultation with resource agencies, if necessary, potential impacts to Western Pond Turtle would be minimized to less-than-significant levels. No additional mitigation would be required.

Nesting Birds

There is a potential for migratory birds to nest in trees or grasslands along the pipeline alignment. Suitable habitat for ground nesting birds such as western meadowlark, killdeer, short-eared owl, and horned occurs along roadways and within adjacent undeveloped grasslands. Suitable habitat for raptors and other tree nesters occurs in trees along the pipeline alignment, particularly in riparian areas. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-6:

To reduce project related impacts to active bird nests and to reduce the potential for construction activities to interrupt nesting and rearing behaviors of birds, the following measures shall be implemented prior to and during construction activities:

A. A preconstruction survey shall be conducted to determine the presence of nesting birds if vegetation removal or construction activities will be initiated during the breeding season (February 15 through September 15). The project site and potential nesting areas within 100 feet of the site for MBTA protected passerines and 500 feet for raptors shall be surveyed within seven days prior to the initiation of construction. Surveys will be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds.
B. Construction shall not occur within a 500-foot buffer surrounding nests of raptors or a 100-foot buffer surrounding nests of MBTA protected passerines (including killdeer, house finch, mourning dove, etc.).
C. If construction within these buffer areas is required, prior approval must be obtained from the CDFW.

Preconstruction surveys and avoidance measures would reduce this impact to less-than-significant levels, and no additional mitigation would be required.

Tricolored Blackbird

Tricolored blackbird (TCBB) is a California threatened species under CESA. Based on statewide surveys, the TCBB population has declined by 63 percent in recent years (Meese 2014). TCBB is a highly colonial species that nests in large flocks near open water with a protected substrate and nearby foraging area. TCBB have two specific peaks in breeding activity, one in the first week of June and one in the first two weeks of July. Total nesting duration is approximately 45 days. Historically, TCBB nested within emergent wetland in the Central Valley; however, currently 38 percent of TCBB nests occur on triticale, a wheat-rye hybrid grown for forage on dairies (Meese 2014). The timing of triticale harvest conflicts with TCBB nesting, putting entire colonies at risk from harvesting activities that occur before fledging (Meese 2009). TCBB foraging typically occurs within three to five miles of the nesting colony. Lightly grazed fields, irrigated pastures, annual grasslands, and grain fields that provide habitat for a supply of large insects such grasshoppers, dragonflies, and damselflies offer the best foraging habitat. However, dairy and silage edge as well as feed lots maybe used for foraging. Although TCBB was not observed during the site survey, some of the croplands and riparian habitat along the proposed pipeline alignment could provide suitable nesting habitat for TCBB.

Currently, there are no specific mitigation requirements for the loss of TCBB nesting or foraging habitat. Both nesting and foraging mitigation options are currently being developed by CDFW and the Tricolored Blackbird Working Group (TBWG). If there is a permanent loss of TCBB breeding habitat, this impact may require compensatory mitigation. Loss of TCBB habitat may be compensated through a combination of: 1) creation of replacement habitat; 2) habitat preservation through Conservation Easement; 3) acquisition of credits at an approved mitigation bank; 4) in-lieu contribution to a regional habitat restoration fund; and/or 5) other compensatory measures that are deemed acceptable by the CDFW. According to Samantha Arthur of the TBWG a nest protection buffer of 100 feet has been applied for nesting TCBB at dairy operations in the Central Valley (Airola, et al. 2016). Although not currently required, mitigation for foraging habitat will likely be required in the future. Mitigation for the loss of foraging habitat could have a similar approach to what is currently being required for the Swainson's hawk, where compensatory mitigation is required for the conversion of foraging habitat within a specific buffer from a nest (Airola, et al. 2016).

Construction of the proposed biogas gathering pipelines would result in temporary disturbance of habitat along the proposed pipeline alignment. There are no permanent impacts associated with the Merced Biogas Pipeline Expansion Project; therefore, this project is not expected to result in permanent loss of potential breeding habitat and no compensatory mitigation is required. The project could result in disturbance to breeding colonies of TCBB if they are present within 100 feet of the proposed pipeline alignment This would be a significant impact, and the following mitigation measure would be required:

Mitigation Measure BIO-7:

Due to the disturbance within 100 feet of potential breeding habitat, the following measures shall be implemented prior to and during construction activities:

A. If ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15), a preconstruction survey shall be conducted to determine presence / absence of TCBB. This measure is also required for all MBTA protected nesting birds, as indicated above. If no TCBB nesting occurrences are found, no further mitigation is required.

B. If a TCBB nest colony is discovered during preconstruction surveys, the following measures shall be implemented:

1. Applicant shall consult CDFW to determine the appropriate avoidance buffer and or required mitigation.
2. Project shall avoid construction activities within the established avoidance buffer of TCBB colonies until young have fledged.

Preconstruction surveys and avoidance measures would reduce this impact to less-than-significant levels, and no additional mitigation would be required.

Burrowing Owl

The burrowing owl, a California Species of Special Concern and USFWS Bird of Conservation Concern, is known to occur within grazed pastureland and on conservation bank lands in close proximity to the pipeline expansion alignment along Sandy Mush Road. Extensive burrow clusters providing suitable habitat for burrowing owl were observed within grazed pastureland along Sandy Mush Road, Rahilly Road, and at one location on Dickenson Ferry Road. The nearest recorded occurrence is adjacent to the alignment south of Sandy Mush Road where extensive burrow clusters were observed during field surveys.

Due to the proximity of suitable habitat and known occurrences of burrowing owl to the pipeline alignment, impact to nesting burrowing owls could occur as a result of construction disturbance. Nest disturbance would be a potentially significant impact, and the following mitigation would be required.

Mitigation Measure BIO-8:

A. Pre-construction Survey. A pre-construction survey of areas providing suitable burrowing owl habitat within 1,640 feet (500 meters) of the pipeline alignment shall be conducted by a qualified raptor biologist prior to ground disturbance.

1. At least two surveys shall be conducted, and surveys will conclude no more than two calendar days prior to construction.
2. To avoid last minute changes in schedule, the project proponent may conduct a preliminary survey up to 14 days before construction. The preliminary survey may count as the first of the two required surveys.

If the required pre-construction surveys show there are no active burrowing owl nests within the 1,640 feet (500 meters) of construction activities, then no further mitigation for burrowing owl nest disturbance will be required.

B: Burrow Avoidance. If an occupied burrow is discovered during pre-construction surveys, a protective buffer consistent with CDFW guidelines shall be established. Appropriate protective buffers depend on the type of burrowing owl occurrence (nesting or overwinter), level of project disturbance, and time of year that the disturbance occurs. Nest protective buffers consistent with CDFW guidelines are outlined below.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting Site	April 1 – Aug 15	200 m	500 m	500 m
Nesting Site	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Site	Oct 16 – March 31	50 m	100 m	500 m

A reduced buffer may be implemented upon CDFW approval and based upon site specific conditions, nesting phenology, and recommendation of the qualified biologist.

Swainson's Hawk

The state threatened Swainson's hawk is known to nest and forage in the project vicinity and several suitable nest trees were noted along the pipeline alignment. Suitable Swainson's hawk nesting habitat was observed at several locations in the project site, including but not limited to Eucalyptus trees on Rahilly Road, riparian trees along several drainages in the northern portion of the project site, and riparian trees on the Chowchilla River in the southeastern portion of the project site. Due to the proximity of suitable nesting habitat to the pipeline expansion alignment, direct impacts could occur, if a Swainson's hawk nests in trees on the pipeline alignment. There are 45 Swainson's hawk occurrences within the quadrangles surrounding the project site, 31 of which are recent occurrences (CDFW 2021). Swainson's hawks generally forage within 10 miles of their nest tree, and more commonly within five miles of their nest tree (CDFW 1994).

According to the CDFW Staff Report regarding Mitigation for Impacts to Swainson's Hawks (CDFW 1994), the following vegetation types are considered small mammal and insect foraging habitat for Swainson's hawks: alfalfa; fallow fields; beet, tomato, and other low-growing row or field crops; dry-land and irrigated pasture; rice land (when not flooded); and cereal grain crops (including corn after harvest). No permanent impacts or cropland conversion would occur as a result of the pipeline expansion project; therefore, no loss of foraging habitat would occur.

Because Swainson's hawk is a state-listed species and there is an abundance of potential nesting habitat in close proximity to the pipeline alignment, nest disturbance would be a potentially significant impact, and the following mitigation would be required.

Mitigation Measure BIO-9:

A. If construction work occurs after August 30 and ends before March 1 (outside of the breeding season), impacts to the Swainson's hawk would be avoided. Surveys would not be required for work conducted during this part of the year, and no further mitigation for nest disturbance is required.

B. *Protocol Surveys*: For work that occurs between March 1 and August 30, a qualified biologist with expertise in Swainson's hawk biology shall conduct protocol surveys of potential nesting habitat within 0.5-mile of any construction activities prior to initiation of such activities. The project applicant shall conduct a protocol-level survey in conformance with the "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley," Swainson's Hawk Technical Advisory Committee (https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds) (May 31, 2000) hereby incorporated by reference. This protocol prescribes minimum standards for survey equipment, mode of survey, angle and distance to tree, speed, visual and audible clues, distractions, notes and observations, and timing of surveys.

A written report with the pre-construction survey results must be provided to the Planning Department and CDFW within 30 days of the commencement of construction-related activities. The report shall include: the date of the report, authors and affiliations, contact information, introduction, methods, study location, including map, results, discussion, and literature cited.

If the required protocol surveys show there are no active Swainson's hawk nests within the 0.5-mile of construction activities, then no further mitigation for nest disturbance will be required.

C. *Nest Avoidance*: Based on results the protocol surveys, if nesting Swainson's hawks are found to occur within 0.5-mile of the project site, the project applicant must implement CDFW pre-approved mitigation measures to avoid nest impacts during construction. These measures include:

1. All project-related activities with the potential to cause nest abandonment or forced fledging of young shall be avoided until the young have fledged.
2. If disturbances, habitat conversions, or other project-related activities, that may cause nest abandonment or forced fledging, are necessary, within the nest protection buffer zone (0.5-mile), monitoring of the nest site by a qualified raptor biologist, funded by the project applicant, shall be required to determine if the nest is abandoned. If the nest is abandoned, but the nestlings are still alive, the project proponent is required to fund the recovery and hacking, that is the controlled release of captive reared young, of the nestling.
3. The project applicant shall be required to coordinate with CDFW to determine if project activities with the potential to cause disturbance to nesting Swainson's hawks within the 0.5-mile buffer may proceed with a reduced nest buffer and an approved biological monitor. CDFW may authorize a reduced nest buffer with the presence of a monitoring biologist during construction activities to ensure that the nest is not disturbed.
4. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.5-mile of an active nest are not prohibited.

Compliance with the CDFW permit requirements would fully mitigate impacts to Swainson's hawk nesting habitat to less-than-significant levels, and no additional mitigation would be required.

Other Wildlife Species

Bats

Many of the natural drainage crossings have concrete brides that could provide maternal, daytime roosting habitat for bat species including the pallid bat, a California Species of Special Concern. These include crossings at Black Rascal Creek, Bear Creek, Owens Creek, Duck Slough, Deadman's Creek, and the Chowchilla River (ND-1 through ND-8). Depending on the construction methodology employed for the installation of the pipeline across these drainage crossings, the project could have an impact on roosting bats. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-10:

A. If pipeline installation across natural drainages is installed using drilling techniques, and all ground disturbance is located in upland areas more than 100 feet from the bridge location, then implementation of the project is expected to have a less than significant impact to bats, and no mitigation is required.

B. If pipeline installation across natural drainages with a bridge crossing is installed using trench excavation across the waterways within 100 feet of the bridge or the pipeline will be attached to the bridge, the following measures shall be implemented:

   1. A preconstruction visual survey shall be conducted to determine presence / absence of roosting bat species at the bridge crossing locations (during the maternity season (March 1 - August 31). The survey shall be conducted within 14 days of proposed impacts within 100 feet of the bridge location.
   2. If a visual survey indicates that the bridge is being used by bats; an acoustic bat survey to determine the species of bat utilizing the bridge will be conducted. If the acoustic survey determines that the bats onsite are Pallid bats or any other special-status bat species, CDFW will be notified of the presence of special-status bat species and construction within 100 feet of the bridge will take place outside of the maternal roosting season (March 1 - August 31).

Because implementation of Mitigation Measure BIO-10 would require preconstruction surveys, consultation with resource agencies, if necessary, and seasonal construction limitations, potential impacts to bats would be minimized to less-than-significant levels. No additional mitigation would be required.

San Joaquin Kit Fox (SJKF)/ American Badger

Significant burrow clusters were observed in grazed pastureland along the pipeline alignment on Sandy Mush Road and Rahilly Road providing suitable habitat for SJKF and American badger and a badger carcass was observed on S. Gurr Road at the Duck Slough Crossing. It is not expected either species would den within the excavation footprint of the proposed pipeline alignment due to placement of the pipeline within developed roadways or road shoulders along Sandy Mush Road and Rahilly Road adjacent to grazed pasture with significant burrowing activity. However, drainages could constitute migration or dispersal corridors for these species. Additionally, trenches left open overnight could entrap SJKF or American badger moving through the project area. The nearest record of SJKF occurrence is less than a mile west of the project site (CDFW 2021). The nearest recorded occurrence of American badger is 0.7-mile from the project site at the Dutchman Creek Mitigation Bank and an American badger carcass was observed on S. Gurr Road at the Duck Slough crossing during surveys (CDFW 2021). This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-11:

Because there is the potential for San Joaquin kit fox and American badgers to occur within the project area, the *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS, 2011) shall be followed. The measures that are listed below have been excerpted from those guidelines and will protect San Joaquin kit fox and American badgers.

A. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and state and federal highways; this is particularly

important at night when kit foxes are most active. Night-time operations should be minimized to the extent possible. However, if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

B. To prevent inadvertent entrapment of San Joaquin kit foxes or other animals, all excavated, steep-walled holes or trenches more than two feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured San Joaquin kit fox is discovered, USFWS and CDFW shall be contacted as noted under Measure 13 referenced below.
C. San Joaquin kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored at the site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a San Joaquin kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
D. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the project site.
E. No firearms shall be allowed on the project site.
F. If any San Joaquin kit fox or American badger, or their sign, are detected onsite, dogs and cats shall be kept off the project site to prevent harassment, mortality of San Joaquin kit foxes or American badgers, and/or destruction of their dens.
G. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of San Joaquin kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
H. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a San Joaquin kit fox or who finds a dead, injured or entrapped San Joaquin kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
I. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this

information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

J. Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. should be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions.

K. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.

L. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist at (530) 934-9309. The USFWS should be contacted at the numbers below.

M. The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

N. New sightings of San Joaquin kit fox shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address below.

O. Any project-related information required by the USFWS or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California, 95825-1846, (916) 414-6620 or (916) 414-6600.

Implementation of BIO-11 would reduce the potential impacts to both San Joaquin kit fox and American badger by requiring preconstruction surveys for the kit fox and badger, preventative measures to avoid potential impacts to these species, and compulsory action should any animal be encountered. Implementation of above mitigation measures would minimize potential impacts to less-than-significant levels, and no additional mitigation would be required.

Summary

In summary, implementation of Mitigation Measures BIO-1 through BIO-11 would reduce potential impacts to species identified as a candidate, sensitive, or special status species to a less-than-significant level. No additional mitigation would be required.

Question (b) Adverse effect on riparian habitat or sensitive natural communities: Less-than-significant Impact with Mitigation. Northern claypan vernal pool is a sensitive natural community known to occur in the region. There are several undeveloped grassland areas adjacent to the proposed pipeline alignment that support vernal pools and swales. These areas are also federally designated Critical Habitat for federally listed species including Colusa grass, vernal pool fairy shrimp, and vernal pool tadpole shrimp. This would be a potentially significant impact.

Mitigation Measure BIO-12:

Implement Mitigation Measure BIO-2.

Implementation of Mitigation Measure BIO-2 would minimize potential impacts to the Northern claypan vernal pool sensitive natural community. With implementation of the mitigation measure, impacts would be reduced to a less-than-significant level. No additional mitigation would be required.

Question (c) Adverse effect on wetlands: Less-than-significant Impact with Mitigation. The proposed pipeline alignment includes as many as 33 drainage crossings, consisting of both stream crossings and agricultural ditch crossings. These crossings could potentially impact water and/or wetland regulated by the Corps under Section 404 of the Clean Water Act, the RWQCB under Section 401 of the Clean Water Act, and the CDFW under Section 1600 of the California Fish and Game Code. Biological reconnaissance surveys of the proposed project site and pipeline alignment identified many drainage crossings including primarily crossings of intermittent streams or agricultural ditches and canals. A preliminary aquatic resources delineation was not conducted as part of the reconnaissance surveys, and the proposed project may include design measures to avoid impacts to waters and wetlands and these drainage crossings (e.g., installation of the pipeline through bridge attachment or directional drilling to install the pipeline below the drainage).

Depending on the construction methodology employed for the installation of the pipeline at each of these drainage crossings, some of the following authorizations may be required:

- Clean Water Act Section 404 Discharge/Fill Permit by the Corps;
- Clean Water Act Section 401 Water Quality Certification by the CVRWQCB; and,
- Fish and Game Code Section 1600 Lake/Streambed Alteration Agreement with CDFW.

This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-13:

Impacts to waters and/or wetlands may be reduced by project design avoidance and minimization measures such as: a) use of existing bridge attachment pipeline installation to span channel to eliminate impact within jurisdictional areas; b) boring installation techniques under streams and ditches to install new pipelines; or, c) realignment of pipelines to avoid jurisdictional areas. Once the pipeline alignment has been determined, construction methodology defined, and precise impact areas and extents identified, the following measures will be implemented:

A. The applicant shall conduct a jurisdictional delineation of WoUS on the project site to confirm the limits of jurisdictional areas and potential project impacts. The delineation shall be verified by the Corps. The verified delineation will provide the applicant with the extent of federal jurisdiction within the defined Project Study Area boundary and the impact acreage necessary for preparing a WoUS/Wetland Mitigation Plan and/or permit application if impacts to jurisdictional areas cannot be avoided, or the jurisdictional boundaries to further refined the project to avoid impact to jurisdictional areas. If the Project is able to avoid impact to jurisdictional waters and wetlands based on the verified delineation, no further mitigation is required.

B. If project impacts to federal and state jurisdictional areas are identified and unavoidable, the applicant shall obtain all necessary permits for impacts to WoUS and wetlands from the Corps and the RWQCB and/or for impacts to the Streambed from CDFW prior to project implementation. The project must comply with all permit conditions. Compensatory mitigation, if required, must be consistent with the Corps' standards pertaining to mitigation type, location, and ratios, but will be accomplished with a minimum of 1:1 replacement ratio.

1. If compensatory mitigation is needed, the applicant may satisfy all or a portion of WoUS and wetlands mitigation through the purchase of "credits" at a mitigation bank approved by the Corps, RWQCB, and/or CDFW for compensatory mitigation of impacts to hydrologically similar WoUS, or through other means, such as on- or off-site wetland creation, conservation easement, contribution to approved in-lieu habitat fund, etc. The mitigation plan must be approved by the permitting agencies.

Implementation of Mitigation Measure BIO-13 would minimize potential impacts to state or federal protected wetlands. With implementation of the mitigation measure, impacts would be reduced to a less-than-significant level. No additional mitigation would be required.

Question (d): Interfere with species movement, wildlife corridors, or native wildlife nursery sites: Less-than-significant Impact. Wildlife movement typically occurs within migration corridors. Wildlife migration corridors are generally defined as connections between fragmented habitat patches that allow for physical and genetic exchange between otherwise isolated wildlife populations. Migration corridors may be local, such as those between foraging and nesting or denning areas, or they may be regional in extent. Migration corridors are not unidirectional access routes; however, reference is usually made to source and receiver areas in discussions of wildlife movement networks. "Habitat linkages" are migration corridors that contain contiguous strips of native vegetation between source and receiver areas. Habitat linkages provide cover and forage sufficient for temporary inhabitation by a variety of ground-dwelling animal species. Wildlife migration corridors are essential to the regional fitness of an area as they provide avenues of genetic exchange and allow animals to access alternative territories as fluctuating dispersal pressures dictate.

The project area consists primarily of agricultural lands. Intensively cultivated fields and dairy farms are not suitable wildlife corridors or nursery sites. The creeks and drainages provide potential wildlife movement corridors and potential nursery sites. Riparian habitat along the creeks within the project site are often discontinuous, but still serves as a preferred movement corridor for wildlife. Additionally, the Grasslands Wildlife Management Area (GWMA), which consists of two national wildlife refuges, four state wildlife areas, and private conservation lands, provides extensive wetland habitat used as nursery sites or a stopover for avian species during migration. This area is an extremely important component of the Pacific Flyway. The majority of the pipeline expansion project occurs within the Grasslands Ecological Area and the Grasslands Focus Area and the western limits of the alignment on Sandy Mush Road are approximately 0.5-mile from the Merced National Wildlife Refuge. The pipeline expansion project would result in only temporary impacts that would be restored to pre-project conditions upon completion of the project; therefore, impacts to wildlife movement are short term and temporary and would not permanently disrupt wildlife movement or impede the use of wildlife nursery sites. This would be a less-than-significant impact, and no mitigation would be required.

Questions (e) and (f) Conflict with policies, ordinances, or plans protecting biological resources: No Impact. The pipeline alignment is not located in an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Merced County has not adopted a tree preservation ordinance, and the proposed project would be consistent with adopted General Plan policies that protect biological resources. Therefore, no conflict with any adopted policies, ordinances, or plans protecting biological resources would occur with project implementation. No significant impact would result, and no mitigation would be required.

V. CULTURAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		**X**		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		**X**		
c) Disturb any human remains, including those interred outside of formal cemeteries?		**X**		

Records of the known cultural resources found in Merced County are included in the files of the Office of Historic Preservation, California Historical Resources Information System (CHRIS). The Central California Information Center (CCIC), housed at California State University, Stanislaus, locally administers these records. The records for Madera County are maintained at the Southern San Joaquin Valley Information Center (SSJVIC), California State University, Bakersfield.

The proposed project was the subject of a Cultural Resources Investigation in November 2021 (Napton 2021). Methodology included literature and records research, including those records in the files of the CCIC and SSJVIC, and direct in-field cultural resources sensitivity assessment of the proposed project alignment.

ENVIRONMENTAL SETTING

The CCIC Records Search reported that there have been twelve previous cultural resources investigations within portions of the proposed project alignment, and another eleven investigations within ¼ mile of the proposed project alignment. No prehistoric or historic archaeological resources have been found or formally reported to the CCIC within the project alignment. One known prehistoric resource and three historic structures have been recorded within ¼ mile radius of the proposed project alignment. (Napton 2021)

The SSJVIC reported that there has been one previous investigation within the proposed project alignment, and nine others within a ½ mile radius. Two road alignments and one channelized river that are crossed by the proposed project alignment have been reported to the SSJVIC. These resources would be unaffected by implementation of the project. (Napton 2021)

While the proposed project area cannot be characterized as highly sensitive from an archaeological or ethnographic perspective, there are eleven locations where the pipeline would intersect creeks or rivers. Since historical research indicates that creeks and rivers include areas of sensitivity in regards to prehistoric archaeological resources, the area of the proposed project alignment would therefore be considered sensitive as to the possible discovery of previously unrecorded prehistoric and historic cultural resources. (Napton 2021)

REGULATORY FRAMEWORK

State and federal legislation requires the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, Governor's Executive Order No. B-64-80 required that state agencies

inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places." Section 15064.5(b)(1) of the CEQA Guidelines specifies that projects that cause "…physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired" shall be found to have a significant impact on the environment.

ENVIRONMENTAL EVALUATION

Questions (a) through (c) Historical and archaeological resources, human remains: Less-than-significant Impact with Mitigation. No prehistoric or historic resources within the project alignment have been reported to the CCIC; the SSJVIC records reflect two road alignments and one channelized river that would be crossed by the proposed project alignment. Additionally, there are eleven locations in the project area where the pipeline would intersect creeks or rivers. Prehistoric archaeological resources have been found in association with similar streamside environs within Merced and Madera counties. Construction would take place in an area that is considered sensitive for prehistoric and historic cultural resources, and construction activities could result in inadvertent impact upon buried (subsurface) historic resources. Because the proposed project is located in an area considered sensitive in reference to historic and prehistoric resources, and because construction activities could result in the discovery of previously unknown historic resources, a significant impact would occur. The following mitigation would be required.

Mitigation Measure CUL-1:

A. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.

B. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

   - The County coroner has been informed and has determined that no investigation of the cause of death is required; and
   - If the remains are of Native American origin:
     - √ The most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or
     - √ The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.

C. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American

cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Mitigation Measure CUL-2:

Monitoring during ground-disturbing activities within 300 meters (approximately 1,000 feet) on each side of the following creek and river crossing locations shall be conducted by a fully qualified archaeologist that meets the Secretary of the Interior's Standards in Archaeology:

- Bear Creek at Oak Avenue
- Bear Creek at Dickenson Ferry Road
- Black Rascal Creek at Oak Avenue
- South Slough at Dickenson Ferry Road
- South Slough at Buhach Road
- Duck Slough at S. Gurr Road
- Owens Creek at S. Gurr Road
- Deadman Creek at S. Gurr Road
- Chowchilla River at Avenue 26
- Chochill River at S. Orchard Way
- Chowchilla River at Bliss Road

In the event that undiscovered cultural resources are found in the area of direct impact of the proposed project, the responsible field manager shall order discontinuation of all activities within a minimum of 30 meters (approximately 100 feet) of the discovery, and promptly contact the monitoring archaeologist regarding evaluation of the find. The archaeologist will consult with all interested parties, including Native Americans, and develop a recovery or mitigation plan, which the applicant shall implement.

Implementation of Mitigation Measures CUL-1 and CUL-2 would reduce potential impacts to prehistoric, historic, and archaeological cultural resources to a less-than-significant level. No additional mitigation would be required.

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

ENVIRONMENTAL SETTING

State and Local Energy Plans

The State's *2019 California Energy Efficiency Action Plan* covers issues, opportunities, and savings estimates pertaining to energy efficiency in California's buildings, industrial, and agricultural sectors. This Plan includes three goals that drive energy efficiency: doubling energy efficiency savings by 2030; removing and reducing barriers to energy efficiency in low-income and disadvantaged communities; and reducing greenhouse gas emissions from the buildings sector.

The California Renewables Portfolio Standard was established in 2002 under Senate Bill 1078. The California RPS program requires all utilities in the state to source half of their electricity sales from clean, renewable sources such as wind, solar, geothermal, and biopower, by 2030. In 2018, SB 100 (de León, 2018) was signed into law, which increases the RPS to 60 percent by 2030 and requires all the state's electricity to come from carbon-free resources by 2045. Dairy digesters producing electricity are an RPS eligible technology. In addition, dairy digesters can produce biogas and send it to a natural gas-fired energy generation facility, which also can produce RPS eligible electricity.

The *California Green Building Standards Code* (CALGreen Code)(California Code of Regulations, Title 24, Part 11) is a part of the California Building Standards Code that comprehensively regulates the planning, design, operation, and construction of newly constructed buildings throughout the state. Both mandatory and voluntary measures are included in the CALGreen Code. Mandatory measures for non-residential structures include standards for light pollution reduction, energy efficiency, and water conservation, among others.

As discussed in Section VIII, *Greenhouse Gas Emissions*, below, Merced County does not yet have a Climate Action Plan (CAP) or energy plan.

ENVIRONMENTAL ANALYSIS

Question (a) Wasteful consumption of energy resources: Less-than-significant Impact. Development of the proposed pipeline would entail energy consumption that includes both direct and indirect expenditures of energy. Indirect energy would be consumed by the use of construction materials for the project (e.g., energy resource exploration, power generation, mining and refining of raw materials into construction materials used, including placement). Direct energy impacts would result from the total fuel consumed in vehicle propulsion (e.g., construction vehicles, heavy equipment, and other vehicles using the facility). No unusual materials, or those in short supply, are required in the construction of the project.

