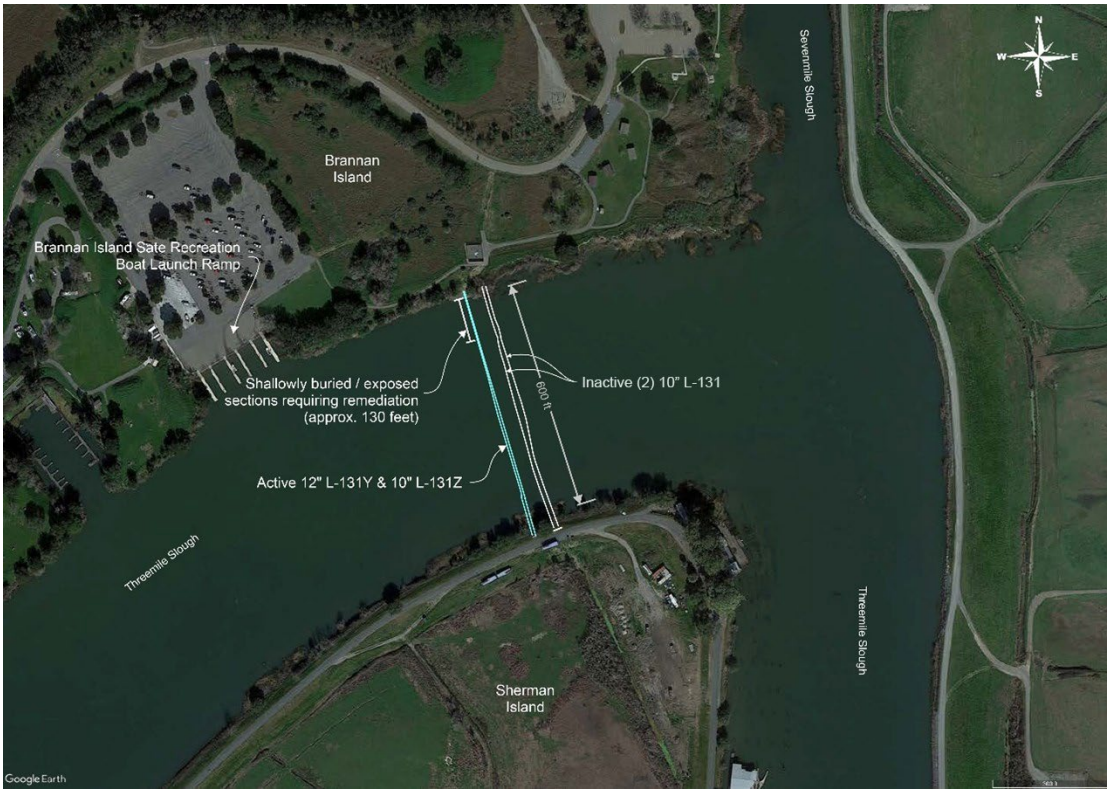
FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

THREEMILE SLOUGH PIPELINE CROSSINGS REMEDIATION AND DECOMMISSIONING PROJECT

October 2026



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MISSION STATEMENT

The California State Lands Commission (CSLC) 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 (Point at Mean High-Water Line)

Latitude: 38.11046° N
Longitude: -121.69716° W
NAD83 Datum

Cover Photo: Aerial imagery overlain with Project pipelines
(Photo courtesy of Padre Associates, Inc.)

Prepared with Commission Staff by:

ESA

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LIST OF ABBREVIATIONS AND ACRONYMS

A

AADT	Annual Average Daily Traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	asbestos-containing materials

B

BAAQMD	Bay Area Air Quality Management District
BCDC	San Francisco Bay Conservation and Development Commission
BMP	Best Management Practice

C

Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management Division
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalents
CRHR	California Register of Historic Resources
CSLC	California State Lands Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act

D

dBA	A-weighted decibels
DDT	dichlorodiphenyltrichloroethane
DOT	U.S. Department of Transportation
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control (Cal/EPA)

E

EFH	Essential Fish Habitat
EIR	Environmental Impact Report
ESA	Endangered Species Act
ESU	Evolutionarily Significant Units

F

FMP	Fishery Management Plan

G

GHG	Greenhouse Gas

H

HMMP	Hazardous Material Management Plan

I

I-	Interstate
IS	Initial Study

J

K

L

LBP	lead-based paint
L_{dn}	day-night average sound level
LOS	Level of Service

M

MCE	Maximum Credible Earthquake
MHW	mean high water
MLLW	mean lower low water
MMP	Mitigation Monitoring Plan
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MOT	Marine Oil Terminal
mph	miles per hour
MT	metric ton

N

NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Protection Act
NMFS	National Marine Fisheries Service
NMOG	non-methane organic gases
NO2	nitrogen dioxide
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center

O

O3	ozone
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Administration

P

Pb	lead
PCBs	polychlorinated biphenyls
PM	particulate matter
PM10	particulate matter less than 10 micrometers in minimum dimension
PM2.5	particulate matter less than 2.5 micrometers in minimum dimension

Q

R

RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RWQCB	San Francisco Bay Regional Water Quality Control Board

S

SARA	Superfund Amendments and Reauthorization Act
SIP	State Implementation Policy
SO2	sulfur dioxide
SWRCB	State Water Resources Control Board

T

TAC	toxic air contaminant
TCDD	tetrachlorodibenzo-p-dioxin
TMDL	total maximum daily loads
TSCA	Toxic Substances Control Act

U

UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

V

W

WEAP	Worker Environmental Awareness Program
WL	Watch List

X

Y

Z

EXECUTIVE SUMMARY

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California State Lands Commission (Commission), as lead agency under the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.), to analyze and disclose the environmental effects associated with the proposed Pacific Gas & Electric Company (PG&E) Threemile Slough Pipeline Crossings Remediation and Decommissioning Project (Project). The Project would authorize Pacific Gas and Electric (PG&E; Applicant) to remediate two active pipelines (L-131Y and L-131Z) within the bed of Threemile Slough with burial of rock materials, and removal of two inactive pipelines (L-131 East and West pipelines) from the bed and banks of Threemile Slough.

The Commission prepared an 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 will avoid or mitigate those impacts to a point where no significant impacts occur.

PROPOSED PROJECT

The Project area is located in unincorporated Sacramento County, California, approximately 2.2. miles southeast of the City of Rio Vista. For the Project vicinity, the Brannan Island State Recreation Area (SRA) is located to the north, State Route (SR) 160 is located 0.5 mile to the west, and rural agricultural lands of Sherman Island and Twitchell Island are located to the south and east (see Figure 1-1).

PG&E owns four natural gas transmission pipelines within the Project area. This includes the two inactive 10-inch pipelines, designated L-131 East and L-131 West, which were active until approximately 1989 to 1990 when they were replaced with two new gas transmission lines: L-131Y, a 12-inch pipeline, and L-131Z, a 10-inch pipeline. The Project would involve:

- Project area preparation and equipment mobilization.
- Remediation of the active L-131Y and L-131Z pipelines within Threemile Slough through placement of rock materials to achieve a minimum required depth of five feet.
- Removal of the inactive pipelines, L-131 East and West, from the bed and north and south banks of Threemile Slough.

- Post-construction restoration of the Project area and demobilization activities.

The Project includes three separate work areas (see Figure 2-1): the Brannan Island SRA Work Area; the Sherman Island Work Area; and the Threemile Slough Work Area. The Brannan Island SRA Work Area consists of limited-use public recreation sites and the north bank of Threemile Slough. The Sherman Island Work Area consists of the Sherman Island levee, Sherman Island East Levee Road, and private lands on the landside of the levee. The Threemile Slough Work Area would be within, and along the riverbed of, Threemile Slough, generally following the pipeline alignments.

