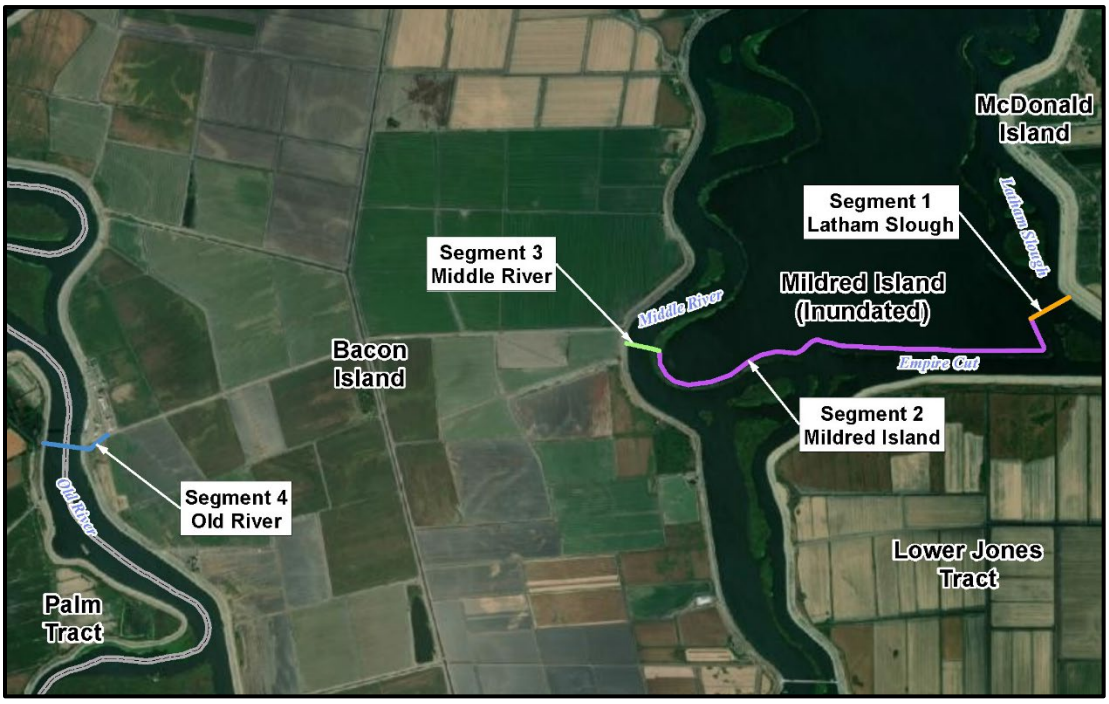
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PACIFIC GAS & ELECTRIC COMPANY LINE 057A-1 MCDONALD ISLAND TO PALM TRACT PIPELINE DECOMMISSIONING PROJECT

June 2021



Lead Agency:
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, California 95825

Applicant:
Pacific Gas & Electric Company
5555 Florin Perkins Road, Room 128D
Sacramento, CA 95826

MISSION STATEMENT

The California State Lands Commission provides the people of California with effective stewardship of the lands, waterways, and resources entrusted to its care based on the principles of equity, sustainability, and resiliency, through preservation, restoration, enhancement, responsible economic development, and the promotion of public access.

CEQA DOCUMENT WEBSITE
www.slc.ca.gov/ceqa/

Geographic Location (Western Bank)

Latitude: 37°58’6” N
Longitude: 121°34’25” W
WGS84 Datum

Cover Photo:
(Photo courtesy of Google Earth)

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LIST OF ABBREVIATIONS AND ACRONYMS

A	ACOE	U.S. Army Corps of Engineers
	APM	Applicant Proposed Measures
	APN	Assessor's Parcel Number
B	BAAQMD	Bay Area Air Quality Management District
	BDCP	Bay Delta Conservation Plan
	BMP	Best Management Practices
C	CalEnviroScreen	California Communities Environmental Health Screening Tool
	Caltrans	California Department of Transportation
	CAP	Climate Action Plan
	CARB	California Air Resources Board
	CDFW	California Department of Fish and Wildlife
	CESA	California Endangered Species Act
	CEQA	California Environmental Quality Act
	Cfs	cubic feet per second
	CH_4	Methane
	CLSM	controlled low strength material
	CMP	Congestion Management Plan
	CNDDB	California Natural Diversity Database
	CNEL	Community noise equivalent level
	CNPS	California Native Plant Society
	CO	Carbon Monoxide
	CO_2	Carbon Dioxide
	CO_2e	Carbon Dioxide Equivalent
	Corps	U.S. Army Corps of Engineers
	CRHR	California Register of Historical Resources
	CSLC	California State Lands Commission
	CVPPP	Central Valley Flood Protection Plan
	CVRWQCB	Central Valley Regional Water Quality Control Board
D	dB	Decibel
	dBA	A-weighted Decibel
	DEPM	Division of Environmental Planning and Management
	DPM	Diesel Particulate Matter
	DPS	distinct population segment
	DTSC	Department of Toxic Substances Control
E	EIR	Environmental Impact Report
	ESU	evolutionary significant units
F	Ft	Feet
	FEMA	Federal Emergency Management Agency
	FESA	Federal Endangered Species Act
G	GHG	Greenhouse Gas
	GSA	Groundwater Sustainability Agency
H	HCP	Habitat Conservation Plan

	H_2S	Hydrogen Sulfide
	Hz	Hertz
I	IEP	Interagency Ecological Program
	ITP	Incidental Take Permit
	IPCC	Intergovernmental Panel on Climate Change
	IS	Initial Study
L	L_{dn}	Day-Night Average Sound Level
	L_{eq}	Equivalent Sound Level
	L_{max}	Maximum Sound Level
	LOS	Level of Service
	LSAA	Lake and Streambed Alteration Agreement
M	MLRA	major land resource area
	MM	Mitigation Measure
	MMP	Mitigation Monitoring Program
	MND	Mitigated Negative Declaration
	mPA	Micro-Pascal
N	N_2O	Nitrous Oxide
	NAHC	Native American Heritage Commission
	NMFS	National Marine Fisheries Service
	NO	Nitric Oxide
	NO_2	Nitrogen Dioxide
	NO_x	Nitrogen Oxides
	NOI	Notice of Intent
	NPDES	National Pollutant Discharge Elimination System
	NRCS	Natural Resources Conservation Service
	NRHP	National Register of Historic Places
	NTM	Notice to Mariners
O	O_3	Ozone
	OEHHA	Office of Environmental Hazard Assessment
	O&M	Operations and Maintenance
	OPR	Office and Planning and Research
P	PG&E	Pacific Gas & Electric Company
	PM	Particulate Matter
	PM_{10}	Particulate Matter Less Than 10 Micrometers
	$PM_{2.5}$	Particulate Matter Less Than 2.5 Micrometers
	ppb	parts per billion
	ppm	parts per million
	PPV	Peak Particle Velocity
	PWSP	Project Work and Safety Plan
R	ROG	Reactive Organic Gases
	RWQCB	Regional Water Quality Control Board
S	SGMA	Sustainable Groundwater Management Act
	SJVAB	San Joaquin Valley Air Basin
	SJVAPCD	San Joaquin Valley Air Pollution Control District
	SLR	Sea level rise

	SO_2	Sulfur dioxide
	SPL	Sound Pressure Level
	SWPPP	Storm Water Pollution Prevention Plan
	SWRCB	State Water Resources Control Board
T	TAC	Toxic Air Contaminant
	TPH	Total Petroleum Hydrocarbons
U	µg/m3	Micrograms per Cubic Meter
	USEPA	U.S. Environmental Protection Agency
	USFWS	U.S. Fish and Wildlife Service

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The California State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) and has prepared this Initial Study (IS)/Mitigated Negative Declaration (MND) that analyzes and discloses the environmental effects associated with the proposed Pacific Gas & Electric Company Line 057A-1 (L-057A-1) McDonald Island to Palm Tract Pipeline Decommissioning Project (Project). The Project would authorize the Pacific Gas & Electric Company (PG&E or Applicant) to decommission and remove four segments of the previously retired L-057A-1 natural gas pipeline at the Latham Slough, Mildred Island, Middle River, and Old River crossings. The Project site is approximately 126.5 acres and consists primarily of tidally influenced river crossings (Latham Slough, Middle River, and Old River) and associated levees that protect agricultural lands on McDonald Island, Bacon Island, and Palm Tract in the Sacramento-San Joaquin River Delta (Figure ES-1).

The CSLC has prepared this MND because it determined that, while the IS identifies potentially significant impacts related to the Project, mitigation measures (MMs) incorporated into the Project proposal and agreed to by the Applicant would avoid or mitigate those impacts to a point where no significant impacts occur.

PROPOSED PROJECT

PG&E is proposing to remove a majority of the remaining submerged pipeline segments of L-057A-1 between McDonald Island and Palm Tract. For planning purposes, the Project has been divided into four discrete segments (Figure ES-2). A summary of the four segments and their proposed final dispositions are provided below.

- **Segment 1 – Latham Slough Submarine Pipeline Crossing** (approximately 712 feet of 14-inch-diameter pipeline): The approximately 79-foot-long segment of pipeline underneath the waterside slope of the McDonald Island Levee would be filled with cement slurry and abandoned in place thereby avoiding unnecessary disturbance to the levee. If present, articulated concrete mats located on top of the pipeline crossing would be removed. The remaining 633 feet of the pipeline that crosses Latham Slough and the Mildred Island Levee would be removed in its entirety to eliminate pipeline segments with shallow depth of burial and the potential for future exposure.
- **Segment 2 – Mildred Island Submerged (Originally Terrestrial) Pipeline Segment** (approximately 8,113 feet of 18-inch-diameter pipeline): Segment 2 would be removed in its entirety to eliminate pipeline segments that are currently exposed or under shallow depth of burial and to eliminate the potential risk of the pipeline segments floating to the surface and creating a public safety hazard.

- **Segment 3 – Middle River Submarine Pipeline Crossing** (approximately 551 feet of 14-inch-diameter pipeline): The segment of pipeline landing underneath the waterside slope of the Bacon Island levee would be filled with cement slurry and an approximately 48-foot-long segment abandoned in place to avoid unnecessary disturbance to the levee. The remaining 503 feet of the crossing across Middle River and across the Mildred Island Levee would be removed in its entirety, eliminating segments with shallow depth of burial.
- **Segment 4 – Old River Submarine Pipeline Crossing** (approximately 1,205 feet of 14-inch-diameter and 18-inch-diameter pipeline): The segment of pipeline on both sides of the river underneath the waterside slope of the Bacon Island Levee (approximately 46-feet long) and the segment of pipeline underneath the waterside slope of the Palm Tract Levee (approximately 49-feet long) would be filled with cement slurry and abandoned in place to avoid unnecessary disturbance to the levee. The remaining 560 feet of the Old River crossing would be removed in its entirety to eliminate pipeline segments with shallow depth of burial. In addition, approximately 110 feet of the terrestrial pipeline crossing the Bacon Island Levee at this site would be removed across the crown of the levee and down the landside slope to the landside toe. Finally, approximately 440 feet of buried terrestrial pipeline from the landside toe out to a point where the pipeline intersects with the existing dirt roadway would be filled with cement slurry.

ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

The environmental issues checked below in Table ES-1 would be potentially affected by this Project; a checked box indicates that at least one impact would be a “potentially significant impact.” The Applicant has agreed to Project revisions, including the implementation of MMs, that would reduce the potential impacts to “less than significant with mitigation,” as detailed in Section 3.0, *Environmental Checklist and Analysis*, of this MND. Table ES-2 lists the proposed MMs designed to reduce or avoid potentially significant impacts. With implementation of the proposed MMs, all Project-related impacts would be reduced to less than significant levels.

Table ES-1. Environmental Issues and Potentially Significant Impacts

☒ Aesthetics	☒ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Cultural Resources – Tribal
☐ Energy	☒ Geology, Soils, and Paleontological Resources	☐ Greenhouse Gas Emissions
☒ Hazards and Hazardous Materials	☒ Hydrology and Water Quality	☐ Land Use and Planning

☐ Mineral Resources	☐ Noise	☐ Population and Housing
☐ Public Services	☒ Recreation	☐ Transportation
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

Table ES-2. Summary of Proposed Project Mitigation Measures

Aesthetics
MM AES-1: Nighttime Illumination Limitations
Agricultural and Forestry Resources
MM AG-1: Noticing to Adjacent Property Owners
Biological Resources
MM BIO-1: Special-Status Plant Avoidance
MM BIO-2: Worker Environmental Awareness Training
MM BIO-3: In-Water Work Period Restrictions
MM BIO-4: Biological Monitoring
MM BIO-5: Turbidity Monitoring Plan
MM BIO-6: Western Pond Turtle and Giant Garter Snake Avoidance
MM BIO-7: Swainson's Hawk and White-Tailed Kite Avoidance
MM BIO-8: California Black Rail Avoidance
MM BIO-9: Breeding Bird Avoidance
MM BIO-10: Wetlands and Riparian Habitat Restoration
Cultural Resources
MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources
MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains
Cultural Resources – Tribal
MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources
MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains
Hazards and Hazardous Materials
APM-1: Project Work and Safety Plan
APM-2: Pre- and Post-Project Geophysical Debris Survey
APM-3: Advanced Notice to Mariners
Hydrology and Water Quality
MM HYDRO-1: Stormwater Pollution Prevention Plan (SWPPP)
Recreation
REC-1: Local In-Water Construction Notice

Figure ES-1. Project Site Vicinity Map

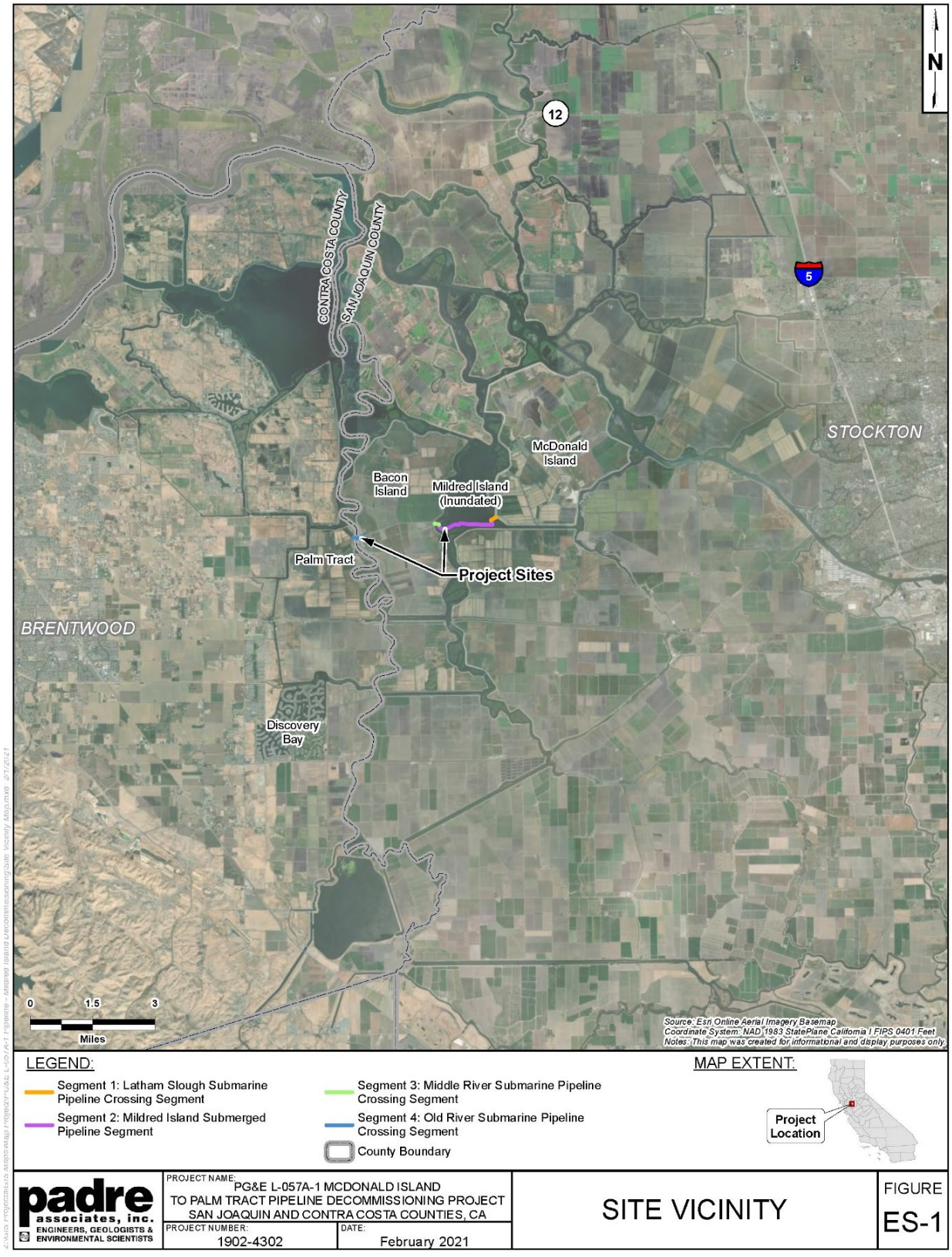
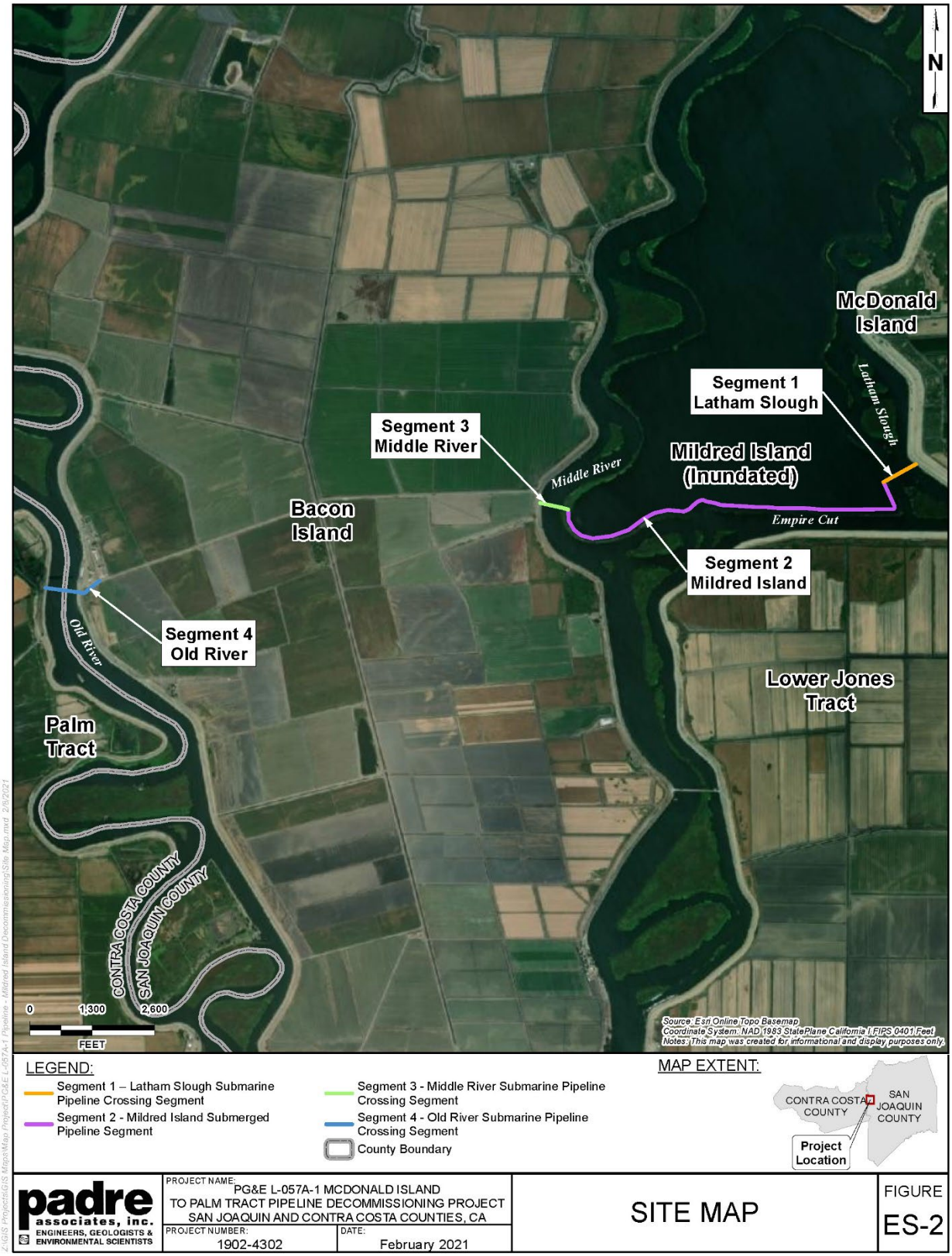


Figure ES-2. Project Overview Map



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1.0 PROJECT AND AGENCY INFORMATION

1.1 PROJECT TITLE

PG&E L-057A-1 McDonald Island to Palm Tract Pipeline Decommissioning Project (Project).

1.2 LEAD AGENCY AND PROJECT SPONSOR

Lead Agency	Contact Person
California State Lands Commission 100 Howe Avenue, Suite 100-South Sacramento, CA 95825	Cynthia Herzog, Senior Environmental Scientist Environmental Planning and Management Division Cynthia.herzog@slc.ca.gov (916) 574-1310
Applicant	**Contact Person**
Pacific Gas & Electric Company 5555 Florin Perkins Road, Room 128D Sacramento, CA 95826	Chris Ellis Principal Land Planner CRE3@pge.com (916) 995-5848

1.3 PROJECT LOCATION

The Project corridor is located within portions of both San Joaquin and Contra Costa Counties. As shown in Figures 1-1 and 1-2, the L-057A-1 segment lies between the east shoreline of Palm Tract and the west shoreline of Bacon Island across Old River, as well as between the east shoreline of Bacon Island across Mildred Island (inundated) and Latham Slough to the west shoreline landing at McDonald Island (approximately 10,581 feet total length over the four segments). The pipeline corridor is located within CSLC Lease No. 5438.1-A.

The coordinates of the westernmost part of the Project on Palm Tract are approximately 37°58’6”N, 121°34’25”W and the easternmost coordinates on McDonald Island are approximately 37°58’30”N, 121°30’42”W. The Project corridor is located through Assessor’s Parcel Numbers 129-05-060, 129-06-012, 129-031-014, and 129-031-032 in San Joaquin County and Parcel Number 015-230-013 in Contra Costa County.

The surrounding area is predominantly in agricultural production.

1.4 ORGANIZATION OF THE MITIGATED NEGATIVE DECLARATION

This Initial Study/Mitigated Negative Declaration (IS/MND) is intended to provide the California State Lands Commission (CSLC), as lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), and other responsible agencies, with the information required to exercise their discretionary

responsibilities with respect to the proposed Project. The document is organized as follows:

- **Section 1** provides the Project location and background, agency and Applicant information, Project objectives, anticipated agency approvals, and a summary of the public review and comment process.
- **Section 2** describes the proposed Project including its location, layout, equipment, facilities, operations, and schedule.
- **Section 3** presents the IS, including the environmental setting, identification and analysis of potential impacts, and discussion of various Project changes and other measures that, if incorporated into the Project, would mitigate or avoid those impacts such that no significant effect on the environment would occur. CSLC staff prepared this IS pursuant to State CEQA Guidelines section 15063.[1]
- **Section 4** presents the Mitigation Monitoring Program.
- **Section 5** discusses other CSLC considerations relevant to the Project, such as climate change, environmental justice, and the CSLC Significant Lands Inventory that are in addition to review required pursuant to CEQA.
- **Section 6** presents information on report preparation and references.
- **Appendices** include specifications, technical data, and other information supporting the analysis presented in this MND:
    - Appendix A: Abridged List of Major Federal and State Laws, Regulations, and Policies Potentially Applicable to the Project
    - Appendix B: Project Plans
    - Appendix C: Air Quality and Greenhouse Gas Emission Calculations
    - Appendix D: Biological Technical Report
    - Appendix E: Noise Modeling Results and Vibration Calculations

[1] The State CEQA Guidelines are found in California Code of Regulations, title 14, section 15000 et seq.

Figure 1-1. Project Site Vicinity Map

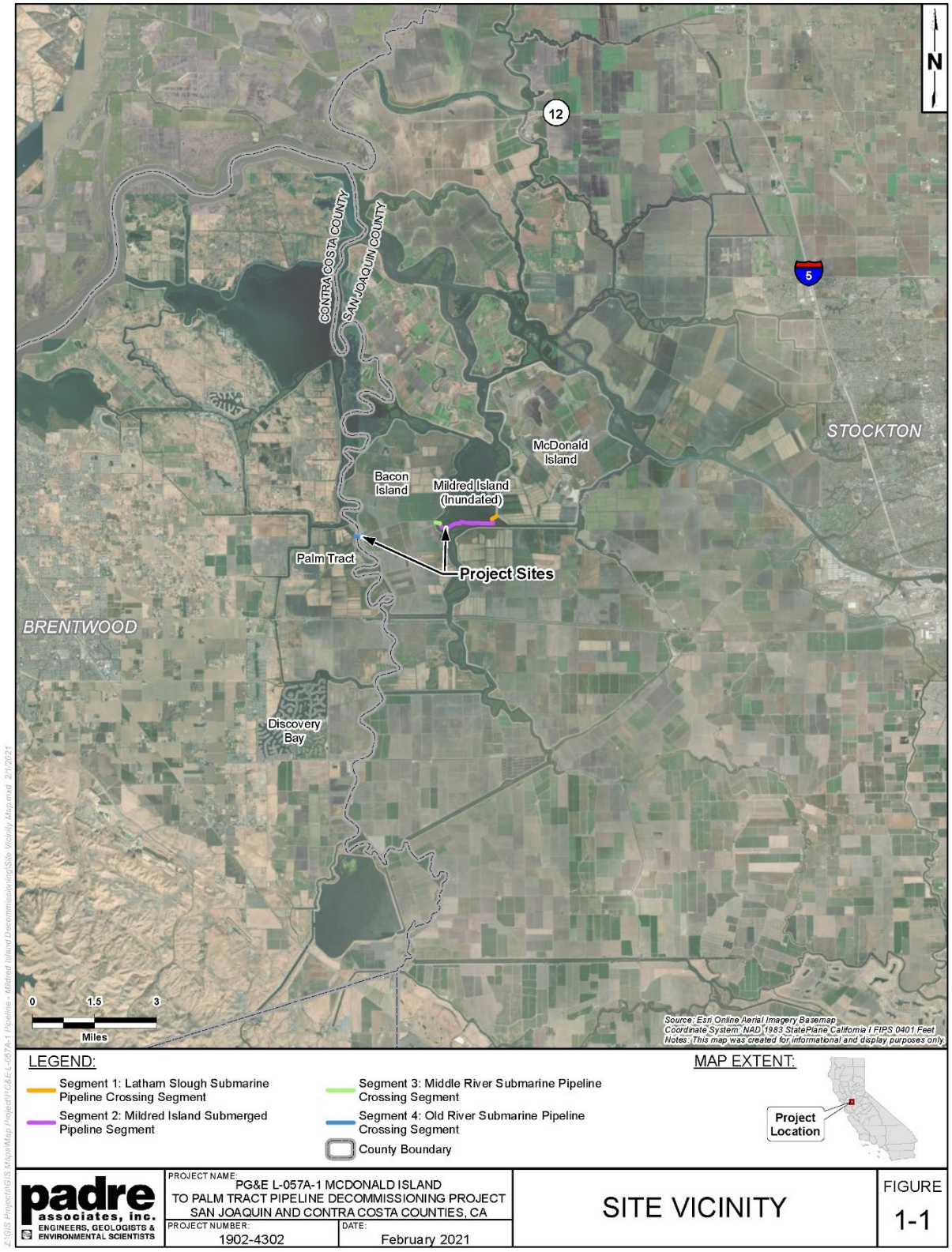
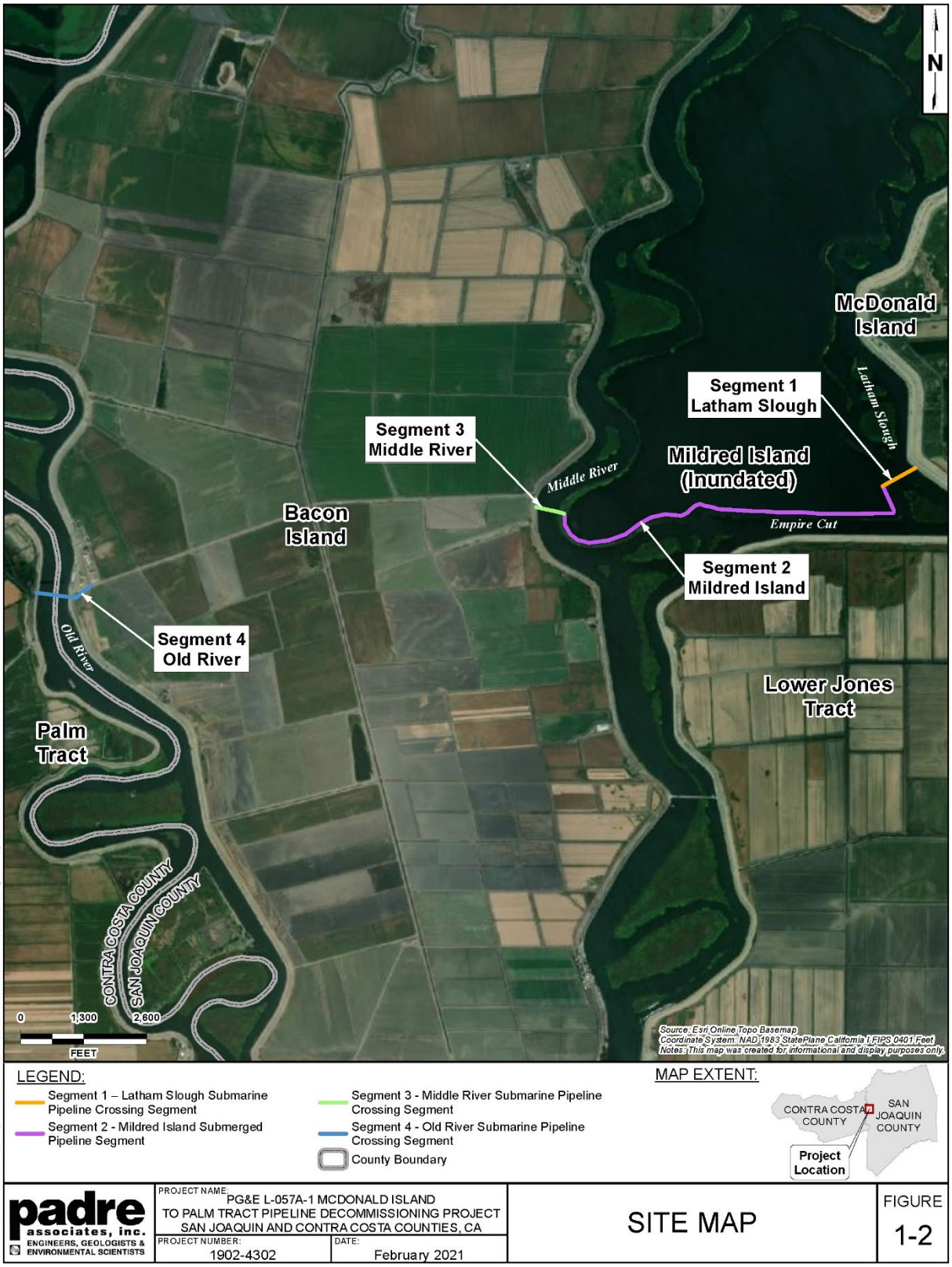


Figure 1-2. Project Overview Map



1.5 PROJECT BACKGROUND AND OBJECTIVES

PG&E L-057A-1 is a deactivated natural gas transmission pipeline that was installed in 1949 by Standard Oil of California to connect the McDonald Island gas field to Brentwood. The pipeline was acquired by PG&E in 1957 and then replaced and deactivated in 1993 as further described below.

Historically, a levee breach occurred in the southern portion of Mildred Island in 1983 and the island was inundated (and still remains inundated). The breach washed out approximately 600 feet of the southern levee and the portion of L-057A-1 that was buried in the toe of the landside slope of the Mildred Island southern levee was exposed through the breach area. Because this terrestrial portion of the pipeline was never intended to be submerged (submarine pipeline), it was not weight-coated and approximately 1,500 feet of the pipeline floated to the surface inside Mildred Island. This floating segment was subsequently ballasted with concrete blocks and anchored with helical screw anchors to the inundated surface of Mildred Island.

In 1993, PG&E replaced the Project-related river crossings and the Mildred Island segment with horizontally directionally drilled crossings, and the replaced segments were abandoned in place. Certain terrestrial segments of the L-057A-1 alignment on McDonald Island, Bacon Island and Palm Tract were removed.

In 2002, approximately 300 feet of the deactivated ballasted pipeline at the southern breach of the Mildred Island levee broke loose from its anchors and floated to the surface. This floating segment was mostly located between two intact portions of the Mildred Island levee.

In October 2019, an additional approximately 900 feet of the Mildred Island terrestrial segment broke loose from its anchors through the breached levee area and floated to the surface, effectively blocking the waterway that now exists between Empire Cut and the inundated Mildred Island interior. PG&E installed navigation safety aids on the floating pipeline segment and immediately began preparations to re-ballast and sink the floating segment of pipeline back down to the floor of the inundated island as an emergency activity. This re-ballasting was successfully completed in December 2019 by flooding the contiguous pipeline segment between McDonald Island and Bacon Island with freshwater.

In response to these events, PG&E is now proposing to remove a majority of the remaining submerged pipeline segments of L-057A-1 between McDonald Island and Palm Tract. These segments consist of Segment 1 - the Latham Slough crossing (approximately 712 feet in length), Segment 2 - the Mildred Island terrestrial segment (approximately 8,113 feet in length now submerged on the flooded island), Segment 3 -

the Middle River crossing (approximately 551 feet in length), and Segment 4 - the Old River crossing (approximately 1,205 feet in length).

1.6 PUBLIC REVIEW AND COMMENT

Pursuant to State CEQA Guidelines sections 15072 and 15073, a lead agency must issue a proposed MND for a minimum 30-day public review period. Agencies and the public will have the opportunity to review and comment on the document. Responses to written comments received by the CSLC during the 30-day public review period will be incorporated into the MND, if necessary, and provided in the CSLC's staff report. In accordance with State CEQA Guidelines section 15074, subdivision (b), the CSLC will review and consider the MND, together with any comments received during the public review process, prior to taking action on the MND and Project at a noticed public hearing.

1.7 APPROVALS AND REGULATORY REQUIREMENTS

1.7.1 California State Lands Commission

The state of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space.

On tidal waterways and navigable rivers, the State's sovereign fee ownership extends landward to the ordinary high-water mark, which is generally reflected by the mean high-tide line, except for areas of fill or artificial accretion. For this Project, the State's sovereign fee ownership includes the bed of the San Joaquin River watershed (including the Latham Slough, Middle River, and Old River navigable waterways), extending below the ordinary low-water mark. The CSLC's authority is set forth in division 6 of the Public Resources Code and the agency is regulated by the California Code of Regulations, title 2, sections 1900 through 2970. The CSLC has authority to issue leases or permits for the use of sovereign lands held in the Public Trust, including all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways, and retains certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). The CSLC must comply with CEQA when it undertakes an activity defined by CEQA as a "project" that must receive discretionary approval (i.e., the CSLC has the authority to approve or deny the requested lease, permit, or other approval) and that may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the

environment. CEQA requires the CSLC to identify the significant environmental impacts of its actions and to avoid or mitigate those impacts, to the extent feasible.

The Applicant has submitted an application to amend the existing lease (Lease No. 5438.1-A) to address the proposed decommissioning of the L-057A-1 natural gas pipeline segments in and around Mildred Island, from McDonald Island to Palm Tract in San Joaquin and Contra Costa Counties.

1.7.2 Other Agencies

In addition to the CSLC, the Project is subject to the review and approval of other state federal, and local entities with statutory or regulatory jurisdiction over various aspects of the Project (Table 1-1). All permits required for the Project would be obtained before starting any Project-related activities.

Table 1-1. Anticipated Agencies with Review/Approval over Project Activities

Permitting Agency	Anticipated Approvals/ Regulatory Requirements
State	
California State Lands Commission	Lease Amendment CEQA Lead Agency
California Department of Fish and Wildlife	Lake and Streambed Alteration Agreement (LSAA); Section 1600 of the California Fish and Game Code
California Office of Historic Preservation	National Historic Preservation Act; Section 106 Compliance
Central Valley Regional Water Quality Control Board (CVRWQCB)	Section 401 Water Quality Certification (Clean Water Act); National Pollutant Discharge Elimination System (NPDES) permits
Central Valley Flood Protection Board	No Encroachment Permit Required. Documentation of Final Disposition of Pipelines in Levees to be Provided.
Federal	
U.S. Army Corps of Engineers, Sacramento District	Section 404 Nationwide Permit (Clean Water Act) Section 10 Permit (Rivers and Harbors Act) 33 U.S.C. Section 1344 Authorization (Rivers and Harbors Act)
U.S. Fish and Wildlife Service	Section 7 Consultation (federal Endangered Species Act (FESA))
National Marine Fisheries Service	Section 7 Consultation (FESA); Essential Fish Habitat Assessment
Local	
Reclamation District 2024 – Palm Tract	Encroachment Permit; California Water Code Section 50000
Reclamation District 2028 – Bacon	Encroachment Permit; California Water Code Section

Permitting Agency	Anticipated Approvals/ Regulatory Requirements
Island	50000
Reclamation District 2030 – McDonald Island	Encroachment Permit; California Water Code Section 50000

2.0 PROJECT DESCRIPTION

Pacific Gas & Electric Company (PG&E or Applicant) is proposing to address long-term exposure of a deactivated natural gas pipeline in and around Mildred Island, from McDonald Island to Palm Tract west of the city of Stockton within San Joaquin and Contra Costa Counties. This portion of the L-057A-1 gas transmission pipeline has been inactive since 1993. The Project objective is permanent decommissioning of the former gas transmission segments of L-057A-1 between McDonald Island and Palm Tract to satisfy CSLC Lease requirements.

2.1 PIPELINE SEGMENTS PROPOSED FOR DECOMMISSIONING

For purposes of decommissioning planning, the subject pipeline has been divided into Segments 1 through 4 as further described below. Please refer to Appendix B (Project Plans) for additional details.

2.1.1 Segment 1 – Latham Slough Submarine Pipeline Crossing

Segment 1 includes approximately 712 feet of 14-inch-diameter nominal pipeline that extends from its termination near the crown of the levee on the waterside slope of the McDonald Island west levee, down the waterside slope and underneath Latham Slough, up and over the Mildred Island east levee, to a point of connection with the 18-inch-diameter Segment 2 pipeline on the landside slope (now underwater) of the Mildred Island east levee. The portion of this pipeline segment that lands on the waterside slope of the McDonald Island levee is buried between approximately 8 and 10 feet deep on the slope. The portion of this pipeline segment that crosses Latham Slough and lands on the Mildred Island east levee, ranges in burial depth between exposure at the surface to approximately 4 feet of cover. Previously performed surveys indicate that articulated concrete mats may have been previously installed in some places on top of the pipeline.

Access to the west levee at McDonald Island is gained from West McDonald Road within the boundary of the McDonald Island Reclamation District 2030 in San Joaquin County. The Project work area includes an approximately 500 foot by 200 foot (or 100,000 square foot) temporary laydown area at the top of the levee bank from West McDonald Road.