While the proposed pipeline would not use or generate energy in and of itself, the proposed dairy digester cluster is estimated to generate biomethane that would be injected into the existing natural gas pipeline network in the area, which is ultimately used to produce electricity or used for heating and cooking. Based on project applicant estimates, 664,296 million British Thermal Units (MMBTU) would be the dairy digester cluster's average annual biomethane production. This would equate to approximately 194,685,893 kWh per year of energy, which could increase as additional dairy digesters are added to the cluster.

While implementation of the project would represent an increase in energy use during construction, the biogas pipeline expansion project would ultimately provide an inherently efficient and renewable source of energy from dairy waste. Therefore, energy would not be consumed in a wasteful, inefficient, or unnecessary manner, and this would be a less-than-significant impact. No mitigation would be required.

Question (b) Conflict with state or local energy efficiency plans: Less-than-significant Impact. Implementation of the biogas pipeline expansion project would not be inconsistent with *2019 California Energy Efficiency Action Plan* since the Plan identifies the state's Renewables Portfolio Standard strategies for renewable energy from animal waste as an important part of the solution to reducing GHG emissions and increasing energy efficency. Further, the proposed project does not pose any apparent conflict with the ARB's Climate Change Scoping Plan strategies. Because the project would result in the continued development of a renewable energy source, the proposed pipeline project would further compliance with AB 32 goals and the California RPS program to achieve a 60 percent renewables mix by 2030. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of promoting renewable energy or energy efficiency, and this would be a less-than-significant impact.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?				**X**
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?			**X**	
iv) Landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?			**X**	
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?			**X**	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			**X**	
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?				**X**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			**X**	

ENVIRONMENTAL SETTING

Geology

The proposed pipeline alignment is located within the Great Central Valley of California. The Central Valley is composed primarily of alluvial deposits from erosion of the Sierra Nevada Mountains located to the east and of the Coastal Ranges located to the west. The topography of the alignment areas are generally flat locally, with surface elevations ranging between 100 feet and 230 feet above mean sea level (MSL) across the entire alignment.

Soils

The soils of the proposed project area are characteristic of those found in poorly drained alluvial fans and flood plains along the San Joaquin and its tributaries. The soil associations within the project area include Pachappa-Grangeville, and, on the low terraces, San Joaquin-Madera soils.

Faults and Seismicity

The project site is not located within a mapped fault zone or landslide and liquefaction zone (DOC 2015; Merced County 2013b). There is no record or evidence of faulting on the project site. The site is located in Seismic Damage Zone III, indicating a high severity level with major probable damage in the event of severe seismic activity (Merced County 2013c).

REGULATORY SETTING

Merced County regulates the effects of soils and geological constraints on urban development primarily through enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to urban development posed by slopes, soils, and geology.

ENVIRONMENTAL EVALUATION

Question (a.i) Earthquake fault: No Impact. The project alignment is not located within or near a mapped earthquake fault, and there is no record or evidence of faulting on the project area (Merced County 2013b; DOC 2015). Because no fault traces underlie the project site, no existing hazardous conditions would be exacerbated with implementation of the project. There would be no impact.

Question (a.ii) Ground shaking: Less-than-significant Impact. As noted above, the proposed pipeline alignment is located in Seismic Damage Zone III. Should an earthquake occur in the vicinity of the proposed alignment, it could result in major damage. However, the proposed project is limited to construction of biogas pipeline and would not introduce any residential, commercial, or other uses that could expose additional persons to strong seismic ground shaking. Merced County requires that all new construction comply with the seismic safety requirements of the CBC. Further, all portions of the project would comply with Merced County Improvement Standards and Specifications and County of Madera Standard Plans and Specifications for pipeline construction, in addition to Pipeline and Hazardous Materials Safety Administration guidelines, 49 CFR Part 192[2], and with the California Public Utilities Commission's (CPUC) Safety Enforcement Division (SED) purview, as required by CPUC General Order 112-F[3]. Compliance with the CBC, County Improvement Standards, and PHMSA guidelines would reduce any potential increase in risks in the area of the proposed alignment from seismic ground shaking to levels considered acceptable for the State and region. This would be a less-than-significant impact, and no mitigation is required beyond compliance with adopted standards.

Question (a.iii) Ground failure, liquefaction: Less-than-significant Impact. The proposed project alignment is not located within a mapped liquefaction zone (DOC 2015). The proposed project would employ standard pipeline construction practices and comply with CBC and PHMSA requirements for the State of California. Standard design, construction, and safety procedures would limit soil liquefaction hazards to levels deemed acceptable in the state and region; no soil related risks that could damage existing structures or land uses would be enhanced. Adherence with adopted building standards would avoid substantial adverse effects due to the risk of loss, injury, or death involving liquefaction or other seismic-related ground failure. This would be a less-than-significant impact, and no mitigation is required.

Question (a.iv) Landslides: No Impact. The project site is generally flat and is not located near steep slopes with unstable soils that may be susceptible to landslides. Also, the greater project area is not noted for unstable geologic formations susceptible to landslides (DOC 2015). Implementation

[2] 49 CFR Part 192 regulations prescribe minimum safety requirements for pipeline facilities and the transportation of gas.

[3] CPUC General Order 112-F regulates the design, construction, testing, maintenance and operation of utility gas gathering, transmission and distribution piping systems.

of the project would not affect any of these existing conditions that would increase the risk of landslides in the project area. Therefore, the project would not be exposed to potential geologic hazards, including the risk of loss, injury, or death involving a landslide. There would be no impact.

Question (b) Soil erosion: Less-than-significant Impact. Construction of the proposed pipeline alignment would be constructed within private easements on existing agricultural property, or within public rights-of-way. While construction of the pipeline alignment could result in temporary soil erosion and the loss of top soil due to construction activities, the proposed pipeline alignment is generally level from previous grading. Minimal modification to the site's existing topography or ground surface relief would be required, and no increases in soil erosion that would affect existing land uses or users would occur. This would be a less-than-significant impact, and no mitigation would be required. For a discussion of potential significant effects due to sedimentation during construction of the project, see Section X, *Hydrology and Water Quality*.

Question (c) and (d) Unstable geologic unit/Expansive Soils: Less-than-significant Impact. Expansive soils are soils that shrink and swell in response to changes in moisture. These volume changes can result in damage over time to building foundations, roads, underground utilities, and structures, if they are not designed and constructed appropriately to resist the changing soil conditions. The project area is not noted for unstable geologic formations susceptible to landslide or ground failure, and the topography surrounding the proposed project alignment is generally level; however, the pipeline alignment would be located in an area noted for subsidence[4] (DOC 2015; Merced County 2013d; Merced County 2013e). The applicant would be required to submit civil drawings for any proposed pipeline to the Merced County Department of Public Works, and detailed site plans to the County of Madera Public Works Department. Any potential effects from unstable or expansive soils would be minimized following compliance with the Merced County Improvement Standards and Specifications and County of Madera Standard Plans and Specifications for pipeline construction and additional corrective engineering measures that would be required to be documented during the permit process. For these reasons, the proposed project would not result in any adverse changes to soil instability and subsequent landslide, lateral spreading, liquefaction, or collapse that would affect existing facilities or land uses. This would be a less-than-significant impact, and no mitigation would be necessary.

Question (e) Soils adequately support septic system: No Impact. The proposed project does not include the installation or expansion of any septic system. Therefore, no impact would result, and no mitigation would be required.

Question (f) Paleontological resource / unique geologic feature: Less-than-significant Impact. According to available information, the pipeline alignment is not located in an area known to have produced significant paleontological resources (UCMP 2021; Napton 2021), nor are there any unique geologic features. Therefore, project construction would not result in the destruction or degradation of paleontological resources or unique geological features. This would be a less-than-significant impact, and no mitigation would be required.

[4] Subsidence is the settling or sinking of land. In Merced County, this generally results from groundwater extraction and drawing down of the groundwater table.

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

ENVIRONMENTAL SETTING

Global Warming is a public health and environmental concern around the world. As global concentrations of atmospheric greenhouse gases increase, global temperatures increase, weather extremes increase, and air pollution concentrations increase. Global warming and climate change have been observed to contribute to poor air quality, rising sea levels, melting glaciers, stronger storms, more intense and longer droughts, more frequent heat waves, increases in the number of wildfires and their intensity, and other threats to human health (IPCC 2013). The seven warmest years in the 1880–2020 record have all occurred since 2014, while the 10 warmest years have occurred since 2005; the year 2020 was the second warmest year in the 141-year record (NOAA 2021). Hotter days facilitate the formation of ozone, increases in smog emissions, and increases in public health impacts (e.g., premature deaths, hospital admissions, asthma attacks, and respiratory conditions) (EPA 2017a).

The Greenhouse Effect (Natural and Anthropogenic)

The Earth naturally absorbs and reflects incoming solar radiation and emits longer wavelength terrestrial (thermal) radiation back into space. On average, the absorbed solar radiation is balanced by the outgoing terrestrial radiation emitted to space. A portion of this terrestrial radiation, though, is itself absorbed by gases in the atmosphere. The energy from this absorbed terrestrial radiation warms the Earth's surface and atmosphere, creating what is known as the "natural greenhouse effect." Without the natural heat-trapping properties of these atmospheric gases, the average surface temperature of the Earth would be below the freezing point of water (IPCC 2007).

The greenhouse effect is primarily a function of the concentration of water vapor, carbon dioxide, methane, nitrous oxide, ozone, and other trace gases in the atmosphere that absorb the terrestrial radiation leaving the surface of the Earth (IPCC 2007). Changes in the atmospheric concentrations of these greenhouse gases can alter the balance of energy transfers between the atmosphere, space, land, and the oceans. Holding everything else constant, increases in greenhouse gas concentrations in the atmosphere will likely contribute to an increase in global average temperature and related climate changes (EPA 2017a).

Greenhouse Gases

Naturally occurring greenhouse gases include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, emitted solely by human activities. There are also several gases that, although they do not have a direct radiative forcing effect, do influence the formation and destruction of ozone, which does have such a terrestrial radiation absorbing effect. These gases, referred to here as ozone precursors, include

carbon monoxide (CO), oxides of nitrogen (NO_X), and non-methane volatile organic compounds (NMVOC). Aerosols (extremely small particles or liquid droplets emitted directly or produced as a result of atmospheric reactions) can also affect the absorptive characteristics of the atmosphere.

Carbon is stored in nature within the atmosphere, soil organic matter, ocean, marine sediments and sedimentary rocks, terrestrial plants, and fossil fuel deposits. Carbon is constantly changing form on the planet through a number of processes referred to as the carbon cycle, which includes but is not limited to degradation and burning, photosynthesis and respiration, decay, and dissolution. When the carbon cycle transfers more carbon to the atmosphere this can lead to global warming.

REGULATORY SETTING

The U. S. EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions thresholds applicable to the proposed project at the time of this Initial Study.

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the CCAA. Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long-term. Because every nation emits GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

In September 2006, then-Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2011, the ARB adopted the cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap.

As the sequel to AB 32, Senate Bill (SB) 32 was approved by the Governor on September 8, 2016. SB 32 requires the ARB to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by former Governor Schwarzenegger in 2005 with Executive Order S-3-05.

The ARB issued a Short-Lived Climate Pollutant Reduction Strategy (SLCP Strategy) in March 2017, which lays out a range of options to accelerate SLCP emission reductions in California, including regulations, incentives, and other market-supporting activities. As stated in the Strategy, California can cut methane emissions by 40 percent below current levels in 2030 by capturing or altogether

avoiding methane from manure at dairies, meeting national industry targets for reducing methane emissions from enteric fermentation, effectively eliminating disposal of organics in landfills, and reducing fugitive methane emissions by 40-45 percent from all sources. California will aim to reduce methane emissions from dairy manure management by at least 20 percent in 2020, 50 percent in 2025, and 75 percent in 2030. To accomplish this, the State has encouraged and supported near-term actions by dairies to reduce emissions through market support and financial incentives (ARB 2017).

As discussed in Section VI, *Energy*, above, the California RPS program requires all utilities in the state to source 60 percent of their electricity sales from clean, renewable sources such as wind, solar, geothermal, and biopower, by 2030. Dairy digesters producing electricity are an RPS eligible technology. In addition, dairy digesters can produce biogas and send it to a natural gas-fired energy generation facility, which also can produce RPS eligible electricity.

Greenhouse Gas Reduction Plans

Merced County does not yet have a Climate Action Plan (CAP) or energy plan. Merced County is in the process of preparing a Climate Action Plan, with a currently unknown anticipated completion date. The County of Madera does not yet have a Climate Action Plan.

The Merced County General Plan includes several policies that seek to reduce GHG emissions, including promoting alternative energy sources and encouraging methane digesters for agricultural operations, among others.

SIGNIFICANCE THRESHOLDS

On December 17, 2009, the SJVAPCD adopted the policy "*District Policy – Addressing GHG Emissions Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*". The guidance was developed to assist Lead Agencies, project applicants, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change. In accordance with this guidance, a project would be considered to have a less-than-significant cumulatively considerable impact on climate change if the project:

- Implements SJVAPCD adopted Best Performance Standards (BPS);
- Complies with an approved GHG plan or mitigation program; or
- Demonstrates a 29 percent reduction[5] in GHG emissions from business-as-usual (BAU).

The analysis for the proposed project does not use any of the above criteria for determining the significance of GHG emissions, for the following reasons: (1) There are no adopted BPS for a pipeline project; (2) Merced County as lead agency does not have an adopted GHG reduction plan or climate action plan; (3) The California Supreme Court[6] questioned the use of Scoping Plan targets for individual projects without adequate explanation. Therefore, this analysis does not use demonstration of a 29 percent reduction in GHG emissions from BAU emissions to determine that

[5] The California Attorney General (AG) has expressed opposition to SJVAPCD strategy, claiming it leaves a number of unanswered questions, and the AG's office issued a letter dated November 4, 2009 stating that the proposed approach would "not withstand legal scrutiny and may result in significant lost opportunities for the Air District and local governments to require mitigation of GHG emissions." The AG stated that the threshold does not take into account the need for new development to be more GHG-efficient than existing development to achieve AB 32 goals, given that past and current sources of emissions, which are substantially less efficient than this average, will continue to exist and emit.

[6] Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal.4th 204.

a project would have a less than cumulatively significant impact consistent with GHG emission reduction targets established in the ARB's AB 32 Scoping Plan.