Pre-construction surveys would be completed for the in-water work areas for assessment of existing conditions. Terrestrial site preparation activities would include mowing, vegetation removal, and trimming; installation of fencing, signage, notices, and warning buoys; and staging of temporary office trailers, sanitation facilities, and trash receptacles. Equipment mobilization would include delivery, preparation, and staging of terrestrial equipment, as well as mobilization of work vessels and equipment from the home port CS Marine in Mare Island.

Proposed remediation work would restore rock cover over the active L-131Y and L-131Z pipelines to 1990 as-built conditions to ensure compliance with applicable regulations, and to protect pipeline integrity. Remediation would include placement of crushed rock via a crane-deployed clam bucket from a derrick barge to achieve the prescribed minimum 5 feet of cover. Removal of the inactive L-131 East and West pipelines would consist of terrestrial and marine construction activities, including excavation, cutting, and removal of the pipelines within the Sherman Island levee bank, Brannan Island SRA waterside slope, and within Threemile Slough (see Figure 2-1). Once the terrestrial pipeline removal is complete, excavations would be backfilled, ~~and~~ compacted, and restored ~~using spoils removed during excavation. Topsoil and riprap removed would then be replaced to match pre-Project conditions~~. For marine excavation, materials would be side-cast along the riverbed and natural processes are anticipated to restore pre-Project contours over time.

During the Site Restoration and Demobilization phase, all construction materials, equipment, and debris would be removed from the terrestrial and marine work areas. A Site Restoration and Riparian Mitigation Plan would be implemented for revegetation of the Sherman Island and Brannan Island SRA Work Areas. Post-

Project surveys of in-water work areas would also be performed, and the results would be compared to initial baseline surveys.

ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

This MND identifies potential significant impacts from the Project on the following environmental resource areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Cultural Resources – Tribal
- Geology, Soils, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Recreation
- Transportation
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Impacts of the Project on the environmental resource areas below would be considered less than significant:

- Agriculture and Forestry Resources
- Energy
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services

PG&E has agreed to the implementation of MMs that would reduce the potentially significant impacts to "less than significant with mitigation," as detailed in Section 3.0, *Environmental Checklist and Analysis*, of this MND.

Table ES-1 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. Summary of Proposed Project Mitigation Measures

Proposed Project Mitigation Measures
Aesthetics
MM AES-1: Night-Lighting Minimization
MM BIO-14: Site Restoration and Riparian Mitigation Plan
Air Quality
MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices
Biological Resources
MM BIO-1: Worker Environmental Awareness Training
MM BIO-2: Special Status Plant Avoidance
MM BIO-3: Biological Monitoring
MM BIO-4: Turbidity Monitoring Plan
MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys
MM BIO-6: Nesting Bird Season Preconstruction Surveys
MM BIO-7: Roosting Bat Avoidance
MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys
MM BIO-9: Northwestern Pond Turtle (NPT) Preconstruction Surveys
MM BIO-10: Elderberry Shrub Avoidance Buffers
MM BIO-11: Elderberry Shrub Trimming
MM BIO-12: In-Water Work Window
MM BIO-13: HACCP and Decontamination Plan
MM BIO-14: Site Restoration and Riparian Mitigation Plan
MM BIO-15: Riparian Habitat Protection Measures
MM BIO-16: Replacement of In-Water Woody Debris
MM HAZ-1: Project Work and Safety Plan
MM HYDRO-1: Stormwater Pollution Prevention Plan
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
Geology, Soils, and Paleontological Resources
MM BIO-14: Site Restoration and Riparian Mitigation Plan
MM HAZ-1: Project Work and Safety Plan
MM HYDRO-1: Stormwater Pollution Prevention Plan
Greenhouse Gas Emissions
MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices
Hazards and Hazardous Materials
MM HAZ-1: Project Work and Safety Plan

Proposed Project Mitigation Measures
MM HAZ-2: Asbestos Exposure Minimization
MM HAZ-3: Soil Testing and Disposal
MM HAZ-4: Bathymetric Surveys and Debris Removal Measures
MM HYDRO-1: Stormwater Pollution Prevention Plan
MM TRA-1: Traffic Control Plan (Terrestrial)
Hydrology and Water Quality
MM HYDRO-1: Stormwater Pollution Prevention Plan
MM BIO-4: Turbidity Monitoring Plan
MM BIO-14: Site Restoration and Riparian Mitigation Plan
MM HAZ-1: Project Work and Safety Plan
MM HAZ-3: Soil Testing and Disposal
MM HAZ-4: Bathymetric Surveys and Debris Removal Measures
Recreation
MM REC-1: Construction Noticing and In-Water Safety Measures
Transportation
MM TRA-1: Traffic Control Plan (Terrestrial)
MM REC-1: Construction Noticing and In-Water Safety Measures
Utilities and Service Systems
MM HAZ-2: Asbestos Exposure Minimization
Wildfire
MM HAZ-1: Project Work and Safety Plan
MM TRA-1: Traffic Control Plan (Terrestrial)
Mandatory Findings of Significance
MM AES-1: Night-Lighting Minimization
MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices
MM BIO-1: Worker Environmental Awareness Training
MM BIO-2: Special Status Plant Avoidance
MM BIO-3: Biological Monitoring
MM BIO-4: Turbidity Monitoring Plan
MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Pre-Construction Surveys
MM BIO-6: Nesting Bird Season Pre-Construction Surveys
MM BIO-7: Roosting Bat Avoidance
MM BIO-8: Giant Garter Snake Work Window and Pre-Construction Surveys
MM BIO-9: Northwestern Pond Turtle (NPT) Pre-Construction Surveys
MM BIO-10: Elderberry Shrub Avoidance Buffers
MM BIO-11: Elderberry Shrub Trimming
MM BIO-12: In-Water Work Window
MM BIO-13: HACCP and Decontamination Plan
MM BIO-14: Site Restoration and Riparian Mitigation Plan

Proposed Project Mitigation Measures
MM BIO-15: Riparian Habitat Protection Measures
MM BIO-16: Replacement of In-Water Woody Debris
MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources
MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains
MM HAZ-1: Project Work and Safety Plan
MM HAZ-2: Asbestos Exposure Minimization
MM HAZ-3: Soil Testing and Disposal
MM HAZ-4: Bathymetric Surveys and Debris Removal Measures
MM HYDRO-1: Stormwater Pollution Prevention Plan
MM REC-1: Construction Noticing and I-Water Safety Measures
MM TRA-1: Traffic Control Plan (Terrestrial)

1.0 PROJECT AND AGENCY INFORMATION

1.1 PROJECT TITLE

Threemile Slough Pipeline Crossings Remediation and Decommissioning Project (Project)

1.2 LEAD AGENCY AND PROJECT SPONSOR

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1.3 PROJECT LOCATION

PG&E's gas pipeline corridor is located across Threemile Slough near the northernmost point of Sherman Island and approximately 600 feet upstream of the Brannan Island State Recreation Area (SRA) boat launch ramp in Sacramento County, California. The Project area is within the Sacramento–San Joaquin Delta (Delta), and the pipeline corridor connects gas distribution service from Brannan Island on the north to Sherman Island on the south. The Project area encompasses both terrestrial and submarine portions of PG&E's gas pipeline corridor. The Project's marine component lies within State sovereign lands under the Commission's jurisdiction and is authorized under Lease 5438.1-E, a General Lease–Right-of-Way Use. Latitude and longitude coordinates are approximately 38.095° North, –121.698° West (World Geodetic System 84). See **Figure 1-1** for the Project location. For further details on the Project location, see Section 2.0, *Project Description*.