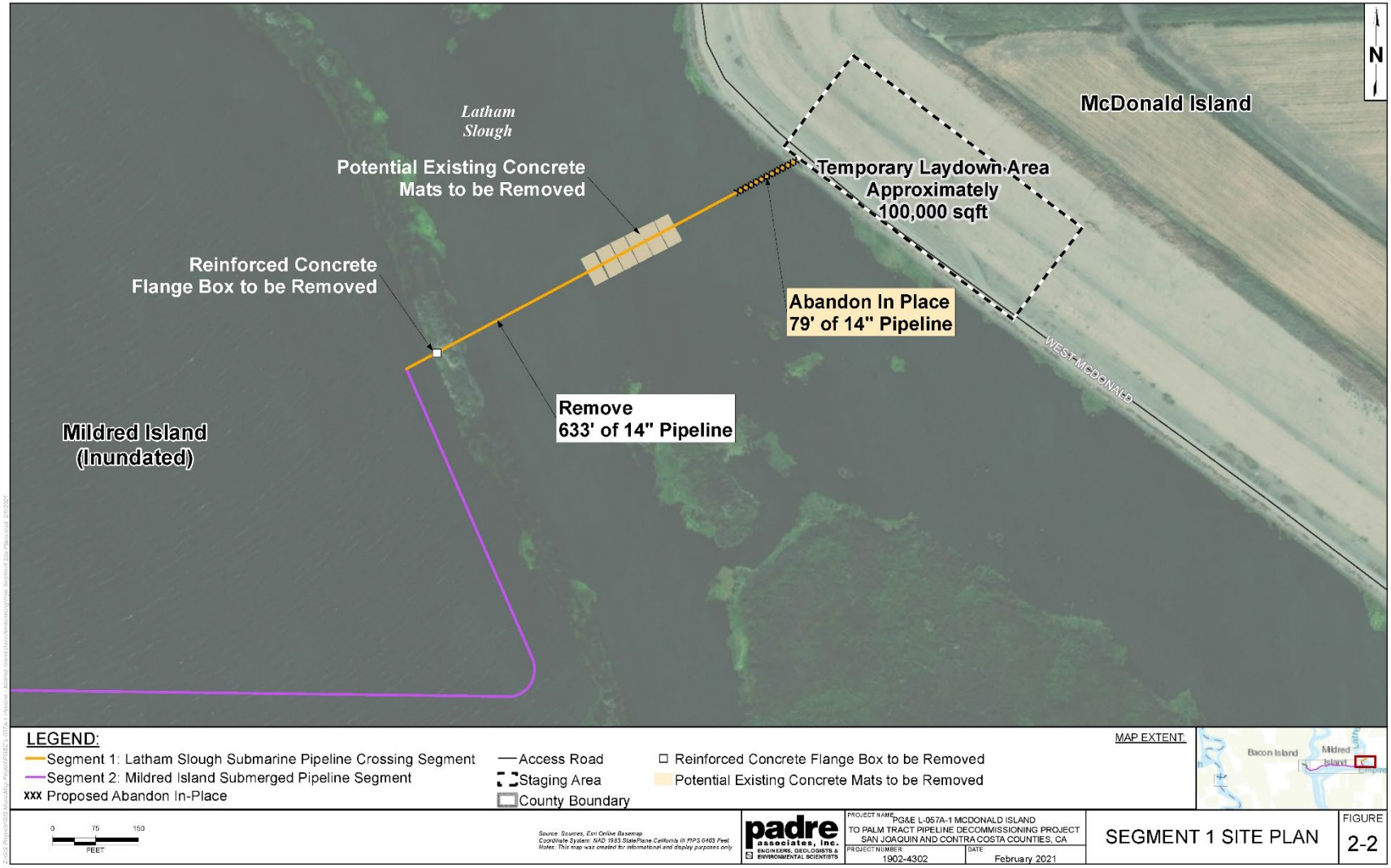
PG&E plans to fill an approximately 79-foot-long segment of pipeline underneath the waterside slope of the McDonald Island Levee with cement slurry and abandon it in place to avoid unnecessary disturbance to the levee. If present, all articulated concrete mats would be removed prior to removal of the remaining pipeline as further described in Section 2.2.4 below. The remaining 633 feet of the pipeline across Latham Slough and the Mildred Island Levee would be removed in its entirety to eliminate segments

with shallow depth of burial and potential future exposure. The recovered pipeline segments would be transported off-site for appropriate recycling or approved disposal.

Figure 2-1 provides a recent photograph of the Segment 1 area showing Latham Slough from the McDonald Island Levee. Figure 2-2 provides an overview of the Segment 1 replacement pipeline crossing alignment and proposed work areas.

Figure 2-1. View of Segment 1 - Latham Slough from McDonald Island Levee

Figure 2-2. Segment 1 Latham Slough Submarine Pipeline Crossing Map



2.1.2 Segment 2 – Mildred Island Submerged (Originally Terrestrial) Pipeline Segment

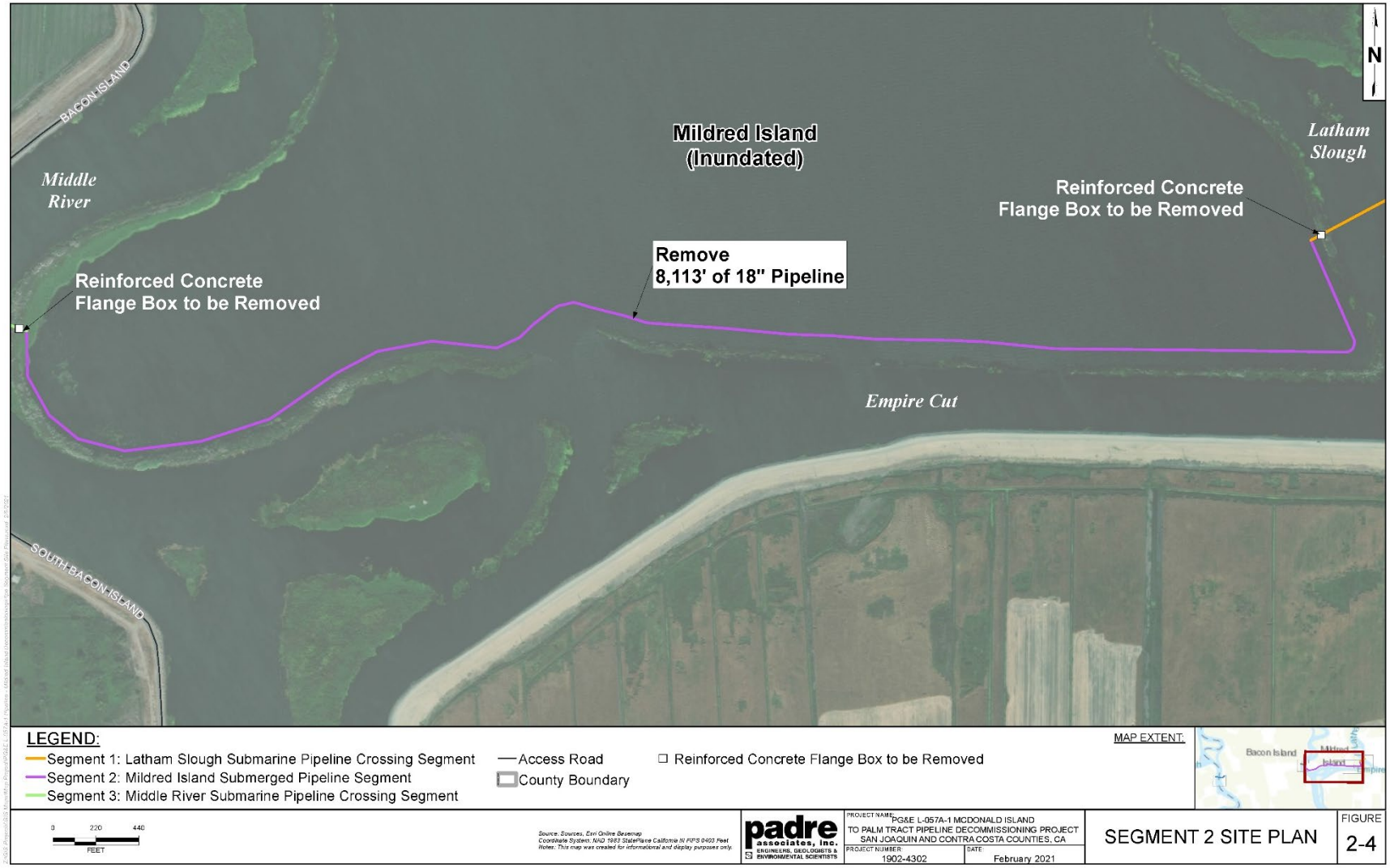
Segment 2 is an approximately 8,113-foot-long segment of 18-inch-diameter nominal pipeline. The pipeline extends from its connection point with Segment 1, crossing Mildred Island from east to west with both buried and exposed portions in the landside toe of the levee. Segment 2 terminates with its connection with Segment 3, a 14-inch-diameter nominal Middle River submarine pipeline crossing on the landside slope (now underwater) of the Mildred Island west levee. This pipeline segment was originally a terrestrial pipeline, which was buried in a shallow trench in the landside toe of the Mildred Island levee until this levee was breeched in January 1983 resulting in the inundation of the island's interior. Although sections of this segment of the pipeline are inaccessible to electronic hydrographic survey, the sections that were surveyed were found to be buried between exposure and up to 1 foot deep.

PG&E plans to remove all 8,113 feet of this terrestrial pipeline that is now submerged to eliminate segments that are exposed or under shallow depth of burial, and to eliminate the potential risk of pipeline segments floating to the surface. The recovered pipeline segments would be transported off-site for appropriate recycling or approved disposal. See Section 2.1.4 below for additional detail.

Figure 2-3 provides a recent photograph of Segment 2 showing the breach in the Mildred Island Levee and entrance to the interior of inundated Mildred Island. Figure 2-4 provides an overview of the Segment 2 Mildred Island submerged pipeline segment alignment and proposed work areas.

Figure 2-3. Segment 2 - View of Breach in Mildred Island Levee and Entrance to the Interior of Submerged Mildred Island

Figure 2-4. Segment 2 Mildred Island Submerged Pipeline Segment



2.1.3 Segment 3 – Middle River Submarine Pipeline Crossing

This approximately 551-foot-long segment of 14-inch-diameter nominal pipeline extends from its point of connection with the 18-inch-diameter Segment 2 pipeline on the landside slope (now underwater) of the Mildred Island west levee, up and over the levee, underneath Middle River, and up the waterside slope of the Bacon Island east levee to its termination near the crown of the levee. The east and west landing portions (waterside slopes) of this pipeline segment were found to be buried under approximately 5 to 12 feet of cover. The mid-river crossing portion was found to be buried under approximately 2 to 4 feet of cover.

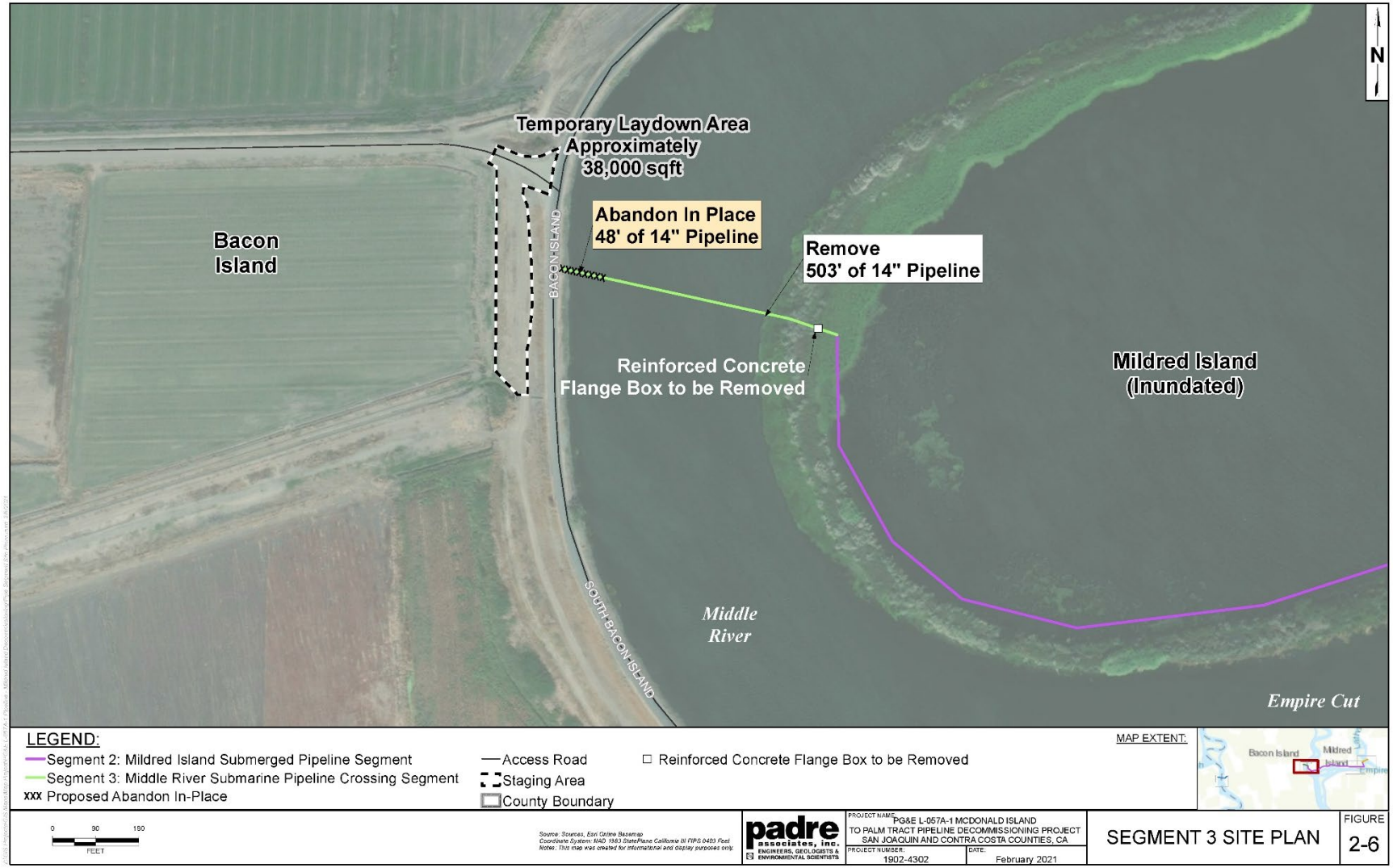
Access to Segment 3 is from South Bacon Island Road on Bacon Island. An approximately 38,000 square foot temporary laydown area would be located at the top of the levee from South Bacon Island Road and informal agricultural access roadways within Bacon Island Reclamation District 2028 in San Joaquin County.

PG&E plans to fill the approximately 48-foot-long segment of pipeline landing underneath the waterside slope of the Bacon Island levee with cement slurry and abandon it in place to avoid unnecessary disturbance to the levee. The remaining 503 feet of the pipeline across Middle River and the Mildred Island Levee would be removed in its entirety to eliminate segments with shallow depth of burial. The recovered pipeline segments would be transported off-site for appropriate recycling or approved disposal.

Figure 2-5 provides a recent photograph of Segment 3 showing the pipeline landing on Bacon Island. Figure 2-6 provides an overview of the Segment 3 Middle River submerged pipeline crossing alignment and proposed work areas.

Figure 2-5. Segment 3 – Southeast View of Pipeline Landing on Bacon Island at Middle River Crossing

Figure 2-6. Segment 3 – Middle River Submarine Pipeline Crossing Segment)



2.1.4 Segment 4 – Old River Submarine Pipeline Crossing

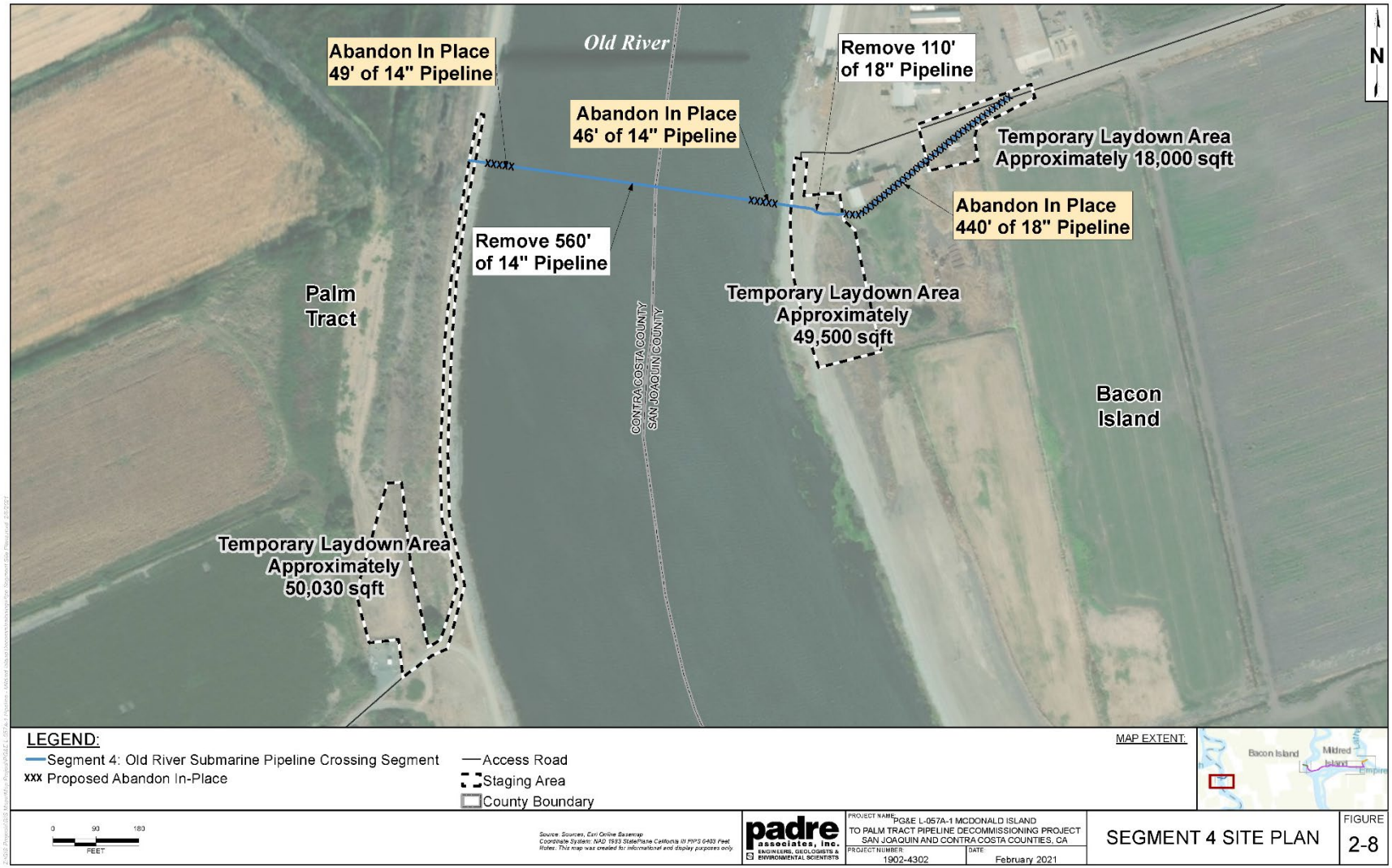
This approximately 1,205-foot-long segment of 14-inch-diameter and 18-inch-diameter nominal pipeline extends from its termination near the crown of the levee on the waterside slope of the Palm Tract east levee, underneath Old River, up and over the Bacon Island west levee, to a point inside Bacon Island where it would be terminated. Pipeline burial depth through the waterside slopes of this crossing range between approximately 2 to 5 feet of cover and the burial depths through the channel portion of the crossing range between 2 to 4 feet of cover. Figure 2-7 provides a recent photograph of Segment 4 showing the Old River pipeline crossing location.

Access to west levee of Bacon Island for Segment 4 is from an informal agricultural access roadway across Bacon Island. Two temporary laydown areas would be required to support work activities in this location (an approximately 18,000 square foot temporary laydown area near milepost 5.94 and an approximately 49,500 square foot temporary laydown area at the top of the levee within Bacon Island Reclamation District 2028 in San Joaquin County). Additionally, access to the east levee of Palm Tract would be from an informal agricultural access roadway on Palm Tract Reclamation District 2024 in Contra Costa County. An approximately 50,030 square foot temporary laydown area would be utilized north of the Old River Pressure Limiting Station and along the top of the levee roadway on Palm Tract. Figure 2-8 provides an overview of the Segment 4 Old River Submarine pipeline crossing alignment and proposed work areas.

PG&E plans to fill the approximately 46-foot-long segment of pipeline underneath the waterside slope of the Bacon Island Levee and the approximately 49-foot-long segment of pipeline underneath the waterside slope of the Palm Tract Levee with cement slurry and abandon these segments in place to avoid unnecessary disturbance to the levee. The pipeline would be excavated and cut near the toe of each levee waterside slope where the pipeline is buried under a minimum of 5 feet of cover. The remaining 560 feet of the Old River crossing would be removed in its entirety to eliminate segments with shallow depth of burial. Approximately 110 feet of the terrestrial pipeline crossing the Bacon Island Levee at this site would be removed across the crown of the levee and down the landside slope to the landside toe. Finally, approximately 440 feet of buried terrestrial pipeline from the landside toe out to a point where the pipeline intersects with the existing dirt roadway would be filled with cement slurry. The recovered pipeline segments would be transported off-site for appropriate recycling or approved disposal.

Figure 2-7. Segment 4 – Old River Crossing Location

Figure 2-8. Segment 4 - Old River Submarine Pipeline Crossing Segment



2.2 PIPELINE DECOMMISSIONING METHODOLOGY

Pipeline decommissioning of Segments 1 through 4 would be accomplished in the following primary steps as further described below.

- Pre-Project Plans and Surveys (Section 2.2.1)
- Pipeline Pigging and Flushing (Section 2.2.2)
- Cementing (Slurry and Abandonment in-Place as Applicable) (Section 2.2.3)
- Pipeline Removal (Section 2.2.4)
- Site Restoration and Demobilization (Section 2.2.5)
- Post-Project Surveys and Reporting (Section 2.2.6)

2.2.1 Pre-Project Plans and Surveys

A contractor-specific Project Work and Safety Plan (PWSP) would be submitted for lead agency approval at least 30 days prior to mobilization. The PWSP will provide additional details related to the means and methods that would be employed to comply with permit conditions and safety requirements.

A contractor specific pre-Project bathymetric and surficial features multi-beam survey of the entire underwater worksite would be performed prior to mobilization. The only exception would be any areas inside the inundated Mildred Island that are too shallow to survey or are otherwise inaccessible due to obstructions. This survey would serve as the baseline survey to be used in comparison to a post-construction multi-beam survey that would be performed after the completion of all in-water construction activities.

Applicable environmental surveys would be performed as part of the MND's Mitigation and Monitoring Plan or the permitting process and performed as required. Other anticipated notifications include pre-excavation DigAlert (811) utility clearance and the U.S. Coast Guard Advanced Notice to Mariners (NTM). See Section 2.5 (Project APMs - Applicant Proposed Measures).

2.2.2 Pipeline Pigging and Flushing

All four segments would be pigged and flushed to ensure that total petroleum hydrocarbon (TPH) levels in the pipeline are less than 15 parts per million (ppm). This would be accomplished by pumping a series of several gel pigs (a tool sized to the interior width of the pipeline used to push material through it) and cleaning chemicals through the pipeline with fresh water. As further discussed below, Segments 1, 2, and 3 are contiguous and would be pigged and flushed as a single unit. Segment 4 is disconnected and would be pigged and flushed separately.

2.2.2.1 Segments 1, 2, and 3

Segments 1 through 3 are currently filled with freshwater and the ends are capped at McDonald Island and Bacon Island. To facilitate pigging and flushing, the pipeline would be excavated on the waterside slope of the McDonald Island levee to re-terminate the pipeline and install a riser and pig launcher. The excavation would be performed using terrestrial equipment (an excavator) operating from the levee crown. To minimize the size of the excavation and maintain a safe work area the excavation would be stabilized with metal shoring panels held in place with metal hydraulic support struts filled with air to maintain tension (Figure 2-9, Step 1). Excavation spoils and riprap would be stockpiled separately. Once the excavation is complete, divers would cut the pipeline using a hydraulically powered reciprocating saw and install a mechanical repair flange on the end of the pipeline (Figure 2-9, Step 2). A temporary riser and pig launcher would then be installed onto the end of the exposed pipeline. A seep tent would be used during the pipeline cutting, flange and riser installation to capture any contaminants. A riser has previously been installed on the east side of Bacon Island, so no excavation would be required prior to pigging and flushing at this location. A pig receiver would be installed on the existing riser (Figure 2-9, Step 3).

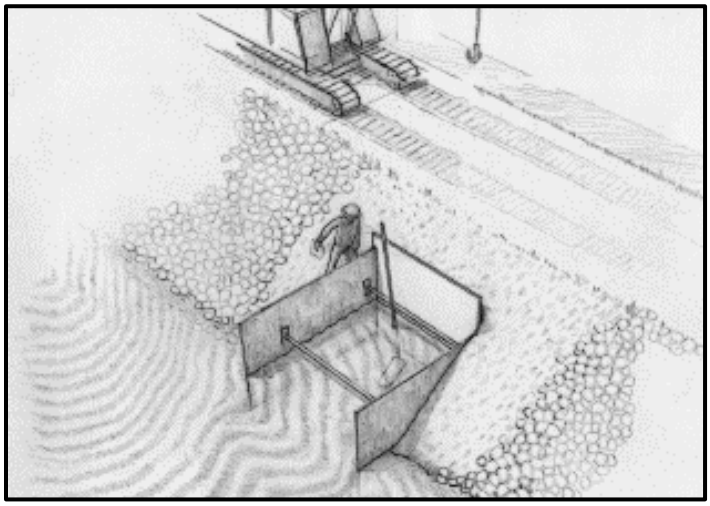
Water Storage and Disposal. Temporary tanks and associated piping would be set up for water storage and handling within the temporary laydown areas on both McDonald and Bacon Islands. Approximately ten temporary tanks, each with an individual capacity of 21,000 gallons, would be installed on each end of the pipeline segment (20 tanks total). Fresh water would be transported via trucks from a local water source to the temporary water storage facilities on McDonald Island, where it would be pumped from a trailer-mounted water pump into the pig launcher.

Several gel pigs would be pumped into the pipeline, with a mixture of water and cleaning chemicals between each individual pig, referred to collectively as a pig train. The water would push the pig train through the pipeline to the pig receiver and then into the temporary water storage facilities on Bacon Island. The anticipated volume of flush water for Segments 1, 2, and 3 is approximately 100,000 gallons per flushing event. A water sample would be acquired after the pig run and tested to determine if the TPH concentration is below 15 ppm. One pig run is anticipated, but additional runs would be performed until sample testing indicates that the TPH concentration within the pipeline is below 15 ppm.

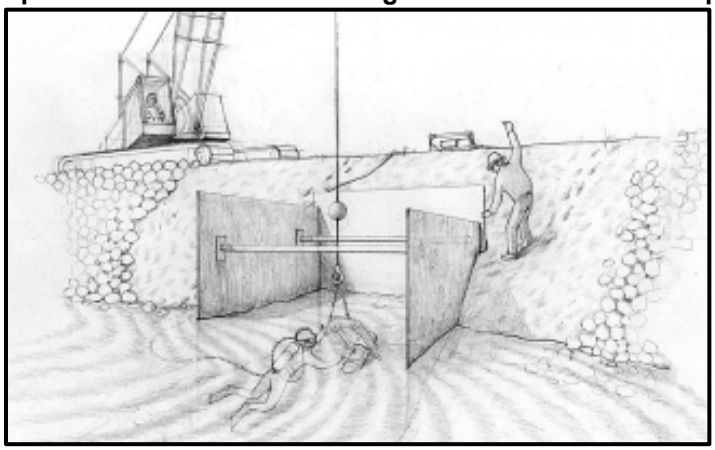
Wastewater stored in the temporary water storage facilities would be tested to characterize the type and concentration of any contaminants. The test results would be used to determine whether the water should be treated on-site, transported to an off-site wastewater treatment facility (requiring approximately 40 trips located within a 25-mile radius of the Project site), or a combination thereof (on-site pre-treatment, then transportation). If it is determined that water could be treated on-site, authorization

under a NPDES permit would be obtained from the CVRWQCB for discharge of treated flush water.

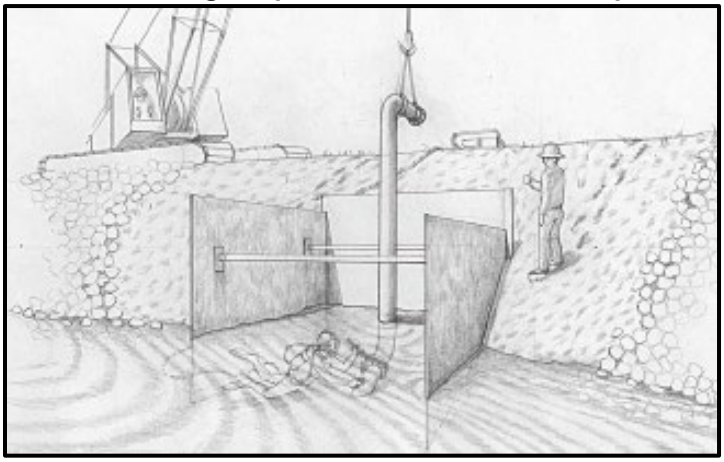
Figure 2-9. Segments 1, 2, and 3 Pipeline Pigging and Flushing: Installation Methodology (Illustration)



Step 1 – Excavation with Shoring on Levee Waterside Slope



Step 2 – Diver Cutting a Pipeline in the Waterside Slope of a Levee



Step 3 – Installation of a Temporary Riser to Facilitate Pigging and Flushing

Depending on flush water test results, discharge to land may be authorized under state-wide General Order WQO-2003-003, while discharge to surface waters may be authorized under General Order R5-2016-0076-01 (NPDES No. CAG995002). The treated water would be tested as required by permit conditions. If needed, treated flush water would be stored on-site until permit authorization is obtained.

2.2.2.2 Segment 4

The Segment 4 pipeline terminates at the crown of the Palm Tract levee (crown and landward slope segments have already been removed) and passes through the crown of the Bacon Island levee, down the landside slope, and underneath the island floor to the dirt access road. No in-water excavation would be required to reach the Palm Tract levee-crown termination or expose the pipeline at the Bacon Island levee crown.

The pipeline would be pigged and flushed from Bacon Island to Palm Tract. A pig launcher would be installed within an 8-foot by 8-foot excavation on Bacon Island near the cross section of the Bacon Island Ingress/Egress Road and temporary staging area. A pig receiver would be installed within a 9-foot by 18-foot excavation at the westernmost point of Segment 4 where it intersects with the existing levee crown and dirt road at Palm Tract. Water would then be used to push a train of gel pigs, water, and cleaning chemicals through the pipeline from the launcher to the receiver, then water samples would be acquired and tested to determine if the TPH concentration is below 15 ppm. The volume of flush water is significantly smaller for Segment 4, approximately 6,000 gallons per flushing event. As a result, water for pigging and flushing would be pumped directly out of and into vacuum trucks on either end of the pipeline, and no temporary water storage tanks would be required.

2.2.3 Cementing (Slurry and Abandonment In-Place as Applicable)

Some sections of the pipeline would be filled with cement slurry and abandoned in place. Most of these segments are located in the levee waterside slopes, which are not being removed in order to minimize unnecessary disturbance to the levees and potential impacts to levee integrity. Specifically, the pipeline landing on the McDonald Island levee waterside slope, the Bacon Island east levee waterside slope, the Bacon Island west levee waterside slope, and the Palm Tract east levee waterside slope would be filled with cement slurry and abandoned in place.

To fill the pipeline sections with cement slurry, a foam pig with a polyethylene rope tether would be inserted into the same pig launchers and receivers used for the pigging and flushing operations. The tethered pig would then be pushed with a pre-determined volume of cement slurry mixture to fill the pipeline with cement past where the pipeline would be cut for removal. The rope tether would be cut to a length corresponding to the volume of cement to prevent the weight of the cement from continuing to push the pig

further down the pipeline. The cement slurry would then be allowed to cure (approximately 48 hours, minimum) prior to subsequent removal operations.

2.2.4 Pipeline Removal

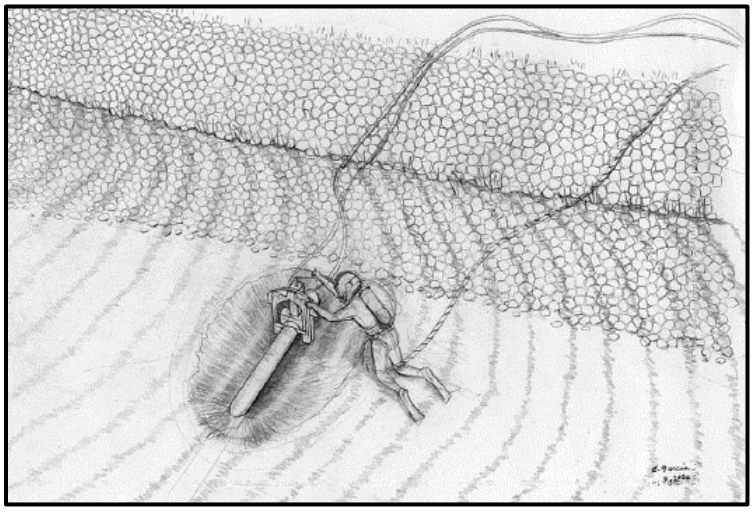
Pipeline Segments 1 through 4 would be removed, except for the pieces that would be cemented and abandoned in place as previously described and shown on Figures 2-2, 2-4, 2-6, and 2-8.

A derrick barge equipped with a crane, shallow air diving spread, underwater excavation equipment, and spuds (movable steel piles attached to the barge that are lowered into the riverbed to anchor the barge in place) would be mobilized with a dedicated support tug from CS Marine Constructors, Inc. Mare Island facility (approximately 50 nautical miles [nm] away) to the worksite to support the submerged pipeline removal operations. An additional materials barge/support tug, crew transportation vessel, and small inflatable support skiffs would also accompany the derrick barge from Mare Island to the Project site.

Previously performed surveys indicate that articulated concrete mats may have been previously installed in some places on top of the pipeline (Figure 2-8). If present, all articulated concrete mats would be removed. Divers would rig the concrete mats to the barge crane that would then lift each mat out of the water and place it on the deck of the materials barge to be stored and transported to an approved disposal facility.

Where the waterside slope portions of the pipeline have been cement filled and are to be abandoned in place, the pipeline would be excavated and cut near the toe of each levee waterside slope (Figure 2-10). Underwater excavation would be conducted using a combination of a Toyo pump, hand jetting by divers, and clam buckets, depending on the conditions encountered. Cuts would then be made where the pipeline is buried under a minimum of 5 feet of cover. A hydraulically powered reciprocating saw would be used to cut the pipeline. Underwater excavation would be conducted using a combination of a Toyo pump, hand jetting by divers, and clam buckets, depending on the conditions encountered. Turbidity curtains would be used during excavation and removal as required. Once the pipeline has been cut, the sections to be removed would be lifted by the derrick barge crane and cut into manageable lengths. These pipeline pieces would then be placed on the deck of the materials barge to be stored and transported to an approved disposal facility. Any concrete blocks or helical screw anchors attached to the pipeline would also be removed and stored on the materials barge for disposal.

Figure 2-10. Illustration of Diver Cutting Pipeline in Underwater Excavation



There are two concrete flange boxes located on the Mildred Island Levee (one on the east side of the island and the other on the west) that would also be removed. In areas with more substantial pipeline depth of cover, underwater excavation would be performed above the pipeline to reduce the sediment over the pipeline, reducing the force required for the crane to lift the pipeline out of the riverbed. Pipeline removal would include the sections of pipeline across the Mildred Island levee and within Mildred Island. Due to shallow water depths and limited access to the interior of Mildred Island the derrick barge would work from outside the levee reaching over the levee with a crane. See Figure 2-11 for a representative photograph of a similar derrick barge taken during previous work at Mildred Island in 2019.

Figure 2-11. Photograph of Derrick Barge from Previous Repair Work at Mildred Island (2019)

In addition to removal of the submerged pipeline sections described above, there is also a terrestrial section of Segment 4 that would be removed. This 110-foot-long section includes the pipeline within the crown and landside slope of the west Bacon Island levee, as well as the land immediately adjacent to the levee landside slope. The easternmost end of this section is located approximately 20 feet east of the levee landside slope toe. This section is buried less than 3 feet deep and would be excavated and removed using standard terrestrial excavation equipment. It would be cut into pieces and transported via truck to an approved disposal facility.

2.2.5 Site Restoration and Demobilization

Temporary risers installed to facilitate cementing, pigging and flushing operations would be removed. Pipe to be abandoned in place would be capped where the temporary risers were attached if the riser attachment point is above water. Where riser attachments are underwater, the pipe to be abandoned in place would be cut, but not capped. The approximate depth of cover at the cut points would be 5 feet.

Temporary excavation shoring would be removed from the site. Excavations on the levees would be backfilled, restored to original contours, and compacted in accordance with Reclamation District encroachment permit requirements. Native spoils would be stockpiled and used for backfilling if use of native spoils is permitted by the Reclamation Districts. Riprap, crushed rock, controlled low-strength material (CLSM) or other fills may also be imported, and geotextiles may be used, as required by Reclamation District encroachment permits.

All terrestrial excavations, except one, are on or near levees and would be backfilled, restored to original contours and compacted in accordance with Reclamation District encroachment permit requirements as described above. The one terrestrial excavation that is not on or near a levee is the excavation at the east end of Segment 4 on Bacon Island. This excavation would be backfilled with native spoils to original contours and compacted to a minimum of 95 percent compaction.

The initial pipeline process would involve rigging a lift line on one end of the pipeline and pulling it out from the cut point to minimize underwater soil disturbance. If the pipeline cannot be pulled out, then precision marine excavation would be employed using divers or a pump lowered from the barge to remove sediment cover over the pipeline and then lift it out. In this case, the excavation spoils would be side cast within a designated area surrounded by silt curtains to minimize turbidity, and then returned to the excavation for backfill as feasible. The excavation would complete backfill through natural hydrogeomorphic processes. Any turbidity curtains that were installed as part of the Project would be removed upon Project completion.

Solid waste would be transported via a combination of barge and truck to approved offsite disposal facilities (located within 35 miles of the Project site). Approximately 50 trips of waste would be generated from the Project. Wastewater disposal is discussed in Section 2.2.2 above. All decommissioning equipment and materials would be removed from the site.

2.2.6 Post-Project Surveys and Reporting

A post-Project bathymetric and surficial features multi-beam survey of the entire underwater worksite would be performed after the decommissioning activities have been completed. This survey would be compared to the pre-Project survey to verify that no debris from the Project remains.

A final Project completion report would be compiled and submitted, including daily Project manager's reports, selected pictures/video, drawings showing the post-Project disposition of the pipeline sections that were abandoned in place, surveys, and other relevant Project documentation.

2.3 EQUIPMENT REQUIREMENTS

The primary equipment requirements for the Project are summarized in Table 2-1 below.

Onshore and offshore work would be conducted concurrently during daytime hours (approximately 10 to 12 hours per day) for approximately 87 days. It is estimated that a maximum of approximately 30 persons at a time would be required for the proposed work activities as detailed in Table 2-2.

Table 2-1. Project Equipment Requirements

Equipment Type	Quantity	Horsepower	Operating Hours/Day	Days
Pre-Project Survey				
Survey vessel	1	(2) 135	12	1
Mobilization				
Light-duty truck (crew)	4	200	3	10
Heavy-duty truck	2	350	8	5
Terrestrial Excavation				
Light-duty truck (crew)	4	200	3	10
Heavy-duty truck	2	350	4	10
Excavator	4	310	6	10
Wheeled loader	2	240	6	10
Pigging and Flushing				

Equipment Type	Quantity	Horsepower	Operating Hours/Day	Days
Light-duty truck (crew)	4	200	3	8
Heavy-duty truck (water/vac)	2	350	8	8
Heavy-duty truck (deliveries)	2	350	6	4
Excavator	2	310	2	4
Wheeled loader	2	240	2	4
Water pump	1	20	4	4
Welding machine	1	20	4	4
Air compressor	1	20	2	4
Cementing				
Light-duty truck (crew)	2	200	3	4
Heavy-duty truck (concrete)	1	350	4	4
Excavator	2	310	2	4
Wheeled loader	2	240	2	4
Concrete pump	1	300	2	4
Welding machine	1	20	4	4
Pipeline Removal				
Crane barge	1	330	12	45
Materials barge	1-	NA	12	45
Support tug	2	500	12	45
Crew/support vessel	2	100	4	45
Dive compressor	2	50	12	45
Generator (water pump)	2	75	6	30
Support skiff	2	25	6	45
Site Restoration and Demobilization				
Light-duty truck (crew)	4	200	3	10
Heavy-duty truck	5	350	6	5
Excavator	4	310	8	5
Wheeled loader	2	240	8	5
Post-Project Survey				
Survey vessel	1	(2) 135	12	1

Table 2-2. Personnel Requirements

Task	Quantity	Hours/Day	Days
Mobilization	5	10	10
Terrestrial Excavation	8	10	10
Pigging and Flushing	4	10	8
Cementing	6	10	4
Pipeline Removal	30	12	45
Site Restoration and Demobilization	5	10	10
		Total	**87**

2.4 SCHEDULE

The decommissioning schedule is based on ~~anticipated~~ guidance from resource agency fish specialists ~~and would~~to avoid listed fish species migration and spawning periods and coincides with the timeframe during which aquatic conditions are least favorable for listed fish occurrence ~~at the Project site and~~ within the aquatic work area~~ is least likely to support listed fish species~~. All decommissioning activities within waterways would occur within the regulatory in-water work windows that would limit in-water work to August 1 through October 31 for protection of listed fish species.

Work activities would generally be conducted Monday through Saturday (occasionally Sunday). Weekend work may occur, if necessary, to complete the Project within the defined seasonal constraints. It is expected that Project activities would be conducted during daylight hours (approximately 10 to 12 hours per day) for approximately 87 days, thus requiring the full duration of the proposed 3-month timeframe from August 1 through October 31 in order to complete the Project.

2.5 PRE-PROJECT PREPARATION ACTIVITIES AND SURVEYS

Once all regulatory permits are received, but prior to commencement of Project activities, the following Applicant Proposed Measures (APMs), consisting of technical plans and surveys to perform the work safely and in compliance with all regulatory permits and permissions, California Occupational Safety and Health Administration safety regulations, and owner's safety requirements would be completed. See Section 3.10, *Hazards and Hazardous Materials* for complete APM text.