The SJVAPCD guidance does not limit the lead agency from establishing its own methodology in determining the significance of project-related greenhouse gas emissions and global climate change impacts. Further, the State CEQA Guidelines specify that thresholds adopted by other agencies may be considered by lead agencies when determining project significance.

This analysis uses the commonly adopted numeric threshold for land use projects of 1,100 metric tons CO_2e per year for both construction and operation emissions. If emissions exceed 1,100 metric tons of CO_2e per year, then a significant impact would result. The project proponent would be required to either mitigate below the 1,100 threshold or implement all feasible mitigation for a project.

ENVIRONMENTAL ANALYSIS

Question (a) Generate GHG emissions: Less-than-significant Impact. Greenhouse gas emissions would be generated from the proposed project during construction and operation. Temporary GHG emissions would occur during construction activities, predominantly from vehicle and equipment exhaust. Operational GHG emissions would occur from employee maintenance trips.

GHG emissions from construction activities were estimated using the SMAQMD Roadway Construction Emissions Model (Version 9.0). The proposed project is estimated to result in 1,064 metric tons of carbon dioxide equivalents (CO_2e) over the nine-month construction period (see Appendix A).

Implementation of SJVAPCD rule and regulations applicable to construction activities included in Mitigation Measure AQ-2 would reduce GHGs associated with pipeline construction.

Beyond the 5-10 trips per week for inspections and maintenance, the proposed pipeline would not result in operational GHG emissions. Because this represents a very low level of trips, GHG emissions were not calculated. Further, the dairy digester cluster project in and of itself would off-set GHG emissions. Based on project applicant estimates, 664,296 million British Thermal Units (MMBTU) would be the dairy digester cluster's average annual biomethane production. Based on these estimates, the proposed project would result in GHG emission reductions of 36,201 metric tons of CO_2 equivalents per year[7]. This is not accounting for the amount of methane reduced through the installation of anaerobic digesters at the individual dairies. These GHG emission benefits would outweigh any GHG emissions associated with employee trips for inspections and maintenance for the proposed pipeline.

Because the construction related emissions associated with the proposed project would result in GHG emissions below numeric thresholds, and operation-related GHG emissions would be minimal, greenhouse gas emissions would not be expected to be significant, and the project would not be expected to make a substantial contribution to the cumulatively significant impact of global climate change. A less-than-significant impact would result, and no mitigation would be required.

[7] Estimated based on the Greenhouse Gas Emission Calculator for Fuel Savings, CDFA: https://apps1.cdfa.ca.gov/emissioncalculator/

Question (b) Conflict with GHG emissions reduction plans: Less-than-significant Impact. The ARB's Climate Change Scoping Plan represents the primary plan to reduce GHG emissions throughout California. The proposed project would be consistent with the GHG reduction measures contained in the Scoping Plan, specifically regarding the California RPS program to achieve a 60-percent-renewables mix by 2030. Senate Bill 1383: Short-lived Climate Pollutants (2016) includes regulations to reduce methane emissions from livestock manure and dairy manure management operations by up to 40 percent below the dairy sector's and livestock sector's 2013 levels by 2030, including establishing energy infrastructure development and procurement policies needed to encourage dairy biomethane projects. The regulations will remain voluntary until they take effect on or after January 1, 2024 (ARB 2017). The proposed project would also be consistent with Merced County General Plan policies cited above that encourage alternative energy sources and the installation of renewable energy technologies. Therefore, the proposed biogas pipeline expansion project would comply with applicable City or County plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs.

IX. HAZARDS AND HAZARDOUS MATERIALS

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

ENVIRONMENTAL SETTING

According to the records search of federal, state, and local environmental databases (pursuant to Government Code Section 65962.5), there is no history of hazardous site contamination within the public and private roadways that comprise the proposed pipeline alignment (CA DTSC 2021). There are three monitoring wells in the greater project vicinity, and a Leaking Underground Storage Tank (LUST) Cleanup Site that was completed (Case Closed) on the Meders property on Hemlock Road. That site is located 425 feet south of the pipeline alignment at the intersection of Avenue 25 and Hemlock Road. (CA DTSC 2021).

There are no schools located within one-quarter mile of the proposed project alignment. The nearest schools are located in the City of Merced, located approximately four miles northwest from the nearest segment of the project alignment, and in Chowchilla, approximately one mile southeast from the nearest segment of the project alignment (Google Earth 2021). The Airport Land Use Commissions for Madera and Merced Counties have developed Airport Land Use Compatibility Plans for county airports. The Merced Regional Airport and the Chowchilla Municipal Airport are located approximately 2.5 miles from segments of the project alignment that are nearest them, respectively. The proposed project alignment is not situated within any flight zones identified in the Plans (Merced County ALUC 2012; Madera County ALUC 2015). According to the 2030 Merced County Emergency Operations Plan, freeways and major county roads would be used as primary evacuation routes in the event of a natural hazard, technological hazard, or domestic security threat.

According to California Fire and Resource Management Program Fire Hazard Severity Zone map, the proposed project alignment is within a Local Responsibility Area (LRA). The pipeline alignment would traverse both Unzoned and LRA Moderate zones. (CalFIRE 2007)

The proposed project alignment is not in an area identified by the California Geological Survey as having soils that are likely to contain naturally occurring asbestos (USGS 2011). Therefore, no naturally occurring asbestos is expected in on-site soils that could be disturbed during construction, and this issue will not be discussed further.

REGULATORY SETTING

Both federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations.

The Merced County Division of Environmental Health is the lead agency for the enforcement of State Hazardous Waste Control laws and regulations in Merced County. The DEH maintains standards and guidelines relating to the proper handling and storage of hazardous materials. The County of Madera Environmental Health Division handles hazardous materials control in Madera County in accordance with state and federal guidelines.

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Use and/or accident conditions related to hazardous materials: Less-than-significant Impact with Mitigation. Construction of the proposed project would include the use, storage, transport, and disposal of oil, diesel fuel, paints, solvents, and other hazardous materials. If spilled, these substances could pose a risk to the environment and to human health. Both federal and state laws include provisions for the safe handling of hazardous substances. According to federal health and safety standards, applicable federal OSHA requirements would be in place to ensure worker safety. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations (Occupational Safety and Health Act of 1970).

While no known existing hazardous materials/waste sites were determined present along the proposed pipeline route, there is the potential for unknown environmental contamination to be encountered during construction. To minimize potential exposure of construction workers to hazardous materials, the following measure would be required:

Mitigation Measure HAZ-1:

> If soil, groundwater, or any other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant or their contractor shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant or their contractor shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies), implementation of actions to identify the nature and extent of contamination, and remediation as necessary. Work shall not

resume in the area(s) affected until the measures have been implemented under the oversight of Merced County, Madera County, or other governmental regulatory agency, as appropriate.

With implementation of Mitigation Measure HAZ-1, potential impacts to construction workers due to accidental discovery of hazardous materials would be reduced to less-than-significant levels, and no additional mitigation would be required.

The proposed biogas pipeline expansion project would connect to the existing dairy digester cluster that was previously evaluated and approved for Merced County CUP19-003 in 2019. The overall process involves the capture of biogas generated via anaerobic digestion of dairy manure. The biogas is scrubbed at each previously evaluated dairy digester location via activated carbon (or similar) media to lower the H_2S below levels hazardous to human health[8]. There would be no hazardous wastes created by the scrubbing process. Once scrubbed, the biogas would be transported via low-pressure biogas gathering pipelines to a cleanup facility.

The previously evaluated upgrading facility removes impurities, moisture, and gas constituents that are not suitable for injection into the PG&E pipeline. The biogas first enters a moisture condensation trap, and is then compressed and sent through a CO_2 stripper. The CO_2 would be vented to the atmosphere during project operations. This process transforms biogas to biomethane, which is indistinguishable from conventional natural gas. Methane is not toxic, but handling methane can be hazardous. In addition, methane can be flammable. Methane has an ignition temperature of approximately 1,150 degrees Fahrenheit (°F) and is flammable at concentrations between 4 percent and 15 percent in air. Unconfined mixtures of methane in air are not explosive; however, a flammable concentration within an enclosed space in the presence of an ignition source can explode. Methane is lighter than air, so it can dissipate into the air rapidly, making accidental combustion difficult. It's also colorless, non-toxic, odorless, and had no taste in its natural state. The Meter Set Assembly (MSA) equipment would add a non-toxic chemical odorant to make leaks easy to smell. Altogether, these factors add up to making accidental ignition or combustion of natural gas an unlikely event. However, unintentional releases of biogas from dairy digesters or gathering pipelines could pose risks to human health and safety.

To ensure the safety of the pipeline system, each dairy would have a blower to push gas from that dairy into the gathering lines at a pressure of less than 20 psi. The pressure of the gathering lines would be monitored via SCADA equipment in real time to detect leaks or major failures. If at any point the biomethane is not within the PG&E Rule 21 standards, the injection valve would automatically close and no biomethane would be injected into the pipeline. In addition, there would be an emergency stop button at each dairy site and the central hub that would immediately shut down the blowers if depressed. The gathering pipeline system would be constructed and operated consistent with the federal Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations. All portions of the project would comply with PHMSA guidelines, 49 CFR Part 192, and with the California Public Utilities Commission's Safety (CPUC) Enforcement Division purview, as required by CPUC General Order 112-F, to minimize the risk of accidental release.

[8] Hydrogen sulfide (H_2S) is a mucous membrane and respiratory tract irritant, and with exposure at high concentrations, can cause pulmonary edema. The hydrogen sulfide removal process with activated carbon would not result in a hazardous

Because the routine transport, use, and disposal of these materials are subject to local, state, and federal regulations, this impact would be considered less than significant. The risk of hazards to the public or to environmental conditions related to accident conditions would also be reduced to a less-than-significant level, and no mitigation would be required.

Question (c) Hazardous emissions or materials near a school: No Impact. The nearest schools to the proposed project alignment are located approximately one to four miles away from the nearest segment of the pipeline alignment, in Chowchilla and in the City of Merced, respectively. Therefore, the proposed pipeline alignment would not result in hazardous emissions or handle hazardous waste within 0.25 miles of an existing or proposed school, and no impact would result.

Question (d) Included on list of hazardous materials sites: No Impact. According to queries of the GeoTracker and Envirostor Data Management Systems, the proposed pipeline alignment would not intersect a site identified on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. While there is record of a LUST Cleanup site located approximately 425 feet south of a segment of the pipeline alignment, the site has been remediated and case closed at this location. There would be no risk of release during construction of the proposed pipeline (CA DTSC 2021). Therefore, implementation of the project would not create a significant hazard to the public or the environment. No impact would result, and no mitigation would be required.

Question (e) Safety hazard or excessive noise near airports: No Impact. There are no existing public airports within two miles of the proposed pipeline alignment, nor is the alignment located within an area regulated by an airport land use plan (Merced ALUC 2012; Madera ALUC 2015). Therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area due to aircraft over-flight. There would be no impact, and no mitigation would be required.

For an analysis of the potential noise effects related to construction and operation of the proposed project, see Section XIII, *Noise*.

Question (f) Impair or interfere with an adopted emergency response/evacuation plan: Less-than-significant Impact with Mitigation. The proposed pipeline would be placed within existing public and private agricultural land roads or ROWs within Merced and Madera Counties. Freeways and major county roads would be used as primary evacuation routes in the event of emergency. During construction and installation of underground pipeline within public ROW, there may be temporary lane closures that could cause slight delays in traffic and emergency response. However, emergency vehicles would be expedited through the construction zone, and emergency service providers would be informed of the project so they could choose alternate routes as needed. All impacts related to lane closures would cease after project completion. Further, the proposed project would not result in an increased concentration of large numbers of persons in an at-risk location. As described in Section XVII, *Transportation*, a Traffic Control Plan would be prepared for construction to minimize traffic conflicts.

Mitigation Measure HAZ-2:

Implement Mitigation Measure TRA-1.

Other roads in the vicinity of the proposed project alignment offer alternative routes for evacuation, and construction effects on emergency circulation would be temporary and well managed. With implementation of Mitigation Measure TR-1, this would be a less-than-significant impact, and no additional mitigation would be required.

Question (g) Exposure to risk involving wildland fires: Less-than-significant Impact. The Fire Hazard Severity Zone map for Merced County indicates that the project alignment and surrounding area is located in the Non-Wildland / Non-Urban and the Moderate Fire Hazard Severity Zones (Merced County 2013h). The pipeline alignment traverses areas designated as a Local Responsibility Area, Unzoned and Moderate zones (CAL FIRE 2007). The pipeline would be located in an existing low-density agricultural area, and the threat of wildland fire has been determined to be unlikely to moderate (CalFIRE 2007). Implementation of the proposed pipeline project would not affect wildland fire risk or hazards. Therefore, a less-than-significant hazard would occur related to risk of loss, injury, or death due to wildland fire with implementation of the proposed project. No mitigation would be required.

X. HYDROLOGY AND WATER RESOURCES

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

ENVIRONMENTAL SETTING

The proposed project alignment is generally located on privately owned agricultural property via easements and/or within or across Merced or Madera County public ROW in active agricultural areas in the San Joaquin Valley. The area along the pipeline alignment generally includes agricultural ditches, canals, and natural drainages. The topography along the alignment is generally flat.

ENVIRONMENTAL EVALUATION

Question (a) Water quality: Less-than-significant Impact with Mitigation. The project alignment has been graded previously and leveled for agricultural use or as a roadway; the proposed pipeline construction method would be open trenching with excavators or wheel trenchers. Because the proposed project would disturb more than one acre, the applicant would be required to obtain a General Construction Activity Storm Water Permit from the State Water Resources Control Board (SWRCB) for stormwater discharges associated with construction activities, which would require the implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP must contain Best Management Practices (BMP) to reduce soil erosion and protect stormwater runoff. To ensure implementation of stormwater requirements and to avoid siltation effects, the following mitigation measure would be required.

Mitigation Measure HYD-1:

> The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit. A Legally Responsible Person (LRP) shall electronically submit PRDs prior to commencement of construction activities in the Storm Water Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the Storm Water Pollution Prevention Plan (SWPPP), a signed certification statement by the LRP, and the first annual fee. Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. All requirements of the site-specific SWPPP, including any revisions, shall be included in construction documents for the project. Proof of registration shall be submitted to the Merced County Building and Safety Division prior to the initiation of construction.