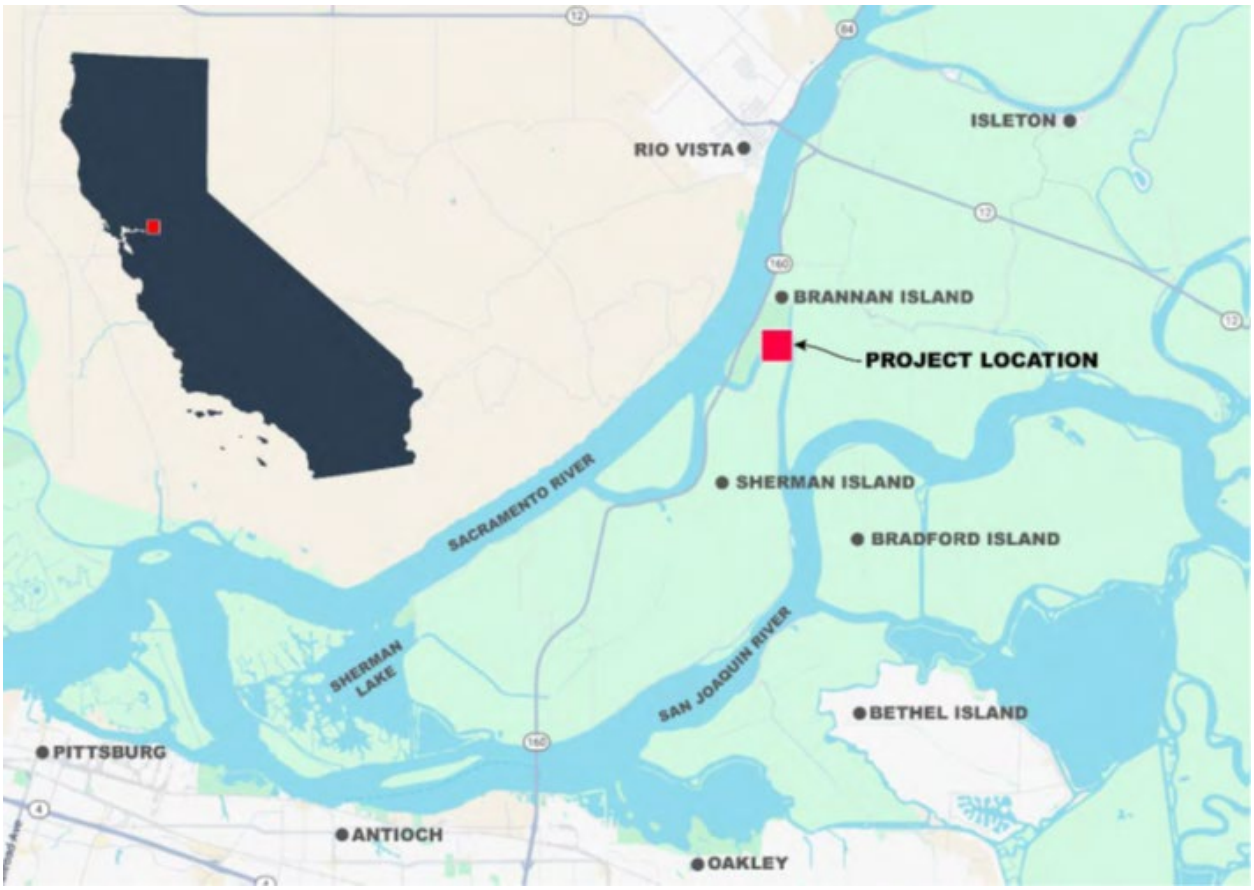


Figure 1-1. Project Vicinity Map

1.4 PROJECT BACKGROUND AND OBJECTIVES

PG&E owns four natural gas transmission pipelines within the Project area. Two 10-inch pipelines—designated L-131 East and L-131 West—were installed in the mid–20th century across Threemile Slough. The pipelines run parallel to each other approximately 10–15 feet apart and extend approximately 600 feet across Threemile Slough. The pipelines were active until approximately 1989 to 1990, when the pipelines were filled with concrete and rendered inactive as part of a project to replace them with the L-131Y and L-131Z pipelines described below. The concrete-filled L-131 East and West pipelines terminate on Brannan Island approximately 50 feet north of the shoreline on the north bank of the slough. On the south side of the slough, the pipelines terminate in the waterside slope of the Sherman Island levee approximately 10 feet north of the levee crown. As-built documentation indicates that the portions of inactive L-131 East and West pipelines within the levee crown were previously removed. In addition, the portions of the inactive L-131 East and West pipelines in the landside slope and south of the landside levee toe are not within the scope of the Project. These

inactive segments would remain in place (Padre Associates and Longitude 123 2024).

At the same approximate time when the L-131 East and West pipelines became inactive, two replacement gas transmission lines were installed and designated as L-131Y, a 12-inch pipeline, and L-131Z, a 10-inch pipeline, which remain active. The L-131Y and L-131Z pipelines extend approximately 600 feet across Threemile Slough within the bed of the slough, run parallel to each other, and are approximately 40 feet west of the L-131 East and West pipelines. As-built documents indicate that the L-131Y and L-131Z pipelines are steel gas transmission lines with wall thicknesses of 0.5 inch and maximum allowable operating pressure of 510 pounds per square inch at 18.6 percent Specified Minimum Yield Strength (Grade B steel) (Padre Associates and Longitude 123 2024). The active lines are part of PG&E's greater L-131 system, which supplies natural gas to customers in the Delta region and surrounding communities.

As-built documents indicate that the L-131Y and L-131Z pipelines were installed with a minimum depth of cover of 5 feet. The as-built documents do not indicate the material that was used to cover the pipelines. The riprap observed above the pipelines is also observed up and down the bank of the slough (**Figure 1-2**) in areas remote from the pipelines, indicating that it was presumably placed by others for the purposes of bank erosion protection (Padre Associates and Longitude 123 2024).

Figure 1-2. Existing Rock Cover on North Bank of Threemile Slough/Brannan Island State Recreation Area

Multibeam echo sounder surveys conducted in 2022 and 2024 indicate that submerged sections of both the L-131 East and West pipelines and an approximately 50-foot-long section of the L-131Z pipeline are exposed on the northern end of the slough, which is less than the minimum burial depth of 5 feet below the channel bed. The slough bottom in this location is composed of rock riprap ranging in size from approximately 9 inches to several feet (Padre Associates and Longitude 123 2024). These conditions expose the lines to potential environmental and mechanical hazards and navigation concerns.

A buried natural gas pipeline owned and operated by a third party, Lodi Gas Storage, extends from Brannan Island SRA across Threemile Slough and through Sherman Island, and it underlies the northern sections of the L-131 East and West pipelines proposed for removal. The third-party pipeline was installed via horizontal directional drilling within a pipeline casing approximately 40 feet below the river bottom (Lodi Gas Storage, LLC 2001). Given the relatively shallow depths of all proposed Project excavation and ground disturbance work, the Project is not expected to affect the third-party pipeline; however, careful consideration of navigation and anchoring of work vessels and excavation of the L-131 East and West pipelines would occur to ensure that the pipeline is protected in place.

1.4.1 Project Need and Objectives

The Project is needed to ensure the continued safe operation of PG&E's regional gas transmission system and to comply with federal pipeline safety standards, and environmental protection mandates. Erosion and sediment transport within Threemile Slough have reduced pipeline cover since the 1990 abandonment and installation project, exposing sections of the pipelines. Exposed or shallow pipelines can be damaged by vessel anchors, debris, or high-velocity flow events, potentially resulting in gas leaks and service interruption.