2.5.1 Project APMs

- APM-1: Project Work and Safety Plan (PWSP)
- APM-2: Pre- and Post-Project Bathymetric Survey
- APM-3: Advanced Notice to Mariners

3.0 ENVIRONMENTAL CHECKLIST AND ANALYSIS

This section contains the Initial Study (IS) that was completed for the proposed Pacific Gas & Electric Company (PG&E) L-057A-1 McDonald Island to Palm Tract Pipeline Decommissioning Project (Project) in accordance with the requirements of the California Environmental Quality Act (CEQA). The IS identifies site-specific conditions and impacts, evaluates their potential significance, and discusses ways to avoid or lessen impacts that are potentially significant. The information, analysis, and conclusions included in the IS provide the basis for determining the appropriate document needed to comply with CEQA. For the Project, based on the analysis and information contained herein, California State Lands Commission (CSLC) staff has found that the IS shows that there is substantial evidence that the Project may have a significant effect on the environment, but revisions to the Project would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur. As a result, the CSLC concluded that a Mitigated Negative Declaration (MND) is the appropriate CEQA document for the Project.

The evaluation of environmental impacts provided in this document is based in part on the impact questions contained in 2020 Appendix G of the State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Air Quality, Biological Resources, etc.), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below.

- **Potentially Significant Impact.** This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more "Potentially Significant Impacts," a Project Environmental Impact Report (EIR) would be prepared.
- **Less than Significant with Mitigation.** This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures would reduce the identified effect(s) to a less than significant level.
- **Less than Significant Impact.** This column is checked when the Project would not result in any significant effects. The Project's impact is less than significant even without the incorporation of Project-specific mitigation measures.
- **No Impact.** This column is checked when the Project would not result in any impact in the category, or the category does not apply.

The environmental factors checked below (Table 3-1) would be potentially affected by this Project. A checked box indicates that at least one impact would be a "Potentially Significant Impact" except that the Applicant has agreed to Project revisions, including

the implementation of mitigation measures, that reduce the impact to "Less than Significant with Mitigation.

Table 3-1. Environmental Issues and Potentially Significant Impacts

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

Detailed descriptions and analyses of impacts from Project activities and the basis for their significance determinations are provided for each environmental factor on the following pages, beginning with Section 3.1, Aesthetics. Relevant laws, regulations, and policies potentially applicable to the Project are listed in the Regulatory Setting for each environmental factor analyzed in this IS as well as within Appendix A - Abridged List of Major Federal and State Laws, Regulations, and Policies Potentially Applicable to the Project.

AGENCY DETERMINATION

Based on the environmental impact analysis provided by this Initial Study:

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

Cynthia Herzog — June 24, 2021

Signature — Date

Cynthia Herzog, Senior Environmental Scientist
Division of Environmental Planning and Management
California State Lands Commission

3.1 AESTHETICS

AESTHETICS – Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

3.1.1 Environmental Setting

The Project site extends from the western bank of McDonald Island, west across Latham Slough, inundated Mildred Island, and Middle River to the eastern bank of Bacon Island, and then again from the western bank of Bacon Island across Old River to the eastern bank of Palm Tract. The Project area is primarily open space and agriculturally developed and is located within San Joaquin and Contra Costa Counties. Figures 2-1, 2-3, 2-5, and 2-7 provide photos that show views of the four Project segment areas. The closest residential development is the community of Summer Lake located approximately 3 miles northwest of Segment 4. However, there are a few farmworker residences on the west side of Bacon Island near Segment 4.

Public views of the Project site are limited to motorists on public roadways (Bacon Island Road) and boaters on Latham Slough, inundated Mildred Island, Middle River, and Old River. The nearest scenic highway is Interstate Highway 5, which is a state-designated scenic highway located approximately 8 miles east of the Project site.

3.1.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to aesthetics that are relevant to the Project. State laws and regulations pertaining to aesthetics and relevant to the Project are identified in Appendix A. Local regulations including applicable County General Plan policies are discussed below.

3.1.2.1 San Joaquin County

San Joaquin County General Plan policies related to aesthetic resources that are applicable to the proposed Project include:

Policy LU-3.10: Visual Access. The County shall encourage new development to maintain the views of hillsides, creeks, and other distinctive natural areas by regulating building orientation, height, and bulk.

Policy LU-8.2: Open Space Character. The County shall require new development in Resource Conservation designated areas to be planned and designed to maintain the scenic open space character of the surrounding area, including view corridors from highways. New development should use natural landforms and vegetation in the least visually disruptive manner possible, and use design, construction, and maintenance techniques that minimize the visibility of structures.

Policy LU-8.3: Waterway Conservation and Restoration. The County shall encourage the conservation and restoration of rivers, creeks, and sloughs as multi-functional open space corridors that complement adjoining development and connect city and County recreation facilities (e.g., parks).

3.1.2.2 Contra Costa County

Contra Costa County General Plan policies related to aesthetic resources that are applicable to the proposed Project include:

Policy 9-12: In order to conserve the scenic beauty of the county, developers shall generally be required to restore the natural contours and vegetation of the land after grading and other land disturbances. Public and private projects shall be designed to minimize damage to significant trees and other visual landmarks.

Policy 9-25: Maintenance of the scenic waterways of the county shall be ensured through public protection of the marshes and riparian vegetation along the shorelines and delta levees, as otherwise specified in this Plan.

Policy 9-27: Physical and visual public access to established scenic routes shall be protected.

3.1.3 Impact Analysis

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

No Impact

There are no scenic vistas in the Project area, therefore, Project-related activities, equipment, and materials would not be visible from a scenic vista.

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

No Impact

The Project would not involve any structures or materials that could be visible from Interstate Highway 5; therefore, no impact to scenic resources along this state scenic highway would occur.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact

Public views are limited to motorists on Bacon Island Road and boaters on affected waterways. Project activities would temporarily introduce terrestrial and marine construction equipment to these public viewsheds, and primarily affect passing boaters. However, the Project is short term and there are no above-ground permanent elements that would be visible following construction. Additionally, vegetation disturbance would be very limited and would not include removal or trimming of any trees. Project-related changes in visual quality would be minor and temporary in nature (a few weeks at any one location). A less than significant impact would result.

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

Less than Significant with Mitigation

Residential land uses in the Project area are limited to housing located near Segment 4 on Bacon Island (Figure 2-8). Although Project work activities would be conducted predominantly during daylight hours (from approximately 7:00 a.m. to 7:00 p.m. per workday), limited nighttime operations (a few hours after sunset) may be required. Lighting requirements for nighttime operations would adversely affect nighttime views from nearby residences; however, **MM AES-1** would limit lighting intensity and direct all lighting downwards and onto the work area. With the implementation of this measure, the impact would be less than significant.

MM AES-1 Nighttime Illumination Limitations. Project lighting shall be as low in intensity as possible to meet Project needs and safety requirements, be focused on work areas, and equipped with shielding to minimize glare and spillover into adjacent areas.

3.1.4 Mitigation Summary

Implementation of the following mitigation measure would reduce the potential for Project-related impacts to aesthetic resources to less than significant.

- MM AES-1: Nighttime Illumination Limitations

3.2 AGRICULTURE AND FORESTRY RESOURCES

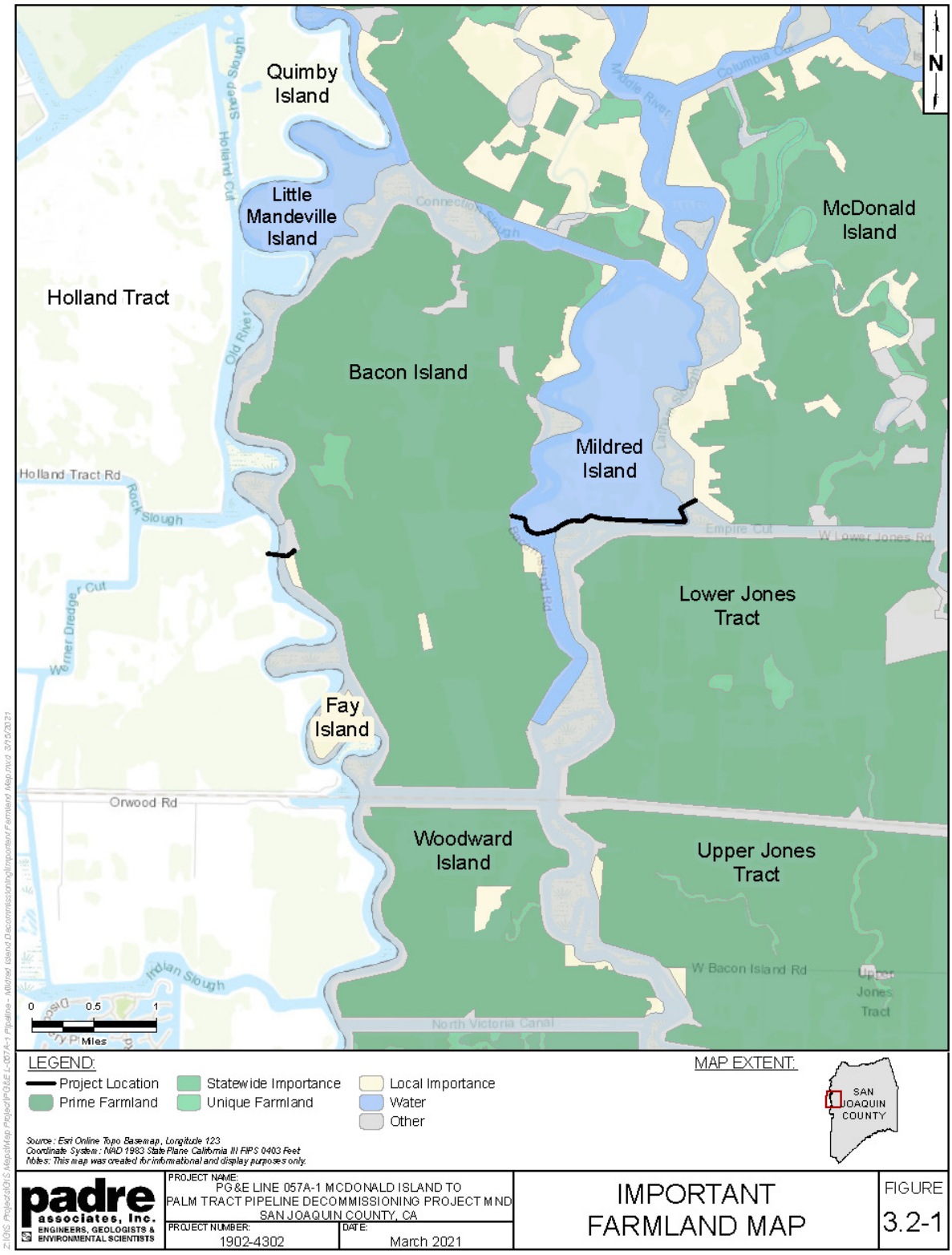
AGRICULTURE AND FORESTRY RESOURCES[2] - Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non-agricultural use?	☐	☒	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Environmental Setting

The Project site is located within San Joaquin and Contra Costa Counties. Agriculture is an important industry in these counties. Created by sediments that have washed out of the major rivers that drain the area, the Delta is characterized by rich agricultural soils and farming activities (Mintierharnish Planning Consultants 2016). As shown in Figure 3.2-1, the Project site is located adjacent to areas designated as prime farmland and farmland of local importance.

[2] In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Figure 3.2-1. Important Farmland Map



3.2.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to agricultural resources that are relevant to the Project. State laws and regulations pertaining to agricultural resources and relevant to the Project are identified in Appendix A. The state Williamson Act and Farmland Security Zone Act programs are administered locally. San Joaquin and Contra Costa Counties are a party to and enforce the contracts on lands within their unincorporated areas.

The portion of McDonald Island proposed for use by the Project for staging and decommissioning of Segment 1 is currently within a Williamson Act contract (San Joaquin County 2015), however, Segments 2 and 3 are not located within a Williamson Act contract area. Similarly, Segment 4 within Contra Costa County does not fall within a Williamson Act contract area (Contra Costa County Department of Conservation and Development 2017).

Other local General Plan policies related to agriculture that are applicable to the Project are listed below.

3.2.2.1 San Joaquin County

San Joaquin County General Plan policies related to agricultural resources that are applicable to the proposed Project include:

Policy LU-2.1: Compatible and Complimentary Development. The County shall ensure that new development is compatible with adjacent uses and complements the surrounding natural or agricultural setting.

Policy LU-7.1: Protect Agricultural Land. The County shall protect agricultural lands needed for the continuation of viable commercial agricultural production and other agricultural enterprises.

Policy LU-7.7: Agricultural Buffers. The County shall ensure non-agricultural land uses at the edge of agricultural areas incorporate adequate buffers (e.g., fences and setbacks) to limit conflicts with adjoining agricultural operations.

Policy LU-7.15: Williamson Act Contracts. The County shall continue to administer the Williamson Act program and shall maintain procedures for Williamson Act contracts consistent with the policies in the General Plan.

3.2.2.2 Contra Costa County

The Project area has been identified within the Contra Costa County General Plan, Conservation Element (2005) as containing important agricultural areas (Figure 8-2 of

General Plan). Contra Costa County General Plan policies related to agriculture that are applicable to the proposed Project include:

Policy 8-2: Areas that are highly suited to prime agricultural production shall be protected and preserved for agriculture, and standards for protecting the viability of agricultural land shall be established.

Policy 8-32: Agriculture shall be protected to assure a balance in land use. The policies of Measure C – 1990 shall be enforced.

Policy 8-33: The County shall encourage agriculture to continue operating adjacent to developing urban areas.

Policy 8-36: Agriculture shall be protected from nuisance complaints from non-agricultural land uses.

3.2.3 Impact Analysis

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 Natural Resources Agency, to non-agricultural use?

Less Than Significant with Mitigation

The Project is primarily located within waterways and levee embankments. As shown in Figure 3.2-1, these areas are identified as “Other” by the California Department of Conservation Farmland Mapping and Monitoring Program. However, the Project landings and staging areas are located adjacent to Prime farmland and farmland of local importance designated by the Department of Conservation. Project activities in these areas are limited to staging and a small amount of temporary soil disturbance during construction. The greatest potential impact would result to the adjacent farmland along the eastern portion of Segment 4 at Bacon Island that would have the potential for temporary interference during Project activities in this location. However, adequate noticing to adjacent property owners described in **MM AG-1** in advance of work activities including PG&E contact information would ensure appropriate coordination opportunities are provided. Following implementation of this measure, this short-term potential for interference would result in a less than significant impact.

Following decommissioning, the pipeline segments would be removed entirely or abandoned in-place underground. No long-term conversion of farmland would occur, and no new above-ground facilities would be constructed. No significant impacts to agriculture would result.

MM AG-1: Noticing to Adjacent Property Owners. PG&E shall provide notices to adjacent property owners within 100 feet of the Project site at least 2 weeks prior to Project implementation. Project notices shall include PG&E Project manager contact information, as well as specifics regarding Project schedule and proposed hours of operation.

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

Less than Significant Impact

Segment 1 falls within an existing Williamson Act contract area on McDonald Island. However, Project activities would be short term and would not result in any permanent above-ground impacts. The Project does not represent a change in land use and would not conflict with existing General Agriculture (A/G) zoning in San Joaquin County (Open Space designation in Contra Costa County), agricultural practices, or result in cancellation of any Williamson Act contract. A less than significant impact would result.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?

No Impact

Forest land or timberland does not occur in the region and would not be rezoned.

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

No Impact

Forest land or timberland does not occur in the region and would not be adversely affected or converted to non-forest use.

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

No Impact

The Project would not involve any environmental changes that could lead to conversion of farmland or forest land.

3.2.4 Mitigation Summary

Implementation of the following MM would reduce the potential for Project-related impacts to agricultural resources to less than significant.

- MM AG-1: Noticing to Adjacent Property Owners

3.3 AIR QUALITY

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

3.3.1 Environmental Setting

3.3.1.1 General Climate and Meteorology

The California Air Resources Board (CARB) has divided California into regional air basins according to topographic air drainage features. The Project site is primarily located within San Joaquin County, which is part of the San Joaquin Valley Air Basin (SJVAB). However, the Old River forms the boundary between San Joaquin County and Contra Costa County, such that the western 200 feet of Segment 4 is located within Contra Costa County. Contra Costa County is located within the San Francisco Bay Area Air Basin. This analysis focuses on the SJVAB because over 98 percent of the affected pipeline segments are located within the basin (San Joaquin County) and local emissions sources and meteorology are much more characteristic of San Joaquin County and the SJVAB as compared to the San Francisco Bay Area Air Basin.

The SJVAB is approximately 250-miles long, averages 35-miles wide, and is the second largest air basin in the state. Air pollution is directly related to a region's topographic features. The SJVAB is defined by the Sierra Nevada mountains in the east (8,000 to 14,000 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi Mountains in the south (6,000 to 8,000 feet in elevation). The San Joaquin Valley is basically flat with a slight downward gradient to the northwest. The San Joaquin Valley could be considered a "bowl" open only to the north, as it opens to the sea at the Carquinez Straits where the San Joaquin-Sacramento Delta empties into San Francisco Bay.

Although marine air generally flows into the SJVAB from the San Joaquin River Delta, the region's topographic features restrict air movement through and out of the basin. The Coast Range hinders wind access into the San Joaquin Valley from the west, the Tehachapi Mountains prevent southerly passage of airflow, and the high Sierra Nevada range is a significant barrier to the east.

These topographic features result in weak airflow, which becomes blocked vertically by high barometric pressure over the valley. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Most of the surrounding mountains are above the normal height of summer inversion layers (1,500 to 3,000 feet). Local climatological effects, including wind speed and direction, temperature, inversion layers, and precipitation and fog, can exacerbate the air quality problem in the SJVAB.

The Project site is located in an agricultural area and not in proximity to sensitive receptors (residences, hospitals, or schools). However, there are a few farmworker residences on the west side of Bacon Island near Segment 4.

3.3.1.2 Local Air Quality

The ambient air quality of San Joaquin County is monitored by two stations: one in the city of Stockton and one in the city of Tracy. The ambient air quality of Contra Costa County is monitored by 10 stations. The Bethel Island Road monitoring station in Contra Costa County is closest and located approximately 4.5 miles northwest of the Segment 4 site. Air quality data from this station is presented in Table 3.3-1, which indicates ozone concentrations monitored at the Bethel Island Road station periodically exceed the state and federal standards, with the State 8-hour ozone standard exceeded an average of about one day per year from 2017 through 2019. In addition, the State PM_{10} standard was exceeded an average of about two days per year at the Bethel Island Road monitoring station.

Table 3.3-1. Ambient Air Quality Summary (Bethel Island Road Monitoring Station)

Air Pollutant/Parameter	Standard	2017	2018	2019
Ozone (parts per million)				
Maximum 1-hour concentration monitored (ppm)				
Number of days exceeding State standard	0.09 ppm			
Maximum 8-hour concentration monitored (ppm)		0.071	0.078	0.072
Number of days exceeding 2015 Federal 8-hour standard	0.070 ppm	1	1	1
Number of days exceeding State 8-hour standard	0.070 ppm	2	1	1

Air Pollutant/Parameter	Standard	2017	2018	2019
PM_{10} (micrograms/cubic meter)				
Maximum sample ($\mu g/m^3$)		52.1	151.0	57.0
Number of samples exceeding State 24-hour standard	50 $\mu g/m^3$	1	2	2
Number of samples exceeding Federal 24-hour standard	150 $\mu g/m^3$	0	0	0

Source: CARB 2021a

Notes: ppm (parts per million; µg/m3 (microgram per cubic meter air)

3.3.1.3 Effects of Air Pollution

The primary chemical compounds that are considered pollutants emitted into or formed in the atmosphere include ozone, oxides of nitrogen, sulfur dioxide, hydrocarbons, carbon monoxide, and particulate matter.

Ozone is formed in the atmosphere through a complex series of chemical reactions generally requiring light as an energy source. Ozone is a pungent, colorless gas that is a strong irritant and attacks the respiratory system. Respiratory and cardiovascular diseases are aggravated by exposure to ozone. A healthy person exposed to high concentrations of ozone may experience nausea, dizziness, and burning in the chest. Ozone also damages crops and other vegetation.

Oxides of nitrogen (NO_x) which are considered pollutants include nitric oxide (NO) and nitrogen dioxide (NO_2). NO is colorless and odorless and is generally formed by combustion processes combining atmospheric oxygen and nitrogen. NO_2 is a reddish-brown irritating gas formed by the combination of NO and oxygen in the atmosphere or at the emission source. Both NO and NO_2 are considered ozone precursors because they react with hydrocarbons and oxygen to produce ozone. Exposure to NO_2 may increase the potential for respiratory infections in children and cause difficulty in breathing even among healthy persons and especially among asthmatics.

Sulfur dioxide (SO_2) is a colorless, pungent, irritating gas which affects the upper respiratory tract. Sulfur dioxide may combine with particulate matter and settle in the lungs, causing damage to lung tissues. Sulfur dioxide may combine with water in the atmosphere to form sulfuric acid that may fall as acid rain, damaging vegetation.

Hydrocarbons include a wide variety of compounds containing hydrogen and carbon. Many hydrocarbons (known as reactive organic gases [ROG]) react with NO and NO_2 to form ozone. Generally, ambient hydrocarbon concentrations do not cause adverse health effects directly but result in ozone formation.

Carbon monoxide (CO) is a colorless, odorless gas generally formed by incomplete combustion of hydrocarbon-containing fuels. Carbon monoxide does not irritate the respiratory tract but does interfere with the ability of blood to carry oxygen to vital tissues.

Particulate matter (PM) consists of a wide variety of particle sizes and composition. Generally, particles less than 10 microns (PM_{10}) are considered to be pollutants because they accumulate in the lung tissues and may contain toxic materials which can be absorbed into the system.

3.3.1.4 Toxic Air Contaminants (TAC)

Over 800 substances have been identified by the U.S. Environmental Protection Agency (USEPA) and CARB that are emitted into the air and may adversely affect human health. Based on the TAC inventory prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD), the TAC with the greatest emission rate in the San Joaquin Valley SJVAB is diesel particulate matter (DPM). Due to the cancer risk associated with exposure to DPM, this substance has been targeted for risk reduction by the SJVAPCD, which includes development and implementation of District rules and State Airborne Toxic Control Measures. In addition, CARB has developed a Final Risk Reduction Plan (released October 2000) for exposure to DPM.

The combustion of diesel fuel in truck engines (as well as other internal combustion engines) produces exhaust containing a number of compounds that have been identified as hazardous air pollutants by USEPA and toxic air contaminants by the CARB. PM from diesel exhaust has been identified as a toxic air contaminant. The Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) indicates diesel PM is a major contributor to cancer risk in southern California associated with toxic air contaminants, accounting on average for 68 percent of the total risk. Diesel PM is currently controlled through the use of selective catalytic reduction control systems (with diesel exhaust fluid) on all new diesel trucks and heavy equipment. In addition, fleets of older trucks are required to phase in installation of exhaust particulate filters.

Sources of TACs in the Project region include mobile sources (motor vehicles, trains, equipment) and stationary sources such as dry cleaners (perchloroethylene emissions) and gasoline dispensing stations (vapor emissions of benzene and other components of gasoline).

3.3.1.5 Air Quality Standards

Air quality standards are specific pollutant concentration thresholds that are used to protect public health and the public welfare. The USEPA has developed two sets of standards; one to provide an adequate margin of safety to protect human health, and

the second to protect the public welfare from any known or anticipated adverse effects. At this time, SO_2 is the only pollutant for which the two standards differ. The CARB has developed air quality standards for California, which are generally lower in concentration (i.e., more stringent) than federal standards. California standards exist for Ozone (O_3), CO, suspended PM_{10}, visibility, sulfates, lead, hydrogen sulfide, and vinyl chloride. Table 3.3-2 lists applicable ambient air quality standards.

Table 3.3-2. Ambient Air Quality Standards (State and Federal)

Pollutant	Averaging Time	California Standard	Federal Standard
Ozone (O_3)	1-Hour	0.09 ppm	--
Ozone (O_3)	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1-Hour	20 ppm	35 ppm
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm	100 ppb
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.030 ppm
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm	0.14 ppm
Sulfur Dioxide (SO_2)	3-Hour	--	0.5 ppm (secondary)
Sulfur Dioxide (SO_2)	1-Hour	0.25 ppm	75 ppb
Respirable Particulate Matter PM_{10}	Annual Geometric Mean	20 µg/m^3	--
Respirable Particulate Matter PM_{10}	24-Hour	50 µg/m^3	150 µg/m^3
Fine Particulate Matter $PM_{2.5}$	Annual Geometric Mean	12 µg/m^3	12.0 µg/m^3
Fine Particulate Matter $PM_{2.5}$	24-Hour	--	35 µg/m^3
Hydrogen Sulfide (H_2S)	1-Hour	0.03 ppm	--
Vinyl Chloride	24 Hour	0.01 ppm	--
Sulfates	24 Hour	25 µg/m^3	--
Lead	30 Day Average	1.5 µg/m^3	--
Lead	Calendar Quarter	--	1.5 µg/m^3
Lead	Rolling 3-Month Average	--	0.15 µg/m^3

Pollutant	Averaging Time	California Standard	Federal Standard
Visibility Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	--

Source: CARB 2021a

3.3.1.6 Air Quality Regulation and Planning

Air pollution control is administered on three governmental levels. The USEPA has jurisdiction under the Clean Air Act, the CARB has jurisdiction under the California Health and Safety Code and the California Clean Air Act, and the SJVAPCD shares responsibility with the CARB for ensuring that all state and federal ambient air quality standards are attained within the SJVAB. The Project site is primarily located in San Joaquin County within the SJVAB, which is comprised of San Joaquin County, Stanislaus County, Merced County, Madera County, Fresno County, Kings County, Tulare County, and Kern County (western part). San Joaquin County periodically fails to meet air quality standards and is a designated "non-attainment" area for:

- State 1-hour ozone standard
- State and federal 8-hour ozone standard
- State particulate matter (PM_{10}) standard
- State and federal fine particulate matter ($PM_{2.5}$) standards

The SJVAPCD developed the *2016 Ozone Plan for the 2008 Federal 8-hour Ozone Standard* to address the mandate to attain this ambient air quality standard by December 31, 2031. Through implementation of comprehensive stationary source and mobile source control strategies as part of the 2016 Ozone Plan and previous ozone plans, the number of days that the federal 8-hour ozone standard was exceeded in the SJVAB has declined from 158 days in 2002 to 80 days in 2015. Implementation of the 2016 Ozone Plan is anticipated to result in attainment of the 2008 federal 8-hour zone standard in SJVAB by 2031.

The SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards* on November 15, 2018. The 2018 Plan addresses the federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. The 2018 Plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable. On June 30, 2020, USEPA approved portions of the 2018 Plan and the *San Joaquin*

Valley Supplement to the 2016 State Strategy for the State Implementation Plan related to the 2006 24-hour $PM_{2.5}$ federal standard of 35 µg/m³. Additionally, USEPA granted an extension of the Serious area attainment date for the 2006 $PM_{2.5}$ federal standard from December 31, 2019 through December 31, 2024.

3.3.2 Regulatory Setting

Federal and state laws and regulations pertaining to air quality and relevant to the Project are identified in Appendix A. At the local level, the SJVAPCD regulates stationary sources of air pollution in the SJVAB, and the Bay Area Air Quality Management District (BAAQMD) regulates stationary sources of air pollution in the San Francisco Bay Area Air Basin.

3.3.2.1 Local District Rules and Regulations

The following SJVAPCD and BAAQMD rules and regulations are applicable to the Project:

- SJVAPCD Rule 4101, BAAQMD Regulation 6, Rule 1 – Visible Emissions. These rules set the opacity standards for the discharge of visible air contaminants (typically smoke). These rules apply to heavy equipment exhaust used for proposed pipeline decommissioning activities.
- SJVAPCD Rule 4102, BAAQMD Regulation 1 – Nuisance. These rules indicate that no air contaminants shall be discharged that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endangers the comfort, repose, health, or safety of any such persons or the public or which would cause injury or damage to business or property. These rules apply to air pollutant emissions and any odors associated with proposed pipeline decommissioning activities.
- SJVAPCD Rule 8011 – General Requirements. This Rule sets the requirements for a fugitive dust management plan for use of unpaved roads and unpaved vehicle/equipment traffic areas. Rule 8011 applies to proposed pipeline decommissioning activities.
- SJVAPCD Rule 8021 – Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities. This Rule sets requirements to reduce fugitive dust generation in areas affected by these operations. Rule 8021 applies to proposed pipeline decommissioning activities.

The SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (2015) include adopted significance thresholds for short-term project (construction) air pollutant emissions (Table 3.3-3) which apply to Project components within SJVAB.

Table 3.3-3. SJVAPCD Air Quality Thresholds of Significance

Pollutant/Precursor	Construction Emissions	Operational Emissions - Permitted Equipment and Activities	Operational Emissions - Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Note: (tpy)- tons per year

The BAAQMD's CEQA thresholds of significance (BAAQMD 2017) for construction-related air pollutant emissions are provided in Table 3.3-4 which apply to Project components within Contra Costa County.

Table 3.3-4. BAAQMD CEQA Thresholds of Significance

Pollutant/Precursor	Average Daily Emissions (pounds/day)
ROG	54
NO_x	54
PM_{10}	82
$PM_{2.5}$	54

3.3.3 Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact

The Project is comprised of decommissioning of an inactive natural gas pipeline and would not extend service into new areas or provide increased capacity into underserved areas. Therefore, the Project would not induce population growth and would not affect the emissions inventory projections (primarily based on population) of the SJVAPCD's 2016 Ozone Plan or 2018 $PM_{2.5}$ Plan. Therefore, the Project would not conflict with the

implementation of these plans and progress towards attainment of ozone and $PM_{2.5}$ standards.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact

Air pollutant emissions associated with implementation of the Project were estimated using emissions factors from emissions inventory models developed by CARB (EMFAC 2017; OFFROAD 2017). Inputs used in the EMFAC 2017 model (on-road motor vehicles) are year 2021 annual emissions for San Joaquin County. Inputs used in the OFFROAD 2017 model (off-road and stationary equipment) are year 2021 emissions for the SJVAB. Appendix C provides spreadsheets documenting these emissions calculations. Project air pollutant emissions estimates are provided in Table 3.3-5 and compared to SJVAPCD and BAAQMD thresholds of significance. Since estimated air pollutant emissions are less than applicable thresholds of significance, the Project's air quality impacts would be less than significant and the incremental increase in air pollutant emissions would not be cumulatively considerable.

Table 3.3-5. Estimated Air Pollutant Emissions

Work Task	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO
Tons per Year					
Pre-Project Underwater Survey	0.01	0.04	0.01	0.01	0.80
Mobilization	0.03	<0.01	<0.01	<0.01	0.01
Terrestrial Excavation	0.09	0.01	<0.01	<0.01	0.05
Pigging and Flushing the Pipeline	0.02	<0.01	<0.01	<0.01	0.01
Cementing the Pipeline	0.01	<0.01	<0.01	<0.01	0.01
Pipeline Removal	1.23	0.29	0.11	0.10	5.11
Site Restoration and Demobilization	0.11	0.01	<0.01	<0.01	0.05
Post-Project Underwater Survey	0.01	0.04	0.01	0.01	0.80
Total*	**1.50**	**0.38**	**0.14**	**0.14**	**6.83**
SJVAPCD Significance Threshold	**10**	**10**	**15**	**15**	**100**
Pounds per Day (Average)					
Total	**33.7**	**8.6**	**3.2**	**3.1**	**153.5**
BAAQMD Significance Threshold	**54**	**54**	**82**	**54**	**--**

*Due to rounding, total values may not equal the sum of values in the table

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact

A few farmworker residences located on the west side of Bacon Island are near Segment 4. Project-related air pollutant emissions near these residences would be short term (10 days) and reduced by implementation of fugitive dust control measures required under SJVAPCD Rule 8021. Due to the short-term nature of exposure and expected dispersion of pollutants by prevailing winds, this impact is considered less than significant.

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

Less than Significant Impact

Project-related odors would be limited to diesel exhaust and possibly reduced sulfur compounds in exposed saturated soil and sediments. Persons potentially exposed to these odors would be limited to local farmworkers on Bacon Island. Due to the temporary daytime nature of these odors (about 10 days) and small size of the affected population, odor impacts are considered less than significant. Project-related odors would not create a nuisance or violate SJVAPCD Rule 4102 and BAAQMD Regulation 1.

3.3.4 Mitigation Summary

The Project would have no significant impacts to air quality; therefore, no mitigation is required.

3.4 BIOLOGICAL RESOURCES

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

The following discussion is based on a Biological Technical Report prepared for the Project by Padre Associates, Inc. (2021), which is included as Appendix D.

3.4.1 Environmental Setting

3.4.1.1 Vegetation

Vegetation communities were characterized and described using two vegetation classification systems: *The Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and *The Manual of California Vegetation*

(Sawyer et al. 2009). Wetlands are also classified according to the *Wetlands and Deepwater Habitat* (Cowardin et al. 1979). A combination of vegetation classification systems was used because it allows for accurate description of the vegetation communities while recognizing the limitations of field surveys (site access limitations) and limitations within each of the classification systems. Site access to the partially submerged levee on the south side of Mildred Island is very limited, and field surveys of this area occurred primarily from a distance using binoculars from terrestrial viewing locations and from the interior of Mildred Island accessed by boat. Comprehensive classification of the vegetation communities in this portion of the study area was hampered by the limited ability of Padre biologists to collect detailed field data at the species level in some locations. Therefore, classifications for the purposes of vegetation community mapping are based on the more general *The Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and aerial imagery of the site was used to map vegetation communities in the field. Descriptions of each of the natural communities mapped are further described according to alliance or association level classifications, where appropriate based on Sawyer et al. (2009).

Vegetation communities identified within the study area are mapped in Figure 3 of the Biological Resources Report (Appendix D) using the Holland (1986) classification system, and include: ruderal, non-native grassland, coastal and valley freshwater marsh, and great valley willow scrub. In addition, non-vegetated areas are identified as either disturbed/developed lands or tidal water cover types based on the Holland (1986) system. These vegetation communities are described in more detail using the alliance and association system as perennial rye grass fields, upland mustards, pampas grass patches, sandbar willow thickets, California bulrush marsh, and hardstem bulrush marsh (Sawyer et al. 2009).

The area surrounding the Project site has been heavily influenced by historic alterations of the hydrology of the Sacramento-San Joaquin Delta associated with reclamation efforts for the purposes of agricultural development. This includes the construction of levee systems to protect farmlands from flooding that has resulted in altered hydrology and landscapes that are generally dominated by lands in agricultural production, levees and disturbed lands supporting weedy vegetation, and stands of remnant native habitat consisting of riparian scrub and emergent wetlands that are intermixed with stands of non-native weedy species.

The study area consists primarily of tidally influenced riverine waters at each of the waterway crossings (Latham Slough, Middle River, and Old River) and lacustrine waters within Mildred Island. The primary vegetation communities found along the shorelines and on the Mildred Island levee were coastal and valley freshwater marsh and great valley willow scrub (California bulrush marsh and sandbar willow thickets interspersed with stands of pampas grass).

The McDonald Island levee, Bacon Island levees, and the Palm Tract levee consist primarily of disturbed and developed lands with rock slope protection (mostly unvegetated) on the waterside slope of the levee, developed roadways along the crown of the levee, and disturbed lands on the landside slope of the levee. In most cases, the landside slope of the levee and areas within the proposed staging locations supported the ruderal (upland mustards) and non-native grasslands (perennial rye grass fields) vegetation communities. Small pockets of discontinuous emergent vegetation occur within riverine habitat along the banks of the waterway crossings, but these waterways primarily consist of unvegetated open waters. The Mildred Island levee is partially submerged and supports wetland vegetation throughout. Wetland vegetation communities consist of great valley willow scrub and coastal valley freshwater marsh (consisting of both emergent wetlands and aquatic bed). The study area also consists of open water areas that are tidally influenced riverine and lacustrine waters.

Non-Native Grasslands

Non-native grasses that were introduced during European settlement typically dominate annual grasslands. Typical species include Italian rye grass (*Festuca perennis*), Bermuda grass (*Cynodon dactylon*), wild oat (*Avena fatua*), soft chess (*Bromus hordeaceus*), and ripgut brome (*Bromus diandrus)*. Native and non-native herbaceous plant species such as field bindweed (*Convolvulus arvensis*), prickly lettuce (*Lactuca serriola*), and yellow star thistle (*Centaurea solstitialis*) occur within this cover type as well. A total of 0.95 acre of non-native grasslands were mapped within the study area and were classified as perennial rye grass fields. These grasslands are characterized by a dominance of Italian rye grass. Other herbs and grasses are often found in these grasslands include ripgut brome, soft chess, wild oat, and black mustard (*Brassica nigra*). This semi-natural herbaceous community occurs within the staging area on the east side of Bacon Island, west of the Middle River crossing. Within the Project site, other species that occur within this community include black mustard, Bermuda grass, wild radish (*Raphanus sativus*), field bindweed, and annual beard grass (*Polypogon monspeliensis*).

Ruderal

Ruderal lands support a mix of native and non-native weed species that thrive in disturbed areas such as roadsides, parking lots, cultivated and fallow fields, and urban areas in towns and cities. Non-native species occurring within the study area that are typical of this cover type consists of weedy species along the perimeters of agricultural fields, edges of levee roads, and within disturbed lands such as Johnson grass (*Sorghum halipense*), poison hemlock (*Conium maculatum*), Italian thistle (*Carduus pycnocephalus*), fennel (*Foeniculum vulgare*), black mustard, and wild radish. A total of 1.56 acres of ruderal lands were mapped within the study area and were characterized primarily as upland mustards and pampas grass patches.

Upland Mustards

Upland mustards can be found in fallow fields, grasslands, roadsides, levee slopes, disturbed scrublands, riparian areas, and waste places. Within the study area this semi-natural herbaceous community is characterized by a dominance of black mustard, summer mustard (*Hirschfeldia incana*), and wild radish. Annual grasses and other herbaceous species often occur as associate species, including ripgut brome, soft chess, Italian rye grass, wild oat, prickly lettuce, and horseweed (*Erigeron canadensis*). Most of the species in this community are non-native and some are considered invasive. Within the study area, this community was present in the upland areas on the landward side of the agricultural levees, along roadsides, and within the proposed staging areas.

Pampas Grass Patches

Pampas grass patches can be found in coastal lands, disturbed areas, estuaries, grasslands, urban areas, and wetlands. There are two species of pampas grass; Andean pampas grass (*Cortaderia jubata)* and pampas grass (*Cortederia selloana*), both of which are a large tussock grass with big showy plumes and abundant small seeds. Both species of pampas grass are considered highly invasive. Within the Sacramento-San Joaquin River Delta (Delta), pampas grass occurs on levees and in disturbed areas at the edge of marshes (Sawyer et al. 2009). Within the study area, this semi-natural herbaceous community was primarily observed on the Mildred Island levee. Other grass species, such as giant reed (*Arundo donax*) and common reed (*Phragmites australis*), also occur and are considered invasive.

Great Valley Willow Scrub

Great valley willow scrub is a riparian plant community typically associated with a channel or riverine systems and consists of the vegetation growing along the banks and within the floodplains. Great valley willow scrub typically consists of an open to dense broad-leafed, winter-deciduous shrubby streamside thickets dominated by any of several willow species (*Salix* sp.). Within the study area, this community consisted primarily of dense sandbar willow (*Salix exigua*) thickets with occasional occurrence of red willow (*Salix laevigata*) and Gooddings willow (*Salix gooddingii*). Within the study area, this community occurs along the western portion of the Mildred Island levee. A total of 5.52 acres of great valley willow scrub was mapped within the study area and is characterized as sandbar willow thickets.

Coastal and Valley Freshwater Marsh

The coastal and valley freshwater marsh community is dominated by perennial, emergent, herbaceous monocots often with very dense cover. Within the study area, the

coastal and valley freshwater marsh community is further divided into emergent wetland or aquatic bed depending on whether the plant community supports primarily emergent vegetation or submerged aquatic and floating vegetation. The emergent wetland portion of this community is characterized as California bulrush marsh and hardstem bulrush marsh. A total of 37.92 acres of coastal and valley freshwater marsh was mapped within the study area and is comprised of 6.88 acres of emergent wetland and 31.04 acres of aquatic bed.

California Bulrush Marsh

California bulrush marsh can be found in brackish to freshwater marshes, shorelines, bars, and channels of river mouth estuaries. Soils in this community have a high organic content and are poorly aerated. California bulrush (*Schoenoplectus californicus*) is the dominant or co-dominant species, with Indian hemp (*Apocynum cannabinum*), hardstem bulrush (*Schoenoplectus acutus*), broadleaf cattail (*Typha latifolia*), common reed, exotic invasive water hyacinth (*Eichhornia crassipes*), and exotic invasive water primrose (*Ludwigia* sp.). Within the study area, this community occurs primarily along the Mildred Island levee and supported a dominance of California bulrush with hardstem bulrush, water hyacinth, and water primrose (*Ludwigia hexapetala*) as co-dominant or associate species at various locations.

Hardstem Bulrush Marsh

Hardstem bulrush marsh can be found along streams, ditches, around ponds and lakes, in sloughs, and in freshwater and brackish marshes. Soils have a high organic content and are poorly aerated. Hardstem bulrush is the dominant species and occurs with many of the same species identified as co-dominants or associates in the California bulrush marsh community. Within the study area, this community occurs primarily as small stands along the shoreline at the Old River crossing location.