With implementation of Mitigation Measure HYD-1, the proposed project is not expected to violate any water quality standards or waste discharge requirements during construction. Compliance with applicable requirements would minimize project impacts to water quality. A less-than-significant impact would result, and no additional mitigation would be necessary.

Operations

During operation, implementation of the project would not adversely affect groundwater or surface water quality. Since the proposed pipeline would be placed underground and would be isolated from stormwater or flood, no adverse effects due to decreased water quality would occur. Therefore, the impact to water quality from operations would be less than significant, and no mitigation would be required.

Implementation of Mitigation Measure HYD-1 and compliance with applicable requirements would minimize project impacts to water quality. After mitigation, a less-than-significant impact would result, and no additional mitigation would be necessary.

Question (b) Groundwater supply: Less-than-significant Impact. The proposed pipeline would be used to transport biogas from previously approved dairy digesters to an existing biogas upgrade facility, and would not require the use of water for operations.

Because the proposed project would not result in an increase in groundwater use, the proposed project would not substantially deplete groundwater supplies, nor interfere with groundwater recharge. Impacts would be considered less than significant, and no mitigation would be necessary.

Questions (c.i) through (c.iv) Drainage patterns: Less-than-significant Impact: The proposed pipeline would be constructed within easements along privately owned agricultural properties or within or adjacent to the paved sections of Merced and Madera County ROW. After the pipeline is installed, the ground surface above the pipe would be restored to its original condition (e.g., repaved within streets or backfilled with native soil in areas outside of paved roadways). Therefore, implementation of the proposed pipeline expansion project would not modify surface water drainage patterns, and would not cause localized off-site migration of runoff, erosion, and/or

impede or redirect flood flows. A less-than-significant impact would result, and no mitigation would be required.

Question (d) Flood hazard, tsunami, or seiche zones: Less-than-significant Impact. While the proposed pipeline alignment runs through areas located within the FEMA designated 100-year or 500-year floodplains, following installation of the pipeline, areas disturbed by construction would be returned to their original condition. The proposed project area is located over 100 miles from the Pacific Ocean at elevations ranging between 100 feet MSL and 230 feet MSL and distant from any lakes (Google Earth 2021). Therefore, the proposed project would not be exposed to inundation hazards related to a seiche or tsunami. Implementation of the proposed pipeline project would not increase existing flood risks, nor would it act increase exposure of existing land uses and activities to seiche or tsunami. A less-than-significant impact would result, and no mitigation would be required.

Question (e) Conflict with water quality or sustainable groundwater management plans: Less-than-significant Impact. The current Basin Plan for the Sacramento River and San Joaquin River Basins was issued in May 2018. As noted above under Question a, the proposed project would be required to implement a stormwater pollution prevention plan during construction, and proposed project operations would not result in waste discharges to surface or groundwater resources. Therefore, the proposed project would not include any waste discharges that could conflict with the Basin Plan.

Regional groundwater in Merced County is composed of four subbasins: the Turlock, the Merced, the Chowchilla, and the Delta-Mendota. The project area is located within the Merced Groundwater Subbasin. The Merced Groundwater Subbasin is identified by the California Department of Water Resources (DWR) as critically overdrafted, and is considered a high priority groundwater basin. The Sustainable Groundwater Management Act (SGMA) of 2014 (as amended) allows customized groundwater sustainability plans (GSP) to be designed by groundwater sustainability agencies (GSA) to manage groundwater resources while being sensitive to local economic and environmental needs. SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. The Merced Subbasin GSA adopted the Merced GSP on December 9, 2019, following a public hearing. Following adoption by all three GSA's in the Merced Subbasin, the GSP was submitted to the California DWR by the January 31, 2020 deadline. As noted above under Question b, the proposed pipeline expansion project would not result in an increase in groundwater use.

Therefore, the project would not conflict with or obstruct the water quality control plan or a sustainable groundwater management plan, and the potential impacts would be less than significant. No mitigation would be required.

XI. LAND USE AND PLANNING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?				**X**
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?			**X**	

ENVIRONMENTAL SETTING

The land surrounding the proposed pipeline alignment is primarily developed for agricultural uses, and includes scattered rural residences that are associated with agricultural operations. Construction of the pipeline alignment would take place on lands that are designated Agricultural by the 2030 Merced County General Plan, and zoned A-1 (General Agricultural) by the Merced County Zoning Code (Merced County 2021). Pipeline construction would occur on private lands and within the public right of way. Within Madera County, parcels within and adjacent to pipeline routes are designated Agricultural Exclusive, with a small area identified as High Industrial near State Route 152 and Lincoln Avenue. Zoning within the affected area of Madera County is primarily ARE-40 (Agriculture, Rural, Exclusive, (40 acre)), with smaller areas zoned ARE-20 (Agriculture, Rural, Exclusive, (20 acre)), and IH (Industrial, Urban or Rural, Heavy). (Madera County 2021)

ENVIRONMENTAL EVALUATION

Question (a) Physically divide established community: No Impact. Other than scattered rural residences, there is no established community in the area of the proposed pipeline network. The nearest established communities within the larger project area include Merced and El Nido. The nearest pipeline alignment to Merced is approximately 4.5 miles to the southwest. The nearest pipeline alignment to El Nido is approximately 2 miles to the southeast. The construction of the pipeline would not occur within or near either of these communities. Because the project would not divide a community, no adverse effects would result, and no mitigation would be necessary.

Question (b) Conflict with land use plans or policies: Less-than-significant Impact. The pipeline route and surrounding areas in Merced County are designated Agricultural on the 2030 Merced County General Plan Land Use Diagram. As set forth in the 2030 Merced County General Plan, the Agricultural land use designation:

> … provides for cultivated agricultural practices which rely on good soil quality, adequate water availability, and minimal slopes. This is the largest County land use designation by area in the County and is typically applied to areas on the valley floor. (Merced County 2013)

The pipeline alignment and the areas surrounding the network in Merced County are located in the A-1 (General Agricultural) zoning district of Merced County. Merced Zoning Code Section 18.02.020 allows for energy generation facilities within the General Agricultural zoning district, subject to a Conditional Use Permit. Within Merced County, Conditional Use Permits are discretionary permits that require special review and control to ensure that a use of land is compatible with the neighborhood and surrounding residences.

The proponents of the proposed Merced Biogas Pipeline Expansion project have made application to the County of Merced for a Conditional Use Permit (CUP20-017) to construct and operate the proposed extension of the biogas pipeline network.

The designated parcels within and adjacent to pipeline routes in Madera County are designated Agricultural Exclusive, with a small area identified as High Industrial, in the Madera County General Plan. The AE designation allows for agricultural support services and agriculturally-oriented service uses; the HI designation allows for industrial parks, warehouses, manufacturing, and other compatible uses. Additionally, Policy DDS-2.8 Methane Digesters in the Dairy Element of Madera County General Plan states, "The County shall encourage the use of methane digesters at new or expanding dairies…". The proposed biogas pipeline would be considered an essential component for operation of the dairy digester cluster.

Zoning within the affected area of Madera County is ARE-40 (Agriculture, Rural, Exclusive, (40 acre)), with smaller areas zoned ARE-20 (Agriculture, Rural, Exclusive, (20 acre)), and IH (Industrial, Urban or Rural, Heavy). The purpose of the ARE zones is to accommodate a wide range of agricultural uses.

With approval of a CUP, the proposed project would be consistent with applicable land use policies and regulations in both Merced and Madera Counties. This would be a less-than-significant impact, and no mitigation would be required.

XII. MINERAL RESOURCES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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?				**X**
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?				**X**

ENVIRONMENTAL SETTING

The majority of the land area of Merced County and the western half of Madera County lie within the Central Valley physiographic province, which is dominated by significant amounts of overburden soils that are alluvial in nature. Less than 30 percent of Merced County lies in higher topographic areas, away from the alluvium and closer to bedrock conditions. Greater that 50 percent of Madera County is located in such areas. Very few traditional hard rock mines exist in the project area in either county. Each county's mineral resources in the project vicinity are primarily sand and gravel mining operations. (Merced County 2013i; Madera County 1995)

No significant Mineral Resource Zones or mineral resource production areas are located in or adjacent to the project area. The eastern portion of Merced County includes the following aggregate resource areas: Merced River, Bear Creek, and Mariposa Creek. According to the 2030 Merced County General Plan Background Report (Figure 8-10), the project site is not located in an area of sand and gravel resources (Merced County 2013i). The California Geological Survey indicates that the proposed project is not within an Aggregate Production Area (CGS 2018). Similarly aggregate resources and production facilities in Madera County are located along the San Joaquin River in southern Madera County, outside of the project's area of potential effect. (Madera County 1995)

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Loss of mineral resources of value and/or delineated on land use plans: No Impact. No important mineral deposits, significant Mineral Resource Zones, or existing or previous mines are located on the project site or in the surrounding area. Because there are no mineral resources or resource protection zones in the vicinity of the project site, there would be no loss of availability of known mineral resources. No adverse effect would result, and no mitigation would be required.

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

ENVIRONMENTAL SETTING

Characteristics of Noise

Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise-sensitive receptor of concern.

Many ways are available to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each

other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Existing Noise Environment

The pipeline route is located in an agricultural area with surrounding rural residential uses and agricultural operations. Noise sources along the route of the pipeline include agricultural operations, traffic on State Routes 59 and 152 and local roadways, and residential sources.

Noise sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, churches, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds and parks are considered noise-sensitive uses. Sensitive land uses immediately surrounding the 39.5-mile pipeline alignment include single-family residences.

The Merced Regional Airport lies over two miles to the east of the proposed project alignment. As indicated in the Merced County Airport Land Use Compatibility Plan, a small portion of the proposed alignment located near the Oliveira Dairy in the northeastern portion of the alignment is located within the airport Compatibility Zone D, which has limited use restrictions (Merced County ALUC 2012).

REGULATORY SETTING

The 2030 Merced County General Plan Noise Element provides a basis for local policies to control and abate environmental noise, and to protect the citizens of Merced County from excessive noise exposure (Merced County 2013). The County also enforces its Noise Ordinance (Chapter 10.60, *Noise Control*) in the County Code. This ordinance contains noise level standards for residential and non-residential land uses. Specifically, the County Code sets 65 dBA Ldn[9] and 75 dB Lmax[10] standards for residential property, with standards applicable to nonresidential properties 5 dB higher (Chapter 10.60.030 (A)).

According to County Code (Chapter 10.60.040(B)(5)), construction activities that include the operation of any tools or equipment used during construction, drilling, earth moving activities, excavating, or demolition are prohibited from 6:00 p.m. to 7:00 a.m. the following day on weekdays. They are also prohibited at any hour during weekend days or legal holidays, except for emergency work.

The Madera County Code (Chapter 9.58.020) includes construction noise requirements that limit construction activities to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and 9:00 a.m. and 5:00 p.m. on Saturdays. The Madera County Code prohibits construction activities Sundays.

[9] Ldn = Day/night average sound level during 24-hour day weighted by a factor of three.

[10] Lmax: The highest root-mean-square (RMS) sound level measured over a given period of time.

ENVIRONMENTAL EVALUATION

Potential noise impacts can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project. Construction associated with the development of the project would increase noise levels temporarily during the construction of the proposed biogas pipeline. There would be no operational noise associated with the proposed underground pipeline, though employee traffic would result in noise on an intermittent basis.

Question (a) Generate a noise increase in excess of local plan standards: Less-than-significant Impact.

Construction Noise

Construction of the Merced Biogas Pipeline Expansion project may result in a temporary increase in ambient noise levels. The 39.5-mile pipeline project would be constructed over a nine-month period, with only a portion of the pipeline constructed at one time. Construction activities would be considered an intermittent noise impact throughout the construction period of the project, and no single sensitive receptor would be exposed to continuous noise over the construction period, since the construction noise only occurs when construction is nearby. These activities could result in various effects on sensitive receptors, depending on the presence of intervening barriers or other insulating materials. Based on typical construction equipment noise emission levels (FHWA 2017), noise levels produced during construction could potentially exceed those determined to be acceptable for parcels not zoned for residential land use by the 2030 General Plan (80 dBA Lmax at the property line) (Merced County Code Section 18.40.050 (C)(3). However, Merced County Code Section 18.40.050 (E) acknowledges there may be temporary, elevated noise levels during construction. No feature of the project would cause noticeable levels of ground borne vibration or noise. Further, to minimize noise impacts during noise sensitive time periods, construction activities would be limited to the hours of 7:00 a.m. and 6:00 p.m. on weekdays and prohibited on weekends in Merced County, and 7:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 5:00 p.m. on Saturdays in Madera County, and prohibited on Sundays. Because construction activities would be temporary and would not likely result in noise levels that exceed General Plan standards for agricultural areas, construction noise would be considered to be a less-than-significant impact, and no mitigation would be required.

Operational Noise

The noise environment along the project alignment is dominated by traffic noise from trucks and vehicles on adjacent public and private roadways, and operational noise from agricultural uses on the site and on adjacent farms. Since the proposed pipelines would be buried underground and any area disturbed by trenching during pipeline installation would be restored to its prior condition, no new or increased noise levels would be generated from the proposed pipeline. Trips associated with the proposed project are estimated to result in approximately 5-10 weekly trips by the part-time employee. This small increase in traffic would not lead to a perceptible change in noise levels. This would be a less-than-significant impact, and no mitigation would be required.

Question (b) Ground-borne vibration or noise: Less-than-significant Impact. Construction activities associated with implementation of the proposed pipeline project are not expected to result in excessive groundborne vibration or groundborne noise levels. Additionally, groundborne vibration during construction activity is temporary and would cease to occur after project construction is completed. No permanent noise sources that would generate excessive groundborne vibration or groundborne noise levels would be located within the project area. Therefore, impacts would be less than significant, and no mitigation would be required.