Additionally, the inactive L-131 East and West pipelines no longer serve a functional purpose and represent unnecessary foreign material within the channel bed that could affect scour patterns and aquatic habitat. Removing these decommissioned facilities would eliminate potential interference with navigation and improve long-term environmental stewardship of the waterway.

Key Project objectives include the following:

1. Restore active pipeline cover (L-131Y and L-131Z) to the 1990 as-built standard of 5 feet to ensure compliance with applicable regulations and protect pipeline integrity.
2. Remove decommissioned pipelines (L-131 East and West lines) to reduce environmental and navigational hazards.
3. Minimize environmental impacts by employing best management practices, mitigation measures, biological work windows, and controlling turbidity and water quality impacts.
4. Maintain safe navigation and coordinate activities with the U.S. Coast Guard and Delta boating community.
5. Restore the Project area through comprehensive site restoration and post-construction monitoring.

1.5 ORGANIZATION OF THE MITIGATED NEGATIVE DECLARATION

This Initial Study/Mitigated Negative Declaration (IS/MND) is intended to provide the Commission, 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 for the proposed Project. The MND is organized as follows:

Section 1.0 presents the Project background and Project location, agency and Applicant information, Project objectives, anticipated agency approvals, and a summary of the public review and comment process.

Section 2.0 describes the proposed Project—its layout, equipment, and facilities—and provides an overview of the Project's operations and schedule.

Section 3.0 presents the IS, which includes the environmental setting, identification and analysis of potential impacts, and a discussion of 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. The Commission prepared this IS pursuant to CEQA Guidelines section 15063.[1]

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

Section 4.0 discusses other Commission considerations relevant to the Project, such as climate change and sea level rise, commercial fishing, and environmental justice, that are in addition to the environmental review required pursuant to CEQA.

Section 5.0 presents information on report preparation and references.

Appendices include the Mitigation Monitoring Program, specifications, technical data, and other information supporting the analysis presented in this IS/MND:

- Appendix A, "Major Federal and State Laws, Regulations, and Policies Potentially Applicable to the Project"
- Appendix B, "Local Regulations and Policies Potentially Applicable to the Project"
- Appendix C, "Air Quality and Greenhouse Gas Emissions Tables"
- Appendix D, "Biological Technical Report"
- Appendix E, "Special Status Wildlife Species with the Potential to Occur at the Project Site"
- Appendix F, "Preliminary Federal Aquatic Resources Delineation Report"
- Appendix G, "Phase 1 Archeological Study"
- Appendix H, "Noise Vibration Calculations"
- Appendix I, "Mitigation Monitoring Program"

1.6 PUBLIC REVIEW AND COMMENT

Pursuant to CEQA Guidelines sections 15072 and 15073, a lead agency must issue a proposed MND for a public review period lasting for a minimum of 30 days. Agencies and the public will have the opportunity to review and comment on the document. Responses to written comments received by the Commission during the minimum 30-day public review period will be incorporated into the MND, if necessary, and provided in the Commission's staff report. In accordance with CEQA Guidelines section 15074, subdivision (b), the Commission 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

All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust. 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, 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 extends waterward from the mean high-tide line. The Commission's authority is set forth in Division 6 of the Public Resources Code and California Code of Regulations, Title 2, sections 1900–2970. The Commission has authority to issue leases or permits for the use of sovereign land held in the Public Trust, including all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways, as well as 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 Commission must comply with CEQA when it undertakes an activity defined by CEQA as a "project" that must receive discretionary approval (i.e., the Commission has the authority to approve or deny the requested lease, permit, or other activity) and that may cause either a direct physical change or a reasonably foreseeable indirect change in the environment. CEQA requires the Commission, as the lead agency, to identify the significant environmental impacts of its actions and to avoid or mitigate those impacts, if feasible.

The Applicant submitted an application to the Commission to use the area under the Commission's jurisdiction waterward of the mean high-tide line for the proposed Project.

1.7.2 Other Agencies

In addition to the Commission, the Project is subject to the review and approval of other federal, State, and local entities with statutory and/or regulatory jurisdiction over various aspects of the Project (**Table 1-1**).

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

Permitting Agency	Anticipated Approvals/Regulatory Requirements
State	
California State Lands Commission	Lease amendment and CEQA lead agency
California Department of Fish and Wildlife	California Endangered Species Act Fish and Game Code sections 1600–1616 streambed alteration agreement
California Department of Transportation	California Streets and Highways Code sections 660–734 encroachment permit
Central Valley Regional Water Quality Control Board	CWA Section 401 water quality certification; National Pollutant Discharge Elimination System (NPDES) permit
Delta Stewardship Council	Determination of consistency with the Delta Plan
California Department of Parks and Recreation	Right of entry permit
Federal	
U.S. Army Corps of Engineers	CWA Section 404 and Section 10 of the Rivers and Harbors Act (under Nationwide Permit No. 12) National Historic Preservation Act Section 106 consultation
U.S. Fish and Wildlife Service	Section 7 consultation (FESA)
National Marine Fisheries Service	Section 7 consultation (FESA) and essential fish habitat
Local	
Sacramento County	Encroachment permit

Notes: CWA = Clean Water Act; FESA = federal Endangered Species Act; NPDES = National Pollutant Discharge Elimination System

Certain approvals have already been issued. The Central Valley Flood Protection Board issued a Minor Alteration No. WA 2025025 on April 9, 2026. Reclamation District 341 issued an encroachment permit, Permit No. 2025-5, in September 2025.

2.0 PROJECT DESCRIPTION

Pacific Gas and Electric Company (PG&E) is proposing the Threemile Slough Pipeline Crossings Remediation and Decommissioning Project (Project), which consists of four primary components:

- Project area preparation and equipment mobilization
- Remediation of the active L-131Y and L-131Z pipelines within Threemile Slough
- Removal of the terrestrial and submarine portions of the inactive L-131 East and West pipelines
- Post-construction restoration of the Project area and demobilization activities

Each Project component includes a defined series of steps summarized in the subsections below. Long-term operations of the active L-131Y and L-131Z pipelines would not differ from existing conditions.

2.1 SUMMARY OF PROJECT WORK AREAS

The Project would take place in Sacramento County, requiring terrestrial work areas on Sherman Island and at Brannan Island State Recreation Area (SRA), as well as an in-water work area across Threemile Slough, as shown on **Figure 2-1**.

2.1.1 Sherman Island Work Area

The Sherman Island work area is required for parking, equipment staging, equipment refueling and maintenance, temporary sanitation facilities, and for removal of the terrestrial portion of the inactive L-131 East and West pipelines located on the waterside levee slope of Sherman Island, which is a federal levee that runs along the north side of Sherman Island. The Sherman Island terrestrial work area includes the federal levee and private land. Vehicle access to the Sherman Island work area would occur along Sherman Island East Levee Road, as shown on Figure 2-1.

A portion of the Sherman Island work area is located on private property; PG&E would obtain a temporary construction easement for use of the property.

Figure 2.1
Project Components Overview

2.1.2 Brannan Island State Recreation Area Work Area

The Brannan Island State Recreation Area (SRA) work area would be used for parking, equipment staging, site preparation and restoration, and boat launching. It would also be used for removal of the terrestrial portion of the inactive L-131 East and West pipelines located on Threemile Slough's northern bank, which is an elevated bluff and not a levee. The Brannan Island SRA work area consists of public land, including public trails and other recreational facilities (e.g., boat launch ramp, fishing pier, campgrounds, paved parking, and other public support facilities). Vehicle access to the Brannan Island SRA work area would occur from State Route 160 and through the SRA's internal system of roads, as shown on Figure 2-1.