Aquatic Bed

This term is used to describe floating and submerged vegetation in shallow water areas primarily along the shoreline of the inside portion of the Mildred Island levee. This community consists of both native species and non-native and nuisance species. Native species observed in this community include common waterweed (*Elodia canadensis*), coon's tail (*Ceratophyllum demensum*), longleaf pondweed (*Potamogeton nodosus*), and wheeled marsh pennywort (*Hydrocotyle verticillate*). Non-native species occurring in this community include Brazilian waterweed (*Egeria densa*), matermilfoil (*Myriophyllum spicatum*), curlyleaf pondweed (*Potamogeton crispus*), Carolina fanwort (*Cabomba caroliniana*), water hyacinth, Uruguayan primrose, and American frogbit (*Limnobium spongia*). This vegetation community was mapped within the aquatic bed wetland classification and integrates with emergent vegetation along the shoreline.

3.4.1.2 Developed Lands

This community is not described in *The Preliminary Descriptions of the Terrestrial Natural Communities of California* or the *Manual of California Vegetation* (Sawyer et al. 2009) because it is not a natural community and is typically associated with human disturbance. Within the study area, developed lands occur along the rock armor face of the levee, the crown of the levee (along levee roads), and within parking and staging areas. Within this area the vegetation was generally sparse and composed of species that are commonly associated with disturbance. Some of these species include pampas grass, knotweed (*Polygonum aviculare*), fennel, and yellow star-thistle. A total of 5.04 acres of developed land was mapped within the study area, mostly consisting of gravel or dirt roadways or staging areas that support little to no vegetation.

3.4.1.3 Waters and Wetlands

The Project site was examined for evidence of regulated habitats, such as waters and wetlands, under regulatory authority of the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. A Preliminary Aquatic Resource Delineation was conducted during September 2020 for the Project site and addressed both federal jurisdictional waters of the U.S. and wetlands and aquatic features under state jurisdiction (Padre 2020).

As a result of the preliminary aquatic resource delineation, Padre identified a total of 118.87 acres of federal jurisdictional waters and wetlands, waters of the State, and stream features within the 126.45 acres study area. Activities within these delineated areas are regulated by the federal government and/or the State of California.

Old River, Middle River, Mildred Island, and Latham Slough are all Navigable Waterways under Section 10 of the Rivers and Harbors Act of 1899 and Waters of the U.S. under Section 404 of the Clean Water Act and are subject to Corps jurisdiction. Adjacent lands meeting the three-parameter definition of a federal wetland are also Corps jurisdictional under Section 404 of the Clean Water Act. These waterways and adjacent wetlands also meet the definition of waters of the State defined within the Porter-Cologne Water Quality Control Act to include any surface water or groundwater, including saline waters, within the boundaries of the State and regulated by the Regional Water Quality Control Board (RWQCB). The bed and bank of Old River, Middle River, and Latham Slough are also regulated under Section 1602 of the California Fish and Game Code administered by the California Department of Fish and Wildlife (CDFW).

Within the study area, there are several wetland types and other waters present that are subject to federal and state jurisdiction. These different wetland types are defined both by their abiotic features such as water regime and topography as well as biotic factors like vegetation communities. The three wetland types found within the study area

include scrub-shrub wetland, emergent wetland, and aquatic bed. Other waters of the U.S. present in the study area are classified as tidally influenced riverine and lacustrine waters and are identified in the delineation map as tidal waters (Latham Slough, Mildred Island, Middle River, and Old River). Wetland types were determined by the aforementioned abiotic and biotic factors and the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin 1979). Below is a brief description of each wetland type and of the other waters present in the study area.

Tidal Waters (Waters of the U.S.)

Tidal waters can belong to a variety of wetland and deepwater habitat systems including marine, riverine, estuarine, and occasionally lacustrine. Within the study area, tidal waters present in Latham Slough, Middle River, and Old River are contained within a channel which makes them part of the riverine classification. Within the riverine system classification there are four subsystems. These are tidal, lower perennial, upper perennial, and intermittent. The tidal riverine subsystem is classified by its low flow and the ocean derived salt concentration below 0.5 parts per thousand (ppt). This subsystem usually has a muddy stream bottom due to the fine particulates settling out of the water column during low flows.

The tidal waters present within Mildred Island are considered lacustrine because they occur in a topographic low area, greater than 20 acres in size and with less than 30 percent vegetative cover; however, for mapping purposes both riverine and lacustrine tidal waters were mapped as tidal waters. In tidal systems, the limits of Corps jurisdiction on waters of the U.S. are defined by the high tide line (limits of Clean Water Act Section 404 jurisdiction) and mean high water line (limits of Rivers and Harbors Act Section 10 jurisdiction). See Appendix D for the location of the high tide line and mean high water line at each of the waterway crossings. A total of 75.45 acres of tidal waters occurs within the study area and are subject to Corps, RWQCB, and CDFW jurisdiction.

Palustrine Scrub-Shrub Wetland (Wetland)

The palustrine classification of wetlands includes a wide variety of different wetland types. Wetlands commonly called ponds, prairies, fens, bogs, marshes, and swamps are all types of palustrine wetlands. In most circumstances, palustrine wetlands are dominated by persistent emergent herbs, shrubs, or trees and are found in non-tidal areas. Palustrine wetlands could occur in tidal wetlands if the salinity derived from the ocean is below 0.5 ppt (Cowardin 1979). Within the study area, palustrine scrub-shrub wetlands were present on the western portion of the Mildred Island levee. Scrub-shrub wetlands consist of willow species and supported a dominance of sandbar willow. Palustrine scrub-shrub wetlands were mapped within the great valley willow scrub community. A total of 5.51 acres of palustrine scrub-shrub wetlands occurs within the study area and are subject to Corps, RWQCB, and CDFW jurisdiction.

Emergent Wetland (Wetland)

Emergent wetlands have a dominance of erect, rooted, herbaceous hydrophytes, typically perennial species, that are present for much of the growing season in most years. Emergent wetlands can occur in all systems except marine and are divided into two subclasses, persistent and nonpersistent. Within the study area, emergent wetlands occur within tidal lacustrine and riverine systems and are considered persistent because the herbaceous species present are visible above the soil or water surface year-round. Within the study area, emergent wetland features occur at various locations along the partially submerged Mildred Island levee. Dominant species include California bulrush and hardstem bulrush. A total of 2.09 acres of emergent wetlands occurs within the study area and are subject to Corps, RWQCB, and CDFW jurisdiction.

Aquatic Bed Wetland (Wetland)

Aquatic bed is a class of wetland that can occur within any of the deepwater habitat systems and is dominated by plants that grow primarily on or below the surface of the water for most of the growing season in most years. Aquatic bed wetlands consist of plant communities that require surface water for growth and reproduction. The plants are either attached to the substrate or float freely in the water above the bottom or on the surface. Within the study area, aquatic beds consist of rooted vascular plants such as Brazilian waterweed, common waterweed, coon's tail, watermilfoil and curlyleaf pondweed and floating vascular plants such as water hyacinth. A total of 31.04 acres of aquatic bed wetlands occurs within the study area and are subject to Corps, RWQCB, and CDFW jurisdiction.

3.4.1.4 Wildlife

Wildlife observed at the Project site was characteristic of the region and of the tidal riverine and estuarine habitats of the Delta. A list of wildlife species observed during biological surveys conducted for the Project is included in Appendix D. Special-status wildlife species (i.e., endangered, threatened, rare, or other special-status species) occurring, or potentially occurring, within the study area are discussed below.

The network of vegetation communities and open water habitat within the study area provide habitat for a wide variety of resident and migratory wildlife species. The composition, density, distribution, and physical characteristics of vegetative communities determine the diversity and abundance of wildlife species. Wildlife species observed within the study area are discussed below.

The majority of the terrestrial portions of the study area are highly altered landscapes used for agriculture. These areas include man-made levees with steep riprap covered slopes, gravel roadways, and other disturbed areas. Within the study area, these

locations are either devoid of vegetation or have a sparse to dense cover of disturbance adapted weedy plant species like black mustard, wild radish, and fennel. The high level of disturbance associated with these areas and the lack of vegetation diversity limits their suitability for wildlife habitat. Bird species that have adapted well to human disturbance including brewer's blackbird (*Euphagus cyanocephalus*), European starling (*Sturnus vulgaris*), northern mockingbird (*Mimus polyglottos*), barn swallow (*Hirundo rustica*), and Eurasian collared dove (*Streptopelia decaocto*) were commonly observed using this terrestrial habitat for foraging and perching. Furthermore, scat from raccoons (*Procyon lotor*), was observed on the levee crowns, suggesting they forage nearby.

Large broad-winged raptors including northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), and Swainson's hawk (*Buteo swainsoni*) were observed soaring over agricultural fields for potential prey species including voles (*Microtus* sp.) and California ground squirrels (*Spermophilus beecheyi*). Nesting sites for Swainson's hawk and other tree nesting raptors are limited within the study area due to the lack of large trees; however, there is suitable nesting habitat in surrounding areas and an abundance of farmland for foraging. Nesting habitat for the ground nesting northern harrier does not occur within the study area due to extent of disturbance and lack of suitable vegetative cover. However, there is suitable nesting habitat for northern harrier in surrounding undisturbed areas with an abundance of foraging habitat in surrounding marsh and farmlands.

The terrestrial portions of the study area that receive less human disturbance occur primarily on the partially submerged Mildred Island levee. Along this levee, great valley willow scrub and coastal and valley freshwater marsh vegetation communities provide habitat for a large variety of wildlife species that commonly interface with the aquatic environment. Species commonly observed in or near the freshwater marshes of the study area and the greater Delta include great blue heron (*Ardea herodias*), great egret (*Ardea alba*), marsh wren (*Cistothorus palustris*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), red-winged blackbird (*Agelaius phoeniceus*), and double-crested cormorant (*Phalacrocorax auritus*). Many of these species are reliant on the emergent vegetation of marshes for cover, nesting habitat, and production of their food base.

Within the aquatic portion of the study area, sparse to dense beds of submerged aquatic vegetation including common waterweed, coon’s tail, and Brazilian waterweed provide habitat for many fish species that occur in tidally influenced habitat. Some of the species that were observed during field surveys include western mosquito fish (*Gambusia affinis*), largemouth bass (*Micropterus salmoides*), and striped bass (*Morone saxatalis*). These fish species provide a valuable food source for many of the aforementioned marshland birds including great egret, great blue heron, and double-crested cormorant as well as other fishing specialists including osprey (*Pandion haliaetus*), belted kingfisher (*Megaceryle alcyon*), and Caspian tern (*Hydroprogne*

caspia). Mammalian species that were observed using aquatic habitat within the study area include North American river otter (*Lontra canadensis*) and California sea lion (*Zalophus californianus*).

3.4.1.5 Special-Status Species

For the purposes of this analysis, a special-status species is a plant or animal species that is:

- Listed as endangered, threatened, or a candidate species under the Federal Endangered Species Act (FESA)
- Listed as endangered, threatened, or a candidate species under the California Endangered Species Act (CESA)
- Listed as a species of special concern by the CDFW
- A plant species that is on the CNPS Rare Plant Ranking System as List 1 or 2
- Considered rare, threatened, or endangered under California Environmental Quality Act (CEQA) Guidelines 15380(d) as the species' survival is in jeopardy due to loss or change in habitat

In addition, species protected by specific federal or state regulations or local ordinances are considered special-status species.

Based on the literature review and species lists obtained from USFWS (IPaC Trust Resource Report, Consultation code 08FBDT00-2020-SLI-0236) and from NMFS for the Woodward Island quadrangle, a list of special-status species that have been reported within a 5-mile radius surrounding the Project site has been compiled. A list of special-status species with occurrences within 5 miles of the site, that were considered for potential occurrence on the Project site are provided in Appendix D. Special-status species occurring within 5 miles of the Project are depicted in Figure 5 of Appendix D.

An analysis of the likelihood of occurrence for each species was conducted on the basis of species ranges, previous observations, contemporary sightings, and presence of suitable habitat elements. The Project site may be located outside of the known range of some species, or within the geographic range for a certain species, but suitable habitat, such as vernal pool habitat is absent onsite. Special-status species addressed in this analysis include those that occur in the general area of the Project site, and for which the Project site may provide habitat. Additional information can be found in Appendix D.

3.4.1.6 Special-Status Plants

Habitat assessments and surveys for the Project were conducted in November 2019 and September 2020 outside of the blooming season for most special-status plant species reported in or near the study area. Marginally suitable habitat for special-status plants occurs on the McDonald Island levee, Bacon Island levees, and Old River levee. Suitable special-status plant species habitat occurs along the Mildred Island levee and known occurrences of special-status plant species are reported in this location from 2009 surveys conducted in support of the Bay Delta Conservation Plan/California Water Fix Project (BDCP/Cal Water Fix) (California Department of Water Resources and U.S. Bureau of Reclamation 2016). Other areas within the study area (e.g., laydown sites and access roads) do not provide suitable habitat for special-status plant species.

The following text provides descriptions of special-status plant species determined to have a moderate to high potential to occur within the Project site. Other special-status plant species reported from the area but determined to be absent from the Project site are discussed in Appendix D.

Woolly Rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*)

Woolly rose-mallow is a CNPS List 1B species, which indicates it is rare, threatened or endangered in California and elsewhere. It is a perennial herbaceous species that blooms from June through September. It occurs in freshwater marsh habitat at elevations up to 400 feet. Wooly rose-mallow can be found on riverbanks and low peat islands in sloughs. It can also occur on riprap and man-made levees. Suitable habitat occurs at the Project site and several known occurrences are mapped on the Mildred Island levee, including one occurrence (California Natural Diversity Data Base [CNDDB] Occ. No. 3) within the study area. Because this species can occur within riprap on armored levees, this species could occur on the McDonald Island levee, Bacon Island levees, and Palm Tract levee; although it was not observed during field surveys conducted for this Project.

Delta Tule Pea (*Lathyrus jepsonii* var. *jepsonii*)

Delta tule pea is also a CNPS List 1B species. This is a perennial herbaceous species that blooms May through July. It is associated with both brackish marshes and freshwater marshes throughout the Delta and Central Valley. Delta tule pea is found with other marsh species including cattail, Suisun marsh aster (*Symphyotrichum lentum*), California rose (*Rosa californica*), and various species of rush and bulrush on the margins of sloughs and within tidal wetlands. The nearest reported occurrence (CNDDB Occ. No. 16) was mapped in 1987 approximately 1.8 miles south; however, more recent occurrences were documented in 2009 on the east side of Bacon Island. Suitable habitat occurs within the study area, particularly within emergent wetland

habitat along the Mildred Island levee. The species was not mapped on the south Mildred Island levee during 2009 surveys conducted in support of the BDCP/Cal Water Fix Project; however, it has the potential to occur.

Mason's Lilaeopsis (*Lilaeopsis masonii*)

Mason's lilaeopsis is a State-listed Rare species, and a CNPS List 1B species. This is a perennial herbaceous species that blooms April through November. This species is associated with tidally influenced marsh habitats, mudflats, and levee banks in the Delta and suitable habitat occurs within the study area, particularly along the southern Mildred Island levee. The nearest reported occurrence (CNDDB Occ. No. 194) is mapped on a portion of southern Mildred Island that is tidally submerged and within the study area for the Project.

Delta Mudwort *(Limosella australis*)

Delta mudwort is a CNPS List 2B species which indicates it is rare, threatened or endangered in California but more common elsewhere. It is a stoloniferous, aquatic, perennial herb in the Scrophulariaceae (snapdragon) family, and is restricted to muddy, intertidal flats and banks in brackish marshes, freshwater marshes, and riparian scrub in the Delta. It is found in association with other rare plants, especially Mason's lilaeopsis, delta tule pea, and Suisun Marsh aster. It blooms from May through August. Several occurrences are documented around the perimeter of Mildred Island and on the tidal mud flats on in-channel islands. Suitable habitat for delta mudwort occurs within the study area, particularly along the southern Mildred Island levee. Excavation within levees for access to the pipeline and/or removal of pipeline segments has the potential to impact this species, particularly the removal of the pipeline from the Mildred Island levees at the eastern and western crossing location.

Marsh Skullcap (*Scutellaria galericulata*)

Marsh skullcap is also a CNPS List 2B species. It is a rhizomatous perennial herbaceous species that typically occurs in marshes and swamps at elevations up to 6,400 feet and blooms June through September. Marsh skullcap can be found from the Delta to lower montane coniferous forests, meadows, and mountain seeps. The nearest reported occurrences (CNDDB Occ. No. 1 and No. 2) are from 1978 and are documented within Middle River approximately 4.5 miles upstream of the Project site. No recent occurrences (less than 26 years old) have been documented near the Project site. Suitable habitat occurs within the study area, particularly along the southern Mildred Island levee.

Suisun Marsh Aster (*Symphyotrichum lentum*)

Suisun marsh aster is a CNPS List 1B species and is a rhizomatous, perennial herbaceous species that typically occurs in brackish marshes, but can also occur in freshwater marshes at elevations up to 10 feet. This species blooms May through November. The nearest occurrences are mapped along the sloughs and riverbanks around Mildred and Bacon Islands. Suitable habitat for Suisun marsh aster occurs within the study area, particularly along the southern Mildred Island levee.

3.4.1.7 Special-Status Wildlife

The following text provides descriptions of special-status wildlife species determined to have a moderate to high potential to occur within the Project site. Other special-status wildlife species reported from the area, but determined to be absent from the Project site or have a low potential to occur are discussed in Appendix D.

Fish Species

Green Sturgeon (*Acipenser medirostris*)

The green sturgeon is a federally listed Threatened species in its southern range or distinct population segment (DPS). It is also a California Species of Special Concern and a NMFS Species of Concern. Adults enter San Francisco Bay from the ocean in late winter through early spring and spawn in the Sacramento River primarily from April through early July, with peaks of activity likely influenced by factors including water flow and temperature. In the autumn, the post-spawning adults move back down the river and re-enter the ocean. After hatching, larvae and juveniles migrate downstream toward the Delta and estuary where they spend a few years maturing before the move out to the ocean. In 2019, three green sturgeon were caught during monitoring surveys in Suisun Bay, approximately 35 miles downstream of the Project site (Danos et al. 2020).

Green sturgeon has not been identified at Interagency Ecological Program (IEP) survey stations within the Project area; however, there is a low likelihood that juvenile green sturgeon may utilize the deeper areas of the Project site for foraging and/or emigrating out to the ocean. Fish salvage data reported for the State Water Project and Central Valley Project from diversion points approximately 10 miles south and upstream of the study area indicate that green sturgeon were salvaged, typically in low numbers during a period of record from 1981 to 2012 (CDFW 2020b). Green sturgeon could occur at the Project site primarily during migration; however, the site does not provide spawning habitat.

White Sturgeon (*Acipenser transmontanus*)

The white sturgeon is a California Species of Special Concern. In California, primary abundance is in San Francisco Bay, with spawning occurring mainly in the Sacramento and Feather Rivers (Klimley et al. 2015). White sturgeon spend most of their lives in estuaries of large rivers, only moving into freshwater to spawn (Moyle 2002). Sturgeon migrate upstream when they are ready to spawn in response to flow increases. Spawning takes place between late February and early June. Adults migrate back downstream to estuaries (such as San Francisco Bay) following spawning.

In the San Joaquin River, telemetry studies have documented adult white sturgeon occurrences as far upstream as Patterson (USFWS 2015). In 2019, 269 white sturgeon were caught during monitoring surveys in Suisun Bay, approximately 35 miles downstream of the Project site (Danos et al. 2020). White sturgeon have not been identified at IEP survey stations within the Project area; however, this species could be found in the Project area when the water temperatures are suitable. Fish salvage data reported for the State Water Project and Central Valley Project from diversion points approximately 10 miles south and upstream of the study area indicate that white sturgeon were salvaged, typically in low numbers during a period of record from 1981 to 2012 (CDFW 2020b). White sturgeon could occur at the Project site during migration. However, the site does not provide suitable spawning habitat.

Pacific Lamprey (*Entosphenus tridentatus*)

Pacific lamprey is a California Species of Special Concern that is found in larger California streams entering the Pacific Ocean, unless blocked by barriers or low flows. The adults often start their spawning migration from the ocean into freshwater in the fall and can be seen moving upstream throughout the winter and early spring except during high water. In some rivers these migrations continue into late spring. Pacific lampreys construct nests for spawning. Pacific lamprey spawn from March through June. They dig shallow depressions in stream riffles by moving stones with their suctorial mouth. The eggs are deposited in the crevices of the rocky nest area, after which the adults die. The eggs hatch and the young lampreys burrow into the stream bottom, where they remain in a larval stage for 3 or 4 years. During this time, they feed on material they filter from the water and gradually change into miniature adults. At a length of about 6 inches, they move into the stream and migrate to the ocean (Moyle et al. 2015). Pacific lamprey are known to occur in the San Francisco Bay-Delta including the San Joaquin River. They could occur in the Project area during migration to spawning habitat; however, the Project site does not provide suitable spawning habitat.

Delta Smelt (*Hypomesus transpacificus*)

The delta smelt is a federally threatened and State-endangered species endemic to the Bay-Delta estuary. Critical habitat for delta smelt includes Suisun, Grizzly, and Honker Bays, Goodyear, Suisun, Cutoff, First Mallard, and Montezuma Sloughs, and the Delta (USFWS 1996). Decline in populations are primarily attributed to habitat loss, diversions of freshwater, reduced water flow, and reduced quality and quantity of suitable nursery habitat. Other contributing factors may include the presence of toxic compounds in the water, competition and predation by nonnative species, reduced food supply, disease, high outflows, and low spawning stock (Goals Project 2000). Adult delta smelt inhabit open water areas where they feed on small zooplankton. They spawn in freshwater from late winter to early summer (primarily February through April) and usually die shortly afterward.

Delta smelt are known to spawn in the lower reaches of the Sacramento and San Joaquin rivers as well as various sites within the Delta in shallow waters and dead-end sloughs. Much of the Project site consists of shallow water habitat, which is considered suitable habitat for delta smelt. Adult delta smelt were collected in midwater trawls conducted in March 2018 and 2019 at the monitoring station on Chipps Island (IEP 2020), located 17 miles west (downstream) of the Project site. Smelt salvage data reported for the State Water Project and Central Valley Project from diversion points approximately 10 miles south and upstream of the study area indicate that low numbers of delta smelt were salvaged at this location in 2018 and 2019 and no delta smelt were salvaged at this location in 2020 (CDFW 2020b). Delta smelt may be present at the Project site.

River Lamprey (*Lampetra ayresi*)

River lamprey is a California Species of Special Concern. Habitat requirements of spawning adults and juveniles (ammocoetes) have not been studied in California. Presumably, the adults need clean, gravelly riffles in permanent streams for spawning, while the ammocoetes require sandy backwaters or stream edges in which to bury themselves, where water quality is continuously high, and temperatures do not exceed 77°F (25°C). In California, they have been recorded only from the lower Sacramento and San Joaquin rivers (and tributaries including Stanislaus and Tuolumne Rivers) and from the Russian River. The river lamprey has become uncommon in California, and it is likely that the populations are declining because the Sacramento, San Joaquin, and Russian rivers and their tributaries have been severely altered by dams, diversions, pollution, and other factors (Moyle et al. 2015). The species spawns from February through May. River lamprey has the potential to occur at the Project site during migration but is not anticipated to spawn in this area due to the lack of suitable spawning habitat.

Central Valley Steelhead (*Oncorhynchus mykiss irideus*)

Central Valley steelhead is a federally listed Threatened species. Steelhead have been separated into 14 Evolutionary Significant Units (ESU). Steelhead of the Central Valley ESU could occur in the vicinity of the Project site. Steelhead are an anadromous form of the rainbow trout native to the Pacific Ocean and coastal drainages. Steelhead live the majority of their life cycle in the Pacific Ocean then migrate upstream to spawn between October and January. Spawning typically occurs between December and April. Steelhead are iteroparous and do not die after spawning and thus may spawn again the following year. Most naturally produced Central Valley steelhead rear in freshwater for 1 to 3 years before emigrating to the ocean. Steelhead eggs hatch in about 30 days at 51 degrees Fahrenheit (Leitritz and Lewis 1980). Currently the species is isolated to the San Joaquin River mainstem and/or larger tributaries. Steelhead are unlikely to occur in the Project area during the summer months when in-water work would occur due high-water temperature and low dissolved oxygen. It is likely smolts or non-anadromous individuals would be located upstream of the site where the water temperature is cooler and within habitat providing vegetation and/or structure for individuals to seek refuge or riffles to provide increased dissolved oxygen.

Chinook Salmon (*Oncorhynchus tshawyscha*)

The Chinook salmon is an anadromous species spending most of its adult life in the ocean and then returning to freshwater streams to spawn. They spend 3 to 6 years maturing in the ocean before they migrate upstream to spawn. Adult Chinook salmon die after spawning. Juveniles spend from several months to over a year rearing in their natal streams before emigrating to the ocean. Preferred spawning grounds for Chinook salmon are in gravel areas of large rivers and tributaries (Goals Project 2000). Chinook salmon have been separated into 17 distinct groups or ESUs based on similarity in life history, location, and genetic markers and the Project is located within the San Joaquin Delta Hydrologic Unit (18040003) identified within the Pacific Coast Salmon Fisheries Management Plan (NMFS 2020). The Central Valley spring-run and fall run ESU's have the potential to occur in and around the Project area when habitat conditions are suitable.

Central Valley Spring-Run Chinook Salmon

The Central Valley spring-run Chinook salmon is a federally Threatened species and California Threatened species. The Central Valley spring-run Chinook salmon migration period occurs from March through July with a peak in May and June. The spawning period is late August through late October (Goals Project 2000). The juvenile downstream emergence period is between November and March with a 3- to 15-month freshwater residency period between November and January, concluding with an estuarine emigration period between November and June.

In the San Joaquin River, spring-run Chinook salmon historically spawned as far as Mammoth Pool Reservoir, located on the San Joaquin River northeast of Fresno, where their upstream migration historically was blocked by a natural velocity barrier. The construction of Friant Dam blocked significant spawning habitat between Millerton Lake and Mammoth Pool Reservoir (Yoshiyama et al. 1998; California Department of Water Resources and U.S. Bureau of Reclamation 2017). By the 1950s, the entire run of spring-run Chinook salmon was extirpated from the San Joaquin River (Fry 1961). Due to the severely decimated population of Central Valley spring-run Chinook salmon, the San Joaquin River Restoration Program helped initiate a reintroduction program. Reintroduced Central Valley spring-run Chinook salmon could occur in the Project area during spring migration upstream to spawning habitat.

Central Valley Fall-Run Chinook Salmon

The Central Valley fall-run Chinook salmon are a California Species of Special Concern. The migration period for fall-run Chinook salmon is June to December, with the peak in September and October. A late fall race within this population may migrate later (October through April) with a peak in December. The spawning period for fall-run Chinook salmon is late September through December, with the peak in October and November. A late fall race within this population may spawn later (January through April) with a peak in February and March (Moyle et al. 2015). Fall-run Chinook salmon generally spawn lower in the watersheds than spring-run Chinook salmon. Fall-run Chinook salmon historically spawned in the main stem San Joaquin River upstream from the Merced River confluence near the town of Friant and in the main stem channels of the major tributaries (Yoshiyama et al. 1998). However, currently, they are limited to the Merced, Stanislaus, and Tuolumne Rivers where they spawn and rear downstream from mainstem dams (California Department of Water Resources and US Bureau of Reclamation 2017). Central Valley fall-run Chinook salmon could occur in the Project area during fall/winter migration upstream to spawning habitat.

Sacramento Splittail (*Pogonichthys macrolepidotus*)

The Sacramento splittail is a federally Threatened species and a California Species of Special Concern. This species is most common in the brackish waters of Suisun Bay, Suisun Marsh, and the Delta; however, in wet years they occur within San Pablo and San Francisco Bays (Goals Project 2000). Upstream spawning migration occurs from November through May and spawning occurs from April through July. Preferred spawning habitat consists of freshwater areas that support submerged vegetation within inundated floodplains. Flooded banks and inundated areas used for spawning are also preferred habitat for rearing and foraging. After spawning, most juveniles move downstream into shallow, productive bay and estuarine water in response to increased water flows (Moyle 2002). The Project site provides suitable shallow water habitat for this species and it may occur here in the spring while spawning.

Longfin Smelt (*Spirinchus thaleichthys*)

Longfin smelt is a federal candidate species and State-threatened species. It is native to the Delta and was once abundant. The decline in longfin smelt abundance is primarily associated with the diversion of freshwater from the Delta. Another contributing factor is reproductive failure during drought years. Longfin smelt occur in the Delta but can range as far as South San Francisco Bay and the open ocean. They are most abundant in Suisun Bay and San Pablo Bay. Adult longfin smelt, like the delta smelt, inhabit open water areas of the Delta and feed on zooplankton. They tolerate a wide range of salinity conditions. Longfin smelt migrate upstream to spawn in brackish water between January and April. The species is known to spawn over sandy or gravelly substrate with rock or plant material to attach their adhesive eggs to when deposited. The nearest recent occurrence of longfin smelt was recorded in March 2020 during 20-millimeter net surveys at Station 901 (south of Bradford Island), approximately 7 miles downstream of the Project site (IEP 2020). The Project site provides suitable habitat for this species and it may occur here in late winter or spring while spawning.

Reptile Species

Western Pond Turtle (*Emys marmorata*)

Western pond turtle is a California Species of Special Concern. This species is a semi-aquatic species inhabiting streams, marshes, ponds, and irrigation ditches within woodland, grassland, and open forest communities, but they require upland sites for nesting and over-wintering. The nearest recent occurrence (CNDDB Occ. No. 186) is from 2000 on the north side of Mildred Island within Latham Slough. This species was not observed during surveys conducted for the Project; however, there is a high likelihood that the western pond turtle could occur due to shallow, warm water with abundant prey base and presence of basking sites on levees within the Project site.

Giant Garter Snake (*Thamnophis gigas*)

Giant garter snake is listed as a State and federally threatened species found in emergent marsh habitats associated with waterways during spring and summer and hibernates in adjacent upland habitat during the winter. There are three recent occurrences of this species within approximately 5 miles of the Project site. Suitable aquatic habitat occurs at the Project site, specifically along the Mildred Island levee which provides suitable aquatic habitat with emergent herbaceous vegetation along the levee shoreline and submerged aquatic vegetation within adjacent shallow water. Remnant riprap within openings in emergent vegetation along the levee providing suitable upland habitat for basking. Because there are known occurrences of giant garter snake in the region and the site provides suitable aquatic habitat, there is a moderate likelihood of occurrence of this species within the Project site.

Bird Species

Great Blue Heron (*Ardea herodias*)

Great blue heron is not a federal or state-listed species; however, its rookery sites are considered sensitive by the State of California. This species is common throughout the year in most of California's shallow estuaries and fresh and saltwater wetlands. Rookeries are scattered throughout Northern California where great blue herons start building their nests in February and usually breed between March and May. There are no known rookeries at the Project site; however, there are mapped rookeries in the eucalyptus stands on islands within the Middle River channel. Great blue heron may forage in the Project site, but trees and shrubs within the Project site do not provide suitable roosting or nesting habitat.

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is a California Threatened species and a Bird of Conservation Concern. This species breeds in the Central Valley and typically winters in South America and Mexico. In California, it usually arrives in March and April and leaves in September or October. Loss of habitat is the major threat to this species in California. This species forages in grassland or areas of sparse trees or shrubs, and often forages in agricultural areas in the Central Valley. It nests in the scattered trees within these habitats such as those along waterways. During the breeding season, it feeds primarily on small mammals and reptiles. During other seasons, large insects (especially grasshoppers) are the bulk of its diet. The riparian habitat along waterways near the Project site offers suitable nesting trees for Swainson's hawks and adjacent agricultural land provides optimal foraging habitat. Biological surveys for this Project were conducted outside of breeding season; therefore, the breeding status of this species at or near the Project site could not be determined. However, there are known occurrences of Swainson's hawk within 0.5 mile of the Project site and this species may occur on the Project site during the breeding season.

Northern Harrier (*Circus cyaneus*)

Northern harrier is a California Species of Special Concern. This species inhabits meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands. It forages mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, insects, and, rarely on fish. Breeding occurs between April and September, with peak nesting in June and July. Northern harrier was observed foraging within open farmlands adjacent to the Project site. Nesting and foraging habitat within the Project site is limited because the site is primarily aquatic and because terrestrial areas within the site are subject to high level of disturbance. However, suitable nesting

and foraging habitat occurs in adjacent marsh and agricultural lands and this species may occur on the Project site.

White-tailed Kite (*Elanus leucurus*)

White-tailed kite is a California Fully Protected species. It is a small raptor that feeds mostly on voles and other diurnal mammals, but will occasionally prey on birds, insects, reptiles, and amphibians. It typically forages over open grasslands and emergent wetlands. White-tailed kites nest in dense foliage in treetops near grassy foothills, marshes, riparian woodland, savanna, and partially cleared fields. Preferred nesting trees include oak, willow, sycamores, or other tree stands. White-tailed kite was not observed during field surveys but is known to occur in the area. Suitable foraging and nesting habitat is limited onsite due to the extent of aquatic habitat within the study area. However, willow scrub riparian habitat on the Mildred Island levee offers suitable nesting habitat and the marsh and agricultural lands adjacent to the Project site provide suitable foraging habitat and this species may occur on the Project site.

California Black Rail (*Laterallus jamaicensis coturniculus*)

California black rail is listed by the State as a threatened species, a CDFW Fully Protected species, and a Bird of Conservation Concern. It is a permanent resident of saline, brackish, and freshwater marshes containing dense tall growths of emergent vegetation. Over 90 percent of the population is found within the tidal marshes of the San Francisco Bay Estuary. Fewer black rails are found in the Delta, and they are very rare in the South Bay (Goals Project 2000). Black rails are associated with dense marsh vegetation, most notably pickleweed and bulrush. This species is most often found in large tracts of marsh, which are far from urbanization (Spautz and Nur 2002). They also prefer marshes with unrestricted tidal influence over muted marshes (Goals Project 2000). The nearest occurrences (CNDDB Occ. Nos. 98 and 295) are from 1992 and 2010, respectively and are mapped on small, vegetated islands in Middle River and Latham Slough. Emergent wetland habitat along the Mildred Island levee consists of remnant linear freshwater marsh habitat and is not likely dense enough to support black rail; however, some of the larger remnant islands of freshwater wetland habitat in Old River, Middle River, Latham Slough, and Empire Cut provide suitable habitat for black rail. Due to the presence of marginally suitable habitat, this special has a moderate potential to occur at the Project site.

Song Sparrow (Modesto population) (*Melospiza melodia*)

The Modesto population of the song sparrow is a California Species of Special Concern and is endemic to California, where it resides only in the north-central portion of the Central Valley. Highest densities occur in the Butte Sink area of the Sacramento Valley and in the Delta. Song sparrows breed from mid-March to early August and are resident

species of the Sacramento Valley and Delta. Song sparrows are frequently seen within mature riparian corridors, such as the Cosumnes and Stanislaus Rivers, and less frequently within irrigation canals and levees. The Modesto population of song sparrow has an affinity for emergent freshwater marshes dominated by tules (*Scirpus* spp.) and cattails (*Typha* spp.) as well as willow thickets. The nearest recent occurrence (CNDDB Occ. No. 18) is from 2009 and mapped around the perimeter of Mildred Island and within the Project site within Middle River and Latham Slough where nesting behavior was observed. The potential for the Modesto song sparrow to occur at the Project site is high due to the presence of suitable habitat and known occurrences.

3.4.1.8 Wildlife 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 waterways, particularly areas with contiguous riparian or marsh vegetation offer migration corridors for mammals, reptiles, and birds. Mammals and reptiles present within the study area likely use the riparian cover as a travel corridor regardless of the season. Birds such as warblers, hummingbirds, etc. migrate to higher elevations in the spring and lower elevations in the fall and the riparian habitat within the Project site offers shelter, forage, and water for migrating species traversing to the Sierra Nevada Range to nest. Resident species may make local migrations for foraging and/or nesting habitat along the river. Additionally, the waterways provide seasonal migration habitat for fish species moving upstream to spawning grounds and provide connections for resident fish species to other aquatic habitat within the watershed.

3.4.2 Regulatory Setting

Federal and state laws and regulations pertaining to biological resources and relevant to the Project are identified in Appendix A. Local policies or regulations applicable to the Project with respect to biological resources are listed below.

3.4.2.1 San Joaquin County

Biological resources policies from the San Joaquin County General Plan Policy Document relevant to the Project are listed below.

NCR-1.1: Preserve Natural Areas. The County shall protect, preserve, and enhance important natural resource habitat, biological diversity, and the ecological integrity of natural systems in the County.

NCR-2.1: Protect Significant Biological and Ecological Resources. The County shall protect significant biological and ecological resources including: wetlands; riparian areas; vernal pools; significant oak woodlands and heritage trees; and rare, threatened, and endangered species and their habitats.

NCR-2.2: Collaboration for Species Protection. The County shall collaborate with the California Department of Fish and Wildlife during the review of new development proposals to identify methods to protect listed species.

NCR-2.3: San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. The County shall continue to implement the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to mitigate biological impacts resulting from open space land conversion.

NCR-2.5: No Net Loss of Wetlands. The County shall not allow development to result in a net loss of riparian or wetland habitat.

NCR-2.7: Protect Waterfowl Habitat. The County shall strive to preserve, protect, and enhance feeding areas and winter habitat for migratory waterfowl.

NCR-2.8: Natural Open Space Buffer. The County shall require a natural open space buffer to be maintained along any natural waterway to provide nesting and foraging habitat and to protect waterway quality.

NCR-3.10: Coordination for Waterway Protection. The County shall coordinate with city, state, and federal agencies to implement policies regarding protection and enhancement of waterways and levees.

D-5.1: Protect Delta Ecosystem. The County shall support the protection and restoration of the Delta ecosystem in perpetuity, including adequate water supply and quality.

3.4.2.2 Contra Costa County

The Conservation Element of the Contra Costa County General Plan contains goals and policies pertaining to biological resources. Biological resources policies relevant to the Project are listed below.

Policy 8-6. Significant trees, natural vegetation, and wildlife populations generally shall be preserved.

Policy 8-7. Important wildlife habitats which would be disturbed by major development shall be preserved, and corridors for wildlife migration between undeveloped lands shall be retained.

Policy 8-13. The critical ecological and scenic characteristics of rangelands, woodlands, and wildlands shall be recognized and protected.

Policy 8-15. Existing vegetation, both native and non-native, and wildlife habitat areas shall be retained in the major open space areas sufficient for the maintenance of a healthy balance of wildlife populations.

Policy 8-17. The ecological value of wetland areas, especially the salt marshes and tidelands of the bay and delta, shall be recognized. Existing wetlands in the County shall be identified and regulated. Restoration of degraded wetland areas shall be encouraged and supported whenever possible.

Policy 8-24. The County shall strive to identify and conserve remaining upland habitat areas which are adjacent to wetlands and are critical to the survival and nesting of wetland species.

Policy 8-25. The County shall protect marshes, wetlands, and riparian corridors from the effects of potential industrial spills.

3.4.3 Impact Analysis

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

Less than Significant with Mitigation

Effects on special-status species and their habitat primarily consist of temporary impacts associated with pipeline excavation for pigging and flushing of the existing pipeline, pumping concrete slurry into sections of pipeline designated to be retired in

place, and excavation and removal of segments of pipeline designated for removal. There would be no permanent impacts to habitat as part of the Project. Temporary impacts associated with the Project include habitat disturbance, localized turbidity, and vegetation removal. Indirect impacts include invasion of non-native plants into natural areas, noise disturbances, and temporary declines in air and water quality. Temporary vegetation loss or disturbance associated with proposed excavation (bell-holes, pipeline removal, and trenches) and laydown areas would be limited to 1.36 acres of coastal and valley freshwater marsh (0.03 acre of emergent wetland and 1.33 acres of aquatic bed), 0.03 acre of great valley willow scrub, 0.87 acre of non-native grasslands and 2.31 acres of ruderal areas.

The Applicant has an agency approved Habitat Conservation Plan (HCP) that provides a comprehensive framework for conserving sensitive habitats for protected species for PG&E Operations and Maintenance (O&M) activities in the San Joaquin Valley. The PG&E San Joaquin Valley HCP was developed in collaboration with the USFWS and CDFW and was first implemented in 2008. PG&E also developed the Bay Area HCP in collaboration with the USFWS to address O&M activities in the San Francisco Bay area and was implemented in 2017. The Project site occurs primarily within the San Joaquin Valley HCP Plan area; however, the westernmost portion of the alignment, within the Old River Crossing and on the west bank of Old River, is in Contra Costa County and the Bay Area HCP Plan area.

In addition, the Applicant must comply with all applicable provisions and/or protective measures of the Master Streambed Alteration Agreement between the California Department of Fish and Wildlife and the Pacific Gas and Electric Company (Notification No. 1600-2008-0001-0000-HQ) and all applicable Conditions of Approval required by the Incidental Take Permit (ITP) issued by CDFW for the San Joaquin Valley HCP (ITP No. 2081-2008-001-00).