Question (c) Excessive noise levels near airports: Less-than-significant Impact. The Merced Regional Airport is located over two miles to the east of the proposed project alignment. A small portion of the proposed alignment located near the Oliveira Dairy is located within the airport Compatibility Zone D, which has limited use restrictions (Merced County ALUC 2012). The Chowchilla Municipal Airport is located over two miles to the southeast of the proposed project alignment (Madera County ALUC 2015). Because most of the proposed project alignment is not located within two miles of a public airport or public use airport, and a small portion of the alignment is within a compatibility zone with limited use restrictions, the project would not expose people residing or working in the project area to excessive noise levels. A less-than-significant impact would result, and no mitigation would be required.

XIV. POPULATION AND HOUSING	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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)?			**X**	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				**X**

ENVIRONMENTAL EVALUATION

Question (a) Induce unplanned population growth: Less-than-significant Impact. The proposed pipeline alignment is located in an area dominated by agricultural uses. Implementation of the project would not result in a new or different type of use for the area, nor would the project create or improve any infrastructure serving the site or region that could lead to substantial unplanned population growth. The proposed project is consistent with Merced County land use plans, and no modification of land use and development policies would be necessary to accommodate the proposed pipeline project.

Construction of the proposed project is anticipated to take approximately nine (9) months to complete. During construction, there would be a maximum of 20 employees; existing local construction workers would be utilized to the extent possible. The pipeline would be operational every day of the year. While monitoring would be performed 24 hours a day, 7 days a week remotely via SCADA, one part-time employee would make 5-10 site visits per week for inspections and maintenance of the pipeline.

In November 2021, the labor force in Merced County totaled 114,800 persons, with an official unemployment rate of 7.6 percent (or 8,800 unemployed persons) (EDD 2021). The increased labor needs of the project could be accommodated by this existing workforce within Merced County and would not require the importation of workers. Similarly, any additional housing demands caused by project employees could be accommodated by existing and planned housing resources within Merced County.

Therefore, the proposed project would not induce substantial direct or indirect population growth, and a less-than-significant impact would occur. No mitigation would be necessary.

Question (b) Displace substantial numbers of people or housing: No Impact. Construction of the pipeline alignment would take place within existing roadways and rights of way. Because no people or housing would be displaced, and no construction of replacement housing would be needed, there would be no impact. No mitigation would be required.

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

ENVIRONMENTAL SETTING

There are no public facilities located within the project vicinity. The closest fire station is located in Merced, approximately four miles to the northeast of the northernmost portion of the proposed pipeline alignment. There are numerous schools in the City of Merced. The Merced County Sheriff's Department provides police protection in the unincorporated areas of Merced County, and the Merced Police Department serves the public within city limits. Three hospitals provide medical services to county residents; Mercy Medical Center Merced in the City of Merced is nearest to the project alignment. There are numerous parks in the City of Merced; park services are discussed in more detail in *Section XV, Recreation.* Utility services are discussed in more detail in *Section XVII, Utilities and Service Systems.*

ENVIRONMENTAL EVALUATION

Questions (a) through (e) New or physically altered governmental public service facilities: Less-than-significant Impact. The proposed project does not include new housing, and following construction, public and private roadways would be returned to their original condition. Construction of the proposed project would not be expected to result in an increase in demand for fire or police protection, schools, parks, or health services that would lead to the construction of new or physically altered facilities.

Because no new residences would be constructed, needed employees would be drawn from the local labor pool, and no substantial increase in population is expected to result from the proposed project, there would be no increase in the demand for public services that would require the construction of new facilities or physically altered facilities. This would be a less-than-significant impact, and no mitigation would be required.

XVI. RECREATION	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated?				**X**
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				**X**

ENVIRONMENTAL SETTING

Merced County contains several federal, State, and county parks and recreation areas. Aside from parks in the county, there are many public open space areas as well.

- There are three National Wildlife Refuges located in Merced County: the Merced National Wildlife Refuge, the San Luis National Wildlife Refuge, and the San Joaquin River National Wildlife Refuge.
- The State of California Department of Parks and Recreation operates six parks in Merced County. The California Department of Fish and Wildlife operates seven wildlife areas.
- The Merced County Parks and Recreation Department maintains a variety of parklands throughout the county. County maintained parklands are divided into four basic classes: regional parks, community parks, dual-use parks, and neighborhood parks. There are a total of 21 parks owned and/or operated by Merced County. (Merced County 2013j)

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Increase park use, construct or expand recreational facilities: No Impact. The land in the general area of the proposed pipeline alignment is primarily developed for agricultural uses. There are existing public recreational facilities in the vicinity of the proposed project, including the Merced National Wildlife Refuge and the Great Valley Grasslands State Park. Implementation of the project, however, would not directly affect the provision or demand for any recreation. There would be no increase in the use of existing neighborhood or regional parks or other recreational facilities that would cause or accelerate the physical deterioration of such facilities. The proposed project does not include recreational facilities, nor does it require the construction or expansion of such facilities. Thus, no significant adverse impacts to recreation would occur with implementation of the proposed biogas pipeline project, and no mitigation would be required.

XVII. TRANSPORTATION

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

ENVIRONMENTAL SETTING

The proposed pipeline alignment is located in areas dominated by agricultural uses. There are several regional highways in the project vicinity: State Route 59 runs north-south through the center of the project area and State Route 152 is located southwest of the area of the pipeline alignment.

ENVIRONMENTAL EVALUATION

Question (a) Conflict with local circulation plans: Less-than-significant Impact. The proposed project includes the construction of up to 39.5 miles of buried biogas gathering lines. The proposed pipeline would be located predominantly on privately owned property via easements or within or across public ROWs.

Construction of the proposed project would be considered temporary over an approximate nine-month period. There would be a maximum of 20 employees during construction. Employee trips and construction deliveries would be considered temporary construction traffic. Following implementation of the proposed project, project operations would result in approximately 5-10 weekly trips , and no more than 12 additional round trips annually by support staff.

The proposed project use would be considered consistent with existing General Plan land use designations in both Merced and Madera counties with issuance of Merced County Conditional Use Permit CUP20-017 (see Section XI, *Land Use and Planning* of this Initial Study). Because minimal new trips would be generated by the proposed project, and the proposed biogas pipeline would be consistent with existing Merced and Madera General Plan land use designations and would not result in a more intense use than previously considered, the proposed project would not conflict with any program, plan, ordinance or policy addressing the circulation system.

Because the proposed pipeline would be constructed underground, no feature of these improvements would result in the modification of any bicycle or pedestrian travel route. This would be a less-than-significant impact, and no mitigation would be required.

Question (b) Conflict with CEQA Guidelines regarding analysis of transportation impacts: Less-than-significant Impact. Section 15064.3, subdivision (b) of the CEQA Guidelines describes criteria for analyzing transportation impacts. The proposed project would result in approximately 5-10 weekly trips for all classes of vehicles. Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. As set forth in the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), "absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact". Because the project would be considered consistent with the Merced County General Plan, and the project would not generate a significant number of trips and associated vehicle miles traveled, a less-than-significant impact would occur, and no mitigation would be required.

Question (c) Increase hazards due to geometric design feature: Less-than-significant Impact. Following completion of construction, any roadway disturbance would be returned to its original condition. Implementation of the proposed project would not result in any permanent changes to the design features or uses of project roadways, or construction of new roadways. There would be no increase to hazards related to a geometric design feature, or due to incompatible uses. A less-than-significant impact would result, and no mitigation would be required.

Question (d) Inadequate emergency access: Less than significant with Mitigation Incorporated. The Merced County Fire Department maintains standards for access roadways to provide for adequate emergency access. As stated above, the proposed pipeline would be placed within or adjacent to existing public ROWs within Merced and Madera Counties (see Figure 1). Encroachment Permits issued by Merced County and Madera County would be required for construction of proposed pipeline within public ROW within the respective county jurisdiction, or by Caltrans for work under state highways. During construction and installation of underground pipeline within public ROW, there may be temporary lane closures that could cause delays and queuing of vehicle traffic, and thereby interfere with emergency services. However, emergency vehicles would be expedited through the construction zone, and emergency service providers would be informed of the project so they could choose alternate routes as needed. All impacts related to lane closures would cease after project completion.

Should it be determined that lane closures are necessary, a Traffic Control Plan (TCP) will be required to detail how the project applicant and/or its contractor will manage roadway access for both emergency and public use, and will include BMPs such as covering the trenched areas after work hours. To ensure implementation of a TCP, the following mitigation measure will be required:

Mitigation Measure TR-1:

> Prior to the initiation of construction, the project applicant will obtain encroachment permits from Merced and Madera counties for work within the respective county ROW. The project applicant and/or its construction contractor will prepare a Traffic Control Plan that meets the requirements of Merced County and/or Madera County, and Caltrans. The TCP shall include all required topics, including: traffic handling during each stage of construction, maintaining emergency service provider access by, if necessary, providing alternate routes, repositioning emergency equipment, or coordinating with nearby service providers for coverage during construction closures, and covering trenches during the evenings and weekends. A component

of the TCP will involve public dissemination of construction-related information through notices to the nearby residences, press releases, and/or the use of changeable message signs. The project contractor will be required to notify all affected residences, post the construction impact schedule, and place articles and/or advertisements in appropriate local newspapers regarding construction impacts and schedules.

While construction of portions of the proposed pipeline would occur within public ROW, the pipeline routes would be restored to their original condition and uses after installation of the pipelines. With implementation of Mitigation Measure TR-1, because construction effects on traffic and emergency circulation for the Merced Biogas Pipeline Expansion project would be temporary and well managed, there would be a less-than-significant impact to emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			**X**	
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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			**X**	

REGULATORY SETTING

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include Tribal Cultural Resources (TCR), the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Section 21074(a) of the Public Resource Code (PRC) defines TCRs for the purpose of CEQA as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
c. 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

"Substantial evidence" is defined in Section 21080 of the Public Resources Code as "fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact."

The criteria for inclusion in the California Register of Historical Resources (CRHR) are as follows [CCR Title 14, Section 4852(b)]:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; and/or
2. It is associated with the lives of persons important to local, California, or national history; and/or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity, which is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)].

ENVIRONMENTAL SETTING

Records Search

The Native American Heritage Commission (NAHC) was contacted to request an examination of their Sacred Lands Files to determine whether the project is located on sacred land. A current list of Native American tribal representatives who may have concerns regarding the proposed project was also requested. The search was completed and no Sacred Lands files were identified for the vicinity of the proposed pipeline alignment (Napton 2021). The NAHC provided a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the proposed pipeline alignment.

Native American Consultation

As of the date of this Initial Study (December 2021), no tribes have previously requested consultation with Merced County regarding tribal cultural resources (Guerrero pers. comm. 2021). Although no tribes have requested consultation with Merced County for proposed projects within the County, letters describing the proposed project and requesting information regarding Native American concerns were sent to each tribal representative on the list provided by the NAHC.

Two responses were received. The first response was from the Tuolumne Me-Wuk Tribal Council, dated December 7, 2021. The letter states that the proposed project alignment is not within the tribe's aboriginal territory, and that the Tribe has no knowledge of any cultural resources(s) or area(s) within the proposed area of the pipeline alignment. The second response was from the Santa Rosa Rancheria Tachi-Yokut Tribe, dated December 14, 2021. The letter requests additional information regarding proposed ground disturbance associated with the proposed project. Merced County responded to the request with an email, dated March 11, 2022, that described the construction activities that would be associated with implementation of the biogas pipeline project.

ENVIRONMENTAL ANALYSIS

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. In assessing substantial adverse change, the County must determine whether or not substantial evidence of a TCR exists within the project area. If substantial evidence of a TCR exists, the County would then determine whether or not the project would adversely affect the qualities of the known tribal cultural resource.

Questions (a) and (b) Affect CRHR resources, significant California Native American Tribe resource: Less-than-significant Impact. A sacred lands file search was conducted by the NAHC, and no sacred lands were identified for the vicinity of the project site. Additionally, Central California Information Center (CCIC) and South San Joaquin Valley Information Center (SSJVIC) Records Searches for cultural resources found no known prehistoric archaeological resources within the project alignment. No tribes have previously requested consultation with Merced County regarding tribal cultural resources, and the two tribal responses to the letter sent to local tribes provided no new information regarding known sacred lands or cultural resources in the area of the proposed alignment. Beyond encroachment permits, there are no additional discretionary entitlements necessary from Madera County for construction and operation of the proposed 7.7 miles of pipeline in the County.

Because no known tribal cultural resources were identified that are listed/eligible for listing on the CRHR, or are otherwise deemed significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, and the only responses from local Native Americans indicated no known tribal cultural resources in the project vicinity or requested additional project construction details, implementation of the proposed project would not cause a significant adverse change in significance of a TCR determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. A less-than-significant impact would result, and no mitigation would be required.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
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?			**X**	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			**X**	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			**X**	
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?			**X**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

ENVIRONMENTAL EVALUATION

Questions (a) through (c) Construct or relocate new service system facilities, sufficient water supply, adequate wastewater treatment capacity: Less-than-significant Impact. The proposed biogas pipeline expansion would not involve the construction of any new septic systems or modification to any existing systems. The proposed project would not require the construction of new water or wastewater treatment facilities.

Following completion of construction, the area of the pipeline alignment would be returned to its original condition. Therefore, no adverse effects to storm drainage are expected, and no needs for, or modifications to, storm drainage systems in the project vicinity would be necessary. For more information regarding storm drainage, see Section X, *Hydrology and Water Resources*, above.

The proposed project pipeline would transport biogas to a single biogas upgrading facility from a cluster of individual dairy digesters in the surrounding area. The upgraded biomethane would be piped to an injection point with a PG&E gas transmission pipeline. No new electrical service would be required.

In accordance with Merced County Improvement Standards and Specifications and County of Madera Standard Plans and Specifications, the proposed pipeline plans would be required to show all existing underground utilities that could be affected by biogas pipeline construction activities. The construction contractor is required to protect existing utilities from damage during construction.

Based on the information above, implementation of the proposed biogas pipeline would not result in the relocation or construction of new or expanded water, wastewater, storm water drainage, electric power, natural gas, or telecommunications facilities. This would be a less-than-significant impact, and no mitigation would be required.

Question (d) and (e) Solid waste: Less-than-significant Impact. Operation of the proposed biogas pipeline would not result in the generation of solid waste. Therefore, the project would not 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. This would be a less-than-significant impact, and no mitigation would be required.