PG&E would obtain a right of entry permit from the California Department of Parks and Recreation for proposed Project activities within the SRA. Within Brannan Island SRA, areas temporarily closed to public use would include a public parking area, a day use picnic area, and trails within the vicinity of the waterside slope of the Brannan Island SRA work area, as depicted in Figure 2-1. Closure signs and fencing would be required around work areas for public safety.

A crew boat would also be launched from the SRA's public boat ramp (approximately 600 feet downstream of the Threemile Slough work area) or the Delta Vista Berthing Area (approximately 1,000 feet downstream of the Threemile Slough work area) for in-water work crew transfers at the beginning and end of shifts each day.

2.1.3 Threemile Slough Work Area

Proposed pipeline remediation and removal work within the Threemile Slough work area would require the use of marine equipment and vessels for transport of construction materials. Marine vessels would mobilize from their home port in Solano County, California, at CS Marine (Berth 19) on Mare Island in Vallejo. The approximate steaming distance through the Carquinez Strait and Suisun Bay and up the Sacramento River to the Threemile Slough work area is 35 miles, with an approximate steaming time of 8 hours (see Section 2.2.2 for further description of work vessels). For the duration of in-water work activities, all barges would be equipped with navigation and safety lighting to avoid nighttime collisions.

Rock material to be used for remediation efforts would be sourced from Vulcan Materials Company in Benicia and hauled by standard dump trucks approximately 10 miles to the CS Marine home port, where rock would be loaded onto a materials barge and brought to the Threemile Slough work area. It is anticipated that 100 truck trips would be required for rock transport from the quarry to the home port (Table 2-4). In-water removal of the inactive L-131 East and West lines would result in waste materials being removed from the Threemile Slough work area. ~~Any hazardous materials resulting from Project implementation would be disposed of in compliance with local and State regulations at a facility licensed to accept such materials. All other non-hazardous waste materials would be delivered by barge back to the home port location, where they would be trucked to the Potrero Hills Landfill near Fairfield, California, for disposal (s~~See Section 2.5 for ~~further~~ a description of waste disposal activities~~)~~.

2.2 SITE PREPARATION, STAGING, AND MOBILIZATION

Terrestrial site preparation activities for removal of the L-131 East and L-131 West lines would include mowing, vegetation removal, and trimming to prepare for siting of excavators and other equipment. This would include the removal of approximately six trees and two areas of brush; five coast live oak trees, ranging in size from 6 inches to 32 inches in diameter, and one miscellaneous brush area (approximately 7,000 square feet in size) would be removed from the Sherman Island work area; and one coast live oak tree, 6 inches in diameter, and one miscellaneous brush area (approximately 13,000 square feet in size) would be removed on the Brannan Island SRA work area. Other site preparation activities (for terrestrial and in-water work areas, as applicable) include the installation of fencing, signage, notices, and warning buoys, as well as temporary office trailers, sanitation facilities, and trash receptacles.

Equipment mobilization would include delivery, preparation, and staging of terrestrial equipment to both the Sherman Island and Brannan Island SRA work areas, as well as marine equipment mobilization to the Threemile Slough work area, as described below. Mobilization and site preparation activities would require 10 days to complete.

2.2.1 Terrestrial Equipment Mobilization

Heavy equipment required for terrestrial removal activities for the L-131 East and West lines would be mobilized to the Sherman Island and Brannan Island SRA work areas by construction vehicles, requiring approximately eight truck trips from a local equipment yard within 25 miles of the Project work areas (Table 2-4). Removal of the terrestrial sections of these lines within both terrestrial work areas would be performed using excavators and necessary attachments. Additional terrestrial construction equipment, such as front loaders, backhoes, or skid steers, may also be used to support the handling of excavated materials. All work, material storage, and equipment storage would occur within the designated work areas shown on Figure 2-1.

2.2.2 Marine Equipment Mobilization

As mentioned in Section 2.1.3, the marine equipment spread used for implementation of the proposed Project would be mobilized to the Threemile Slough work area from the home port located in Solano County, California, at CS Marine (Berth 19) on Mare Island in Vallejo. Mobilization of marine equipment (and transport of rock material required for pipeline remediation) is anticipated to require approximately four barge transport trips (Table 2-4). Marine vessels required for the Project include:

- A derrick barge, measuring approximately 140 feet in length and 60 feet in breadth, which would serve as the primary work platform for the marine equipment. The derrick barge would be equipped with a conventional crane to be used for remediation and pipeline removal operations, and would include the equipment needed for pipeline removal, including a submersible excavation pump, shallow air diving spread, cutting shear, and grapple. The derrick barge would be equipped with a four-point anchor system and a spud system for mooring with two spud piles. Spuds are vertical piles that can be lowered to hold the barge in place, then raised when the barge needs to be moved by a tugboat. The spud piles are gravity fed. They are lifted by winch cables and then free-dropped through the spud guides into the river bottom. The depth of penetration into the river bottom depends on the riverbed sediment, and can range from a few feet in dense sand to several feet in soft silty mud.
- A materials barge, which would transport the rock that would be placed over the L-131Y and L-131Z pipelines, and to store and transport removed

segments of the L-131 East and West pipelines. The materials barge would be secured to the derrick barge during in-water work activities.

- Two tugboats, which would tow the two barges from the home port to the Threemile Slough work area. One of the tugboats would remain on-site to tend the derrick and materials barges for the duration of all in-water work, and the other would return to the home port. The tugboat that would remain on-site would be secured to the derrick barge when not in use for movement of the derrick and/or materials barges. After the completion of all Project in-water construction activities, at the contractor's discretion, two tugboats may be needed to tow the barges back to the home port. If so, then the second tugboat would return to the Threemile Slough work area for towing of the barges.
- A vessel approximately 30 feet in length, which would transport work crews to and from the Threemile Slough work area and the nearby boat ramp facility at Brannan Island SRA. This same vessel would be used to perform post-remediation surveys.
- A work skiff, deployed from the derrick barge if needed and measuring approximately 15 feet long, which may be used to assist with tasks such as turbidity monitoring, deployment of silt curtains, or response to potential spills.

2.3 L-131Y AND L-131Z SUBMARINE PIPELINE REMEDIATION

As explained in Section 1.0, as-built drawings from the pipelines' installation in 1990 indicate that the L-131Y and L-131Z pipelines were installed with the required 5 feet of burial and cover. The proposed remediation work would restore rock cover to the 1990 as-built condition. The rock materials for remediation were selected to match the existing slough bottom rock materials to avoid changing the character of the slough bottom (Padre Associates and Longitude 123 2024).

2.3.1 Rock Placement

Before the start of in-water remediation activities for the L-131Y and L-131Z pipelines, silt curtains would be installed and anchored with clump weights to create a horseshoe shape around the remediation area to contain turbidity. Because of tidal fluctuations, the clump weights would be moved as needed to maintain the horseshoe shape of the silt curtains on the down-current side.

The submarine work required to remediate the L-131Y and L-131Z pipelines would use staging areas at the Brannan Island SRA work area. Crews would be ferried from a crew boat launched from the Brannan Island SRA boat ramp to barges located within Threemile Slough where in-water construction activities would occur. The crane on the derrick barge would have up to a 200-foot reach from the barge, which should allow remediation work to be completed from one barge anchoring location; if necessary, a second anchoring location may be considered to complete the L-131Y and L-131Z remediation work.