Special-Status Plant Species. Special-status plant species were not observed at the Project site. However, botanical surveys conducted for the Project were completed outside the blooming period for special-status plant species that may occur (woolly rose mallow, Mason's lilaeopsis, delta mudwort, delta tule pea, Suisun marsh aster). In addition, focused terrestrial plant surveys at the Mildred Island levees were limited because they are inaccessible from land. There is potential for impact to these species if they occur within the excavation footprint for removal of the pipeline from the partially submerged Mildred Island levees, both on the west bank of Latham Slough and the east bank of Middle River. Additionally, there is limited potential for occurrence of special-status plant species within the excavation area on McDonald Island levee, Bacon Island east levee, Bacon Island west levee, and Palm Tract levee, particularly for species known to occur within levee riprap. Temporary impact to terrestrial areas that provide suitable habitat for special-status plant species is relatively small (0.05 acre). All special-status plant species known or potentially occurring within this area are CNPS-

listed species. No state or federal listed species have the potential to be adversely affected. Impacts to special-status plant species are considered less than significant with the implementation of **MM BIO-1.**

Special-status Fish Species. Pipeline removal from affected waterways (Latham Slough, Middle River, Old River) and their banks may impact special-status fish species (green sturgeon, white sturgeon, Central Valley steelhead, Chinook salmon, Pacific lamprey, Delta smelt, river lamprey, Sacramento splittail, longfin smelt) if present. A seasonal work window (August 1 through October 31) for avoidance of listed fish species was identified to avoid spawning periods in the study area and correspond to periods of high-water temperatures which are least favorable conditions for fish, especially steelhead and Chinook salmon. Pipeline removal activities would temporarily increase turbidity in the aquatic environment surrounding the work area. Increases in turbidity can result in physical effects that adversely affect habitat and temporary suspension of sediments, organic matter, or contaminated constituents contained within the sediments could be introduced into the water column. Large-scale increases of organic matter within a water column, usually associated with fine sediments, such as silts and clays, can increase dissolved nutrient concentrations, resulting in increased algal blooms, or decrease dissolved oxygen when the suspended sediments are anoxic or have a high chemical oxygen demand. Due to the short-term nature of the Project and implementation of **MM BIO-2** through **MM BIO-5**, impacts to special-status fish species would be less than significant.

Western Pond Turtle and Giant Garter Snake. Based on the review of pertinent literature, the proximity to known occurrences, and field surveys, western pond turtle has a high potential for occurrence and giant garter snake has a moderate potential to occur within the Project site, particularly along the Mildred Island levee which offers suitable aquatic habitat with emergent vegetation and remnant rock riprap as basking habitat. Habitat removal, noise and equipment activity associated with pipeline decommissioning may reduce foraging opportunities and result in mortality. Due to the short-term nature of the Project and implementation of **MM BIO-4** and **MM BIO-6**, these impacts would be less than significant.

Swainson's Hawk and White-tailed Kite. The State-threatened Swainson's hawk and CDFW fully protected white-tailed kite occurs in the Project vicinity and could nest in proximity to work areas. Habitat removal, noise and equipment activity associated with pipeline decommissioning may substantially reduce breeding success of Swainson's hawk or white-tailed kite. Due to the short-term nature of the Project and implementation of **MM BIO-7**, this impact would be less than significant.

California Black Rail. There are known occurrences of black rail on several small, vegetated islands in Latham Slough, Middle River and Old River and this species may nest in proximity to the Project site. Habitat removal, noise and equipment activity

associated with pipeline decommissioning may substantially reduce breeding success of California black rail. Due to the short-term nature of the Project and implementation of **MM BIO-8**, this impact would be less than significant.

Breeding Birds. Vegetation removal or other Project activities may disrupt breeding by bird species protected under the Migratory Bird Treaty Act, California Fish and Game Code or other special-status bird species such as great blue heron, northern harrier, and Modesto song sparrow. Due to the short-term nature of the Project and implementation of **MM BIO-9**, this impact would be less than significant.

Noise and Lighting. Noise generated by pipeline flushing, cementing and removal activities may temporarily reduce habitat value for wildlife and special-status bird species along the affected waterways, particularly during vulnerable periods of the life cycle, such as breeding season. However, Project activities within habitat areas would be conducted outside the breeding season and would be limited to a maximum of six weeks at any one location. Therefore, noise-related impacts to wildlife and bird behavior and foraging success are considered less than significant.

Nighttime operations are not proposed; however, lighting may be occasionally required to complete critical operations for a few hours after sunset. However, this lighting would be low intensity, focused on work areas and limited to a few days at any one work site. Due to the temporary nature and small area affected (as compared to typical foraging areas), lighting-related impacts to bird behavior and foraging success would not be considered significant.

Implementation of the following MMs would be sufficient to reduce impacts to special-status species to a less-than-significant level.

MM BIO-1: Special-Status Plant Avoidance. Prior to the start of construction, a qualified botanist shall survey planned terrestrial impact areas to identify special-status plants potentially occurring within the impact footprint. The surveys shall be conducted during the appropriate blooming period. If a special-status plant population is found, it shall be flagged for avoidance, if feasible. If temporary impacts cannot be avoided, affected special-status plant populations shall be restored upon Project completion to pre-existing conditions. A Site Restoration Plan shall be prepared and approved by CSLC staff and other agencies if appropriate that provides for plant salvage and transplantation and/or seed collection and replanting, as appropriate, and establishes performance criteria and monitoring to ensure restoration to pre-project conditions.

MM BIO-2: Worker Environmental Awareness Training. An environmental training program shall be developed, approved by CSLC staff prior to Project

implementation, and presented by a qualified biologist. All contractors and employees involved with the Project shall attend the training. At a minimum, the training shall address special-status species that could occur on the site, their distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and required Project avoidance, minimization, and mitigation measures A copy of the training sign-in sheets shall be provided to CSLC staff when training has been concluded.

MM BIO-3: In-Water Work Period Restrictions. Pipeline removal activities in surface water or on the banks of Latham Slough, Middle River and Old River shall be conducted during the period when migratory fish are less likely to be present (August 1 through October 31) and shall avoid spawning periods. This work period shall be modified as required following consultation between the ACOE and NMFS conducted as part of Project permitting.

MM BIO-4: Biological Monitoring. A qualified biological monitor, approved by CSLC staff, shall survey the onshore work area for sensitive species or other wildlife that may be present no more than 24 hours prior to the commencement of Project activities. In addition, the biological monitor shall monitor Project activities within surface water, and marsh and riparian habitats, and other activities that have the potential to impact special-status species on a daily basis before Project activity begins. If at any time during Project decommissioning any special-status wildlife species are observed within the Project area, work around the animal's immediate area shall be stopped or work shall be redirected to an area within the Project site that would not impact these species until the animal leaves or is relocated by a qualified biologist. Listed species would be allowed to leave on their own volition, unless coordination with USFWS and/or CDFW provides authorization for relocation by a qualified biologist with appropriate handling permits. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is injured or killed by Project-related activities, the biological monitor would stop work and notify CSLC and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area.

MM BIO-5: Turbidity Monitoring Plan. A Turbidity Monitoring Plan shall be developed and submitted to CSLC staff 30 days prior to in-water work. The plan shall be implemented during all in-water work to ensure that turbidity levels upstream and downstream of the Project site do not exceed Basin Plan water quality objectives. The Plan shall include methods to reduce turbidity during in-water pipeline removal and removal of pipeline from the levees and banks, if determined to be necessary by turbidity monitoring results. These

methods could include the application of materials such as silt fences and straw waddles to control erosion and sediment release or in-water silt curtains. The Applicant or its contractor shall send weekly electronic copies of the turbidity monitoring results for review by CSLC during in-water Project activities.

MM BIO-6: Western Pond Turtle and Giant Garter Snake Avoidance. A qualified biologist shall conduct a pre-construction survey for these species within 24 hours prior to any ground disturbance on or adjacent to levees and channel banks. Barrier fencing shall be constructed around the work areas, determined by the qualified biologist to be within suitable habitat, to preclude these species. Should western pond turtle or giant garter snake be found within the work areas, they will be allowed to leave the site of their own volition prior to installation of fencing and initiation of construction. In areas providing suitable habitat for giant garter snake, terrestrial excavation within 250 feet of suitable aquatic habitat will be avoided from October 1 to May 1, the snake's inactive season.

MM BIO-7: Swainson's Hawk and White-tailed Kite Avoidance. A qualified biologist shall conduct a pre-construction nest survey for Swainson's hawk and white-tailed kite no more than 72 hours prior to any ground disturbance. If a Swainson's hawk nest or white-tailed kite nest is found within 0.25 mile of any work areas, a qualified biologist shall evaluate the adverse effects of the planned activity in consultation with CDFW. If the biologist determines that the activity would disrupt nesting, a buffer between the activity and the nest shall be established and limited operation period (reduced level of disturbance) during the nesting season (March 15 through June 30) shall be implemented. If work cannot be postponed, the active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.

MM BIO-8: California Black Rail Avoidance. If construction is scheduled to occur within 250 feet of suitable California black rail habitat during California black rail breeding season (February 1 through August 15), a qualified biologist shall conduct a breeding season survey to identify nesting locations of California black rail. Surveys shall be conducted between February 1 and August 1 in accordance with accepted protocols. If active nests are identified, work within 250 feet of any nest location shall not occur until after August 15. If work cannot be postponed, the active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.

MM BIO-9: Breeding Bird Avoidance. Should Project activities occur during the breeding season (March 1 through August 1), a qualified biologist shall conduct breeding bird surveys to identify active nests. If an active nest is

found, a buffer shall be established between the active nest and work activities in coordination with CDFW. Work within the established buffer shall be avoided. If work cannot be postponed, the active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.

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

Less than Significant with Mitigation

Pipeline removal activities at the Middle River east levee (Segment 3, west side of Mildred Island) would result in the temporary loss of approximately 0.03 acre of great valley willow scrub. Pipeline removal activities on the Latham Slough west levee (Segment 3, east side of Mildred Island) would result in the temporary loss of approximately 0.01 acre of emergent wetland. It is anticipated that this vegetation would quickly re-colonize the backfilled trench in both locations. Due to the short-term nature of the Project, and implementation of **MM BIO-10**, this impact would be less than significant.

MM BIO-10: Wetland and Riparian Habitat Restoration. A Site Restoration Plan developed in coordination with the ACOE and CDFW shall be implemented to replace wetland and riparian habitat removed by the Project. A copy of the plan shall be submitted to CSLC staff 60 days prior to Project implementation. The Applicant shall also obtain and comply with all necessary permits for impacts to jurisdictional aquatic resources from the ACOE, RWQCB, and CDFW prior to Project implementation. Compensatory mitigation must be consistent with the regulatory agency standards pertaining to mitigation type, location, and ratios. After decommissioning and pipeline removal activities are completed, all disturbed areas shall be seeded or hydroseeded with a native seed mix appropriate for the area.

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

Less than Significant with Mitigation

Excavation required for pipeline decommissioning and removal would involve temporary impacts to aquatic resources (waters of the U.S. and wetlands) regulated by the ACOE under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The Project would also result in temporary impacts to aquatic resources regulated

by the Central Valley Regional Water Quality Control Board (CVRWQCB) under Section 401 of the Clean Water Act and CDFW under Section 1602 of the California Fish and Game Code, and the California Water Board's Statewide Wetland Definition and Procedures. The Preliminary Aquatic Resource Delineation prepared for the Project determined up to 68.11 acres of federally jurisdictional waters and wetlands may be temporarily disturbed by removal of segments of the decommissioned pipeline at the Latham Slough, Mildred Island, Middle River, and Old River crossing locations. Up to 68.11 acres of waters of the State and CDFW stream features may also be temporarily impacted by the Project. Of this disturbance area, up to 2.09 acres of excavation within federal and state jurisdictional features may be necessary for decommissioning and removal of the pipeline. Due to the short-term nature of the Project, and implementation of **MM BIO-10**, these impacts would be less than significant.

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

Less than Significant with Mitigation

Heavy equipment, vessel activity, and habitat removal would be focused on levee and in-water areas, which would allow wildlife to avoid work activities by transiting the Project site on levee roads and adjacent habitat areas. Work would not be conducted at night when most mammal movement occurs.

In-water work would be conducted during periods when migratory fish are unlikely to be present. At any one time, in-water pipeline removal activities would affect up to 200 feet of the subject waterway crossings which are at least 500 feet wide. Therefore, fish would have free passage during Project activities. Due to the short-term nature of the Project and implementation of **MM BIO-3**, fish migration impacts would be less than significant.

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

Less than Significant with Mitigation

San Joaquin County General Plan Policies NCR-2.1, NRC-2.5 and NRC-2.7, and Contra Costa County General Plan Policies 8-6, 8-7 and 8-13 seek to protect wetlands, riparian vegetation and other native vegetation and wildlife habitat. Pipeline decommissioning and removal activities would result in temporary disturbance to coastal and valley freshwater marsh, great valley riparian scrub and wetlands and may conflict with these policies. Due to the short-term nature of the Project, and implementation of **MM BIO-10**, this impact would be less than significant.

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

No Impact

As noted above, the Applicant has two agency-approved HCPs that provide a comprehensive framework for conserving sensitive habitats for protected species for PG&E Operations and Maintenance activities in the San Joaquin Valley and the Bay Area. Swainson's hawk, white-tailed kite, western pond turtle, and giant garter snake are PG&E San Joaquin Valley HCP covered species that may be affected by the Project. **MM BIO-2**, **MM BIO-4**, **MM BIO-6**, and **MM BIO-7** ensure that Project avoidance of these species is consistent with the PG&E San Joaquin Valley HCP. Therefore, there would be no conflicts with this HCP.

3.4.4 Mitigation Summary

Implementation of the following MMs would reduce the potential for Project-related impacts to biological resources to less than significant.

- MM BIO-1: Special-status Plant Avoidance
- MM BIO-2: Worker Environmental Awareness Training
- MM BIO-3: In-Water Work Period Restrictions
- MM BIO-4: Biological Monitoring
- MM BIO-5: Turbidity Monitoring Plan
- MM BIO-6: Western Pond Turtle and Giant Garter Snake Avoidance
- MM BIO-7: Swainson's Hawk and White-tailed Kite Avoidance
- MM BIO-8: California Black Rail Avoidance
- MM BIO-9: Breeding Bird Avoidance
- MM BIO-10: Wetlands and Riparian Habitat Restoration

3.5 CULTURAL RESOURCES

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

3.5.1 Environmental Setting

The following discussion is a summary from the Phase 1 Archaeological Study prepared for the Project by Padre Associates, Inc. (2020).

3.5.1.1 Archaeological Context

Archaeologists working in the Central Valley region of California have generally recognized three major pre-contact periods of cultural adaptation within the last 10,000 years. Stockton-area amateur archaeologists J. A. Barr and E. J. Dawson made substantial collections in the area from 1893 to the 1930s, which provided the foundation for the development of the three-phased chronological sequence that would ultimately be applied to the Central Valley region (Ragir 1972). Through comparative analysis of the artifacts collected during field investigations, Barr identified what he felt were two distinct cultural traditions. These two traditions were later refined by Dawson into a conceptual model which categorized area sites into “Early”, “Middle”, and “Late” periods (Ragir 1972; Schenck and Dawson 1929).

In the 1930s and 1940s, J. Lillard and W. Purves of Sacramento Junior College developed a three-phased cultural sequence that was similar to the one proposed by Barr and Dawson. These studies led to the establishment of sub-sequences for many regions of Central California, the most well-received of which has been Fredrickson’s (1973) concept of cultural “patterns” (Moratto 1984). This concept is essentially built around the premise that seemingly disparate groups can in fact be accurately described as sharing a single, widespread culture-horizon, and that perceived differences in approach and execution between individual groups can be attributed to local variations of that same, shared horizon.

Paleo-Indian Period (~10,000 to ~4,500 years ago). Due to the rapid accumulation of alluvial sediments that occurred during the late Holocene epoch, there exists very little archaeological data regarding early human occupation of the Central Valley region

during the “Paleo-Indian” period (Ragir 1972). While humans likely inhabited the region as early as 10,000 years ago, and possibly earlier, physical evidence of these early occupations would likely be deeply buried. However, traces of human activity during this period have been identified in and around the Central Valley. Archaeological remains from the Paleo-Indian period have been grouped into what is called the Farmington Complex, which is characterized by core tools and large, reworked percussion flakes. Populations during this time were likely small and mobile, and the subsistence strategy employed by these early peoples is generally thought to be centered around the exploitation of large game.

Windmiller Pattern - Early Period (~4,500 to ~2,500 years ago). During the Windmiller period, human settlement strategy in the Central Valley was predominantly riverine, with the majority of sites being situated in a valley floor setting along rivers or marshes. Other Windmiller Pattern sites have been identified atop small knolls above prehistoric floodplains (Martin and Self 2002). The general abundance and wide variety of plant and animal resources in these riverine environments would have been an attractive feature to pre-contact populations, and some scholars have hypothesized that the influx of peoples to the Central Valley region during this time may be the result of a deliberate migration of one or more pre-adapted groups, possibly even from outside California, who were already familiar with such environments and selected the Central Valley specifically because of those resources.

The Windmiller Pattern shows evidence of a mixed economy, with both faunal and plant resources being utilized. The archaeological record contains examples of numerous projectile point forms from this period, with a wide range of faunal remains that include aquatic as well as terrestrial animals (Ascent Environmental 2018). At some sites, fishing hooks and spears have been found in direct association with the remains of sturgeon, salmon, and other fish. The utilization of local plant resources is evidenced by ground stone artifacts, which are present in many Windmiller Pattern sites and are associated with the processing of wild seeds and nuts such as acorns. Clay balls used in the preparation of acorn mush have also been found in some Windmiller sites.

Mortuary practices of the Windmiller Pattern typically involved burial of the deceased in a flat-stomach or ventrally flexed position that was oriented with the head facing to the west. Copious amounts of “grave goods” are often found in association with the deceased. Specific items found in association with Windmiller Pattern burials include large, stemmed-type projectile points (both spear and dart) typically made from slate or chert but also less commonly from obsidian, fishing paraphernalia such as net weights and bone hooks, faunal remains of large and small animals, conically drilled tubular stone pipes, charmstones, quartz crystal, red ocher pigment, rectangular beads of abalone (*Haliotis* spp.), various shapes of beads made from marine snail shell (*Olivella biplicata*), and occasionally artifacts made of bone or baked clay.

Berkeley Pattern - Middle Period (~2,500 to ~1,500 years ago). Berkeley Pattern sites exhibit some temporal overlap with the Windmiller Pattern during the early period, and with the Augustine Pattern during the late period. Unlike the predominantly west-facing burials associated with the Windmiller Pattern, Berkeley Pattern burials utilize a variety of directional orientations (Fredrickson 1973; Moratto 1984). Occasional cremations are also found. Also, while red ocher pigment is often still found spread over burials from this period (Lillard et al. 1936), a general reduction of mortuary goods occurs during this time (Fredrickson 1973; Moratto 1984). If mortuary goods are present, they are often utilitarian in nature and include few ornamental or ritual objects. However, certain items such as charmstones, quartz crystals, and bone whistles have at times been found in Berkeley Pattern burials, suggesting the religious or ceremonial significance of the individual (Hughes 1994).

The Berkeley Pattern initially may represent the spread of proto-Miwok and Costanoans, collectively known as Utians, from their hypothesized lower Sacramento Valley and Sacramento Delta homeland (City of Davis 2000). However, the expansion or assimilation of different populations during this time may be reflective of a gradual process which also involved a broader shift in economic focus, rather than being the sole result of a sudden and outright replacement of one population with another (Fredrickson 1973).

Meganos Tradition (~1,500 to ~1,000 years ago). A cultural tradition resembling an amalgamation of Windmiller Pattern and Berkeley Pattern traits established itself between the tidal marsh people of the south Bay and those to the north. Bennyhoff (1994) calls this tradition *Meganos*, the Spanish word for “sand mound”, due to the abundance of sand mound burials found in area sites from this time period. Other cultural traits associated with the Meganos Tradition include dorsally flexed burials, found also in Early Period Windmiller Pattern sites of the Delta, marine snail saucer and saddle beads, and increased occurrences of otter bone in habitation and resource processing sites (Milliken et al. 2007). Moratto (1984) suggests that members of both the Windmiller Pattern and the Meganos Tradition were speakers of an extinct subgroup of the Utian language family, while Bennyhoff describes this hypothetical shared language as proto-Yokutsian (Milliken et al. 2007).

The roots of what appears to have been a population movement can be seen at sites around the sloughs and mouth of the San Joaquin River in the Stockton District, where many cultural traits of the earlier Windmiller Pattern appeared south of their earlier origin in the lower Sacramento Valley. Concurrently, sites within what was formerly Windmiller territory have been found to exhibit characteristics of the Berkeley Pattern. Site CA-ALA-413 in Livermore Valley provided evidence that the Meganos Tradition had spread into the interior valleys of the northern Diablo Range by the early phase of the Middle Period (Bennyhoff 1994; MacEwen2013). During the upper Middle Period, the

Meganos Tradition extended into the Fremont Plain of the southeast Bay and mixed with the populations of Santa Clara Valley.

Bennyhoff viewed the Meganos Tradition as "a hybrid of a Windmiller population intermarrying with Berkeley neighbors" (Bennyhoff 1994). Bennyhoff proposed that towards the end of the Middle Period, or about 1,000 years ago, the Meganos people began withdrawing progressively back towards the San Joaquin River delta, possibly due to the arrival of other cultural groups into the area, with the Stockton District ultimately becoming their cultural center (Milliken et al. 2007). Bennyhoff (1994) has suggested that the Meganos Tradition is indicative of a semi-sedentary settlement arrangement, marked by increased seasonal movement of villages, a departure from earlier, more sedentary patterns (Garlignhouse et al. 2017).

Augustine Pattern (~1,500 to ~150 years ago). The Augustine Pattern is composed of three temporal phases, which indicate a progressive intensification of localized economic systems and greater distinctions in social ranking, possibly the result of intrusive traits accompanying the southward movement of Wintuan peoples into the lower Sacramento Valley.

Broadly speaking, the Augustine Pattern is characterized by a shift in the general subsistence pattern. Specific changes include the advent of the bow-and-arrow, which effectively replaces the atlatl and thrown dart technology as the primary means of hunting game. Intensive fishing, hunting and plant resource gathering continues during this time. Ultimately, acorns become the predominant food resource during this period, eclipsing but not replacing all other food resources. Trade systems expand to include raw materials as well as finished products (Garlignhouse et al. 2017).

This Pattern is typified by a general increase in population size, increased trade and exchange networks, and great elaboration of ceremonial and social organization, which includes the development of social stratification. Specific artifacts that also typify the pattern are clam shell disc beads, bone awls for use in basket-making, small notched and serrated projectile points referred to as the Gunther barbed series, bone whistles, stone pipes, and an especially elaborate baked clay industry, which included figurines and pottery vessels. Other traits associated with the Augustine Pattern are increased village sedentism and an incipient monetary economy in which beads become the standard measure of exchange (City of Davis 2000).

Mortuary practices of the Augustine Pattern continue the use of flexed positioning with variable orientation, but the inclusion of red ocher in burial settings diminishes. There is also a significant increase in the number of cremations, which become widespread at this time (Moratto 1984). Comparisons of mortuary goods found in association with Augustine Pattern burials indicate that cremation may have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions.

Some research has suggested that the Augustine Pattern represents the expansion of Wintuan populations from the north, the cultural traits of whom were assimilated into the existing cultural horizon established in the region during the preceding Berkeley Pattern (Moratto 1984).

3.5.1.2 Regional Historical Context

The history of Northern California, which includes San Joaquin County and Contra Costa County, is grouped into three distinct periods: Spanish, Mexican, and American. Due to its distance from San Francisco Bay, the Project site was largely isolated from the Spanish and Mexican periods of California history. The following section briefly discusses major events from these periods as a point of reference.

Spanish Period (A.D. 1775 to 1822). The earliest overland exploration of Contra Costa County was that of the Fages-Crespi Expedition in 1772. Travelling through what is now Milpitas, Oakland, and Berkeley, the party reached Pinole on March 28, 1772 (Cook 1957). From there they traveled through areas now known as Rodeo and Crockett to Martinez, made a brief foray into the delta region of the Central Valley, and camped somewhere near areas now occupied by Pittsburg or Antioch. The Anza-Font Expedition reached the East Bay Hills in March 1776 by following a similar route.

In 1775, Captain Manuel Ayala's expedition explored the San Francisco Bay and later ventured up the Sacramento and San Joaquin Rivers in search of suitable sites for the establishment of missions. The first mission in the region was established in 1776 with the completion of Mission San Francisco de Asís (Mission Dolores) in San Francisco. It was followed three months later by Mission Santa Clara de Asís and in 1797 with the Mission San Jose de Guadalupe. The establishment of these and other missions throughout California represents the start of the California Mission Era, which lasted for another 46 years.

The missions also functioned as hubs for the procurement and dispersal of local economic resources, and as military outposts and proxies of secular governance. Native peoples from throughout California were brought into the missions as "neophytes" for both labor and conversion into the Catholic faith. Tactics used to boost the number of neophytes at each mission ranged from well-intended promises of betterment and spiritual salvation; to coercion and seizure by force of arms.

Mexican Period (A.D. 1822 to 1850). In 1821, Mexico declared independence from Spain; a year later, California became a Mexican Territory. After the secularization of the missions in 1834, lands were gradually transferred to private ownership via a system of land grants (Hoover et al. 2002). The Project site is not within a land grant; however, it is located between the former *Rancho Campo de los Franceses* and *Rancho Los Meganos* land grants.

Rancho Campo de los Franceses was a 48,747-acre land grant encompassing present-day Stockton and French Camp, patented to Guillermo Gulnac by Governor Manuel Micheltorena in 1844 (Hoffman 1862). Gulnac did not permanently settle on the land and sold the property in 1845 to Captain Charles H. Weber. Weber, a German immigrant, went on to establish the town of Stockton in 1849 (Lloyd and Baloian 2005).

Rancho los Meganos was a 13,316-acre land grant located in the Delta region in present-day Contra Costa County (Hoffman 1862). A patent for *Rancho los Meganos* was issued to Jose Noriega by Governor Jose Castro in 1835. Noriega sold the rancho two years later in 1837 to John Marsh, an early pioneer who is credited with being the first doctor in California and a significant figure in California's statehood (Brewer 1966; Winkley 1962; Lyman 1931).

Following the Bear Flag Revolt in 1846, California gained its independence from Mexico and the United States gained control of the territory. Across California, courts reviewed the legality of each land grant on an individual basis. While the Treaty of Hidalgo promised all property belonging to the Californios would be respected, the Land Act of 1851 required all land grant owners to prove their title and ownerships rights. Because the Californios relied on vague surveys and land titles, it took an average of 17 years to receive their American land patents (Rawls and Bean 2012).

American Period (A.D. 1850 to Present). The discovery of gold in the Sierra Nevada mountains in 1849 prompted a surge in population throughout the northern half of California, as emigrants sought their fortunes as prospectors in the rivers and hills, or as tradesmen in the towns and cities where the need for goods and services was suddenly expanded. The increased demand for supplies and provisions led to a significant rise in the number and respective market value of livestock. Additional changes in land use involved widespread logging, which greatly accelerated with the increased demand for railroad ties, mine timbers, and building materials. Agricultural development across all arable land rapidly intensified during the American period, both to meet local and regional demand and also as a commercial venture.

3.5.1.3 Local Historical Context

San Joaquin County. San Joaquin County was one of the original 27 counties created when California achieved statehood in 1850. During the early nineteenth century, while leading a Spanish expedition into the lower portion of California's Central Valley, Lieutenant Gabriel Moraga encountered a larger river emanating from the southern Sierra Nevada mountains, which he named San Joaquin, after Saint Joachim. The river, which flows through the heart of California's Central Valley, would ultimately give the county its name.

Under Mexican governance, the area of *Alta California* that would eventually become San Joaquin County contained five *ranchos*, making ranching and small-scale agriculture the primary drivers of the local economy. Ownership of these ranchos changed over time and in many cases transitioned to early European families before developing into larger settlements, such as Stockton.

When the Gold Rush struck, a massive influx of prospectors and entrepreneurs arrived in the Sierra Nevada mountains, and Stockton soon grew into a major logistical hub for those seeking their fortunes at the Mother Lode. Although few actually succeeded in their pursuit, many remained in the area to pursue livelihoods in other areas, primarily agriculture. With the development of the San Joaquin Valley into a major agricultural center came an increased need for arable land. This led to reclamation efforts within the Delta, which was subject to regular flooding and could not be farmed without large-scale human intervention. Initial reclamation began in 1869, further augmenting agricultural output of the region and resulting in the emergence of a powerful industrial engineering sector in Stockton and Lodi. Notables within this sector include the Sperry Flour Company, the Holt Manufacturing Company, which pioneered the manufacturing and sales of the tractor, Samson Ironworks, and the canning empire of Tillie Lewis.

The City of Stockton was named the county seat and soon became an important supply and transportation center in the late 1800s. Like many others, Captain Weber originally intended to make his fortune San Joaquin County by gold mining but soon realized that greater wealth could be achieved by supplying gold miners with provisions and established a town to serve that purpose. He built the first permanent residence in the Central Valley in the area now known as Weber Point in downtown Stockton (Michael Brandman Associates 2010.)

Bacon Island Rural Historic District. Bacon and two partners purchased what would become Bacon Island in 1872 and constructed a levee around the island the same year, with the first agricultural crop planted during the 1872 to 1873 season. The levee failed, the crop was destroyed, and Bacon and his partner Sherman Day, who owned the western part of the island, attempted many methods of levee construction over the following years through the use of Chinese labor. However, by the turn of the century, these methods had proven unsuccessful and Bacon Island, like many others, continued to experience seasonal flooding. Permanent reclamation of Delta islands followed the invention of industrial dredging machines, mechanical ditch diggers, and steam-powered (and later electrical) water pumps in the late nineteenth and early twentieth centuries. This was accompanied by consolidation of land ownership under companies undertaking large-scale reclamation projects, beginning around the turn of the century. It was via one of these companies, run by Los Angeles-based businessman Lee Phillips, that Bacon Island was permanently leveed around 1915. Phillips then leased the land to farmers (Garlignhouse et al. 2017).

One of these farmers was Japanese immigrant George Shima (Kinji Ushijima), who entered into an agreement with Phillips to lease and farm the land reclaimed by Phillips' company on a series of Delta islands; Shima later purchased much of his own land. Shima's main crop was potatoes and his success soon earned him the nickname "Potato King". Shima constructed a series of twelve farm labor camps along the levee around the island's perimeter, with bunkhouses, boarding houses, cook's houses and mess halls, barns, garages, machine shops, Japanese style baths, and other structures, depending on the size of the camp. On Bacon Island he also grew beans and barley, often via tenant farmers and sharecroppers that included Japanese immigrants. He became a leader in the Japanese American community, was active in the local Delta community, and fought against Anti-Asian legislation at the State and federal levels. As such, today Shima is recognized as a major figure in the early history and development of the Delta region and the early Japanese American community (Garlignhouse et al. 2017).

Shima died in 1926 and, following his death, Bacon Island changed ownership and farming in the Delta changed in significant ways. This included increased mechanization, subdivision of large land holdings, and a shift in crops, with farmers on Bacon Island focusing on crops such as sugar beets. Increasing discrimination against Asian Americans also led to a sharp decline in the number of Japanese farmers in the Delta. They were increasingly replaced by Anglo and Filipino American farmers.

In 1942, during World War II, Japanese Americans were forcibly removed from the coast and sent to a series of inland relocation centers in California and several other states. Many Delta farms lay fallow during the war and, although farming resumed in 1945, continued developments in agriculture reduced the number of laborers needed to operate each farm. Until the 1980s, Bacon Island continued to be operated by Asian American companies, two Japanese and one Chinese. It is one of the few Delta islands to retain intact farm labor camps from the early twentieth century (Garlignhouse et al. 2017).

3.5.1.4 Archaeological Surveys

The Project site was surveyed by Padre Associates archeologists on October 22, 2020. The surveys focused on terrestrial impact areas, access roads and staging areas. One new historic-aged resource, the Palm Tract Levee, was observed and recorded during the survey.

3.5.1.5 Records Search Results

An archaeological record search from the Central California Information Center at California State University, Stanislaus was requested on September 2, 2020, and the Northwest Information Center at Sonoma State University on October 15, 2020. Both

information centers are part of the California Historical Resources Information System. The records search included a review of all recorded historic-era and prehistoric archaeological sites within a 0.25-mile radius of the Project site, as well as a review of known cultural resource surveys and technical reports. The State Historic Property Data Files, National Register of Historic Places, National Register of Determined Eligible Properties, California Points of Historic Interest, and the California Office of Historic Preservation Archaeological Determinations of Eligibility also were analyzed. Padre received the results on September 3 and November 16, 2020, respectively. Padre also completed a review of PG&E's Cultural Resources Database on October 13, 2020.

During the records search, the following sources were consulted:

- Information Center base maps, USGS 7.5-minute series topographic quadrangles for the Project site, and other historic maps
- Pertinent survey reports and archaeological site records were examined to identify recorded archaeological sites and historic-period built-environment resources (such as buildings, structures, and objects) within or immediately adjacent to the Project site
- The California Department of Parks and Recreation's California Inventory of Historic Resources and the Office of Historic Preservation's Historic Properties Directory, which combines cultural resources listed on the California Historical Landmarks, California Points of Historic Interest, and those that are listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR)

The records search revealed that 17 cultural resource studies have been completed within a 0.25-mile radius of the Project site, five of which included portions of the Project site. The records search indicates three historic resources are located within the Project site: the Bacon Island levee, the McDonald Island levee, and the Bacon Island Rural Historic District. The background research did not identify any prehistoric resources. Table 3.5-1 lists and describes all previously recorded cultural resources.

Table 3.5-1. Previously Recorded Cultural Resources within 0.25 mile of the Project Site

Primary Site No.	Trinomial Site No.	Description	Distance from Project Site
P-39-000327	CA-SJO-213H	George Shima's Camp No. 3	25 feet north
P-39-000332	CA-SJO-218H	George Shima's Camp No. 10	43 feet southwest
P-39-000333	CA-SJO-219H	George Shima's Camp No. 10 ½	65 feet southwest
P-39-000334	CA-SJO-220H	George Shima's Camp No. 11	100 feet south

Primary Site No.	Trinomial Site No.	Description	Distance from Project Site
P-39-000335	CA-SJO-221H	Bacon Island Bridge Tender's House	275 feet south
P-39-000030	-	One fragment of Japanese blue floral print on white porcelain	1,320 feet northwest
P-39-000473	-	Bacon Island Road Bridge. Historic truss bridge constructed in 1906 and removed/relocated in 1950. Demolished	145 feet south
P-39-005041	-	Holt School. Originally constructed in 1917 and destroyed by fire in 1950. Rebuilt in 1953.	1,600 feet east
-	-	Bottle Fragment. Temporary Designation ISO-SI-01	547 feet south
-	**-**	**Bacon Island Rural Historic District**	**-**
-	**-**	**Bacon Island Levee**	**-**
-	**-**	**McDonald Island Levee**	**-**

Note: Resources that occur within the Project site are bolded.

Source: Central California Information Center, 2020.

A review of historic topographic map and aerial photographs identified one new resource: the Palm Tract Levee. Because the resource is more than 50 years old, Padre documented the levee on the appropriate forms which are attached to the Phase I Archaeological Study. Specifically, Padre recorded one segment of the levee as a historic resource. The recorded segment extends approximately 1,036 feet north of the intersection of the L-057A pipeline with Palm Tract and extends south for approximately 1,388 feet.

3.5.2 Regulatory Setting

Federal and state laws and regulations pertaining to cultural resources and relevant to the Project are identified in Appendix A. Local policies applicable to the Project with respect to cultural resources are listed below.

3.5.2.1 San Joaquin County

The San Joaquin County General Plan Policy Document contains goals and policies pertaining to cultural resources. Cultural resources policies relevant to the Project are listed below.

NCR-6.1: Protect Historical and Cultural Resources. The County shall protect historical and cultural resources and promote expanded cultural opportunities for residents to enhance the region's quality of life and economy.

NCR-6.2: No Destruction of Resources. The County shall ensure that no significant architectural, historical, archeological, or cultural resources are knowingly destroyed through County action.

NCR-6.5: Protect Archeological and Historical Resources. The County shall protect significant archeological and historical resources by requiring an archeological report be prepared by a qualified cultural resource specialist prior to the issuance of any discretionary permit or approval in areas determined to contain significant historic or prehistoric archeological artifacts that could be disturbed by project construction.

NCR-6.6: Tribal Consultation. The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

3.5.2.2 Contra Costa County

The Open Space Element of the Contra Costa County General Plan contains goals and policies pertaining to cultural resources. Cultural resources policies relevant to the Project are listed below.

Policy 9-28. Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.

Policy 9-29. Buildings or structures that have visual merit and historic value shall be protected.

3.5.3 Impact Analysis

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

Less than Significant

The proposed Project would directly impact approximately 100 square feet of the McDonald Island Levee, approximately 308 square feet of the Bacon Island Levee, approximately 128 square feet of the Bacon Island Rural Historic District, and approximately 162 square feet of the Palm Tract Levee. The Bacon Island Rural Historic District has been recommended eligible for listing on the NRHP, and the Bacon Island Levee is a contributing element to the historic district. However, the affected historic resources (levees) have been previously impacted by pipeline installation and the

Project would not cause any new impacts. Additionally, the McDonald Island and Palm Tract levees do not meet any of the significance criteria for listing on the NRHP. Finally, once ground disturbance is complete, the affected portions of the levees would be backfilled and restored to pre-Project contours and condition.

The southern boundary of George Shima's Camp No. 3 (Site P-39-000327) is adjacent to the proposed temporary laydown area on the west side of Bacon Island, and approximately 60 feet from a proposed temporary excavation (Bell-hole No. 7). However, no impacts to the property or structures within George Shima's Camp No. 3 would occur.

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

Less than Significant with Mitigation

No archeological resources were identified in proximity to the Project site. However, archeological resources may be discovered during pipeline removal. MM-CUL-1/TCR-1 would ensure that archeological resources, in the event of accidental discovery, further disturbance would halt until the resource had been appropriately assessed and treatment, if necessary, approved. With the implementation of MM CUL-1/TCR-1, impacts to archeological resources would be less than significant.

MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Resources. In the event that potential cultural or tribal cultural resources are uncovered during Project implementation, all earth-disturbing work within 100 feet of the find shall be temporarily suspended or redirected until an approved archaeologist and tribal monitor, if retained, has evaluated the nature and significance of the discovery. In the event that a potentially significant cultural or tribal cultural resource is discovered, PG&E, CSLC and any local, state, or federal agency with approval or permitting authority over the Project that has requested/required notification shall be notified within 48 hours. The location of any such finds must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. Impacts to previously unknown significant cultural or tribal cultural resources shall be avoided through preservation in place if feasible. Damaging effects to tribal cultural resources shall be avoided or minimized following the measures identified in Public Resources Code section 21084.3, subdivision (b), if feasible, unless other measures are mutually agreed to by the lead archaeologist and culturally affiliated tribal monitor that would be as or more effective.

A treatment plan, if needed to address a find, shall be developed by the archaeologist and, for tribal cultural resources, the culturally affiliated tribal monitor, and submitted to the appropriate tribal representatives and CSLC staff for review, input, and concurrence prior to implementation of the plan. Protection in place of tribal cultural resources shall be prioritized, if feasible; if the archaeologist or tribe determines that damaging effects on the cultural or tribal cultural resource can be avoided in place, then work in the area may resume provided the area of the find is clearly marked for no disturbance. If avoidance in place of tribal cultural resources is infeasible, the treatment plan shall include measures that place priority on Tribal self-determination over collection and curation, including the option to repatriate (rebury) materials nearby at a location of their choosing, and to transfer possession/ownership to the culturally affiliated Tribe.

Title to all archaeological sites, historic or cultural resources, and tribal cultural resources on or in the tide and submerged lands of California is vested in the State and under CSLC jurisdiction. The final disposition of archaeological, historical, and tribal cultural resources recovered on State lands under CSLC jurisdiction must be approved by the CSLC.

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

Less than Significant with Mitigation

The Project is not expected to disturb human remains. However unlikely, unmarked burials could be unearthed during subsurface construction activities and consequently the Project could disturb human remains, including those interred outside formal cemeteries. **MM CUL-2/TCR-2** would ensure that, in the event of accidental discovery, further disturbance would halt until the human remains had been appropriately assessed and treatment, if necessary, approved. With the implementation of **MM CUL-2/TCR-2**, the impact would be less than significant.

MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains. If human remains are encountered, all provisions provided in California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98 shall be followed. Work shall stop within 100 feet of the discovery, and both an archaeologist and CSLC staff must be contacted within 24 hours. The archaeologist shall consult with the County Coroner. If human remains are of Native American origin, the County Coroner shall notify the Native American Heritage Commission within 24 hours of this determination, and a Most Likely Descendent shall be identified. No work is to proceed in the

discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented.

3.5.4 Mitigation Summary

Implementation of the following MMs would reduce the potential for Project-related impacts to cultural resources to less than significant.

- MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources
- MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains

3.6 CULTURAL RESOURCES – TRIBAL

CULTURAL RESOURCES – TRIBAL	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) 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:	☐	☒	☐	☐
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1, subdivision (k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. 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.	☐	☒	☐	☐

3.6.1 Environmental Setting

3.6.1.1 Ethnographic Context

The Project site is located within territory traditionally associated with the Northern Valley Yokuts; however, the site is approximately 0.5 mile south of territory traditionally associated with the Eastern Miwok (Kroeber 1925). Given the fluidity of tribal borders, it is possible that the Project site could have been utilized by both tribes.