XX. WILDFIRE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evaluation plan?				**X**
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?				**X**
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?				**X**
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?				**X**

According to California Fire and Resource Management Program, the proposed pipeline alignment is within the Local Responsibility Area. The pipeline alignment would traverse both Unzoned and LRA Moderate zones. (CalFIRE 2007)

Questions (a) through (d) Wildfire: No Impact. The pipeline alignment in not located in or near state responsibility areas, or lands classified as very high fire hazard severity zones. It is located in an existing low-density agricultural area, and the threat of wildland fire has been determined to be unlikely to moderate (CalFIRE 2007). Because the proposed project is not located in or near a State Responsibility Area nor on lands classified as very high fire hazard severity zones, no impact would occur and no mitigation would be required. For additional information regarding emergency access to the site, see Section XVII, *Transportation*.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

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

Question (a) Degrade quality of the environment: As discussed above, the project has the potential to result in impacts to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and transportation. With the implementation of mitigation measures identified in this Initial Study (see below), all potential impacts would be reduced to a less-than-significant level. No significant or potentially significant impacts would remain.

Mitigation Measure AQ-1:

Prior to the release of the first-issued building permit, the applicant shall provide to the County a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form in compliance with Regulation VIII – Fugitive Dust PM_{10} Prohibitions. Additional applicable SJVAPCD Rules and Regulations may include: Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), and Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The project applicant will be required to implement measures of applicable SJVAPCD Rules and Regulations as noted.

Mitigation Measure AQ-2:

Implement Mitigation Measure AQ-1, which would require that the project comply with all applicable SJVAPCD regulations.

Mitigation Measure BIO-1:

A. If pipeline installation at the natural drainage crossing locations and the earthen agricultural ditch crossing locations are avoided using alternate alignments, bridge mounted crossings, or installed using boring techniques or open cut trench excavation within the disturbed or paved roadway or shoulder, and all ground disturbance is located in developed lands and/or upland areas outside of potential special-status plant species habitat, implementation of the

project is expected to have a less than significant impact to special-status plants, and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of roadway.

B. If pipeline installation at the natural drainage crossings and/or earthen agricultural ditch crossings involves trench excavation across the waterways (creeks, channels, swales, earthen ditches), or any other ground disturbance within natural waterway crossings or vernal pools and swales, even if conducted when dry, the following measures will be implemented:

    1. Pre-construction special-status species plant surveys shall be conducted in waterway crossing impact areas prior to initiating project activities. All surveys will be conducted in accordance with agency approved survey protocols. If no special-status species are identified in protocol surveys, no mitigation is required.
    2. If special-status plants are identified within project impact areas, one of the following measures shall apply:

        2.1 If feasible, the project will be adjusted to avoid impacts to special-status plants. If adjustment of construction areas or methods is not feasible, the applicant will develop species-specific measures to minimize the effects of construction. This may include: seasonal construction restrictions, erection of protective barriers, collection and relocation of individual plants or seeds, site monitoring during construction, site restoration, and/or implementation of construction practices that would avoid specific areas.

        2.2 If there is no feasible alternative to the disturbance to special-status plants, the applicant will mitigate for impacts to special-status plants. All impacts associated with pipeline installation are expected to be short-term, temporary impacts that would be restored to pre-project conditions upon completion of construction. The applicant shall prepare a site restoration plan that provides for plant salvage and replanting, seed collection and replanting, and/or topsoil collection and replacement as appropriate for species identified within the project impact area. The final restoration plan would, at a minimum, restore the temporary impact areas to pre-project conditions that would support special-status species populations. The restored habitat would be monitored consistent with the requirements of the site restoration plan to ensure that performance criteria established are achieved and maintained through the monitoring period. No permanent impact to special-status plants will occur.

    3. If listed species are identified (e.g., federal- or state-listed endangered, threatened, or candidate species) the applicant will consult with the USFWS and/or CDFW to secure proper authorization. Any project component that would jeopardize the continued existence of a listed plant species will be eliminated from consideration.

Mitigation Measure BIO-2:

Construction of the pipeline alignment along Rahilly Road and Sandy Mush Road may require the following mitigation measures for direct or indirect impacts on VPBs depending on pipeline location and construction methodologies used:

A. If pipeline installation-related ground disturbance is entirely located within the paved roadway or disturbed shoulder on Sandy Mush Road between the Merced County Correctional Facility and Los Banos Highway; pipeline installation at the western limits of

the alignment on Sand Mush Road near Homen Dairy is sited on the south side of the paved roadway (opposite grassland areas supporting vernal pool habitat); and pipeline installation along Rahilly Road is sited on the north side of the paved roadway at the Vander Woude Dairy property (opposite the grassland areas supporting vernal pool habitat); then implementation of the project is expected to have a less than significant impact to VPBs, and no mitigation is required. For the purposes of this discussion, the prescribed locations defined for full avoidance of direct and indirect impacts to listed VPBs include the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Rahilly Road on the north side of the roadway at the Vander Woude Dairy; the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on the south side of Sandy Mush Road by the Homen Dairy; and within the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on Sandy Mush Road from the Merced County Correctional Facility to Los Banos Highway where vernal pool grassland occurs on both sides of the roadway.

B. If full avoidance of direct or indirect impact to VPB habitat as outlined in BIO-2A is not feasible the following mitigation scenarios may apply:

1. If installation of the pipeline involves excavation in grassland areas within 250 feet of vernal pools or swales that provide suitable habitat for VPBs and without any disturbed or developed land barriers (e.g., disturbed or paved roadway) between construction activities and suitable VPB habitat, there is potential for indirect impact to listed VPBs through alteration of the watershed or damage to subsurface impervious layer, and the following measures shall be implemented:

   (a) Applicant shall consult with USFWS prior to implementation of the project to obtain all required regulatory permits and authorizations for potential indirect impact to listed species.
   (b) All work will be conducted during the dry season when potential habitat features on or near the proposed pipeline installation areas are dry.
   (c) Adequate fencing will be placed and maintained around any vernal pool habitat not approved for impact to prevent encroachment.
   (d) Environmental Awareness Training Program will include information regarding the presence of listed VPB species and the importance of avoiding impacts to these species and their habitat.
   (e) A USFWS-approved biologist will monitor pipeline installation activities in potential VPB habitat or in proximity to known or potential VPB habitat to ensure that no unnecessary take or destruction of habitat occurs. The biologist will have authority to stop activities if necessary, to implement appropriate corrective measures.
   (f) Storm water BMPs (silt fencing and straw waddles) will be placed around excavations and dirt stockpiles to reduce potential for erosion and sedimentation into potential VPB habitat features.
   (g) No application of water (e.g., dust suppression) will occur in vernal pool habitat without additional measures (such as barriers and/or use of low flow water truck nozzles) in place to keep water out of potential or known VPB habitat features during the dry season.
   (h) Any groundwater encountered within the trench excavation will be pumped into a water truck or other containment device and will be discharged offsite or in upland areas outside of vernal pool grassland habitat.

Mitigation Measure BIO-3:

A. Construction of the pipeline may require excavation within 165 feet of a blue elderberry shrub providing suitable habitat for the VELB. To conclusively determine occurrence of blue elderberry shrubs within 165 feet of the pipeline alignment and apply appropriate mitigation measures, additional surveys for blue elderberry shrubs shall be performed within 165 feet of drainage crossings with riparian cover during the blue elderberry blooming period (March through July) when the blue elderberry shrub is detectable in dense riparian vegetation. If no blue elderberry shrubs occur within 165 feet of the pipeline alignment, no mitigation is required.

B. If surveys conducted during the blooming period indicate that blue elderberry shrubs occur within 165 feet of the pipeline alignment, a minimum 20-foot exclusion zone extending from the dripline of the shrub shall be maintained during construction. Consistent with measures outlined by the USFWS to mitigate potential impacts to VELB when working within 165 feet of a blue elderberry shrub, but outside the 20-foot core area, the following measures shall be implemented:

1. Applicant shall consult with USFWS prior to implementation of the project to obtain all regulatory permits and authorizations for potential impact to listed species.
2. Fence and flag elderberry shrubs to be avoided and provide a minimum setback of at least 20 feet from the dripline of each elderberry plant for ground disturbance activities (e.g., trenching) to ensure that activities will not damage or kill the elderberry shrub.
3. Brief the contractors and key employees of the need to avoid any impacts to the elderberry plants, and to advise them of penalties associated with damage or destruction of the plants. Instruct work crew about the status of the VELB and the need to protect its elderberry host plant, and possible penalties for non-compliance with avoidance and minimization measures.
4. A qualified biologist will monitor the work area at project-appropriate intervals to assure that all avoidance and minimization measures are implemented. The amount and duration of monitoring will depend on the project and should be determined in coordination with the USFWS biologist.
5. As much as feasible, all activities within 165 feet of an elderberry shrub, will be conducted outside the flight season of the VELB (March-July).
6. Continue to protect both core and buffer avoidance areas after construction from adverse effects of the project.
7. No insecticides, herbicides, fertilizers, or other chemicals that might harm the VELB or its host plant should be used within 100 feet of any elderberry plant with a stem measuring 1.0 inch or greater in diameter at ground level.
8. Mechanical vegetation removal within the dripline of an elderberry shrub will be limited to the season when adult VELB are not active (August-February) and will avoid damaging the elderberry.
9. Erosion control will be implemented, and the affected construction area will be revegetated with appropriate native plants.

Mitigation Measure BIO-4:

A. If pipeline installation on Sandy Mush Road, Rahilly Road adjacent to vernal pool grasslands, and on S. Gurr Road at the Deadman Creek (ND-8) drainage crossing are designed to avoid

impact to suitable amphibian dispersal habitat through installation techniques involving bridge attachment, boring under the drainage, or by using open cut trench excavation only within the disturbed or paved roadway or shoulder, and all ground disturbance is located in developed lands outside of potential amphibian dispersal corridors, then implementation of the project is expected to have a less than significant impact to CTS and western spadefoot, and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of Rahilly Road on the north side of the roadway at the Vander Woude Dairy; the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on the south side of Sandy Mush Road by the Homen Dairy; and within the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section on Sandy Mush Road from the Merced County Correctional Facility to Los Banos Highway where vernal pool grassland occurs on both sides of the roadway.

B. If pipeline installation on Sandy Mush Road, Rahilly Road adjacent to vernal pool grasslands, and on S. Gurr Road at the Deadman Creek (ND-8) drainage crossing involves trench excavation or any other ground disturbance within the drainage crossing or vernal pool grasslands, the following measures shall be implemented:

   1. Construction for pipeline installation at the drainage crossing and/or in vernal pool grasslands will be completed during the dry season when amphibians are not expected to be dispersing and are expected to be in their summer refugia (June 15 and October 31).
   2. A pre-construction survey for CTS and western spadefoot will be conducted by a qualified biologist along pipeline segments in vernal pool grassland habitat and drainage crossing locations focused on identification of burrows or other suitable summer refugia that may be impacted by pipeline installation. Surveys will be completed within 48 hours prior the onset of work activities in these locations.
   3. If CTS and/or western spadefoot is observed or burrows or other suitable summer refugia are identified within the construction work area, the biologist will coordinate with CDFW and USFWS to ensure that the individuals are not harmed. If burrow excavation and/or relocation of amphibians is necessary, they will be relocated the shortest distance possible to a location that contains suitable habitat that will not be affected by activities associated with the proposed project. Any burrow excavation and amphibian relocation must be pre-approved by the USFWS and CDFW and be conducted by an agency approved permitted biologist.

Mitigation Measure BIO-5:

A. If pipeline installation at any of the drainage crossing locations are installed using drilling techniques or open cut trench excavation within the disturbed or paved roadway or shoulder, and all ground disturbance is located in upland areas outside of potential pond turtle habitat or the drainage crossing are dry at the time of construction, implementation of the project is expected to have a less than significant impact to western pond turtle and no mitigation is required. For the purposes of this measure, the "disturbed or paved roadway or shoulder" is defined as the paved section of the roadway or unvegetated road shoulder immediately adjacent to the paved section of the road.

B. If pipeline installation at any of the drainage locations involves trench excavation across the waterways with water present (creeks, channels, swales), or any other ground disturbance within natural waterway crossings or vernal pools and swales, the following measures will be implemented:

    1. A qualified biologist shall conduct preconstruction surveys for western pond turtles if construction activities will result in impacts to any of the drainages. Surveys shall be conducted within 48 hours of the start of construction at these locations.
    2. If western pond turtle is found within the construction work area the biologist will coordinate with CDFW to ensure that the turtles are not harmed. If relocation of individuals is necessary, turtles will be relocated the shortest distance possible to a location that contains suitable habitat and will not be affected by activities associated with the proposed project. Relocation of turtles will be pre-approved by the CDFW and will be conducted by an agency approved biologist.

Mitigation Measure BIO-6:

To reduce project related impacts to active bird nests and to reduce the potential for construction activities to interrupt nesting and rearing behaviors of birds, the following measures shall be implemented prior to and during construction activities:

A. A preconstruction survey shall be conducted to determine the presence of nesting birds if vegetation removal or construction activities will be initiated during the breeding season (February 15 through September 15). The project site and potential nesting areas within 100 feet of the site for MBTA protected passerines and 500 feet for raptors shall be surveyed within seven days prior to the initiation of construction. Surveys will be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds.
B. Construction shall not occur within a 500-foot buffer surrounding nests of raptors or a 100-foot buffer surrounding nests of MBTA protected passerines (including killdeer, house finch, mourning dove, etc.).
C. If construction within these buffer areas is required, prior approval must be obtained from the CDFW.

Mitigation Measure BIO-7:

Due to the disturbance within 100 feet of potential breeding habitat, the following measures shall be implemented prior to and during construction activities:

A. If ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15), a preconstruction survey shall be conducted to determine presence / absence of TCBB. This measure is also required for all MBTA protected nesting birds, as indicated above. If no TCBB nesting occurrences are found, no further mitigation is required.
B. If a TCBB nest colony is discovered during preconstruction surveys, the following measures shall be implemented:

    1. Applicant shall consult CDFW to determine the appropriate avoidance buffer and or required mitigation.
    2. Project shall avoid construction activities within the established avoidance buffer of TCBB colonies until young have fledged.

Mitigation Measure BIO-8:

A. Pre-construction Survey. A pre-construction survey of areas providing suitable burrowing owl habitat within 1,640 feet (500 meters) of the pipeline alignment shall be conducted by a qualified raptor biologist prior to ground disturbance.