Remediation of the active L-131Y and L-131Z pipelines within Threemile Slough would begin with the placement of approximately 100 cubic yards of gravel or three-quarter-inch crushed rock around the exposed pipeline to a point approximately 1–2 feet above the top of the pipeline to minimize the potential for larger rocks to damage the pipeline coating. Approximately 950 cubic yards of larger rock approximately matching the size of that found on the surrounding slough bed (9-inch) would then be placed above the pipelines to achieve the prescribed minimum 5 feet of cover. From the derrick barge, a crane-deployed clam bucket would be used to pick up rock from the deck of a materials barge and place the rock above the pipelines. See **Figure 2-2** for an example of a derrick barge used on a similar project.

Figure 2-2. Photographs of a Derrick Barge Installing Rock

The estimated total volume of rock that would be placed is up to 1,050 cubic yards, and the estimated area of rock cover would be approximately 5,706 square feet, extending from the northern side of Threemile Slough to slightly above the mean high-tide line on the bank of Brannan Island, as shown in Figure 2-1. The cross section of the proposed rock placement would have an approximately 5-foot-wide flat top and would be sloped at 1.7 to 1 (horizontal to vertical) or 60 percent grade maximum, to a point where it meets the existing grade (see **Figure 2-3** for a cross section of the proposed rock cover). These dimensions were designed in compliance with U.S. Army Corps of Engineers (USACE) Engineer Manual 1110-2-1601 to ensure that the proposed rock size and slope would be adequate to resist future erosion based on water flow within the slough. A multibeam echo sounder (a device that uses sound waves to map the depth and shape of the bottom of a water body) would be used to document the final remediated condition.

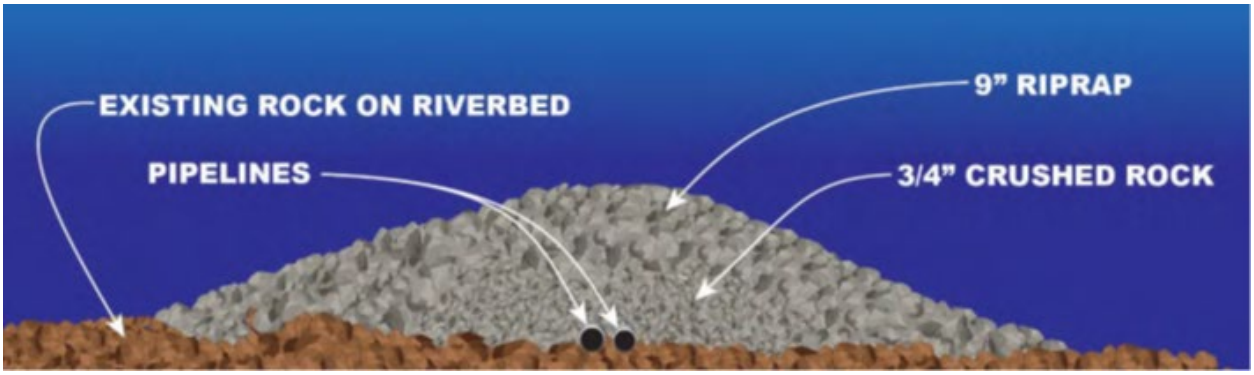


Figure 2-3. Cross Section of Proposed Rock Cover

2.4 L-131 EAST AND L-131 WEST PIPELINE REMOVAL

As explained in Section 1.0, the existing L-131 East and West pipelines run parallel to each other approximately 10–15 feet apart and extend approximately 600 feet across Threemile Slough. The pipelines were rendered inactive and filled with concrete in 1990, and sections of the pipelines do not currently have the required 5 feet minimum burial depth. Consequently, the pipelines are proposed for removal to comply with Commission lease requirements for decommissioning of the pipelines and to restore the slough bottom for environmental and navigational purposes.

2.4.1 Terrestrial Pipeline Removal

Terrestrial construction activities would occur above the mean high-tide line and would include excavation, backfilling, and surface restoration. The Sherman Island terrestrial work area is a federal levee under jurisdiction of the Central Valley Flood Protection Board (CVFPB), Reclamation District 341 (RD 341), and USACE. Although the Brannan Island terrestrial work area is not a levee, PG&E is coordinating with the Brannan-Andrus Levee Maintenance District regarding proposed work activities on Brannan Island.

2.4.1.1 Terrestrial Excavation

Excavators would be used to excavate 3–5 feet of soil above and adjacent to the pipelines to fully expose the pipelines.

At the Brannan Island SRA work area, approximately 336 cubic yards (Table 2-1) of ~~E~~excavated materials, consisting of surface riprap and subsurface earthen materials, would be set to the side of the excavated area to be used later for backfilling. ~~At the Brannan Island SRA work area, a~~ A long-arm excavator would be positioned at the top of the bluff above the waterside slope, and excavations would be sloped in accordance with federal and California Occupational Safety and Health Administration requirements.

Excavations in the Sherman Island work area would occur within the waterside levee slope up to the levee crown. A long-arm excavator would be positioned at the levee crown and within the southbound lane of Sherman Island East Levee Road (Sacramento County Road No. 2H0020), which would require one-way controlled traffic during excavation operations in accordance with an encroachment permit from Sacramento County. Excavation would be performed in accordance with the requirements of agencies responsible for the levee, including the CVFPB, USACE, and RD 341. These requirements typically include excavating at a 2 to 1 (horizontal to vertical) or flatter slope.

It is anticipated that a total of approximately 28 truck trips would be required to transport construction waste materials from the Brannan Island SRA and Sherman Island work areas to the Potrero Hills Landfill (located near Fairfield in Solano County) or other suitable disposal facility within approximately 25 miles (Table 2-4). Approximately 20 of these truck trips would be required to remove approximately 219 cubic yards (Table 2-1) of excavated materials from the Sherman Island work area, in accordance with RD341 requirements, and

replace them with imported materials meeting RD341 standards. The excavator would use a bucket attachment to load excavated materials onto trucks for transport to the disposal facility.

Table 2-1 summarizes the excavation footprints within both terrestrial workspaces.

Table 2-1. L-131 East and West Pipeline Excavation Footprints Associated with Terrestrial Activities

Excavation Location	Excavation Depth (feet)	Approximate Area (square feet)	Excavation Volumes (cubic yards)
Brannan Island State Recreation Area Work Area	8	2,446	336
Sherman Island Work Area	8	1,959	219

2.4.1.2 Pipeline Cutting and Removal

Before cutting of the pipelines, save-a-valves would be installed near the end of each pipeline, which would be used to verify that the pipelines are not pressurized and that hydrocarbons are not present inside the pipeline. The terrestrial segments of the pipelines would be cut into sections using the excavator with a mounted shear attachment, a hand-operated plasma cutter, or a saw designed to cut through both steel and concrete. See **Figure 2-4** for a photo of a pipeline being cut with a shear for a different project.

Pipeline segments would then be picked up using the excavator with a hydraulic thumb or grapple attachment and loaded onto trucks for transport to the Potrero Hills Landfill ~~near Fairfield~~ or other suitable disposal facility within approximately 25 miles from the Brannan and Sherman Island work areas, along with other waste materials for disposal described in Section 2.4.1.1. ~~One truckload is anticipated for transport of the removed pipeline sections from the Brannan Island work area, and one truckload is anticipated for pipeline disposal from the Sherman Island work area.~~

Figure 2-4. Photograph of Pipeline Cutting with Excavator-Mounted Shear

2.4.1.3 Excavation Backfill and Compaction

Once the terrestrial pipeline removal is complete, excavations would be backfilled and compacted. ~~using the spoils removed during excavation. Up to 3 cubic yards of additional fill material may be needed to effectively backfill excavations to preconstruction contours. If needed, fill material would be imported from a local source less than 25 miles from the Project area and would require one truck trip~~.