Northern Valley Yokuts. The Northern Valley Yokuts, whose territory extended south from Bear Creek near Stockton to the south side of the San Joaquin River past Mendota, east to the Sierra Foothills, and west to the Coast Range, occupied year-round villages along the San Joaquin River and other major tributaries to exploit riverine resources (Wallace 1978). The Northern Valley Yokuts were organized into individual autonomous villages composed of single-family structures (Moratto 1984). The structures were typically small and constructed from mats of woven tule. Other structures included sweathouses and ceremonial chambers. Villages tended to be located on high ground near drainages and other valley water sources (Moratto 1984).

Aside from tobacco, the Northern Valley Yokuts did not cultivate plants or, aside from the dog, domesticate animals. Subsistence was primarily focused around the gathering of wild plant foods such as acorn (*Quercus* spp.), buckeye (*Aesculus californica*), hazelnut (*Corylus cornuta* var. *californica*), nuts from the digger pine (*Pinus sabiniana*), and bulbs from various types of *Brodiaea*, all of which would be supplemented by meat from the hunting of large mammals such as mule deer (*Odocoileus hemionus*), tule elk (*Cervus nannoides*), and pronghorn antelope (*Antilocarpa americana*). Other important food sources included freshwater fish and game birds such as quail, and various species of waterfowl.

Yokuts lithic production relied heavily upon local cherts, in addition to imported obsidian, when available (Wallace 1978). Groundstone artifacts consisted of the mortar and pestle, and coiled basketry was fashioned through the use of bone tools. Tule was integral in the manufacture of not just mats for structures, but also boats and rafts, which the Yokuts used for navigating the larger waterways. Other material resources were acquired by the Yokuts via an intensive system of trading, specifically with neighboring Miwok and Costanoans.

In the mid to late eighteenth century, the welfare of both tribes was significantly altered when Spanish explorers arrived in the Bay-Delta region in the 1760s. Spanish expeditions resulted in a series of events that significantly reduced the Bay Miwok and Northern Valley Yokut populations, changed their political and social organization, and altered their traditional territory. The biggest change occurred with the establishment of two nearby Franciscan missions, San Francisco de Asís (1776) and Mission San José (1797). The missionaries were focused on the acculturation of the local Native Americans and their indoctrination to Catholicism (Garlignhouse et al. 2017).

Eastern Miwok. The Native Americans who occupied the Mount Diablo and Delta regions at the time of the 1770s Spanish entrada are now commonly known as “Bay Miwok”, which is often classified as a subdivision of Eastern Miwok. The Miwok language family consisted of multiple groups, occupying a diverse range of territory, and could be distinguished linguistically and geographically. Bay Miwok territory extended from the Delta along the southern shore of the Suisun Bay and south past the eastern slopes of Mt. Diablo to the area surrounding the city of Danville. Archaeological and linguistic evidence suggests that the Miwok arrived in the area about 2,000 years ago, entering into the lower Sacramento and Delta area, possibly displacing a previously established group (Moratto 1984; Garlignhouse et al. 2017).

The Bay Miwok lived in close proximity to a number of other indigenous groups including the Yokuts to the southeast, the Plains Miwok to the northeast, the Patwin to the north and the Costanoan-Ohlone to the south and west. Prior to the arrival of Euro-Americans in the mid to late eighteenth century, the Bay Miwok relied upon annual cycles of hunting, gathering, and fishing to procure items for subsistence, trade, and

material needs. The Miwok territory encompassed a wide range of environments, some rich enough to support permanent villages, others less abundant and necessitating a more mobile way of life. Tribelets were the predominant political unit among the Bay Miwok. Each tribelet occupied and maintained distinct boundaries that were generally recognized and respected by neighboring tribelets (Bennyhoff 1977). Within each tribelet there were lineages and settlements between 20 and 300 persons with the larger villages along the rivers and bay (Garlignhouse et al. 2017).

Generally speaking, Eastern Miwok subsistence practices were similar to those of the Northern Valley Yokuts and will not be discussed in detail here. The principal tool utilized by the Bay Miwok in both large game hunting and warfare was the bow and arrow. Bows were generally sinew-backed, and hunting arrows meant for larger game would often feature a detachable foreshaft that would remain in the prey even if the main shaft were broken or removed (Aginsky 1943). Miwok inhabiting the higher elevations would typically craft bows from incense cedar, while those at lower elevations would select wood from ash (*Fraxinus latifolia*), oak (*Quercus spp.),* willow (*Salix spp*.), pepperwood, maple, and hazel (Aginsky 1943; Levy 1978).

Miwok basketry could be either twined or coiled, with the twined variety consisting of seed beaters, burden baskets, cradles, and netted rackets used in a lacrosse-like, women-only ball game called *a'mta*, *ama'tup,* or *sakumship* (Barrett and Gifford, 1933). The coiled technique was often employed in the making of winnowing trays, parching baskets, and various types of truncated conical baskets (Levy 1978). Other Miwok textiles included tule mats, which were used extensively by the Plains Miwok. Cordage, of particular importance to the Bay Miwok for its application in net-making for fishing activities, was made from a variety of plants that included milkweed (*Asclepias spp*.), California fremontia (*Fremontodendron californicum*), and Indian hemp (*Apocynum cannabinum*) (Levy 1978).

The Eastern Miwok made several distinct types of dwellings. For those inhabiting the higher elevations, such as the Sierra Miwok, the preferred form for residential structures was a circular hut featuring vertical sides and topped by a conical roof, all of which was constructed from bark slabs. At lower elevations, the principal house type was a thatched structure. The Bay Miwok would have utilized the latter form, which was constructed using poles to form an inner, conical frame, over which was arranged thatching of brush, grass, or tule (Levy 1978). Other Miwok structures included assembly houses, which were 40 to 50 feet in diameter, semi subterranean, and used for social and ritual community gatherings; a smaller circular structure composed of brush that would be used for mourning ceremonies held during the summer months; and conical sweathouses, which ranged from 6 to 15 feet in diameter and were built over a pit that was 2 to 3 feet deep (Levy 1978).

3.6.1.2 Tribal Coordination

Pursuant to Executive Order B-10-11 concerning coordination with tribal governments in public decision making (Appendix A), the CSLC adopted a Tribal Consultation Policy in August 2016 to provide guidance and consistency in its interactions with California Native American Tribes (CSLC 2016). The Tribal Consultation Policy, which was developed in collaboration with tribes, other state agencies and departments, and the Governor's Tribal Advisor, recognizes that tribes have a connection to areas that may be affected by CSLC actions and "that these Tribes and their members have unique and valuable knowledge and practices for conserving and using these resources sustainably" (CSLC 2016).

Under AB 52, lead agencies must avoid damaging effects on tribal cultural resources, when feasible, whether consultation occurred or is required. The CSLC contacted the Native American Heritage Commission (NAHC), which maintains two databases to assist specialists in identifying cultural resources of concern to California Native Americans Sacred Lands File and Native American Contacts). A request was sent to the NAHC for a sacred lands file search of the Project area and a list of Native American representatives who may be able to provide information about resources of concern located within or adjacent to the Project area.

On December 14, 2020, the NAHC provided a letter and a list of 21 tribal contacts from 15 tribes:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Buena Vista Rancheria of Me-Wuk Indians
- California Valley Miwok Tribe AKA Sheep Rancheria of Me-Wuk Indians of CA
- California Valley Miwok Tribe
- Chicken Ranch Rancheria of Me-Wuk Indians
- Guidiville Indian Rancheria
- Indian Canyon Mutsun Band of Costanoan
- Ione Band of Miwok Indians
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- North Valley Yokuts Tribe
- The Ohlone Indian Tribe
- Tule River Indian Tribe

- Wilton Rancheria
- The Confederated Villages of Lisjan

The NAHC's reply also stated that no records were identified in the Sacred Lands File record search for the Project area.

On December 20, 2020, CSLC staff provided CEQA notice of the Project to all tribes on the NAHC list. In addition to CEQA notice letters, the CSLC staff sent out a notification of consultation AB 52 letter to the United Auburn Indian Community of the Auburn Rancheria (UAIC) who had previously requested to be notified of CSLC projects. UAIC responded in an e-mail on January 21, 2021, stating "Thank you for the invitation to consult on the above-mentioned project. We have reviewed the project and it falls just south of the Tribe's geographic area of cultural and traditional affiliation. Please don't hesitate to reach out if you would like any additional information on our decision."

In addition, one response was received from the CEQA outreach letters. The Wilton Rancheria contacted the CSLC Tribal Liaison on January 25, 2021, requesting a site visit, which is currently in the planning stages. No other comments have been received to date.

3.6.2 Regulatory Setting

Federal and state laws and regulations pertaining to tribal cultural resources and relevant to the Project are identified in Appendix A. See Section 3.5.2 for a listing of local cultural resources policies.

3.6.3 Impact Analysis

a) 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:

> ***(i) Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code section 5020.1, subdivision (k), or***
>
> ***(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. 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.***

Less than Significant with Mitigation

Non-tribal cultural resources are addressed in Section 3.5. No tribal resources were identified in proximity to the Project site. However, tribal resources may be discovered during pipeline removal. MM-CUL-1/TCR-1 would ensure that tribal resources, in the event of accidental discovery, would not be further disturbed and work would halt until the resource had been appropriately assessed and treatment, if necessary, approved. With the implementation of MM CUL-1/TCR-1, impacts to tribal resources would be less than significant. In addition, if human remains of Native American origin are discovered in Project areas, MM CUL-2/TCR-2 would ensure proper coordination with the most likely descendent(s). With the implementation of MM CUL-1/TCR-1 and MM CUL-2/TCR-2 impacts would be reduced to less than significant.

3.6.4 Mitigation Summary

Implementation of the following MMs would reduce the potential for Project-related impacts to tribal cultural resources to less than significant.

- MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources
- MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains

3.7 ENERGY

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

3.7.1 Environmental Setting

San Joaquin County is served by PG&E as the main energy provider. PG&E has a diverse power production portfolio, which is comprised of a variety of renewable (such as wind, solar, and hydroelectric) and non-renewable (such as natural gas) sources. Other energy providers include Lodi Electric Utility and Modesto Irrigation District.

In Contra Costa County, PG&E provides all gas services, electric delivery, and power line maintenance. The majority of Contra Costa County residents are served by MCE Community Choice Energy, a not-for-profit clean energy provider.

3.7.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to energy that are relevant to the Project. State laws and regulations pertaining to energy and relevant to the Project are identified in Appendix A. There are no local laws, regulations, or policies pertaining to energy that are relevant to the Project.

3.7.3 Impact Analysis

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

Less than Significant Impact

The proposed Project involves the use of heavy equipment, motor vehicles, and vessels, all powered by non-renewable petroleum-based fuel sources. As such, Project activities would result in temporary consumption of energy resources (e.g., gasoline and diesel fuel). This energy consumption would be focused on removing a natural gas pipeline to eliminate the potential for the pipeline to become exposed (due to future erosion or pipeline buoyancy) and associated riverbed erosion caused by turbulence and any debris caught on the exposed pipeline. The Project has been designed to

conduct the proposed pipeline decommissioning in an efficient manner, such that consumption of energy resources would not be wasteful, inefficient, or unnecessary.

Project activities would not draw energy from the local power grid. In the long-term, the Project would eliminate any future maintenance needs of the pipeline and the related use of gasoline and diesel fuel. Therefore, energy impacts would be less than significant.

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

No Impact

The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, there would be no impact.

3.7.4 Mitigation Summary

The Project would have no significant impacts to energy; therefore, no mitigation is required.

3.8 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

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

3.8.1 Environmental Setting

3.8.1.1 Regional Overview

The Project site is located within the central portion of the Great Valley geomorphic province in Central California. The Great Valley geomorphic province is characterized by a long alluvial plain that extends approximately 400 miles through central California. The Great Valley can be further divided into the northern Sacramento Valley and the southern San Joaquin Valley. The valleys were created as a result of the uplift of the

two mountain ranges that flank them, the Coast Ranges to the west and the Sierra Nevada mountain range to the east.

3.8.1.2 Site Geomorphology and Geology

The Project site is located within the Delta formed by the confluence of the Sacramento and San Joaquin Rivers. The geomorphology of the Delta is a level plain, except for the levees of the Sacramento and San Joaquin Rivers. Many artificial levees have been constructed to prevent flooding of land committed to agriculture with elevation ranges of a few feet on levees to sea level, or lower, throughout the rest of the plain. Decomposition of organic deposits and consequential land subsidence is the main geomorphic process. Fluvial erosion and deposition are the main geomorphic processes on and adjacent to levees.

The geology of the Project site (including Mildred Island, Bacon Island and McDonald Island) is characterized as “man-made and tidal deposits” (Atwater 1982).

3.8.1.3 Soils

Based on a review and analysis of the Natural Resources Conservation Service (NRCS) Web Soil Survey for the Project area (NRCS 2020), the Project site is underlain by Rindge muck, 0 to 2 percent slopes, partially drained, major land resource area (MLRA) 16 (map unit symbol Rd in Contra Costa County and 225 in San Joaquin County), Kingile muck, partially drained, 0 to 2 percent slopes, MLRA 16 (map unit symbol 190), and Ryde clay loam, partially drained, 0 to 2 percent slopes, MLRA 16 (map unit symbol 230).

3.8.1.4 Seismicity and Faulting

The Project area is located within two areas of seismic activity. The active faults associated with the San Andreas Fault System of the greater San Francisco Bay Area lie west of the San Joaquin County line. To the east is the Foothills Fault System. The closest active faults to the Project location are the Greenville Fault located approximately 15 miles to the southwest and the Concord Fault located approximately 25 miles to the west. There are no Alquist-Priolo earthquake hazard zones within the vicinity of the Project site (California Department of Conservation, California Geologic Survey 2021).

3.8.1.5 Subsidence

Subsidence is the gradual settling or sudden sinking of the land surface from changes that take place underground, primarily from groundwater or oil pumping. Groundwater extraction-induced subsidence is not considered an issue within the Project area (Tracy Sub-basin) (California Natural Resources Agency 2021).

In the Delta, land subsidence is primarily caused by oxidation of organic or peat deposits. Deverel and Leighton (2010) measured subsidence rates on Bacon Island from 1978 to 2006 and identified an average subsidence rate of 0.9 inches per year, with a range of 0.6 to 1.5 inches per year. Measured subsidence rates on Bacon Island were about 40 percent less than the 1926 to 1958 rates. San Joaquin County has mapped soils at the Project site as expansive and may contribute to subsidence.

3.8.1.6 Liquefaction

The area immediately west of Old River (Contra Costa County) has been designated a liquefaction hazard zone by the California Department of Conservation (California Department of Conservation, California Geologic Survey 2021).

3.8.2 Regulatory Setting

Federal and state laws and regulations pertaining to geology, soils, and paleontological resources and relevant to the Project are identified in Appendix A. Local policies or regulations applicable to the Project with respect to geologic hazards are listed below.

3.8.2.1 San Joaquin County

The San Joaquin County General Plan Policy Document contains goals and policies pertaining to geologic hazards of San Joaquin County. Geologic hazard policies relevant to the Project are listed below.

PHS-3.5: Subsidence or Liquefaction. The County shall require that all proposed structures, utilities, or public facilities within County recognized areas of near surface subsidence or liquefaction be located and constructed in a manner that minimizes or eliminates potential damage.

PHS-3.7: Erosion Control. The County shall encourage the planting of vegetation to decrease loss of soil by erosion.

3.8.2.2 San Joaquin County Grading Permit

A grading permit may be required from San Joaquin County for pipeline removal on Bacon Island.

3.8.2.3 Contra Costa County

The Safety Element of the Contra Costa County General Plan contains goals and policies pertaining to geologic hazards. Geologic hazards policies relevant to the Project are listed below.

Policy 10-20. Any structures permitted in areas of high liquefaction danger shall be sited, designed, and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.

3.8.3 Impact Analysis

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

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

(ii) Strong seismic ground shaking?

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

Less than Significant Impact

No Alquist-Priolo earthquake fault zones occur in the Project area (California Department of Conservation, California Geologic Survey 2021). The nearest known fault (Greenville Fault) is approximately 15 miles southwest of the Project site. Proposed pipeline removal would include backfilling excavations with native earth material, such that the soil properties (including shear strength and grain size) would not be substantially changed. Therefore, the potential for ground-shaking or ground failure (including liquefaction) during seismic events would not increase.

In accordance with CEQA, Project analysis should address the potential impacts of the Project on the environment, not the potential impacts of the environment on the Project. As stated by the California Supreme Court, “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users.” (*California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 386 (CBIA)).

Project activities would not exacerbate existing geological conditions or the potential for seismic ground shaking. No long-term impacts to the area due to loss of slope stability or erosion would result from the Project. This analysis therefore does not evaluate existing environmental risks that could affect the Project because the Project would not exacerbate them, consistent with the Court’s ruling in CBIA. Therefore, the impacts would be less than significant.

(iv) Landslides?

No Impact

The Project area and vicinity are level, and do not have the potential to slide or experience sliding from adjacent areas. While there are minor slopes associated with the levees and channel banks, these are not expected to be at risk of substantial movement during Project activities. Abandonment in place of some sections of levee face pipelines is proposed to reduce the level of disturbance of these levee slopes and the potential for slope erosion. Therefore, the Project is unlikely to result in landslides and there would be no impact.

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

Less than Significant with Mitigation

Topsoil would be temporarily displaced during excavation of levees, pits used for flushing and cementing pipeline segments and trenches used to remove portions of the pipeline. However, this topsoil (along with any existing rock slope protection) would be replaced as part of backfilling.

Pipeline replacement activities would not involve construction of any slopes or removal of substantial amounts of vegetation that could increase soil erosion during rain events. The Project applicant would obtain a grading permit from San Joaquin County and follow erosion minimization procedures as required by that permit. Additionally, the Project would obtain coverage under the National Pollution Discharge Elimination System Statewide Construction General Permit (Order No. 2012-0006-DWQ). The Construction General Permit requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared and implemented, as outlined in **MM HYDRO-1** (Section 3.11, *Hydrology and Water Quality*). The SWPPP would include erosion and sediment control best management practices and housekeeping measures for control of contaminants. Erosion control best management practices would include source control measures such as wetting of dry and dusty surfaces to prevent fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water. Project-related vegetation removal may also result in an increase in erosion; however, with the implementation of **MM BIO-10**, impacts would be further reduced to less than significant. With implementation **MM HYDRO-1** and **MM BIO-10**, the Project would have a less than significant impact due to soil erosion or the loss of topsoil.

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

Less than Significant Impact

See the discussion above related to landslides and liquefaction. Project activities would result in the short-term disturbance to the ground surface and would not result in any permanent changes to the sites topographic features. Excavations and areas of disturbance would be backfilled with native earth material and would not result in any changes to geologic units or soils.

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?

No Impact

Expansive soils mapped by San Joaquin County occur along a portion of Segment 2 (eastern Mildred Island levee), Segment 3 (eastern Bacon Island levee) and Segment 4. However, pipeline removal and decommissioning would not increase the risk to life or property created by their presence. Therefore, there would be no impact.

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

No Impact

The Project would not involve the use of septic tanks or on-site sewage disposal. Portable restrooms would be provided on-site for workers and would be regularly serviced to remove sewage which would be disposed at a nearby municipal wastewater treatment facility.

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

No Impact

All Project excavations would occur within active channel deposits or basin deposits of the San Joaquin River (Holocene age or younger). Geologic formations that may contain fossils do not occur within the Project area, therefore no impact to paleontological resources or unique geologic features.

3.8.4 Mitigation Summary

Implementation of the following MM would reduce the potential for Project-related impacts to Geology, Soils, and Paleontological Resources to less than significant.

- MM HYDRO-1: Stormwater Pollution Prevention Plan (SWPPP)
- MM BIO-10: Wetland and Riparian Habitat Restoration

3.9 GREENHOUSE GAS EMISSIONS

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

3.9.1 Environmental Setting

Greenhouse Gases (GHGs), defined as any gas that absorbs infrared radiation in the atmosphere, include, but are not limited to, water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorocarbons. These GHGs trap and build up heat in the atmosphere near the earth's surface, commonly known as the Greenhouse Effect. The atmosphere and the oceans are reaching their capacity to absorb CO_2 and other GHGs, leading to significant global climate change in the future. There is widespread international scientific consensus that human-caused increases in GHGs have and will continue to contribute to climate change, although there is uncertainty concerning the magnitude and rate of the warming.

In addition, the Intergovernmental Panel on Climate Change (IPCC), in the section of its Fifth Assessment Report by Working Group II, "Climate Change 2014: Impacts, Adaptation, and Vulnerability," (IPCC 2014; released March 31, 2014) specific to North America (Chapter 26), stated in part:

> *North American ecosystems are under increasing stress from rising temperatures, carbon dioxide (CO_2) concentrations, and sea-levels, and are particularly vulnerable to climate extremes. Climate stresses occur alongside other anthropogenic influences on ecosystems, including land-use changes, non-native species, and pollution, and in many cases will exacerbate these pressures. [26.4.1; 26.4.3]. Evidence since the Fourth Assessment Report (AR4) highlights increased ecosystem vulnerability to multiple and interacting climate stresses in forest ecosystems, through wildfire activity, regional drought, high temperatures, and infestations [26.4.2.1; Box 26-2]; and in coastal zones due to increasing temperatures, ocean acidification, coral reef bleaching, increased sediment load in runoff, sea level rise (SLR), storms, and storm surges [26.4.3.1].*

Climate change is having widespread impacts on California's economy and environment and will continue to affect communities across the state. Many impacts already occur, including increased fires, floods, severe storms, and heat waves (California Climate Change Center 2012). Documented effects of climate change in California include increased average, maximum, and minimum temperatures; decreased spring runoff to the Sacramento River; shrinking glaciers in the Sierra Nevada; sea-level rise at the Golden Gate Bridge; warmer temperatures in Lake Tahoe, Mono Lake, and other major lakes; and plant and animal species found at changed elevations (Office of Environmental Health Hazard Assessment [OEHHA] 2018).

According to the IPCC, the concentration of CO2, the primary GHG, has increased from approximately 280 parts per million (ppm) in pre-industrial times to well over 380 ppm today. CO2 concentrations are currently increasing about 1.9 ppm per year; present CO2 concentrations are higher than any time in at least the last 650,000 years. CO2 is also used as a reference gas for climate change. To account for different GHG warming potentials, emissions are often quantified and reported as CO2 equivalents (CO2e). For example, if the CO2 warming potential is set at a reference value of 1, CH4 has a warming potential of 28 (i.e., 1 ton of methane has the same warming potential as 28 tons of CO2 [IPCC 2014]), while nitrous oxide has a warming potential of 265.

To meet both the statewide 2020 GHG reduction target that requires California to reduce its total statewide GHG emissions to 1990 levels (Health and Safety Code, § 38550), and the 2050 goal of 80 percent below 1990 levels (Executive Order S-3-05), not only must projects contribute to slowing the increase in GHG emissions, but, ultimately, projects should contribute to reducing the State's GHG output. In order to reach California's GHG reduction targets, per capita emissions would need to be reduced by slightly less than five percent each year from 2020 to 2030, with continued reductions through 2050.

3.9.2 Regulatory Setting

Federal and state laws and regulations pertaining to greenhouse gas emissions and relevant to the Project are identified in Appendix A. Local planning efforts are described below.

3.9.2.1 San Joaquin County

The Project site is primarily located within San Joaquin County which is part of the SJVAB; however, the western 200 feet of Segment 4 is located within Contra Costa County (San Francisco Bay Area Air Basin). The SJVAPCD adopted a Climate Change Action Plan in August 2008 which provides guidance for lead agencies within the SJVAB to streamline CEQA review by pre-quantifying emissions reductions that would be achieved through the implementation of Best Performance Standards. Projects are

considered to have a less-than-significant cumulative impact on climate change if any of the following conditions are met:

- Comply with an approved GHG reduction plan
- Achieve a score of at least 29 using any combination of approved operational Best Performance Standards
- Reduce operational GHG emissions by at least 29 percent over Business-as-Usual conditions (demonstrated quantitatively)

Lead agencies should quantify and disclose GHG emissions that would occur during construction and make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals (SJVAPCD 2009). The SJVAPCD has not adopted significance thresholds for construction-related GHG emissions.

The San Joaquin County General Plan Policy Document contains goals and policies pertaining to greenhouse gas emissions. Policies relevant to the Project are listed below.

PHS-6.3: GHG Reduction Strategies. The County shall promote greenhouse gas emission reductions by encouraging efficient farming methods (e.g., no-till farming, crop rotation, cover cropping); supporting the installation of renewable energy technologies; and protecting grasslands, open space, oak woodlands, riparian forest, and farmlands from conversion to urban uses.

PHS-6.5: Diversion, Recycling, and Reuse. The County shall achieve a 75 percent diversion of landfilled waste based on 1990 levels by 2020 and shall achieve a diversion rate of 90 percent by 2035.

PHS-6.6: Business-related GHG Reduction Strategies. The County shall encourage all businesses to help reduce GHG emissions by replacing high mileage fleet vehicles with more efficient and/or alternative fuel vehicles; increasing the energy efficiency of facilities; transitioning toward the use of renewable energy instead of non-renewable energy sources; adopting purchasing practices that promote emissions reductions and reusable materials; and increasing recycling.

3.9.2.2 Contra Costa County

Contra Costa County developed a Climate Action Plan (CAP) which was adopted on December 15, 2015. The CAP identifies how the County will achieve the AB 32 GHG emissions reduction target of 15 percent below baseline levels by the year 2020, in addition to supporting other public health, energy efficiency, water conservation, and air quality goals identified in the County's General Plan and other policy documents. In

addition to reducing GHG emissions, this CAP includes actions that improve public health and result in additional benefits to the community such as lower energy bills and enhanced quality of life. The CAP also lays the groundwork for achieving long-term state GHG reduction goals for 2035. Specifically, the CAP:

- Provides the scientific, regulatory, and public health framework for addressing climate change and GHGs at the local level
- Identifies sources of GHG emissions within the unincorporated areas of the county and estimates how these emissions may change over time
- Provides energy use, transportation, land use, water use, and solid waste strategies to reduce community-wide GHG emissions consistent with AB 32, BAAQMD guidance, and Public Resources Code Section 21083.3 (CEQA)
- Proposes an approach to addressing climate change-related public health issues, which increases the county's resiliency to climate change, establishes priorities for improving public health, and identifies public health benefits that are expected to result from implementing the CAP
- Presents an implementation program to assist with monitoring and prioritization of the reduction strategies and public health goals through 2020

The BAAQMD has not adopted significance thresholds for construction or decommissioning-related GHG emissions. However, the BAAQMD has adopted a CEQA threshold of significance for operational GHG emissions. For the purposes of this impact analysis, the BAAQMD threshold of significance for operational GHG emissions (1,100 metric tons CO_2e per year) is used to determine the significance of Project-related GHG emissions.

3.9.3 Impact Analysis

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

Less than Significant Impact

Greenhouse gas emissions associated with implementation of the Project were estimated using emissions factors from emissions inventory models developed by CARB (EMFAC 2017; OFFROAD 2017) and the California Climate Action Registry General Reporting Protocol. Inputs used in the EMFAC 2017 model (on-road motor vehicles) are year 2021 annual emissions for San Joaquin County. Inputs used in the OFFROAD 2017 model (off-road and stationary equipment) are year 2021 emissions for the San Joaquin Valley Air Basin. Appendix C provides spreadsheets documenting these emissions calculations.

Project greenhouse gas emissions estimates are provided in Table 3.9-1. Since the proposed Project would not exceed the 1,100 metric tons CO_2e significance threshold, the Project's incremental increase in greenhouse gas emissions would not be cumulatively considerable.

Table 3.9-1. Estimated Greenhouse Gas Emissions (metric tons/year)*

Work Task	CO_2	CH_4	N_2O	CO_2e
Pre-Project Underwater Survey	0.9	<0.0001	<0.0001	0.9
Mobilization	3.4	<0.0001	0.0003	3.5
Terrestrial Excavation	20.9	0.0011	0.0005	21.1
Pigging and Flushing the Pipeline	3.4	0.0001	0.0002	3.5
Cementing the Pipeline	2.5	0.0001	0.0001	2.5
Pipeline Removal	114.3	0.0056	0.0036	115.4
Site Restoration and Demobilization	20.8	0.0008	0.0012	21.2
Post-Project Underwater Survey	0.9	<0.0001	<0.0001	0.9
Total*	**167.0**	**0.008**	**0.006**	**168.9**

*Due to rounding, total values may not equal the sum of values in the table

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

No Impact

The proposed Project would generate only temporary greenhouse gas emissions and would not conflict with the state-wide Climate Change Scoping Plan, the Climate Change Action Plan developed for the SJVAB by the SJVAPCD or Contra Costa County's CAP.

3.9.4 Mitigation Summary

The Project would have no significant impacts to greenhouse gas emissions; therefore, no mitigation is required.

3.10 HAZARDS AND HAZARDOUS MATERIALS

HAZARDS AND HAZARDOUS MATERIALS – Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise or people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

3.10.1 Environmental Setting

The Project site is located within agricultural open space and inundated areas within San Joaquin and Contra Costa Counties. Access to the Project site is from State Route 4. The nearest public airport is the Stockton Metropolitan Airport located approximately 14.8 miles southeast of the Project site (Segment 1). A small private facility, Las Serpientas Airport is located approximately 3 miles southwest of the Project site. The nearest residential area is the Summer Lake community, located approximately 3 miles to the northwest of Segment 4.

The nearest school is Knightsen Elementary School located approximately 4.6 miles west of the Project site (Segment 4).

The State Water Resources Control Board GeoTracker database did not list any hazardous cleanup sites within the Project site (SWRCB 2020). The Project site is not located within the vicinity of any Cortese hazardous waste cleanup sites (DTSC 2021). The nearest sites include Friendly Harbors, LLC located at 7000 Holland Tract Road in Brentwood; a leaking underground storage tank cleanup site located at the southeast corner of the Holland Tract less than 1 mile across the channel from the Segment 4 landing at Palm Tract that was formally closed in 2009; and a PG&E cleanup program site (McDonald Island Compressor Station) located at Zukerman Road in Holt approximately 1.5 miles northeast of Segment 1 at McDonald Island that was formally closed in 2017.

3.10.2 Regulatory Setting

Federal and state laws and regulations pertaining to hazards and hazardous materials and relevant to the Project are identified in Appendix A. Local policies are listed below.

3.10.2.1 San Joaquin County

The San Joaquin County General Plan Policy Document contains goals and policies pertaining to hazards and hazardous materials. Policies relevant to the Project are listed below.

PHS-7.1: Minimize Hazardous Materials and Wastes. The County shall discourage the use of hazardous materials and the creation of hazardous wastes.

PHS-7.2: Avoid Contamination of Resources. The County shall strive to ensure that hazardous materials and wastes do not contaminate air, water, or soil resources.

PHS-7.3: Control Hazardous Materials. The County shall require the use, storage, and disposal of hazardous materials and wastes to comply with local, state, and federal safety standards.

PHS-7.4: County Hazardous Waste Management Plan. The County shall maintain and implement the County Hazardous Waste Management Plan.

PHS-7.5: Locate Hazardous Materials Away from Populated Areas. To the extent feasible, the County shall require proposed activities and land uses that use, store, or dispose of hazardous materials or wastes to be located away from existing and planned populated areas.

PHS-7.7: County Hazardous Materials Area Plan. The County shall maintain and implement the County Hazardous Materials Area Plan for emergency response to a release or threatened release of hazardous material within the unincorporated County.

PHS-7.11: Hazardous Materials Transportation Routes. The County shall continue to maintain route designations for hazardous materials transport within San Joaquin County.

3.10.2.2 Contra Costa County

The Contra Costa County General Plan Safety Element includes policies to manage hazardous materials. The following policies are relevant to the Project.

Policy 10-61. Hazardous waste releases from both private companies and from public agencies shall be identified and eliminated.

Policy 10-62. Storage of hazardous materials and wastes shall be strictly regulated.

Policy 10-64. Industrial facilities shall be constructed and operated in accordance with up- to-date safety and environmental protection standards.

Policy 10-68. When an emergency occurs in the transportation of hazardous materials, the County Office of Emergency Services shall be notified as soon as possible.

Policy 10-69. Industry should be encouraged to utilize underground pipelines, rail, and water transportation of hazardous materials to the greatest extent feasible to take advantage of the greater separation from the general public provided by these modes of transportation.

3.10.3 Impact Analysis

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

Less than Significant with Mitigation

The Project would involve the routine transport, storage, use, and disposal of small quantities of hazardous materials during vessel mobilization/demobilization, decommissioning, and removal of the existing pipeline segments. These materials may include gasoline, diesel, lubricants, hydraulic fluid, coolant, and solvents, which are regulated by federal, state, and local laws and regulations.

Development and implementation of a Project Work and Safety Plan **(APM-1)** would address the storage and handling of these materials during this Project and would include storing incompatible hazardous materials separately, using secondary containment for hazardous materials storage, requiring the contractor to use trained personnel for hazardous materials handling, keeping spill clean-up kits available on-site,

and designating specific sites with appropriate spill containment within work areas as refueling stations for equipment.

Additionally, the likelihood of a vessel fuel oil spill due to a collision is extremely small given the brief duration of decommissioning activities and appropriate noticing to watercraft via the Advanced Notice to Mariners (**APM-3**). With the inclusion of **APM-1 and APM-3**, any potential impact to the public or the environment through the routine transport, use, or disposal of hazardous materials would be further reduced to less than significant.

APM-1: Project Work and Safety Plan. A Project Work and Safety Plan (PWSP) shall be submitted to CSLC staff and all other pertinent agencies for review and approval at least 30 days prior to the implementation of the Project. The PWSP shall include the following information (at a minimum):

- Contact Information
- Hazardous Spill Response and Contingency Plan
- Emergency Action Plan
- Summary of the Project Execution Plan
- Project Management Plan
- Site Safety Plan, including measures for proper handling of hazardous materials including, but not limited to soils containing residual pesticides
- Permit Condition Compliance Matrix

APM-3: Advanced Notice to Mariners. All offshore operations shall be described in a Local Notice to Mariners to be submitted to the U.S. Coast Guard at least 15 days prior to decommissioning activities. The Notice shall include:

- Type of operation (i.e., dredging, diving operations, pipeline recovery)
- Location of operation, including latitude and longitude and geographical position, if applicable
- Duration of operation, including start and completion dates (if these dates change, the U.S. Coast Guard needs to be notified)
- Vessels involved in the operation
- VHF-FM radio frequencies monitored by vessels on the scene
- Point of contact and 24-hour phone number
- Chart Number for the area of operation

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

Less than Significant with Mitigation

As noted above, **APM-1** and **APM-3** would include a Hazardous Spill Response and Contingency Plan and Safety Plan to address the accidental release of hazardous materials during pipeline decommissioning activities.

Pipeline decommissioning would include pigging and flushing to remove residual hydrocarbons, which would be captured in temporary tanks. Flush water would not contain hazardous materials but would be tested to identify levels of contamination and disposed at an appropriate facility or discharged to surface waters, if authorized by the CVRWQCB. Impacts to water resources associated with discharge of any flush water are further addressed in Section 3.11 (*Hydrology and Water Quality*). With the implementation of **APM-1** impacts related to accidental release would be less than significant.

Additionally, a pre-Project Geophysical Debris Survey of the riverbed would be conducted to fully identify pre-Project bottom contours, debris, and any exposed utilities in order to avoid those areas during decommissioning (**APM-2**). The riverbed would also undergo a post-Project survey to ensure no hazards remain following completion of the Project. Implementation of **APM-2** would ensure no subsurface hazards are encountered during Project activities or remain following completion of the Project.

With the implementation of **APM-1** through **APM-3,** potential impacts due to hazardous materials or risk of upset would be reduced to a less-than-significant level.

APM-2: Pre- and Post-Project Geophysical Debris Survey. The Applicant or its contractor shall conduct pre- and post-Project Geophysical Debris Surveys of the riverbed using a vessel equipped with a multi-beam sonar system. The pre-Project survey, with previously collected data, shall serve to fully identify pre-Project bottom contours, debris, and any exposed utilities, and a copy of the survey shall be submitted to CSLC staff for review 30 days prior to Project implementation. A post-Project geophysical debris survey shall also be performed, and the results compared to the initial baseline survey. Any anomalous objects located in the survey would be positively identified by divers and any remaining objects related to the decommissioning would be removed. A Project close-out report with drawings and coordinates of any facilities abandoned in place would be submitted to the CSLC within approximately 60 days of work completion.

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

No Impact

The Project site is located in an agricultural area, and there are no existing or proposed schools within 0.25 mile of the Project site. Therefore, there would be no impact to schools.

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

No Impact

The Project site is not located within or near any hazardous materials sites compiled pursuant to Government Code section 65962.5. Therefore, there would be no impact to the public or the environment.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact

The Project site is not located within an airport land use plan or within 2 miles of an airport. Therefore, there would be no airport-related safety or noise impact to the public.

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

No Impact

The Project would not result in any change in land use or affect any roadways that may be used for emergency response or evacuation. Therefore, there would be no impact to emergency response in the Project area.

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

Less than Significant Impact

The Project site mostly uninhabited and has a low fire risk due to high soil moisture related to crop irrigation and surrounding waterways. It is not served by a fire protection district. The California Department of Forestry and Fire Protection would respond to any wildfires. Project ignition sources would be limited to mobile and stationary equipment, vehicles, welders, and grinders. Standard safety features would be utilized, such as spark arrestor mufflers and grinder shields. Project activities would occur within areas of irrigated agriculture or floodplains, with relatively high soil moisture. In addition, potentially flammable vegetation would be removed as part of work area setup, and while conducting pipeline decommissioning activities. Therefore, the Project-related increase in risk of property loss, injury or death from wildland fires is considered a less than significant impact.

3.10.4 Mitigation Summary

Implementation of **APM-1** through **APM-3** would reduce the potential for Project-related impacts related to hazardous materials to less than significant.

- APM-1: Project Work and Safety Plan
- APM-2: Pre- and Post-Project Bathymetric Survey
- APM-3: Advanced Notice to Mariners

3.11 HYDROLOGY AND WATER QUALITY

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

3.11.1 Environmental Setting

The Central Valley, also referred to as the Great Valley, is a very large, flat alluvial valley that dominates the central portion of California. Land use in this region includes a majority of the State's most productive agricultural operations. The Central Valley is divided into three hydrologic regions or surface water basins including the Sacramento River Basin in the north, the San Joaquin River Basin in the center, and the Tulare Lake Basin to the south. The two main drainages for these valleys, the Sacramento River and the San Joaquin River, empty into the San Francisco Bay estuary system through a large expanse of interconnected canals, streambeds, sloughs, marshes, and peat islands known as the Delta.

3.11.1.1 Surface Water Characteristics

The San Joaquin River has a watershed of about 15,880 square miles. The larger tributaries of the River include the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers. The San Joaquin River empties into the Delta. The Project site includes three major channels in the Delta, fed by the mainstem San Joaquin River: Old River, Middle River and Latham Slough. Based on the most recent two years of flow monitoring by the California Department of Water Resources, peak outflows (towards Suisun Bay) in the Project vicinity are:

- Old River: 3,974 cubic feet/second (cfs) on March 27, 2019 (near Project site)
- Middle River: 25,700 cfs on April 20, 2019 (1.9 river miles upstream)
- Latham Slough: 4,262 cfs on March 13, 2019 (2.2 river miles downstream)

3.11.1.2 Surface Water Quality

The CVRWQCB has jurisdiction over the entire Sacramento River and San Joaquin River basins. The CVRWQCB has developed a Water Quality Control Plan, or "Basin Plan", to protect the quality of surface and groundwaters of the region. The Basin Plan designates beneficial uses of waters within the region, sets narrative and numerical water quality objectives to protect beneficial uses, and describes implementation programs intended to meet the Basin Plan objectives. Beneficial uses established for the Delta are municipal and domestic supply, irrigation, stock watering, industrial process water, industrial service supply, contact recreation, non-contact recreation, warm freshwater habitat, cold freshwater habitat, warm migration habitat, cold migration habitat warm spawning habitat, wildlife habitat and navigation.

Surface water of the Project area (Delta waterways, central portion) is considered impaired under Section 303(d) of the Clean Water Act due to elevated levels of chlorpyrifos, DDT, diazinon, Group A pesticides, invasive species, mercury, and aquatic toxicity (State Water Resources Control Board [SWRCB] 2016). A water body is impaired when data indicate that adopted water quality objectives are continually exceeded or that beneficial uses are not protected.

3.11.1.3 Flood Hazard

California Reclamation Districts are legal subdivisions within the Central Valley that are responsible for managing and maintaining the levees. These Reclamation Districts are managed by the Central Valley Flood Protection Board. The Project sites includes three Reclamation Districts: The McDonald Island Reclamation District (No. 2030), Bacon Island Reclamation District (No. 2028), and the Palm Tract Reclamation District (No. 2024). The entire Project site is located within Flood Zone AE (San Joaquin County 2021). Mildred Island is permanently inundated and flooded. Zone AE is defined by the

Federal Emergency Management Agency (FEMA) as a high-risk area (also known as the special flood hazard area). High-risk areas have at least a 1 percent annual chance of flooding.