1. At least two surveys shall be conducted, and surveys will conclude no more than two calendar days prior to construction.
2. To avoid last minute changes in schedule, the project proponent may conduct a preliminary survey up to 14 days before construction. The preliminary survey may count as the first of the two required surveys.

If the required pre-construction surveys show there are no active burrowing owl nests within the 1,640 feet (500 meters) of construction activities, then no further mitigation for burrowing owl nest disturbance will be required.

B: Burrow Avoidance. If an occupied burrow is discovered during pre-construction surveys, a protective buffer consistent with CDFW guidelines shall be established. Appropriate protective buffers depend on the type of burrowing owl occurrence (nesting or overwinter), level of project disturbance, and time of year that the disturbance occurs. Nest protective buffers consistent with CDFW guidelines are outlined below.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting Site	April 1 – Aug 15	200 m	500 m	500 m
Nesting Site	Aug 16 – Oct 15	200 m	200 m	500 m
Nesting Site	Oct 16 – March 31	50 m	100 m	500 m

A reduced buffer may be implemented upon CDFW approval and based upon site specific conditions, nesting phenology, and recommendation of the qualified biologist.

Mitigation Measure BIO-9:

A. If construction work occurs after August 30 and ends before March 1 (outside of the breeding season), impacts to the Swainson's hawk would be avoided. Surveys would not be required for work conducted during this part of the year, and no further mitigation for nest disturbance is required.

B. *Protocol Surveys*: For work that occurs between March 1 and August 30, a qualified biologist with expertise in Swainson's hawk biology shall conduct protocol surveys of potential nesting habitat within 0.5-mile of any construction activities prior to initiation of such activities. The project applicant shall conduct a protocol-level survey in conformance with the "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley," Swainson's Hawk Technical Advisory Committee (https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds) (May 31, 2000) hereby incorporated by reference. This protocol prescribes minimum standards for survey equipment, mode of survey, angle and distance to tree, speed, visual and audible clues, distractions, notes and observations, and timing of surveys.

A written report with the pre-construction survey results must be provided to the Planning Department and CDFW within 30 days of the commencement of construction-related

activities. The report shall include: the date of the report, authors and affiliations, contact information, introduction, methods, study location, including map, results, discussion, and literature cited.

If the required protocol surveys show there are no active Swainson's hawk nests within the 0.5-mile of construction activities, then no further mitigation for nest disturbance will be required.

C. *Nest Avoidance*: Based on results the protocol surveys, if nesting Swainson's hawks are found to occur within 0.5-mile of the project site, the project applicant must implement CDFW pre-approved mitigation measures to avoid nest impacts during construction. These measures include:

1. All project-related activities with the potential to cause nest abandonment or forced fledging of young shall be avoided until the young have fledged.
2. If disturbances, habitat conversions, or other project-related activities, that may cause nest abandonment or forced fledging, are necessary, within the nest protection buffer zone (0.5-mile), monitoring of the nest site by a qualified raptor biologist, funded by the project applicant, shall be required to determine if the nest is abandoned. If the nest is abandoned, but the nestlings are still alive, the project proponent is required to fund the recovery and hacking, that is the controlled release of captive reared young, of the nestling.
3. The project applicant shall be required to coordinate with CDFW to determine if project activities with the potential to cause disturbance to nesting Swainson's hawks within the 0.5-mile buffer may proceed with a reduced nest buffer and an approved biological monitor. CDFW may authorize a reduced nest buffer with the presence of a monitoring biologist during construction activities to ensure that the nest is not disturbed.
4. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.5-mile of an active nest are not prohibited.

Mitigation Measure BIO-10:

A. If pipeline installation across natural drainages is installed using drilling techniques, and all ground disturbance is located in upland areas more than 100 feet from the bridge location, then implementation of the project is expected to have a less than significant impact to bats, and no mitigation is required.

B. If pipeline installation across natural drainages with a bridge crossing is installed using trench excavation across the waterways within 100 feet of the bridge or the pipeline will be attached to the bridge, the following measures shall be implemented:

1. A preconstruction visual survey shall be conducted to determine presence / absence of roosting bat species at the bridge crossing locations (during the maternity season (March 1 - August 31). The survey shall be conducted within 14 days of proposed impacts within 100 feet of the bridge location.
2. If a visual survey indicates that the bridge is being used by bats; an acoustic bat survey to determine the species of bat utilizing the bridge will be conducted. If the acoustic survey determines that the bats onsite are Pallid bats or any other special-status bat species, CDFW will be notified of the presence of special-status bat species and construction

within 100 feet of the bridge will take place outside of the maternal roosting season (March 1 - August 31).

Mitigation Measure BIO-11:

Because there is the potential for San Joaquin kit fox and American badgers to occur within the project area, the *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS, 2011) shall be followed. The measures that are listed below have been excerpted from those guidelines and will protect San Joaquin kit fox and American badgers.

A. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and state and federal highways; this is particularly important at night when kit foxes are most active. Night-time operations should be minimized to the extent possible. However, if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
B. To prevent inadvertent entrapment of San Joaquin kit foxes or other animals, all excavated, steep-walled holes or trenches more than two feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured San Joaquin kit fox is discovered, USFWS and CDFW shall be contacted as noted under Measure 13 referenced below.
C. San Joaquin kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored at the site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a San Joaquin kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
D. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the project site.
E. No firearms shall be allowed on the project site.
F. If any San Joaquin kit fox or American badger, or their sign, are detected onsite, dogs and cats shall be kept off the project site to prevent harassment, mortality of San Joaquin kit foxes or American badgers, and/or destruction of their dens.
G. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of San Joaquin kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
H. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a San Joaquin kit fox or who finds a dead, injured or entrapped San Joaquin kit fox. The representative will be

identified during the employee education program and their name and telephone number shall be provided to the Service.

I. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

J. Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. should be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions.

K. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.

L. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist at (530) 934-9309. The USFWS should be contacted at the numbers below.

M. The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

N. New sightings of San Joaquin kit fox shall be reported to the CNDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address below.

O. Any project-related information required by the USFWS or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California, 95825-1846, (916) 414-6620 or (916) 414-6600.

Mitigation Measure BIO-12:

Implement Mitigation Measure BIO-2.

Mitigation Measure BIO-13:

Impacts to waters and/or wetlands may be reduced by project design avoidance and minimization measures such as: a) use of existing bridge attachment pipeline installation to span channel to eliminate impact within jurisdictional areas; b) boring installation techniques under streams and ditches to install new pipelines; or, c) realignment of pipelines to avoid jurisdictional areas. Once the

pipeline alignment has been determined, construction methodology defined, and precise impact areas and extents identified, the following measures will be implemented:

A. The applicant shall conduct a jurisdictional delineation of WoUS on the project site to confirm the limits of jurisdictional areas and potential project impacts. The delineation shall be verified by the Corps. The verified delineation will provide the applicant with the extent of federal jurisdiction within the defined Project Study Area boundary and the impact acreage necessary for preparing a WoUS/Wetland Mitigation Plan and/or permit application if impacts to jurisdictional areas cannot be avoided, or the jurisdictional boundaries to further refined the project to avoid impact to jurisdictional areas. If the Project is able to avoid impact to jurisdictional waters and wetlands based on the verified delineation, no further mitigation is required.

B. If project impacts to federal and state jurisdictional areas are identified and unavoidable, the applicant shall obtain all necessary permits for impacts to WoUS and wetlands from the Corps and the RWQCB and/or for impacts to the Streambed from CDFW prior to project implementation. The project must comply with all permit conditions. Compensatory mitigation, if required, must be consistent with the Corps' standards pertaining to mitigation type, location, and ratios, but will be accomplished with a minimum of 1:1 replacement ratio.

    1. If compensatory mitigation is needed, the applicant may satisfy all or a portion of WoUS and wetlands mitigation through the purchase of "credits" at a mitigation bank approved by the Corps, RWQCB, and/or CDFW for compensatory mitigation of impacts to hydrologically similar WoUS, or through other means, such as on- or off-site wetland creation, conservation easement, contribution to approved in-lieu habitat fund, etc. The mitigation plan must be approved by the permitting agencies.

Mitigation Measure CUL-1:

A. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.

B. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The County coroner has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin:
    - √ The most likely descendants of the deceased Native Americans have made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or

- √ The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.

C. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Mitigation Measure CUL-2:

Monitoring during ground-disturbing activities within 300 meters (approximately 1,000 feet) on each side of the following creek and river crossing locations shall be conducted by a fully qualified archaeologist that meets the Secretary of the Interior's Standards in Archaeology:

- Bear Creek at Oak Avenue
- Bear Creek at Dickenson Ferry Road
- Black Rascal Creek at Oak Avenue
- South Slough at Dickenson Ferry Road
- South Slough at Buhach Road
- Duck Slough at S. Gurr Road
- Owens Creek at S. Gurr Road
- Deadman Creek at S. Gurr Road
- Chowchilla River at Avenue 26
- Chochill River at S. Orchard Way
- Chowchilla River at Bliss Road

In the event that undiscovered cultural resources are found in the area of direct impact of the proposed project, the responsible field manager shall order discontinuation of all activities within a minimum of 30 meters (approximately 100 feet) of the discovery, and promptly contact the monitoring archaeologist regarding evaluation of the find. The archaeologist will consult with all interested parties, including Native Americans, and develop a recovery or mitigation plan, which the applicant shall implement.

Mitigation Measure HAZ-1:

If soil, groundwater, or any other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant or their contractor shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant or their contractor shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies), implementation of actions to identify the nature and extent of contamination, and remediation as necessary. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of Merced County, Madera County, or other governmental regulatory agency, as appropriate.

Mitigation Measure HAZ-2:

Implement Mitigation Measure TRA-1.

Mitigation Measure HYD-1:

The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit. A Legally Responsible Person (LRP) shall electronically submit PRDs prior to commencement of construction activities in the Storm Water Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the Storm Water Pollution Prevention Plan (SWPPP), a signed certification statement by the LRP, and the first annual fee. Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. All requirements of the site-specific SWPPP, including any revisions, shall be included in construction documents for the project. Proof of registration shall be submitted to the Merced County Building and Safety Division prior to the initiation of construction.

Mitigation Measure TR-1:

Prior to the initiation of construction, the project applicant will obtain encroachment permits from Merced and Madera counties for work within the respective county ROW. The project applicant and/or its construction contractor will prepare a Traffic Control Plan that meets the requirements of Merced County and/or Madera County, and Caltrans. The TCP shall include all required topics, including: traffic handling during each stage of construction, maintaining emergency service provider access by, if necessary, providing alternate routes, repositioning emergency equipment, or coordinating with nearby service providers for coverage during construction closures, and covering trenches during the evenings and weekends. A component of the TCP will involve public dissemination of construction-related information through notices to the nearby residences, press releases, and/or the use of changeable message signs. The project contractor will be required to notify all affected residences, post the construction impact schedule, and place articles and/or advertisements in appropriate local newspapers regarding construction impacts and schedules.

Question (b) Cumulatively considerable impacts: Less-than-significant Impact. While the proposed project could contribute to cumulative impacts associated with increased development in the region, these impacts have previously been evaluated by the County and considered in development of the County's 2030 General Plan. The 2030 General Plan EIR comprehensively evaluated the potential environmental effects, including the potential countywide and cumulative impacts, of implementing the 2030 General Plan. As discussed in the preceding discussion of tiering, the General Plan EIR is hereby incorporated by reference into this Initial Study pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein.

As discussed in this Initial Study, the Merced Biogas Pipeline Expansion project has the potential to result in impacts to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and transportation. As set forth in the appropriate topical discussions of this Initial Study, effects to these issue areas are all subject to the proposed mitigation measures identified in this Initial Study, State, Federal, and County standards and regulations, and 2030 Merced County General Plan policies and programs designed to avoid, reduce, or mitigate such effects.

Implementation of the proposed project would result in the installation of an network of collection pipeline. As viewed within the context of the overall growth and development in the County as outlined in the 2030 Merced County General Plan, the potential impacts of the proposed pipeline alignment are individually limited and not considered "cumulatively considerable." Additionally, after mitigation, the project has been determined not to have significant project level or cumulative level effects for any environmental issue. Therefore, construction and operation of the proposed pipeline alignment would not make a cumulatively considerable contribution to cumulative impacts, and would result in a less-than-significant impact when viewed in connection to the effects of past and probable future projects.

Question (c) Adversely affect human beings: Less-than-significant Impact. As demonstrated in the detailed evaluation contained in this Initial Study, because of existing site conditions, Merced and Madera County standards, Merced County 2030 General Plan programs and policies, and the regulation of potential environmental impacts by other agencies, in addition to mitigation measures included in this Initial Study, the proposed Merced Biogas Pipeline Expansion project would not have the potential to cause substantial adverse effects on human beings. This would be a less-than-significant impact.

3. APPLICANT AGREEMENT TO MITIGATION MEASURES

By the signature below, the project applicant agrees to implement and incorporate the Mitigation Measures identified in this Initial Study as outlined above in Section XXI, *Mandatory Findings of Significance*, as part of the Merced Biogas Pipeline Expansion project.

Signed: Lauren Duggan

Printed Name: Lauren Duggan Date: April 20, 2022

4. PREPARERS OF THE INITIAL STUDY / NEGATIVE DECLARATION

Lead Agency

Merced County
Community and Economic Development Department
2222 M Street
Merced, CA 95340
(209) 385-7654

Brian Guerrero, Planner III

Environmental Consultant

Environmental Planning Partners, Inc.
2934 Gold Pan Court, Suite 3
Rancho Cordova, California 95670
(916) 852-8830

Robert D. Klousner – President, Principal in Charge
Raadha Jacobstein – Professional Planner, Project Manager
Mary Wilson – Planner
L. Kyle Napton, Ph.D. – Cultural Resources
Dale Nutley – Graphic Artist

Sarah Powell – Project Manager / Senior Biologist
Trish Fernandez – Tribal Cultural Resources

5. LITERATURE CITED

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DETERMINATION

On the basis of this initial evaluation:

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

X 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 applicant. A 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

4/19/22

Brian Guerrero, Planner III
Merced County
Community and Economic Development Department

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