The excavation in the Brannan Island SRA work area would be backfilled and compacted to match the relative compaction of adjacent undisturbed soils. Topsoil and riprap removed during excavation and stockpiled separately (as described in Section 2.4.1.1) would be reused and placed last to match pre-Project conditions. Up to 3 cubic yards of additional fill material may be needed to effectively backfill excavations to pre-construction contours.

The excavation in the Sherman Island levee waterside slope would have a stepped or terraced slope design before backfilling with imported fill material and would be backfilled in 4- to 6-inch layers. Each layer would be compacted to at least 90 percent of maximum density, in accordance with CVFPB authorization and RD 341 permit conditions. Topsoil and riprap would be imported to restore the Sherman Island levee in accordance with RD 341 requirements.

A total of approximately 22 truck trips from a local source within 25 miles of the Project work areas are estimated to be needed for import of fill materials for the Sherman Island work area and Brannan Island SRA work area, including riprap and topsoil (Table 2-4).

~~Topsoil and riprap removed during excavation and stockpiled separately (as described in Section 2.4.1.1) would be reused and placed last to match pre-Project conditions.~~

2.4.2 Submarine Pipeline Removal

The marine spread that would be used for remediation of the L-131Y and L-131Z pipelines, as described in Section 2.3, would remain on-site and would be used for submarine pipeline removal of the L-131 East and West pipelines. Before the start of all in-water pipeline removal activities, silt curtains would be installed, as described in Section 2.3, to contain turbidity.

2.4.2.1 Underwater Excavation

The L-131 East and West pipelines are buried approximately 7–12 feet deep across much of the slough, although there are some exposures and shallowly buried segments within the Brannan Island SRA work area. Given the 200-foot reach of the crane from the derrick barge, up to three anchoring locations (through use of the spud piles) would be expected to cover the full in-water linear distance of the L-131 East and West pipelines across Threemile Slough.

Underwater excavation would be performed using a submersible excavation pump deployed using the crane from the derrick barge. See **Figure 2-5** for an artist's rendering of a derrick barge using a submersible excavation pump to expose a pipeline. The submersible excavation pump would narrowly follow the buried pipeline alignment, pulling both sediment and water into the pump inlet, which mix and form a slurry. On the riverbed, hoses connected to the pump outlet would transport the slurry a short distance, where it would be side-cast onto the riverbed alongside the excavation area.

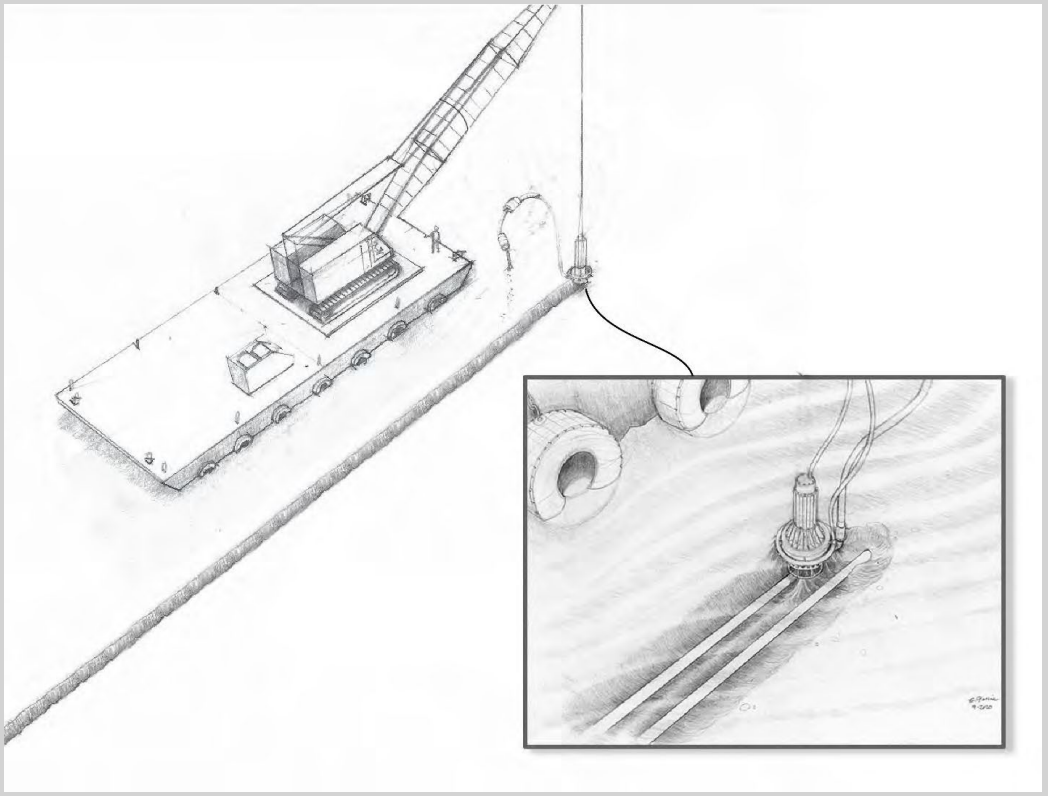


Figure 2-5. Rendering of a Submersible Excavation Pump

Table 2-2 summarizes the excavation footprint within the Threemile Slough work area.

Table 2-2. L-131 East and West Excavation Footprints Associated with Marine Activities

Project Component	Excavation Depth (feet)	Approximate Area (square feet)	Excavation Volumes (cubic yards)
Threemile Slough Work Area	7–12	16,145	3,501

2.4.2.2 Pipeline Cutting and Removal

Once excavation is complete, a cutting device such as a shear, hydraulically operated saw, or diamond wire saw suspended from the crane would cut the pipelines into sections. The crane would then be operated with a hydraulically operated grapple to pick up each section of pipeline and place it on the materials barge for transport to the home port and eventual disposal, as described in Section 2.5. See **Figure 2-6** for an example of a crane-operated

grapple from a similar project. Up to three anchoring locations for work barges would be needed for pipeline cutting and removal across Threemile Slough.

Figure 2-6. Photograph of Pipeline Removal with Crane and Grapple

A portion of the side-cast material from the submersible excavation pump would settle back into previously excavated areas. The remaining material that settles outside the excavation would become part of natural hydrogeomorphic processes that are anticipated to return the contours of the bottom of the slough to pre-Project contours over time.

Depending on the riverbed sediment, actual depth of pipeline burial, and speed of excavation, the excavation and pipeline cutting and removal procedures may be done together at each barge anchoring location rather than as separate operations across the slough. If this were to occur, the spoils would be side cast back into the previously removed pipeline trench area to facilitate backfill. This would also limit the number of barge anchoring locations to three rather than six, to avoid separate operations for pipeline cutting and removal across the slough.

2.5 SITE RESTORATION AND DEMOBILIZATION

Once marine operations have been completed, the barges and associated marine equipment spread would be towed back to the home port at Mare Island.

~~As mentioned in Section 2.2, *Site Preparation, Staging, and Mobilization*, t~~The removed L-131 East and West pipeline sections may contain asbestos coating, which would be assessed prior to construction activities. If it is determined that asbestos is present, the pipeline sections would be disposed of in compliance with all local and State regulations at a facility licensed to accept such materials (or recycled if feasible) as further explained in Section 3.10, *Hazards and Hazardous Materials*. All non-hazardous waste on the materials barge would be towed back to the home port and loaded onto trucks for transport to the Potrero Hills Landfill ~~near Fairfield~~, approximately 30 miles from the port. Approximately three truck trips are anticipated for waste disposal from the home port (Table 2-4) to the landfill. As stated in Section 2.4.2.2, underwater excavations or disturbances to the riverbed that result from removal of the submarine pipelines would infill through side-casting of the excavated materials and natural hydrogeomorphic processes and, in time, would be expected to return to pre-Project conditions; therefore, no additional restoration or disposal activities are proposed for this Project activity.