3.11.1.4 Groundwater Environment

The Project site is located within the San Joaquin Delta Hydrologic Unit, and within the Tracy Sub-basin of the San Joaquin Valley Groundwater Basin. The Tracy Sub-basin covers a land surface area of 372.5 square miles and is part of the Central Valley Aquifer System. The Tracy Sub-basin is composed of continental deposits of Late Tertiary to Quaternary age including from oldest to youngest, the Tulare Formation, Older Alluvium, Flood Basin Deposits and Younger Alluvium. Groundwater is mostly harvested from the Tulare Formation which is approximately 1,400 feet thick and consists of semi-consolidated, poorly sorted, discontinuous deposits of clay, silt, and gravel. The nearest well to the Project site is located on Venice Island approximately 4.7 miles north of the Project site, and monitoring data indicates groundwater lies at a depth of approximately 18 feet. Groundwater levels in this area are stable due to infiltration from the San Joaquin River.

3.11.1.5 Groundwater Management

The 2014 Sustainable Groundwater Management Act (SGMA) requires the formation of groundwater sustainability agencies (GSAs) in high- and medium-priority groundwater basins and sub-basins by June 30, 2017, to meet California Water Code requirements. Groundwater basins are often subdivided into smaller sub-basins for the purposes of groundwater management. The Tracy Sub-basin has been prioritized as “medium” for management and development of a groundwater sustainability plan by the California Department of Water Resources. Several GSA’s have been formed within the Tracy Sub-Basin and must submit groundwater sustainability plans by January 31, 2022. The Project site is located within the jurisdiction of the San Joaquin County GSA.

3.11.1.6 Potentially Affected Groundwater Basins

As discussed in Sections 2.2.2.1 and 2.2.2.2, approximately 106,000 gallons of water would be required for flushing the pipeline (all four segments, each pig run). Based on two pig runs, this equates to approximately 212,000 gallons or 0.7 acre-feet in total. Project water demands would be met by groundwater trucked to the Project site. The source of this water has not been determined to date but would be obtained from a municipal supply (Stockton or Brentwood) or directly from an agricultural water district. For the purposes of impact assessment, it is assumed the source of Project water would be located within 25 road miles of the Project site. Based on this criterion, potentially affected groundwater basins are the Tracy, East Contra Costa, and Eastern San Joaquin sub-basins of the San Joaquin Valley Groundwater Basin. Table 3.11-1

provides a comparison of the Project water demand to the existing annual groundwater usage in each sub-basin.

Table 3.11-1. Project Water Use Comparison (acre-feet)

Sub-basin	SGMA Basin Priority	Annual Groundwater Use	Project Groundwater Use	Project Percent Increase
Tracy	Medium	11797	0.7	0.006
East Contra Costa	Medium	10279	0.7	0.007
Eastern San Joaquin	High	469213	0.7	0.0001

3.11.2 Regulatory Setting

Federal and state laws and regulations pertaining to hydrology and water quality and relevant to the Project are identified in Appendix A. Relevant regional and local permits and plans are discussed below.

3.11.2.1 National Pollutant Discharge Elimination System General Permits

Pursuant to the Porter-Cologne Act, the Regional Board issues National Pollutant Discharge Elimination System (NPDES) permits for discharges to land or surface waters. The limitations placed on the discharge are designed to ensure compliance with water quality objectives in the Basin Plan. Construction activities that disturb one or more acres of land surface are regulated under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ). This general permit also covers construction activities associated with Linear Underground/Overhead Utility Projects such as installation of underground pipelines, trenching, excavation, boring and drilling, and stockpile/borrow locations. To obtain coverage under the Construction General Permit, the legally responsible person must file a Notice of Intent (NOI), SWPPP, risk assessment, site map(s), and drawings.

Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Water Quality Order 2003-003-DWQ) addresses potential discharges that have a low potential to threaten water quality. Project-related discharges that may be covered include pipeline flush water and construction dewatering (exposed groundwater). In accordance with this state-wide General Permit, all dischargers must comply with all applicable provisions in the Project area's Basin Plan, including any prohibitions and water quality objectives for surface water and groundwater. Discharges must be made to land owned or controlled by the discharger unless the discharger has a written lease or agreement with the landowner. An NOI must be filed with the applicable regional board (in this case the CVRWQCB) prior to

any wastewater discharge. Compliance with permit terms, including any monitoring, and filing a notice of termination upon completion of the activity are also required.

Waste Discharge Requirements for Limited Threat Discharges to Surface Water (Order No. R5-2016-0076-01) addresses discharges that have a low potential to threaten water quality. Project-related discharges that may be covered include pipeline flushing water and construction dewatering. In accordance with this General Permit, the discharged water must meet screening levels established in the Permit for nitrate, residual chlorine, metals, pesticides, and other contaminants. The discharge cannot substantially affect receiving water quality including dissolved oxygen, pH, and temperature. An NOI must be filed with the CVRWQCB prior to any wastewater discharge. Compliance with permit terms, including a self-monitoring program with quarterly monitoring reports, and filing a notice of termination upon completion of the activity are also required.

3.11.2.2 Central Valley Flood Protection Plan

State Bill 5 required the California Department of Water Resources and the Central Valley Flood Protection Board to prepare and adopt a Central Valley Flood Protection Plan (CVFPP) and establish flood protection requirements for local land use decisions consistent with the CVFPP. The Project site is located within the planning area of the CVFPP which was adopted in 2012 and updated in 2017. The CVFPP serves as the guiding document for managing flood risk along the Sacramento and San Joaquin river systems, including a system-wide investment approach for sustainable, integrated flood management in areas currently protected by facilities of the State Plan of Flood Control. Regional flood management plans were also developed to specifically address more local issues.

3.11.2.3 San Joaquin County

The Public Health and Safety Element of the San Joaquin County General Plan Policy Document includes policies to manage flood risk. The following policies are relevant to the Project.

PHS-2.1: Restrict Uses in Designated Floodways. The County shall restrict uses in designated floodways except those that do not adversely affect flood elevations or velocities and are tolerant of occasional flooding in accordance with the County's Floodplain Management Ordinance.

PHS-2.2: Primary Purpose of Levees. The County shall ensure that the primary use and purpose of levees is flood protection. The County shall only allow other uses of levees if they are compatible with the primary purpose of the levee and do not reduce the flood protection integrity, provided such uses are in compliance with state and federal regulations.

PHS-2.4: Flood Protection for Existing Development. The County shall investigate and implement, when feasible, mitigation measures that offer protection for existing development within flood prone areas and shall strive to achieve 200-year level of flood protection for urban areas, and 100-year level protection for non-urban areas, where feasible.

PHS-2.7: Preservation of Floodway and Floodplains. The County shall preserve floodways and floodplains for non-urban uses in an effort to maintain existing flood carrying capacities, except that development may be allowed in floodplains with mitigation measures that are in conformance with the County's floodplain management ordinance.

PHS-2.10: Levee and Channel Maintenance. The County's Flood Control District shall prioritize levee and channel maintenance to ensure the most efficient use of available funding to reduce flood risk and shall encourage reclamation districts and other levee maintaining agencies to employ similar practices.

3.11.2.4 Contra Costa County

The Contra Costa County General Plan includes policies to manage water resources and flood risk. The following policies are relevant to the Project.

Policy 7-56: All residential and non-residential uses proposed in areas of special flood hazards, as shown on FEMA maps, shall conform to the requirements of the County Floodplain Management Program applied to all ordinances, approved entitlements (land use permits, tentative, final, and parcel maps, development plan permits, and variances) and ministerial permits (buildings and grading permits).

Policy 8-27: Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.

3.11.3 Impact Analysis

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

Less than Significant with Mitigation

In the absence of proper controls, ground disturbance associated with setting up work areas, excavation of pits and trenches, and pipeline removal activities could result in erosion and sedimentation or the discharge of pollutants. Spills of improperly treated pipeline flush water, diesel fuel, gasoline, coolant, hydraulic oil, and lubricants could occur, potentially impacting surface water quality. These issues would be addressed by

the Hazardous Spill Response and Contingency Plan (part of **APM-1**, see Section 3.10.3), and the implementation of a SWPPP (**MM HYDRO-1**), which would be required to avoid significant impacts associated with spills, runoff, and sedimentation. The SWPPP would be consistent with the Statewide Construction General Permit (Order No. 2012-0006-DWQ). Discharge of flush water would also be conducted under the authorization of a General Permit and would be required to meet the established water quality limits.

On April 22, 2010, the CVRWQCB identified the CSLC as both a State agency that manages open water areas in the Delta Estuary and a nonpoint source discharger of methylmercury (Resolution No. R5-2010-0043), because subsurface lands under the CSLC's jurisdiction are impacted by mercury from legacy mining activities dating back to California's Gold Rush. Pursuant to a CVRWQCB Total Maximum Daily Load (TMDL), the CVRWQCB is requiring the CSLC to fund studies to identify potential methylmercury control methods in the Delta and to participate in an Exposure Reduction Program. The goal of the studies is to evaluate existing control methods and evaluate options to reduce methylmercury in open waters under jurisdiction of the CSLC. The Project may result in mercury or methylmercury suspension within the Sacramento-San Joaquin Delta Estuary. Therefore, in support of CSLC's efforts to comply with the CVRWQCB TMDL, **MM BIO-5** would require turbidity monitoring during construction to minimize the potential for surface water quality impacts during pipeline excavation and removal.

With the implementation of **APM-1,** impacts associated with hydrology and water quality would be reduced; however, not to a less-than-significant level. PG&E commits to the following measure to ensure that impacts affecting hydrology and water quality would be minimized. With implementation of **MM BIO-5** and **MM HYDRO-1,** impacts to hydrology and water quality would be reduced to less than significant.

MM HYDRO-1: Stormwater Pollution Prevention Plan (SWPPP). The Applicant or their contractor shall develop and implement a SWPPP consistent with the Statewide NPDES Construction General Permit (Order No. 2012-0006-DWQ). At a minimum, the SWPPP shall include measures for:

- Maintaining adequate soil moisture to prevent excessive fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water.
- Installing fiber rolls and sediment basins to capture and remove particles that have already been dislodged.
- Establishing good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials,

and waste management best management practices, including procedural and structural measures to prevent the release of wastes and materials used at the site.

The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill. The SWPPP shall be provided to CSLC staff for review a minimum of 30 days prior to Project implementation.

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

Less than Significant Impact

As indicated in Table 3.11-1, the Project water demand would be negligible (0.007 percent or less) of the groundwater use of any potentially affected sub-basin. The Project water demand would be for pipeline flushing only (one-time use) and short term (about 20 workdays). Therefore, Project-related water use would represent a less than significant impact to local water supplies. Such water use would not hinder sustainable groundwater management of any groundwater basin.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

i) Result in substantial erosion or siltation on or off site;

Less than Significant with Mitigation

The Project would not alter the drainage pattern of the affected Delta channels (Old River, Middle River, Latham Slough). Removal of the pipeline would eliminate the potential for the pipeline to become exposed (due to future erosion or pipeline buoyancy) and associated riverbed erosion caused by turbulence and any debris caught on the exposed pipeline. However, short-term erosion and siltation caused by removal of pipeline and protective mats (if present) on the channel bed and banks would be potentially significant without implementation of a SWPPP (**MM HYDRO-1**). Erosion and siltation caused by pipeline removal would be further minimized by the proposed restoration of riparian habitat removed by the Project (**MM BIO-10**), and adherence to regulatory permit conditions. With the inclusion of **MM HYDRO-1** and **MM BIO-10**, the impact would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site;

No Impact

The Project does not involve any new impervious surfaces or drainage features that could alter the rate or amount of storm run-off. Therefore, there would be no impact.

iii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

No Impact

The Project does not involve any new impervious surfaces or drainage features that could alter the rate or amount of storm run-off. Pipeline segments to be abandoned in place would be flushed and filled with cement and would not contribute any pollutants to stormwater run-off in the Project area. Therefore, there would be no impact to any existing or planned drainage systems.

iv) Impede or redirect flood flows?

No Impact

Although the Project site is located within a flood hazard area, pipeline segments to be abandoned in place are to be buried with a minimum of 5 feet of cover and would not impede or redirect flood flows. The removal of shallow or exposed portions of the pipelines and protective mats would reduce the potential of future impendent or redirect of high flows.

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

No Impact

Although the Project site is located within a flood hazard area, pipeline segments to be abandoned in place would be flushed and filled with cement and could not release pollutants during flood events. In addition, the proposed Project would be implemented during late summer when river flows are at low levels reducing the potential risk of flood events impact decommissioning operations. The Project site is not located within Tsunami Inundation Hazard Zone or subject to seiches. Therefore, no impact would result.

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

No Impact

The Project may include discharge of pipeline flush water to the affected Delta channels, which could exceed the water quality objectives of the Central Valley Region Water Quality Control Plan. However, this water would be tested and treated as needed to ensure it complies with the waste discharge requirements of applicable general permits (Water Quality Order 2003-003-DWQ, Order R5-2016-0076-01). Therefore, such discharge is not anticipated to conflict with the Central Valley Region Water Quality Control Plan.

As discussed above in Section 3.11.1.6, the water demand of the Project may be met by one of three sub-basins of the San Joaquin Valley Groundwater Basin, including the Eastern San Joaquin Sub-basin which is managed under a groundwater sustainability management plan. However, due to the relatively small and temporary nature of this water demand, the Project would not conflict or obstruct groundwater management in the area.

3.11.4 Mitigation Summary

Implementation of the following APMs and MMs would reduce the potential for Project-related impacts to hydrology and water quality to less than significant.

- APM-1: Project Work and Safety Plan
- MM BIO-5: Turbidity Monitoring Plan
- MM BIO-10: Wetlands and Riparian Habitat Restoration
- MM HYDRO-1: Stormwater Pollution Prevention Plan (SWPPP)

3.12 LAND USE AND PLANNING

LAND USE AND PLANNING – Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

3.12.1 Environmental Setting

The Project site is located within the Primary Zone of the Delta as outlined in the Delta Protection Act of 1992. Portions of the Project site are located within the McDonald Island Reclamation District (No. 2030), Bacon Island Reclamation District (No. 2028), and Palm Tract Reclamation District (No. 2024).

The majority of the Project site is located in the San Joaquin County Delta Planning Area (APN 129-050-060, 129-060-012, 129-310-014, and 129-310-032) with a land use designation of General Agricultural (A/G) lands onshore and Resource Conservation (OS/RC) within the waterways. The A/G designation applies to areas outside areas planned for urban development. The OS/RC designation provides for areas with significant natural resources that should remain in open space, used for recreation, or preserved and used for resource production.

Segment 4 includes the western bank of the Old River (Palm Tract) within Contra Costa County (APN 015-230-013). This area has been designated as Open Space (OS) within the General Plan Land Use Element (Contra Costa County 2005) and is located the Primary Zone of the Delta Planning Area. The Open Space land use designation includes publicly owned open space lands which are not designated as Public and Semi-Public, Watershed, or Parks and Recreation.

3.12.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to land use and planning that are relevant to the Project. Relevant state, regional, and local plans and policies are discussed below.

3.12.2.1 State of California Delta Protection Commission

The Delta Protection Act of 1992 (Act) established the Delta Protection Commission, a State entity to plan for and guide the conservation and enhancement of the natural resources of the Delta (including Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties), while sustaining agriculture and meeting increased recreational demand.

The Act defines a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Act (Public Resources Code Section 29760 et seq.) requires the Commission to prepare and adopt and thereafter review and maintain a comprehensive long-term Resource Management Plan for land uses within the Primary Zone of the Delta. A local general plan must be consistent with the Resource Management Plan. Applicable Goals and Policies of the Resource Management Plan (Delta Protection Commission 2010) are outlined below:

Land Use Policy P-8: Local government policies regarding mitigation of adverse environmental impacts under the California Environmental Quality Act may allow mitigation beyond county boundaries, if acceptable to reviewing fish and wildlife agencies and with approval of the recipient jurisdiction, for example in approved mitigation banks or in the case of agricultural loss to mitigation. Mitigation in the Primary Zone for loss of agricultural lands in the Secondary Zone may be appropriate if the mitigation program supports continued farming in the Primary Zone. California Government Code Section 51256.3 (Assembly Bill 797) specifically allows an agricultural conservation easement located within the Primary or Secondary Zone of the Delta to be related to Williamson Act contract rescissions in any other portion of the secondary zone without respect to County boundary limitations.

Land Use Policy P-10: Maintain sites for the storage of dredged material from channels within the Delta and discourage the conversion of existing sites to other uses, as appropriate. Soil that is suitable for levee rehabilitation and raising Delta lowlands should remain within the Delta.

Natural Resources Policy P-1: Preserve and protect the natural resources of the Delta. Promote protection of remnants of riparian and aquatic habitat. Encourage compatibility between agricultural practices, recreational uses, and wildlife habitat.

Natural Resources Policy P-7: Incorporate, to the maximum extent feasible, suitable and appropriate wildlife protection, restoration, and enhancement on publicly owned land as part of a Delta-wide plan for habitat management.

Water Policy P-1: State, federal, and local agencies shall be strongly encouraged to preserve and protect the water quality of the Delta both for in-stream purposes and for human use and consumption.

Levees Policy P-1: Local governments shall carefully and prudently carry out their responsibilities to regulate new construction within flood hazard areas to protect public health, safety, and welfare. These responsibilities shall be carried out consistent with applicable regulations concerning the Delta, as well as the statutory language contained in the Delta Protection Act of 1992. Increased flood protection shall not result in

residential designations or densities beyond those allowed under zoning and general plan designations in place on January 1, 1992, for lands in the Primary Zone.

Levees Policy P-7: Encourage the beneficial reuse of dredged material, as appropriate, for levee maintenance and rehabilitation, and the maintenance of instream flows. Support and advocate for the Delta Long-Term Management Strategy.

Levees Policy P-9: Support a minimum Delta-specific levee design standard as established by state and federal regulations.

3.12.2.2 San Joaquin County

Applicable policies from the San Joaquin County General Plan Policy Document regarding affected land use designations are listed below.

LU-7.1: Protect Agricultural Land. The County shall protect agricultural lands needed for the continuation of viable commercial agricultural production and other agricultural enterprises.

LU-7.7: Agricultural Buffers. The County shall ensure non-agricultural land uses at the edge of agricultural areas incorporate adequate buffers (e.g. fences and setbacks) to limit conflicts with adjoining agricultural operations.

LU-8.1: Open Space Preservation. The County shall limit, to the extent feasible, the conversion of open space and agricultural lands to urban uses, and place a high priority on preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, public safety, water resource protection, and overall community benefit.

LU-8.2: Open Space Character. The County shall require new development in Resource Conservation designated areas to be planned and designed to maintain the scenic open space character of the surrounding area, including view corridors from highways. New development should use natural landforms and vegetation in the lease visually disruptive manner possible, and use design, construction, and maintenance techniques that minimize the visibility of structures.

3.12.2.3 Contra Costa County

Applicable policies from the Contra Costa County General Plan Land Use Element regarding the OS land use designation includes the following:

Policy 3-12. Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy a competitive agricultural economy and assuring a

balance of land uses. Preservation and conservation of open space, wetlands, parks, hillsides, and ridgelines should be encouraged as it is crucial to preserve the continued availability of unique habitats for wildlife and plants, protect unique scenery, and provide a wide range of recreational opportunities for county residents.

Policy 3-54. All public and private management and development activities within the Primary Zone of the Delta shall be consistent with the goals, policies, and provisions of the "Land Use and Resource Management Plan" for the Primary Zone of the Delta as adopted and as may be amended by the Delta Protection Commission.

3.12.3 Impact Analysis

a) Physically divide an established community?

No Impact

The Project site is located in an agricultural area with the nearest community (Summer Lake), approximately 3 miles to the northwest of Segment 4. The Project does not involve any new structures and would not divide any community.

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

No Impact

The Project would not result in any change in land use or conflict with existing agricultural activities or any land use plan or policy.

3.12.4 Mitigation Summary

The Project would have no impact to land use and planning; therefore, no mitigation is required.

3.13 MINERAL RESOURCES

MINERAL RESOURCES – Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.13.1 Environmental Setting

The Project site is located in San Joaquin and Contra Costa Counties. The primary extractive resources in San Joaquin County are sand, gravel, and natural gas. Peat soil, placer gold and silver are also extracted from the County to a lesser extent. Other resources which have been extracted in the past include coal, clay, and manganese ore, all of which have been mined in the southwestern portion of the County. There are over 40 mines in San Joaquin County, of which the majority are actively mining fill dirt and sand and gravel (California Department of Conservation, Division of Mine Reclamation 2021).

There are 14 mines in Contra Costa County, of which the majority are actively mining rock, specialty sand, and sand and gravel (California Department of Conservation, Division of Mine Reclamation 2021).

The nearest mineral resource area with demonstrated resources (aggregate classified as MRZ-2a) is located approximately 8 miles to the southwest of the Project site (Segment 4) (California Department of Conservation Division of Mines and Geology 1987). The nearest regionally significant aggregate resources are located near Lathrop, approximately 16.4 miles southeast of the Project site (Segment 1) (California Department of Conservation, State Mining and Geology Board 2017).

According to the California Department of Conservation, Geologic Energy Management Division's on-line Well Finder, the Project site is not located within an active oil and gas development area. The nearest active well (PG&E Observation Well API 0407720010) is located on McDonald Island approximately 1.1 miles east of the Project site (Segment 1).

3.13.2 Regulatory Setting

Federal and state laws and regulations pertaining to mineral resources and relevant to the Project are identified in Appendix A. Local policies related to mineral resources are discussed below.

3.13.2.1 San Joaquin County

Mineral resources policies are provided in the San Joaquin County General Plan Policy Document, but none apply to the Project.

3.13.2.2 Contra Costa County

Mineral resources policies are provided in the Contra Costa County General Plan Conservation Element, but none apply to the Project.

3.13.3 Impact Analysis

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

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

(a to b) No Impact

There are no mineral resource recovery sites or known mineral resources in or near the Project site. Project activities would not hinder access or otherwise result in the loss of availability of known or inferred mineral resources; therefore, there would be no impact.

3.13.4 Mitigation Summary

The Project would have no impact to mineral resources; therefore, no mitigation is required.

3.14 NOISE

NOISE – Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generate excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐
c) Be 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 and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.14.1 Environmental Setting

The Project pipeline segments are located in an agricultural area. Noise sources include farm equipment and vehicles associated with planting, cultivation, harvesting, packing and crop transportation, and motor vehicle traffic on farm and levee roads. Traffic noise from the more distant State Route 4 (5.1 miles to the southeast) and Interstate Highway 5 (8.8 miles to the east) may be noticeable during nighttime periods. Noise impacts to biological resources are analyzed in Section 3.4, *Biological Resources*.

The Project site is located in an agricultural area and not in proximity to sensitive receptors (residences, hospitals, or schools). However, there are a few farmworker residences on the west side of Bacon Island near Segment 4.

3.14.1.1 Sound, Noise and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound. In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

3.14.1.2 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this huge range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

3.14.1.3 Addition of Decibels

Because decibels are logarithmic units, sound pressure level cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.14.1.4 A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hertz [Hz] and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but

these scales are rarely used in noise impact assessments. Noise levels for impact assessments are typically reported in terms of A-weighted decibels or dBA.

3.14.1.5 Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3 dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern one dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 to 8,000 Hz) range. In typical noisy environments, changes in noise of one to two dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments.

Further, a 5 dB increase is generally perceived as a distinctly noticeable increase, and a 10 dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the number of similar sources or the volume of traffic on a highway) that would result in a 3 dB increase in sound would generally be perceived as barely detectable.

3.14.1.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in noise analysis.

- Equivalent Sound Level (Leq) represents an average of the sound energy occurring over a specified period. The 1-hour A-weighted equivalent sound level (Leq[h]) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- Percentile-Exceeded Sound Level (Lxx) represents the sound level exceeded for a given percentage of a specified period (e.g., L10 is the sound level exceeded 10 percent of the time, and L90 is the sound level exceeded 90 percent of the time).
- Maximum Sound Level (L_{max}) is the highest instantaneous sound level measured during a specified period.

- Day-Night Level (Ldn) is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m.
- Community Noise Equivalent Level (CNEL) is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m., and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m.

Sound from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, and the sound level attenuates (decreases) at a rate of 6 dB each time the distance doubles from a point or stationary source. Roadways, highways, and moving trains (to some extent) consist of several localized noise sources on a defined path; these are treated as “line” sources, which approximate the effect of several point sources. Sound levels attenuate at a rate of 3 dB for each time the distance doubles from a line source.

Ground-borne Vibration. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. Vibration from sources such as buses and trucks is not usually perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

Ground-borne vibration can cause detectable building floor movement, window rattling, items shaking on shelves or walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Human annoyance from vibration can often occur and can happen when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance would be well below the damage threshold for normal buildings.

Vibration is an oscillatory motion which can be described in terms of displacement, velocity, or acceleration. Displacement is the easiest descriptor to understand. For a vibrating floor, the displacement is simply the distance that a point on the floor moves away from its static position. The velocity represents the instantaneous speed of the floor movement and acceleration is the rate of change of the speed. The peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration signal. PPV is often used in monitoring of blasting vibration since it is related to the stresses that buildings undergo.

3.14.2 Regulatory Setting

Federal and state laws and regulations pertaining to noise and relevant to the Project are identified in Appendix A. Local noise policies and standards are provided below.

3.14.2.1 San Joaquin County

The Public Health and Safety Element of the San Joaquin County General Plan Policy Document provides noise standards for various land uses from both transportation and non-transportation sources. The performance standards for new or existing residential areas affected by non-transportation sources are 50 dBA Leq (hourly) during daytime (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq (hourly) during nighttime (10:00 p.m. to 7:00 a.m.).

Section 9-1025.9 of the San Joaquin County Ordinance Code exempts construction activities conducted between 6:00 a.m. and 9:00 p.m. from County noise standards.

3.14.2.2 Contra Costa County

The major objective of the Noise Element of the Contra Costa County General Plan is to provide guidelines to achieve noise/land use compatibility. The Noise Element contains the following policies designed to meet this objective.

Policy 11-1. New projects shall be required to meet acceptable exterior noise level standards as established in the State's Noise and Land Use Compatibility Guidelines.

Policy 11-2. The applicable standard for outdoor noise levels in residential areas is a CNEL of 60 dBA. However, a L_{dn} of 60 dBA or less may not be achievable in all residential areas due to economic or aesthetic constraints.

Policy 11-6. If an area is currently below the maximum "normally acceptable" noise level, an increase in noise up to the maximum should not be allowed necessarily.

Policy 11-8. Construction activities should be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.

Policy 11-9. Sensitive land uses shall be encouraged to be located away from noise areas, or the impacts of noise on these uses shall be mitigated.

Policy 11-11. Noise impacts upon the natural environment, including impacts on wildlife, shall be evaluated and considered in review of development projects.

3.14.3 Impact Analysis

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

Less than Significant Impact

The Federal Highway Administration's Roadway Construction Noise Model was used to estimate peak hour noise (L_{eq}) generated by decommissioning operations (pipeline removal at Segment 4) at the nearest residence. The scenario modeled is excavation of an 8-foot by 8-foot trench (identified within the Project Plan set as Bell-Hole No. 8 – Appendix B), which would be conducted approximately 30 feet from a farmworker residence. The modeled peak hour noise level is 79.1 dBA L_{eq} at this residence. Model output data is provided in Appendix E. Project activities would comply with the restrictions imposed by Section 9-1025.9 of the San Joaquin County Ordinance Code such that noise generated would be exempt from County noise standards for residences. Therefore, noise impacts are considered less than significant.

b) Generate excessive ground-borne vibration or ground-borne noise levels?

Less than Significant Impact

Methodology provided in the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (2013) was used to estimate ground borne vibration at the nearest occupied structure (farmworker residence on the west side of Bacon Island, Segment 4). Input and output data are provided in Appendix E. The estimated peak vibration level at this structure would be 0.06 PPV during excavation of Bell-hole No. 8, which would be distinctly perceptible by humans, but less than 0.1 PPV which could damage fragile buildings. Therefore, Project-generated vibration is considered a less than significant impact.

c) Be 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 and expose people residing or working in the project area to excessive noise levels?

No Impact

The nearest private airport (Las Serpientas Airport) is located approximately 3 miles to the southwest of the Project site (Segment 4). The nearest public airport (Stockton Metropolitan Airport) is located in Stockton, approximately 14.8 miles to the southeast of the Project site (Segment 1). Therefore, aviation noise would not adversely affect the Project site.

3.14.4 Mitigation Summary

The Project would have no significant impacts to noise; therefore, no mitigation is required.

3.15 POPULATION AND HOUSING

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

3.15.1 Environmental Setting

According to the 2010 U.S. Census, San Joaquin County had a population of 685,306. The 2019 population in San Joaquin County was 762,148. In addition, the population of Contra Costa County reported by the 2010 Census was 1,049,025. The 2019 population in Contra Costa County was 1,153,526 (U.S. Census Bureau 2021).

3.15.2 Regulatory Setting

No federal, state, or local laws relevant to population and housing are applicable to the Project. Since the Project does not involve a change in land use, local goals, policies, or regulations are not applicable.

3.15.3 Impact Analysis

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

No Impact

The Project consists of decommissioning a retired natural gas pipeline in an agricultural area and would not extend natural gas service into new areas. Therefore, the Project would not induce growth.

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

No Impact

The Project would be implemented in an agricultural area and would not displace any housing or create a long-term demand for housing. Construction workers and other field personnel involved with pipeline decommissioning may slightly increase the demand for temporary housing (hotels or rental housing). However, the demand would be temporary (a few months) and limited based on the small number of persons involved with Project activities. The Project would not generate a need for additional housing, generate new permanent jobs in the region, or displace existing housing or owners/tenants. Therefore, there would be no impact.

3.15.4 Mitigation Summary

The Project would have no impact to population and housing; therefore, no mitigation is required.

3.16 PUBLIC SERVICES

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

3.16.1 Environmental Setting

The Project site is located in unincorporated San Joaquin County and Contra Costa County, within an agricultural area with minimal community services. The nearest incorporated city in San Joaquin County is the city of Stockton located approximately 5.8 miles to the east of the Project site (Segment 1). In addition, the nearest incorporated city in Contra Costa County is the city of Oakley located approximately 5.4 miles west of the Project site (Segment 4).

The Project site is not inhabited and has a low fire risk due to surrounding waterways. It is not served by a local municipal fire department or regional fire protection district. The California Department of Forestry and Fire Protection would respond to any wildfires.

The San Joaquin County Sheriff's Office is responsible for law enforcement in unincorporated San Joaquin County. Portions of the Project site located in San Joaquin County are served by the San Joaquin County Sheriff's headquarters located at 7000 Michael Canlis Boulevard in French Camp, approximately 13.2 miles southeast of the Project site (Segment 1).

The Contra Costa County Sheriff's Office is responsible for law enforcement in unincorporated Contra Costa County. The portion of the Project site located in Contra Costa County (Palm Tract) is served by the Contra Costa County Sheriff's Delta Station

located at 9100 Brentwood Boulevard in Brentwood, approximately 6.8 miles to the southwest of the Project site (Segment 4).

The nearest school is Knightsen Elementary School located at 1923 Delta Road in Knightsen, approximately 4.6 miles west of the Project site (Segment 4).

The nearest parks to the Project site are Fritz Grupe Park located at 3201 West Benjamin Holt Drive in Stockton (approximately 8.6 miles to the east of Segment 1) and Creekside Park located at 1010 Claremont Drive in Brentwood (approximately 8.1 miles to the southwest of Segment 4).

3.16.2 Regulatory Setting

Federal and state laws and regulations pertaining to public service and relevant to the Project are identified in Appendix A. There are no local goals, policies, or regulations applicable to the Project.

3.16.3 Impact Analysis

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

- ***Fire protection?***
- ***Police protection?***
- ***Schools?***
- ***Parks?***
- ***Other public facilities?***

No Impact

The Project involves short-term pipeline replacement and does not involve the construction of any residences, buildings, or new infrastructure. The Project would not generate a need for any new government facilities or public services during or after proposed activities are completed. Therefore, there would be no impact.

3.16.4 Mitigation Summary

The Project would have no impact to public services; therefore, no mitigation is required.

3.17 RECREATION

RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
Would the project interfere with existing use of in-river recreational boating opportunities?[3]	☐	☒	☐	☐

3.17.1 Environmental Setting

The primary recreational opportunities in the Project area are recreational boating, fishing, wildlife viewing, and walking along waterways. Private duck hunting clubs occasionally hunt on McDonald Island. The nearest parks to the Project site are Fritz Grupe Park located at 3201 West Benjamin Holt Drive in Stockton (approximately 8.6 miles to the east of Segment 1) and Creekside Park located at 1010 Claremont Drive in Brentwood (approximately 8.1 miles to the southwest of Segment 4).

The nearest trails are in the city of Stockton (such as the French Camp Slough Trail along the San Joaquin River, 10.8 miles to the southeast of Segment 1) and those at the Black Diamond Mines Regional Preserve (13.5 miles west of Segment 4).

Recreational boating is available within the affected waterways (Old River, Middle River, Latham Slough), with public marinas at Brannan Island and Stockton.

3.17.2 Regulatory Setting

There are no federal or state laws, regulations, or policies pertaining to recreation that are relevant to the Project. Local policies with respect to recreation are listed below.

[3] The CSLC has chosen to analyze this impact in addition to the impact analyses set forth in CEQA Guidelines Appendix G. Though use of the Appendix G checklist meets the requirements for an initial study, "public agencies are free to devise their own format." (State CEQA Guidelines § 15063, subd. (f).)

3.17.2.1 San Joaquin County

Applicable policies from the San Joaquin County General Plan Policy Document regarding recreation are listed below.

NCR-8.7: Protect Resources. The County shall strive to protect the diverse resources upon which recreation is based, such as waterways, marsh lands, wildlife habitats, unique land and scenic features, and historical and cultural sites.

NCR-8.13: Preserve Natural Features. The County shall encourage natural features to be preserved in recreation areas to increase opportunities for users to experience natural settings.

NCR-8.17: Public Access to Waterways. The County shall ensure adequate public access to waterways at selected appropriate locations.

NCR-8.18: Protect Water-Related Resources. The County shall protect water-related resources, especially the Delta, Mokelumne River, and Stanislaus River, for their importance to recreational uses.

NCR-8.19: Waterway Navigability. The County shall encourage the Corps of Engineers or other appropriate agencies to maintain navigability of the County's waterways.

3.17.2.2 Contra Costa County

Parks and recreation policies are provided in the Contra Costa County General Plan Open Space Element, but none apply to the Project.

3.17.3 Impact Analysis

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

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

(a to b) No Impact

The Project would not result in population growth in the area or otherwise result in the increased use of existing recreational facilities. The Project does not include any recreational facilities or require the construction or expansion of recreational facilities.

Would the project interfere with existing use of in-river recreational boating opportunities?

Less than Significant with Mitigation

The presence and operation of the derrick barge, materials barge and vessels required for pipeline removal within waterways may temporarily limit access to recreational activities within the Project area and raise safety concerns for recreational boaters. Such restricted access would be short term and would not limit access to other surrounding recreational area. Ultimately, removal of the pipeline would remove a potential boating hazard should the pipeline again float to the surface. **MM REC-1** would be implemented to reduce this potential impact to less than significant.

MM REC-1. Local In-Water Construction Notice. Prior to in-water activity, PG&E or its designated contractor shall post information on Project locations, times, and other details of activities that may pose hazards to recreational boaters. At all times while Project activities are taking place in waterways, warning signs and buoys shall be installed upstream and downstream of the work site to provide notice to the public that Project activities are taking place and to exercise caution.

3.17.4 Mitigation Summary

Implementation of the following MM would reduce the potential for Project-related impacts to recreation to less than significant.

- MM REC-1: Local In-Water Construction Notice

3.18 TRANSPORTATION

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

3.18.1 Environmental Setting

The east end of the Project site (Segment 1) would be accessed from State Route 4, then north on Inland Road, west on McDonald Road, cross the bridge over the Turner Cut to McDonald Island, then west on West McDonald Road along the north side of Empire Cut to the McDonald Island work site.

The west end of Segment 3 (Middle River west levee) would be accessed from State Route 4, cross over Trapper Slough, then west on Bacon Island Road, then cross the bridge over Middle River to Bacon Island, then head north to the work site.

The east end of Segment 4 (Old River east levee) would be accessed by farm roads from the east side of Bacon Island (Segment 3). The west end of Segment 4 (Old River west levee) would be accessed from State Route 4, then north on Byron Highway, then east on Orwood Road, then northeast on farm roads to the work site.

3.18.1.1 Local Roadway Conditions

The quality of traffic service provided by a roadway system can be described through the Level of Service (LOS) concept. LOS is a standardized means of describing traffic conditions by comparing traffic volumes in a roadway system with the system's capacity. A LOS rating of A to C indicates that the roadway is operating efficiently. Minor delays are possible on an arterial with a LOS of D. Level E represents traffic volumes at or near the capacity of the roadway, resulting in possible delays and unstable flow.

The most recent traffic count data (2017) provided by the California Department of Transportation (Caltrans, 2021) indicates that traffic volumes on State Route 4 west of the Project site (Discovery Bay area) are relatively high (23,600 average annual daily trips east of Byron Highway). Traffic volumes on State Route 4 east of the Project site are relatively low (11,800 average annual daily trips west of Tracy Boulevard). More recent (2020) traffic counts conducted on State Route 4 as part of San Joaquin County's Regional Congestion Management Program indicate volumes have increased since 2017 to 12,300 average annual daily trips between the County line and Tracy Boulevard (San Joaquin Council of Governments 2020).

3.18.1.2 San Joaquin Council of Governments Regional Transportation Plan/Sustainable Communities Strategy

The 2018 Regional Transportation Plan/Sustainable Communities Strategy represents a new chapter in the development of the San Joaquin region's transportation system. The Plan incorporates the clear mandate from the citizens of San Joaquin County who succeeded in 2006, with 78 percent of the vote, to extend Measure K (half-cent sales tax to fund transportation projects) an additional 30 years. It is comprehensive in its response to new federal statutes embodied in the MAP-21 (Moving Ahead for Progress in the 21st Century) and state statutes including Senate Bill (SB) 375. The Plan continues to provide a "sustainability vision" through year 2042 that recognizes the significant impact the transportation network has on the region's public health, mobility, and economic vitality. As the region's comprehensive long-range transportation planning document, the Plan serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements.

3.18.1.3 San Joaquin Council of Governments Regional Congestion Management Program

The San Joaquin Council of Governments updated the Regional Congestion Management Program in 2018 which involves designating and monitoring a roadway network. Performance measures are tracked to identify current and future multimodal system performance for the movement of goods and people, and a travel demand model is employed to estimate future transportation demand and needs. Once the future needs are determined, a capital improvement program is designed to promote the goals of the Regional Congestion Management Program.

State Route 4 is included in the monitored roadway network and is considered operationally deficient in the Project area (County line to Tracy Boulevard) because it operates at LOS E during a.m. and p.m. peak periods (San Joaquin Council of Governments 2020).

3.18.1.4 Contra Costa Congestion Management Program

The Contra Costa Transportation Authority updated the County's Congestion Management Program in 2019. In the Project area, State Route 4 and the State Route 4/Byron Highway intersection are included in the monitored roadway network. Recent monitoring has not identified any operational deficiencies (exceeding adopted LOS standards) in the Project area (Iteris 2017).

3.18.2 Regulatory Setting

Federal and state laws and regulations pertaining to transportation and relevant to the Project are identified in Appendix A. Local goals, policies, or regulations applicable to this area with respect to transportation are listed below.

3.18.2.1 San Joaquin County

Applicable policies from the San Joaquin County General Plan Policy Document regarding transportation are listed below.

TM-3.1: Roadway Provision. The County shall maintain LOS standards consistent with the San Joaquin Council of Governments Congestion Management Program (CMP) for State highways and designated County roadways and intersections of regional significance. Per the CMP, all designated CMP roadways and intersections shall operate at an LOS D or better except for roadways with "grandfathered" LOS. LOS for State highways shall be maintained in cooperation with Caltrans. The County LOS standards for intersections are LOS "D" or better on Minor Arterials and roadways of higher classification and LOS "C" or better on all other non-CMP designated County roadways and intersections. The County shall also maintain the following:

- On State highways, LOS D or Caltrans standards whichever is stricter
- Within a city's sphere of influence, LOS D, or the city planned standards for that level of service
- On Mountain House Gateways, as defined in the Master Plan, LOS D, on all other Mountain House roads, LOS C

3.18.2.2 Contra Costa County

Transportation policies are provided in the Contra Costa County General Plan Transportation and Circulation Element, but none apply to the Project.

3.18.3 Impact Analysis

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

Less than Significant Impact

The Project is not a new development and not subject to any General Plan policies or public facilities fees. The Project would result in new (but temporary) vehicle trips on State Route 4 (considered operationally deficient in San Joaquin County) during the decommissioning period. However, the maximum number of Project-related vehicle trips is anticipated to be approximately 20 (0.2 percent of existing volumes), and mostly occur during off-peak periods. Therefore, conflicts with the CMP would be minor and considered less than significant.

b) Conflict or be inconsistent with State CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact

CEQA Guidelines section 15064.3(b) indicates that vehicle miles traveled is the most appropriate measure for transportation impacts. In December 2018, the Office of Planning and Research (OPR) provided an updated Technical Advisory to provide guidance regarding the evaluation of transportation impacts under CEQA. In particular, the advisory suggests that a project generating or attracting fewer than 110 one-way trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR 2018).

Peak day traffic volumes are anticipated to occur during pipeline removal and include approximately 20 one-way worker trips. Project-related trips and vehicle miles traveled would be temporary and have no lasting effect on greenhouse gas emissions and related impacts to human health and the environment. Peak day trips would be below the threshold identified in the Technical Advisory. Therefore, the impact would be less than significant.

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

No Impact

The Project would not involve any roadway modifications or incompatible uses and would not increase traffic hazards.

d) Result in inadequate emergency access?

No Impact

The Project site is located in an agricultural area and affected roadways do not provide emergency access for local communities. The Project would not encroach into any roadways, reduce LOS, or cause congestion that could affect emergency access.

3.18.4 Mitigation Summary

The Project would have no significant impact to transportation; therefore, no mitigation is required.

3.19 UTILITIES AND SERVICE SYSTEMS

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

3.19.1 Environmental Setting

The Project does not include components that would require or alter existing utilities or service systems. Project-related solid waste would be transported by the materials barge to Mare Island in Solano County. Non-recyclable, non-hazardous solid waste would likely be transported to the Potrero Hills Landfill, either directly or through the Devlin Road Transfer Station in American Canyon. The Potrero Hills Landfill, located in Suisun City, is permitted for disposal of industrial and construction/demolition waste, and has 13,872,000 cubic yards of remaining capacity.

The nearest hazardous waste disposal site to Mare Island is the World Oil Environmental Services site in Dixon, California, which is permitted to receive oily water (such as contaminated pipeline flush water).

3.19.2 Regulatory Setting

Federal and state laws and regulations pertaining to utilities and service systems and relevant to the Project are identified in Appendix A. There are no local goals, policies, or regulations applicable to the Project.

3.19.3 Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact

The Project does not include activities or new facilities that require new or expanded water, wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities. Therefore, there would be no impact.

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

No Impact

The Project would require water for dust control and pipeline flushing. However, as discussed in Section 3.11 (Hydrology and Water Quality), this water demand would be temporary and supplied by trucking. No long-term water demand would be created, and no new or expanded water infrastructure or entitlements would be needed. Therefore, there would be no impact.

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

No Impact

As discussed in Section 3.11 (Hydrology and Water Quality), wastewater generated by pipeline flushing would be treated as needed and disposed on-site under the authorization of a general permit. Alternatively, wastewater would be disposed off-site at a permitted facility. Portable restrooms would be provided on-site for workers and resulting domestic wastewater/sewage would be disposed at a municipal wastewater treatment plant (likely in Stockton). The Project would not generate wastewater following completion of pipeline decommissioning and would not affect the capacity of any wastewater treatment providers.

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact

The Project would generate solid waste including removed pipeline sections, and miscellaneous debris and materials packaging. Steel pipe would be recycled if feasible, with the balance of generated solid waste disposed at a permitted landfill. If flush water is found to be hazardous, it would be disposed of at a permitted hazardous waste facility. Local facilities have adequate remaining capacity to accept the waste from Project activities. Therefore, the impact would be less than significant.

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

No Impact

Solid waste would be disposed of in accordance with local, state, and federal laws and regulations as required by the Project plans and specifications. Removed pipe and any associated debris would be recycled to the extent feasible. Non-hazardous waste would be disposed at a nearby landfill. Disposal of solid waste generated by the Project would not affect compliance of the region with state-mandated municipal solid waste diversion and recycling requirements.

3.19.4 Mitigation Summary

The Project would have no significant impact to utilities and service systems; therefore, no mitigation is required.

3.20 WILDFIRE

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

3.20.1 Environmental Setting

The Project site is not inhabited and has a low fire risk due to surrounding waterways. It is not served by a local municipal fire department or regional fire protection district. The California Department of Forestry and Fire Protection would respond to any wildfires.

3.20.2 Regulatory Setting

There are no federal laws, regulations, or policies pertaining to wildfire that are relevant to the Project. State laws and regulations pertaining to wildfire and relevant to the Project are identified in Appendix A. There are no additional regulations at the local level.

3.20.3 Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

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

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?

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

(a to d) No Impact

The Project would not result in any change in land use, affect transportation facilities, or otherwise impair implementation of any emergency response or emergency evacuation plan. The Project does not include any habitable structures. The Project involves decommissioning and partial removal of an inactive natural gas pipeline and would not exacerbate fire risk. The Project site and adjacent areas are level and not subject to landslides or post-fire slope instability. Overall, the Project would not increase the risk of wildfire and any associated impacts.

3.20.4 Mitigation Summary

The Project would have no impacts related to wildfire; therefore, no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

The lead agency shall find that a project may have a significant effect on the environment and thereby requires an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where, prior to commencement of the environmental analysis, a project proponent agrees to MMs or Project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per State CEQA Guidelines, § 15065).

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

3.21.1 Impact Analysis

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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation. As analyzed in Biological Resources (Section 3.4), the Project would not significantly adversely affect fish or wildlife habitat, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate plant or animal community, or reduce the number or restrict the range of an endangered, rare, or threatened species. Mitigation measures **MM BIO-1** through **MM BIO-10** would ensure that the minor, temporary, and localized impacts on special-status species and their habitats would be less than significant.

The Project's potential effects on historic and archaeological resources are described in Cultural Resources (Section 3.5) and Cultural Resources – Tribal (Section 3.6). Based on cultural resources records of the area, cultural resources are unlikely to be adversely affected. Implementation of mitigation measures **MM CUL-1/TCR-1** and **MM CUL-2/TCR-2** would reduce the potential for Project-related impacts on previously undiscovered cultural and tribal cultural resources to a less than significant level.

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

Less than Significant Impact. As provided in this MND, the Project has the potential to significantly impact the following environmental disciplines: Aesthetics (Section 3.1), Agriculture (Section 3.2), Biological Resources (Section 3.4); Cultural Resources (Section 3.5); Cultural Resources – Tribal (Section 3.6); Geology, Soils, and Paleontological Resources (Section 3.8); Hazards and Hazardous Materials (Section 3.10), Hydrology and Water Quality (Section 3.11) and Recreation (Section 3.17). However, measures have been identified that would reduce these impacts to less than significant with mitigation.

The nearest project currently under review by the San Joaquin County Planning Department is a minor subdivision to create one residential parcel, located 11.3 miles southeast of the Project site (Segment 1).

The nearest project currently under review by the Contra Costa County Department of Conservation and Development consists of three exploratory oil/gas wells near Brentwood, approximately 9.8 miles west-southwest of the Project site (Segment 4).

For any impact to act cumulatively on any past, present, or reasonably foreseeable projects, these projects would have to have individual impacts in the same resource areas, some at the same time, or occur within an overlapping area as the proposed Project. Excluding air pollutant emissions, the other projects listed above would not impact the same resources or the same population as the proposed Project. Cumulative

impacts would be virtually the same as Project-specific impacts and not cumulatively considerable. Therefore, the impact is less than significant.

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

Less than Significant with Mitigation. The Project's potential to impact human beings is addressed in Sections 3.1 through 3.20 of this document, including impacts that may affect resources used or enjoyed by the public, residents, and others in the Project area (such as aesthetics, public services, and recreation); those that are protective of public safety and well-being (such as air quality, geology and soils, GHG emissions, hydrology and water quality, and noise); and those that address community character and essential infrastructure (such as land use and planning, population and housing, transportation, and utilities). None of these analyses identified a potential adverse effect that could not be avoided or minimized through the mitigation measures described or compliance with standard regulatory requirements. As such, with mitigation in place, Project impacts would be less than significant.

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4.0 MITIGATION MONITORING PROGRAM

The California State Lands (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the Pacific Gas and Electric Company L-057A-1 McDonald Island to Palm Tract Pipeline Decommissioning Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a), and State CEQA Guidelines sections 15074, subdivision (d), and 15097.

The Project authorizes the Pacific Gas & Electric Company (PG&E or Applicant) to decommission four segments of its retired Line 057A-1.

4.1 PURPOSE

It is important that significant impacts from the Project are mitigated to the maximum extent feasible. The purpose of an MMP is to ensure compliance and implementation of MMs; this MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

4.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

4.3 MONITORING

CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions (San Joaquin or Contra Costa Counties). The CSLC or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To confirm implementation and success of the MMs, an environmental monitor must be on-site during all Project activities with the potential to create significant environmental impacts or impacts for which mitigation is required. Along with CSLC staff, the environmental monitor(s) are responsible for:

- Confirming that the Applicant has obtained all applicable agency reviews and approvals
- Coordinating with the Applicant to integrate the mitigation monitoring procedures during Project implementation

- Confirming that the MMP is followed

The environmental monitor shall immediately report any deviation from the procedures identified in this MMP to CSLC staff or its designee. CSLC staff or its designee shall approve any deviation and its correction.

Workforce Personnel. Implementation of the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. To facilitate successful implementation, relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. A monitoring record form shall be submitted to the Applicant, and once the Project is complete, a compilation of all the logs shall be submitted to CSLC staff. CSLC staff or its designated environmental monitor shall develop a checklist to track all procedures required for each MM and shall confirm that the timing specified for the procedures is followed. The environmental monitor shall note any issues that may occur and take appropriate action to resolve them.

Public Access to Records. Records and reports are open to the public and are to be provided upon request.

4.4 MITIGATION MONITORING TABLE

This section presents the mitigation monitoring table (Table 4-1) for Aesthetics; Agriculture; Biological Resources; Cultural Resources; Cultural Resources – Tribal; Hazards and Hazardous Materials; Hydrology and Water Quality; and Recreation. All other environmental factors were found to have less than significant or no impacts; therefore, they are not included in the table. The table lists the following information by column:

- Potential Impact
- Mitigation Measure (full text of the measure)
- Location (where impact occurs and where MM should be applied)
- Monitoring/Reporting Action (action to be taken by monitor or lead agency)
- Timing (before, during, or after construction, during operation, etc.)
- Responsible Party (entity responsible to ensure MM compliance)
- Effectiveness Criteria (how the agency can know if the measure is effective)

Table 4-1. Mitigation Monitoring Program

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
Aesthetics					
Create a new source of substantial light or glare	**MM AES-1: Nighttime Illumination Limitations.** Project lighting shall be as low an intensity as possible to meet Project needs and safety requirements, be focused on work areas, and equipped with shielding to minimize glare and spillover into adjacent areas.	Observe nighttime lighting for compliance	Lighting glare minimized	PG&E, contractors	During any nighttime work
Agriculture					
Conflict with adjacent agricultural operations	**MM AG-1: Noticing to Adjacent Property Owners**. PG&E shall provide notices to adjacent property owners within 100 feet of the Project site at least 2 weeks prior to Project implementation. Project notices will include PG&E Project manager contact information, as well as specifics regarding Project schedule and proposed hours of operation.	Submission of copies of all notices sent	Reduce conflicts	PG&E, contractors	Prior to any work within or adjacent to cultivated areas
Biological Resources					
Special-Status Plant Species	**MM BIO-1: Special-Status Plant Avoidance**. Prior to the start of construction, a qualified botanist shall survey planned terrestrial impact areas to identify special-status plants potentially occurring within the impact footprint. The surveys shall be conducted during the appropriate blooming period. If a special-status plant population is found, it shall be flagged for avoidance, if feasible. If temporary impacts cannot be avoided, affected special-status plant populations shall be restored upon Project completion to pre-existing conditions. A Site	Review of botanical survey report and Site Restoration Plan, inspect implementation of the Plan	Avoid loss and/or replace special-status plant species	PG&E, contractors	Prior to any work within terrestrial work areas

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	Restoration Plan shall be prepared and approved by CSLC staff and other agencies if appropriate that provides for plant salvage and transplantation and/or seed collection and replanting, as appropriate, and establishes performance criteria and monitoring to ensure restoration to pre-project conditions.				
Special-Status Species and Habitats	**MM BIO-2: Worker Environmental Awareness Training.** An environmental training program shall be developed, approved by CSLC staff prior to Project implementation, and presented by a qualified biologist. All contractors and employees involved with the Project shall attend the training. At a minimum, the training shall address special-status species that could occur on the site, their distribution, identification characteristics, sensitivity to human activities, legal protection, penalties for violation of state and federal laws, reporting requirements, and required Project avoidance, minimization, and mitigation measures. A copy of the training sign-in sheets shall be provided to CSLC staff when training has been concluded.	Signatures of trained employees for compliance	All construction workers complete the program, special-status fish avoidance	PG&E, contractors	Prior to and throughout Project activities
Special-Status Fish Species	**MM BIO-3: In-Water Work Period Restrictions**. Pipeline removal activities in surface water or on the banks of Latham Slough, Middle River, and Old River shall be conducted during the period when migratory fish are less likely to be present (August 1 through October 31) and shall avoid spawning periods. This work period shall be modified as required following consultation between the ACOE and NMFS conducted as part	Observe in-water work, complete observation reports	Compliance with work period restrictions, special-status fish avoidance	PG&E, contractors	Prior to and throughout in-water work

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	of Project permitting.				
Special-Status Species and Habitats	**MM BIO-4: Biological Monitoring.** A qualified biological monitor, approved by CSLC staff, shall survey the onshore work area for sensitive species or other wildlife that may be present no more than 24 hours prior to the commencement of Project activities. In addition, the biological monitor shall monitor Project activities within surface water, marsh and riparian habitats, and other activities that have the potential to impact special-status species on a daily basis before Project activity begins. If at any time during Project decommissioning any special-status wildlife species are observed within the Project area, work around the animal's immediate area shall be stopped or work shall be redirected to an area within the Project site that would not impact these species until the animal leaves or is relocated by a qualified biologist. Listed species would be allowed to leave on their own volition, unless coordination with USFWS and/or CDFW provides authorization for relocation by qualified biologists with appropriate handling permits. Work would resume once the animal is clear of the work area. In the unlikely event a special-status species is injured or killed by Project-related activities, the biological monitor would stop work and notify CSLC and consult with the appropriate agencies to resolve the impact prior to re-starting work in the area.	Observation reports	Special-status species avoidance	PG&E, contractors	Prior to the start and throughout onshore work
Special-Status Fish and Aquatic Species	**MM BIO-5: Turbidity Monitoring Plan.** A Turbidity Monitoring Plan shall be developed and	Submit plan to CSLC for review	Special-status fish and aquatic	PG&E, contractors	Prior to the start of and throughout in-

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
and Habitats	submitted to CSLC staff 30 days prior to in-water work. The plan shall be implemented during all in-river work to ensure that turbidity levels upstream and downstream of the Project site do not exceed Basin Plan water quality objectives. The Plan shall include methods to reduce turbidity during in-water pipeline removal and removal of pipeline from the levees, if determined to be necessary by turbidity monitoring results. These methods could include the application of materials such as silt fences and straw waddles to control erosion and sediment release or in-water silt curtains. The Applicant or its contractor shall send weekly electronic copies of the turbidity monitoring results for review by CSLC during in-water Project activities.	and approval at least 30 days prior to in-river work, and weekly monitoring results.	species avoidance		water work
Western Pond Turtle and Giant Garter Snake	**MM BIO-6: Western Pond Turtle and Giant Garter Snake Avoidance**. A qualified biologist shall conduct a pre-construction survey for these species within 24 hours prior to any ground disturbance on or adjacent to levees and channel banks. Barrier fencing shall be constructed around the work areas determined by the qualified biologist to be within suitable habitat to preclude these species. Should western pond turtle or giant garter snake be found within the work areas, they will be allowed to leave the site of their own volition prior to installation of fencing and initiation of construction. In areas providing suitable habitat for giant garter snake, terrestrial excavation within 250 feet of suitable aquatic habitat will be avoided from October 1 through	Submit pre-construction survey report to CSLC prior to ground disturbance, observation reports	Barrier fencing in place if needed, turtles and giant garter snakes relocated as needed, no western pond turtle or giant garter snake mortality	PG&E, contractors	Prior to the start and throughout work on or adjacent to levees and channel banks

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	May 1, the snake's inactive season.				
Swainson's Hawk and White-tailed Kite	**MM BIO-7: Swainson's Hawk and White-tailed Kite Avoidance.** A qualified biologist shall conduct a pre-construction nest survey for Swainson's hawk and white-tailed kite no more than 72 hours prior to any ground disturbance. If a Swainson's hawk nest or white-tailed kite nest is found within 0.25 mile of any work areas, a qualified biologist shall evaluate the adverse effects of the planned activity in consultation with CDFW. If the biologist determines that the activity would disrupt nesting, a buffer between the activity and the nest shall be established and limited operation period (reduced level of disturbance) during the nesting season (March 15 through June 30) shall be implemented. If work cannot be postponed, the active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.	Submit pre-construction survey report to CSLC prior to ground disturbance, submit proposed buffers to CSLC for review if needed, observation reports	Compliance with buffers	PG&E, contractors	Prior to the start and throughout Project activities
California Black Rail	**MM BIO-8: California Black Rail Avoidance**. If construction is scheduled to occur within 250 feet of suitable California black rail habitat during California black rail breeding season (February 1 through August 15), a qualified biologist shall conduct a breeding season survey to identify nesting locations of California black rail. Surveys shall be conducted between February 1 and August 1 in accordance with accepted protocols. If active nests are identified, work within 250 feet of any nest location shall not occur until after August 15. If work cannot be postponed, the	Submit pre-construction survey report to CSLC prior to ground disturbance during the breeding season, submit proposed buffers to CSLC for review if needed,	Compliance with buffers	PG&E, contractors	Prior to the start and throughout Project activities conducted between February 1 and August 15

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.	observation reports			
Breeding and Migratory Birds	**MM BIO-9: Breeding Bird Avoidance.** Should Project activities occur during the breeding season (March 1 through August 1), a qualified biologist shall conduct breeding bird surveys to identify active nests. If an active nest is found, a buffer shall be established between the active nest and work activities in coordination with CDFW. Work within the established buffer shall be avoided. If work cannot be postponed, the active nest shall be monitored by a qualified biologist to establish a smaller buffer if warranted and approved by CDFW.	Submit breeding bird survey report to CSLC for work during the breeding season, submit proposed buffers to CSLC for review if needed, observation reports	Avoid breeding season if feasible, compliance with buffers	PG&E, contractors	Prior to the start and throughout Project activities conducted between March 1 and August 1
Wetlands and Riparian Habitat	**MM BIO-10: Wetlands and Riparian Habitat Restoration.** A Riparian Site Restoration Plan developed in coordination with the ACOE and CDFW shall be implemented to replace wetland and riparian habitat removed by the Project. A copy of the plan shall be submitted to CSLC staff 60 days prior to Project implementation. The Applicant shall also obtain and comply with all necessary permits for impacts to jurisdictional aquatic resources from the ACOE, RWQCB, and CDFW prior to Project implementation. Compensatory mitigation must be consistent with the regulatory agency standards pertaining to mitigation type, location, and ratios. After decommissioning and pipeline removal activities are completed, all disturbed areas shall be seeded or hydroseeded with a native seed mix	Submit Site Restoration Plan to CSLC for review and approval at least 14 days prior to onshore work, observation reports	Restoration of disturbed wetlands and riparian habitats	PG&E, contractors	Prior to the start and throughout onshore work, restoration following

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	appropriate for the area.				
Cultural Resources/Tribal Cultural Resources					
Unknown Cultural or Tribal Resources	**MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Resources**. In the event that potential cultural or tribal cultural resources are uncovered during Project implementation, all earth-disturbing work within 100 feet of the find shall be temporarily suspended or redirected until an approved archaeologist and tribal monitor, if retained, has evaluated the nature and significance of the discovery. In the event that a potentially significant cultural or tribal cultural resource is discovered, PG&E, CSLC and any local, state, or federal agency with approval or permitting authority over the Project that has requested/required notification shall be notified within 48 hours. The location of any such finds must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. Impacts to previously unknown significant cultural or tribal cultural resources shall be avoided through preservation in place if feasible. Damaging effects to tribal cultural resources shall be avoided or minimized following the measures identified in Public Resources Code section 21084.3, subdivision (b), if feasible, unless other measures are mutually agreed to by the lead archaeologist and culturally affiliated tribal monitor that would be as or more effective.	Qualified archeologist and tribal monitor to evaluate the find, report to CSLC, prepare and submit treatment plan to CSLC if needed	Avoidance of disturbance of any found cultural resources	PG&E, contractors, CSLC	Prior to and throughout Project activities

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	A treatment plan, if needed to address a find, shall be developed by the archaeologist and, for tribal cultural resources, the culturally affiliated tribal monitor, and submitted to the appropriate tribal representatives and CSLC staff for review, input, and concurrence prior to implementation of the plan. Protection in place of tribal cultural resources shall be prioritized, if feasible; if the archaeologist or tribe determines that damaging effects on the cultural or tribal cultural resource can be avoided in place, then work in the area may resume provided the area of the find is clearly marked for no disturbance. If avoidance in place of tribal cultural resources is infeasible, the treatment plan shall include measures that place priority on Tribal self-determination over collection and curation, including the option to repatriate (rebury) materials nearby at a location of their choosing, and to transfer possession/ownership to the culturally affiliated Tribe. Title to all archaeological sites, historic or cultural resources, and tribal cultural resources on or in the tide and submerged lands of California is vested in the State and under CSLC jurisdiction. The final disposition of archaeological, historical, and tribal cultural resources recovered on State lands under CSLC jurisdiction must be approved by the CSLC.				
Unanticipated Discovery of Human Remains	**MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains.** If human remains are encountered, all provisions provided in California Health and Safety Code section 7050.5 and	Notification of County Coroner and NAHC as required, copy to	Avoidance of disturbance of any found human remains	PG&E, contractors, CSLC	Prior to and throughout Project activities

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	California Public Resources Code section 5097.98 shall be followed. Work shall stop within 100 feet of the discovery, and both an archaeologist and CSLC staff must be contacted within 24 hours. The archaeologist shall consult with the County Coroner. If human remains are of Native American origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of this determination, and a Most Likely Descendent shall be identified. No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented.	CSLC			
Hazards and Hazardous Materials					
Hazardous Materials, Water Quality	**APM-1: Project Work and Safety Plan.** A Project Work and Safety Plan (PWSP) shall be submitted to CSLC staff and all other pertinent agencies for review and approval at least 30 days prior to the implementation of the Project. The PWSP shall include the following information (at a minimum): • Contact information • Hazardous Spill Response and Contingency Plan • Emergency action plan • Summary of the Project Execution Plan • Project management plan • Site safety plan, including measures for proper handling of hazardous materials including, but not limited to soils containing residual	CSLC review and approval of PWSP 30 days prior to work activities	Avoidance of discharge of hazardous materials or pollutants	PG&E, contractors	Prior to Project initiation

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	pesticides. • Permit condition compliance matrix				
Existing Utility Disturbance (Riverbed)	**APM-2: Pre- and Post-Project Geophysical Debris Survey.** The Applicant or its contractor shall conduct pre- and post-Project Geophysical Debris Surveys of the riverbed using a vessel equipped with a multi-beam sonar system. The pre-Project survey, with previously collected data, shall serve to fully identify pre-Project bottom contours, debris, and any exposed utilities, and a copy of the survey shall be submitted to CSLC staff for review 30 days prior to Project implementation. A post-Project geophysical debris survey shall also be performed, and the results compared to the initial baseline survey. Any anomalous objects located in the survey would be positively identified by divers and any remaining objects related to the decommissioning would be removed. A Project close-out report with drawings and coordinates of any facilities abandoned in place would be submitted to the CSLC within approximately 60 days of work completion.	30 days prior to Project implementation and 60 days after Project completion	Geophysical Debris Survey Results	Avoidance of utilities and debris	PG&E, contractors
Interaction with Offshore Vessels	**APM-3: Advanced Notice to Mariners.** All offshore operations shall be described in a Local Notice to Mariners to be submitted to the U.S. Coast Guard at least 15 days prior to decommissioning activities. The Notice shall include: •Type of operation (i.e., dredging, diving operations, pipeline recovery). • Location of operation, including latitude and longitude and geographical position, if	Offshore	Publication of Notice	Reduction of potential impact to offshore vessels	PG&E, contractors

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	applicable. • Duration of operation, including start and completion dates (if these dates change, the U.S. Coast Guard needs to be notified). • Vessels involved in the operation. • VHF-FM radio frequencies monitored by vessels on the scene. • Point of contact and 24-hour phone number. • Chart Number for the area of operation.				
Hydrology and Water Quality					
Stormwater Pollution	**MM HYDRO-1: Stormwater Pollution Prevention Plan (SWPPP).** The Applicant shall develop and implement a SWPPP consistent with the Statewide NPDES Construction General Permit (Order No. 2012-0006-DWQ). At a minimum, the SWPPP shall include measures for: • Maintaining adequate soil moisture to prevent excessive fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water. • Installing fiber rolls and sediment basins to capture and remove particles that have already been dislodged. • Establishing good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials, and waste management	Submittal of the SWPPP to CSLC, observation reports	Minimize erosion, siltation, and turbidity	PG&E, contractors	During all Project activities

Potential Impact	Mitigation Measure (MM)	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Party	Timing
	best management practices, including procedural and structural measures to prevent the release of wastes and materials used at the site. The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill. The SWPPP shall be provided to CSLC staff for review a minimum of 30 days prior to Project implementation.				
Recreation					
Recreational Boaters	**MM REC-1. Local In-Water Construction Notice.** Prior to in-water activity, PG&E or its designated contractor shall post information on Project locations, times, and other details of activities that may pose hazards to recreational boaters. At all times while Project activities are taking place in waterways, warning signs and buoys shall be installed upstream and downstream of the work site to provide notice to the public that Project activities are taking place and to exercise caution.	Documentation of compliance	Minimize conflicts with boaters	PG&E, contractors	During all in-water work

5.0 OTHER STATE LANDS COMMISSION CONSIDERATIONS

In addition to the environmental review required pursuant to the California Environmental Quality Act (CEQA), a public agency may consider other information and policies in its decision-making process. This section presents information relevant to the California State Lands Commission's (CSLC's) consideration of the Project. The considerations addressed below are:

- Climate change
- Recreational fishing
- Environmental justice
- Significant Lands Inventory

Other considerations may be addressed in the staff report presented at the time of the CSLC's consideration of the Project.

5.1 CLIMATE CHANGE

The Project site is sufficiently distant from the ocean that any effects of sea-level rise would be attenuated by over 50 miles of intervening bays and delta channels. However, as stated in Safeguarding California Plan: 2018 Update (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms. The Project site includes submerged land and delta waterways. As part of the decommissioning, portions of an existing pipeline would be removed from below the bed and banks of the San Joaquin River, and upland portions would be abandoned in place at depth. Therefore, no facilities would remain within the lease areas to be affected by the flooding or drought conditions that could occur given future projected scenarios of sea-level rise.

5.2 RECREATIONAL FISHING

The affected waterways (Old River, Middle River, Latham Slough) support recreational fishing, with fisherman launching their boats at Brannan Island, Bethel Island, Discovery Bay, and other locations. In-water work would be conducted during periods when migratory fish are unlikely to be present. At any one time, in-water pipeline removal activities would affect up to 200 feet of the subject waterway crossings which are at least 500-feet wide. Therefore, fishermen would have free passage during Project activities. Overall, the Project is not anticipated to affect recreational fishing opportunities in affected waterways; however, **MM REC-1** has been included to address in-water construction safety concerns.

5.3 ENVIRONMENTAL JUSTICE

In keeping with its commitment to environmental sustainability and access to all, California was one of the first states to codify the concept of environmental justice in statute. Beyond the fair treatment principles described in statute, CSLC would like to include individuals who are disproportionately affected by a proposed project's effects in the decision-making process. The goal is that, through equal access to the decision-making process, everyone has equal protection from environmental and health hazards and can live, learn, play, and work in a healthy environment.

In 2016, legislation was enacted to require local governments with disadvantaged communities, as defined in statute, to incorporate environmental justice into their general plans when two or more general plan elements (sections) are updated. The Governor's Office of Planning and Research (OPR) (the lead state agency on planning issues) is working with state agencies, local governments, and many partners to update the General Plan Guidelines to include guidance for communities on environmental justice (OPR 2020).

"Environmental justice" is defined by California law as "the fair treatment of people of all races, cultures, and incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12, subd. (e)). This definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all people. The CSLC adopted an Environmental Justice Policy in December 2018 (Item 75, December 2018) to ensure that environmental justice is an essential consideration in the CSLC's processes, decisions, and programs.[4] Through its policy, the CSLC reaffirms its commitment to an informed and open process in which all people are treated equitably and with dignity, and in which its decisions are tempered by environmental justice considerations. Among other goals, the policy commits the CSLC to, "Strive to minimize additional burdens on and increase benefits to marginalized and disadvantaged communities resulting from a proposed project or lease."[5]

The available data revealed no significant environmental impact associated with the issuance of an amendment of General Lease – Right of Way Use, for either the removal or abandonment of PG&E gas pipes in Latham Slough, Middle River, Empire Cut, Mildred Island, and Old River. The subject parcels are submerged lands located in the Delta with predominately agricultural uses. The causal relationship between access and environmental burden appears largely unsupported by quantitative data, at this time. Therefore, community outreach was not conducted.

[4] See https://www.slc.ca.gov/wp-content/uploads/2018/11/EJPolicy.pdf
[5] Id.

5.3.1 U.S. Census Bureau Statistics

Table 5-1 presents income, employment, and race data of the regional and local study area in the Project vicinity, based on the most recently available information from U.S. Census 2019 American Community Survey 5-Year Estimates.[6] The Project corridor is located within San Joaquin and Contra Costa Counties, but specifically falls within Census Tract No. 39 in San Joaquin County and 3040.05 in Contra Costa County, which includes the larger regional vicinity surrounding the Project corridor.

5.3.2 Population and Economic Characteristics

5.3.2.1 Demographics

As indicated in Table 5-1, regionally the population in San Joaquin and Contra Costa Counties is comprised of an approximately 56.5 to 55.8 percent white and 43.5 to 44.2 percent minority population. Demographics within the Census Tracts including and adjacent to the Project corridor are also predominantly white, ranging from 76.3 percent (Tract 3040.05) to 85.5 percent (Tract 39.00). However, it is important to note that this area (specifically Tract 39.00) contains a significant number of persons (69.8 percent) who classify themselves as being of Hispanic or Latino decent. That percentage is higher than the percentage of Hispanic or Latino persons within San Joaquin or Contra Costa Counties as a whole (ranging from 25.6 to 41.4 percent) or the State of California (38.9 percent).

5.3.2.2 Socioeconomics

As shown in Table 5-1, from a regional standpoint, San Joaquin County has a lower-than-average median household income level ($64,432) compared to the State of California ($75,235), but Contra Costa County is significantly higher ($99,716). Similarly, Census Tract 39.00 in San Joaquin County ($52,540) is slightly lower than the County median, but Tract 3040.05 in Contra Costa County is the highest of all ($129,932). San Joaquin County residents are primarily employed in educational, health care, retail, and manufacturing trades; however, residents in Census Tract 39.00 in San Joaquin County (including the majority of the Project vicinity) are predominantly employed in the agriculture and forestry industry (as high as 38.8 percent). With respect to populations (all families) living below the established poverty level, San Joaquin County and Census Tract 39.00 contains approximately 11.6 and 14.6 percent, which is higher than the State of California average of 9.6 percent. Census Tract 3040.05 in

[6] U.S. Census 2018 American Community Survey estimates come from a sample population but are more current than the most recent full census of 2010. Because they are based on a sample of population, a certain level of variability is associated with the estimates. Supporting documentation on American Community Survey data accuracy and statistical testing can be found on the American Community Survey website in the Data and Documentation section available here: census.gov/programs-surveys/acs.

Contra Costa County is lower than the State and San Joaquin County at 6.1 to 6.2 percent of persons living below the established poverty level.

Table 5-1. Environmental Justice Statistics

Parameter	California	San Joaquin County	Contra Costa County	Census Tract 39.00	Census Tract 3040.05
Income and Population					
Total population	39,283,497	742,603	1,142,251	1,518	8,766
Median household income	$75,235	$64,432	$99,716	$52,540	$129,932
Percent (%) below the poverty level (all families)[1]	9.6%	11.6%	6.2%	14.6%	6.1%
Employment Industry (percentage of total population)					
Agriculture, forestry, fishing and hunting, mining	2.2%	4.5%	0.7%	38.8%	1.2%
Construction	6.3%	8.5%	7.2%	9.3%	11.1%
Manufacturing	9.1%	9.5%	6.5%	7.9%	4.1%
Wholesale trade	2.8%	3.2%	2.3%	11.1%	4.6%
Retail trade	10.5%	12.0%	10.1%	11.8%	15.4%
Transportation and warehousing, and utilities	5.3%	8.7%	5.5%	3.8%	3.8%
Information	2.9%	1.3%	2.5%	0.0%	3.9%
Finance and insurance, and real estate and rental and leasing	6.0%	4.7%	8.3%	0.0%	11.3%
Professional, scientific, and management, and administrative and waste management	13.7%	9.6%	16.5%	3.6%	10.8%

Parameter	California	San Joaquin County	Contra Costa County	Census Tract 39.00	Census Tract 3040.05
services					
Educational services and health care and social assistance	21.0%	20.1%	22.2%	8.2%	15.8%
Arts, entertainment, and recreation, and accommodation and food services	10.4%	8.2%	9.1%	5.5%	6.9%
Other services, except public administration	5.2%	4.6%	5.1%	0.0%	5.9%
Public administration	4.4%	5.1%	4.1%	0.0%	5.0%
Race					
White	59.7%	56.5%	55.8%	85.5%	76.3%
Black or African American	5.8%	7.0%	8.7%	0.0%	7.8%
American Indian and Alaska Native	0.8%	0.6%	0.5%	0.5%	1.7%
Asian	14.5%	15.6%	16.7%	0.7%	7.1%
Native Hawaiian	0.4%	0.6%	0.5%	0.9%	0.4%
Some Other Race	14.0%	8.8%	10.9%	6.0%	0.8%
Hispanic or Latino (of Any Race)	39.0%	41.4%	25.6%	69.8%	21.8%

Notes:

[1] Poverty threshold as defined in the ACS is not a singular threshold but varies by family size. Census data provides the total number of persons for whom the poverty status is determined and the number of people below the threshold. The percentage is derived from this data.

Source: U.S. Census Bureau American Fact Finder accessed January 2021 (DP05 – ACS Demographic and Housing Estimates and DP03 – Selected Economic Characteristics; 2019 ACS 5-Year Estimates.

5.3.3 California Office Of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen Results

According to California Office of Environmental Health Hazard Assessment (OEHHA 2021) California Communities Environmental Health Screening Tool (CalEnviroScreen) data (June 2018 Update), the majority of the Project corridor (Segments 1-3 in San Joaquin County and a portion of Segment 4 in Contra Costa County) is located within an area of existing environmental burden, scoring between 95 to 100 percent (pollution

burden percentile of 96 percent). This means that only 0 to 5 percent of all census tracts in California have greater population vulnerability or environmental burdens (Figure 5-1). This is primarily attributed to pesticides, drinking water, groundwater threats, hazardous waste, and impaired water as factors with the highest scores; combined with socioeconomic community components such as linguistic isolation and poverty reported by OEHHA in the Project vicinity that could result in increased vulnerability to environmental impacts.

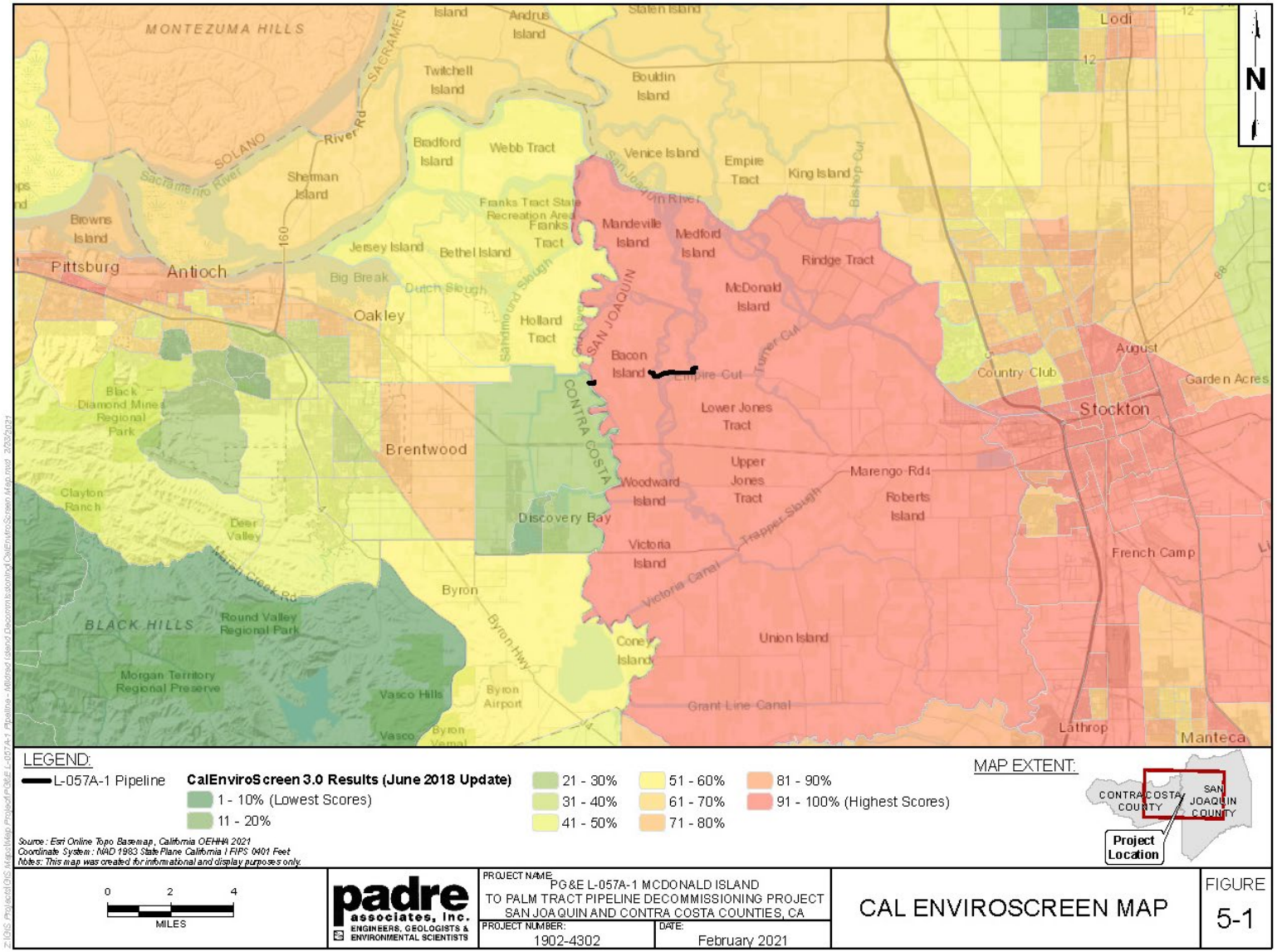
Conversely, the small portion of Segment 4 located within Palm Tract in Contra Costa County is located within an area of significantly less environmental burden, scoring 20 to 25 percent (meaning that 75 to 80 percent of Census tracts in California have greater population vulnerability or environmental burden). However, this area also reported a high percentage related to pesticides (82 percent) and impaired water (93 percent) that would be considered specifically to an increase in environmental impacts.

5.3.4 Conclusion

Project activities would require short-term construction during the pipeline decommissioning. As noted above, a majority of the Project corridor is located within an area that has been identified as having a high percentage of minority populations and a higher existing environmental burden. Additionally, the Project corridor is located within an area that has recorded lower median family income and a higher percentage of persons below the established poverty level. Specifically, the Project vicinity is impacted by impaired ground, surface, and drinking water as well as pesticides and hazardous waste. As such, any Project activities that would have the potential to contribute to this burden would be considered significant.

As indicated in Section 3.0, *Environmental Checklist and Analysis*, the proposed Project would have the potential for short-term construction-related impacts to aesthetics, agriculture and forestry resources, cultural resources, cultural resources-tribal, hazards and hazardous materials, hydrology and water quality, and recreation that have the potential to contribute to existing circumstances affecting environmental justice communities. However, following incorporation of identified mitigation measures, the proposed Project is not anticipated to create new burdens or add to existing pollution burdens felt by a vulnerable community; and there are no anticipated factors that would put any of the nearby populations at risk from this Project. No long-term or permanent impacts would result from incorporation of the proposed Project. The Project objective is to eliminate the risk of further pipeline exposure or interference with waterway navigation. Completion of the Project would result in a beneficial impact to public safety, recreation, and aesthetics by removing pipeline segments across the Project corridor that could become exposed again over time.

Figure 5-1. CalEnviroScreen Results



5.4 SIGNIFICANT LANDS INVENTORY

The Project involves lands identified as possessing significant environmental values within CSLC's Significant Lands Inventory, pursuant to Public Resources Code section 6370 et seq. The Project site is in the Significant Lands Inventory as parcel numbers 39-089-100 (Middle River) and 39-093-100 (Old River). The subject lands are classified as use category Class B, which authorizes limited use. Environmental values identified for these lands are mostly biological, including endangered species habitat, migratory path for anadromous fish spawning on tributary streams, riparian habitat for wildlife support, but also scenic/aesthetic and recreational.

Based on CSLC staff's review of the Significant Lands Inventory and the CEQA analysis provided in this MND, the Project, as proposed, would not significantly affect those lands and is consistent with the use classification.

6.0 MND PREPARATION SOURCES AND REFERENCES

This Mitigated Negative Declaration (MND) was prepared by the staff of the California State Lands Commission (CSLC) Division of Environmental Planning and Management (DEPM), with the assistance of Padre Associates, Inc. The analysis in the MND is based on information identified, acquired, reviewed, and synthesized based on DEPM guidance and recommendations.

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