Construction of the Project would require a total of approximately 9.1 acres of ground disturbance and would require site restoration. Some terrestrial site restoration could occur concurrently with in-water Project activities; otherwise, final Project area restoration would be performed once remediation and pipeline removal activities have been concluded. All construction materials, equipment, and debris would be removed from the terrestrial work areas. Excavation backfill and compaction on the north and south banks of Threemile Slough, within the Brannan Island SRA and Sherman Island work areas, respectively, would occur as described in Section 2.4.1.3, *Excavation Backfill and Compaction*.

Areas of land disturbance within the Brannan Island SRA and Sherman Island work areas would be reseeded as feasible, in accordance with applicable CVFPB authorization and RD 341 permit requirements for revegetation of the Sherman Island levee.

2.6 ANTICIPATED PROJECT WORK SCHEDULE, EQUIPMENT, AND PERSONNEL

The Project consists of four components, which would occur over a 3-month work window (approximately August 1 through October 31): site preparation and equipment mobilization, remediation of the active L-131Y and L-131Z pipelines, removal of the inactive L-131 East and West pipelines, and site restoration and demobilization. Although most work would be generally sequential, the potential exists for overlap between some work required for terrestrial and marine Project components, reducing the total number of workdays.

All remediation and pipeline removal activities within waterways would occur within the regulatory in-water work window that occurs from August 1 through October 31 to protect special-status fish species.

Project work activities would generally be conducted Monday through Friday for approximately 10 hours each day for terrestrial Project components, and Monday through Saturday for approximately 10 hours each day for marine/ riverine Project components. Construction activities would occur from 7 a.m. to 5:30 p.m. each day. Although work activities are not anticipated during nighttime hours, if work activities must extend into nighttime hours due to Project schedule constraints (August 1 through October 31 aquatic work window), then night lighting would be required to illuminate terrestrial and in-water work areas for safety and navigation purposes. Work barges would also be anchored overnight at the in-water work area, which would require navigational safety lighting.

Tables 2-3, 2-4, and **2-5** list equipment, vehicle trips, and personnel requirements for all Project components.

Table 2-3. Estimated Equipment Requirements

Equipment Type	Quantity	Horsepower	Operating Hours per Day	Days
Light-Duty Truck (crew)	6	200	2	60
Light Plant	4	15	6	60
Air Compressor (185 cubic feet per minute)	1	50	2	60
Water Pump	1	20	2	45
Welding Machine	1	20	8	2
Hydro-excavator	1	300	6	2
Excavator	2	310	8	10
Wheeled Loader	2	240	8	10

Equipment Type	Quantity	Horsepower	Operating Hours per Day	Days
Survey Vessel	1	270	10	2
Derrick Barge Crane	1	330	10	30
Derrick Barge Generator	1	100	10	30
Support Tug Mains	1	500	2	30
Support Tug Generator	1	75	10	30
Driving Air Compressor	1	50	3	30
Submersible Excavation Pump Generator	1	400	4	30

Table 2-4. Pickup and Delivery Estimates[1,2]

Item	Trips	One-Way Miles per Trip
Vehicle Trips		
Transport of Pipeline Remediation Rock from Quarry to Home Port	100	~~20~~ 10
Equipment Transport to Terrestrial Work Areas	8	25
Construction Worker Trips to ~~Terrestrial~~ Project Work Areas	400	15
Delivery of Site Restoration Materials to Terrestrial Work Areas	~~2~~ 22	25
Transport of Waste Materials from Home Port to Potrero Hills Landfill (or similar disposal site)	3	30
Transport of Waste Materials from Terrestrial Work Areas to Potrero Hills Landfill (or similar disposal site) ~~Disposal Site~~	~~8~~ 28	25
Marine Vessel Trips		
Barge Transport from Home Port to ~~Construction~~ Project Work Areas[2]	4	35
Waste Materials Transport from Threemile Slough to Home Port	1	35
Post-construction In-Water Survey Work	1	60

Notes:
[1] See full calculations in Appendix C.
[2] Includes all vessel trips for transport of equipment and materials, including for site restoration and transport of construction workers.

Table 2-5. Personnel Requirements

Task	Quantity	Hours per Day	Days
Site Support/Project Manager	3	10	60
Excavation	4	10	5
Backfill/Site Restoration	6	10	5
Terrestrial Pipeline Removal	4	10	30
Marine Pipeline Removal	12	10	30
Survey	2	10	2

3.0 ENVIRONMENTAL CHECKLIST AND ANALYSIS

This section contains the Initial Study (IS) that was completed for the proposed PG&E (Applicant) Threemile Slough Pipeline Crossings Remediation and 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 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 has concluded that a Mitigated Negative Declaration (MND) is the appropriate CEQA document for the Project.

The evaluation of environmental impacts provided in this IS is based in part on the impact questions contained in Appendix G of the State CEQA Guidelines; these questions, which are included in an impact assessment matrix for each environmental category (Aesthetics, Agriculture/Forest Resources, 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 resource areas listed below would be potentially affected by this Project. These were identified because there would be at least one impact that would be a "Potentially Significant Impact" except that the Applicant has agreed to Project revisions, including the implementation of mitigation measures, that would reduce the impact to "Less than Significant with Mitigation."

Environmental Resource Areas with Potentially Significant Impacts:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Cultural Resources – Tribal
- Geology, Soils, and Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- 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 and as further contained in Appendices A and B.

PROPOSED FINDING

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

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.

Jason Ramos

Signature

October 16, 2026

Date

Jason Ramos
Senior Environmental Scientist
Division of Environmental Science, 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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

3.1.1 Environmental Setting

The Project work areas are located in the vicinity of Brannan Island SRA along Threemile Slough, within an unurbanized area (U.S. Census Bureau 2023). The Project area includes the southern shore of Brannan Island and the northernmost tip of Sherman Island, and in-water components within Threemile Slough. The northern portion of the Project area is bounded by the Brannan Island SRA on

the north and west. The southern portion of the Project area is bounded on the south and east by a federal levee along Threemile Slough and surrounding private lands. Waterways in the vicinity of the Project area include the Sacramento River, approximately 0.5 miles to the west, and various sloughs and channels including Threemile Slough. The Project also involves marine equipment mobilization and materials hauling from commercial vendors and ports in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait, Suisun Bay, and up the Sacramento River to Threemile Slough. These activities would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and recreational watercraft and vehicles. These activities do not have the potential to impact aesthetic resources, except for impact b in the Checklist as explained further in Section 3.1.3. Otherwise, environmental setting information substantially focuses on aesthetic resources at the Project work areas located within Brannan Island SRA, Sherman Island, and Threemile Slough.

The visual character of the Project area consists of agricultural and open space lands, rural communities, and waterways that compose the Delta. The Sierra Nevada to the east and the Coast Ranges to the west also serve as important backdrops that add to the visual quality of the area. There is one designated State Scenic Highway in the vicinity of the Project area, State Route 160, which runs along the Sacramento River at the confluence with Threemile Slough approximately 0.5 mile to the west of the Brannan Island SRA work area (Caltrans 2018). However, from State Route 160, the Threemile Slough channel extends east for a short distance and then bends in a northerly direction towards the northern tip of Sherman Island where the Project work areas are located. Therefore, the Project work areas are not visible from State Route 160.

Public views of the Project area are limited to motorists on Sherman Island East Levee Road, boaters on Threemile Slough, users of the Brannan Island SRA boat ramp, recreationists such as hikers and campers within Brannan Island SRA. The Brannan Island Scenic View is located 0.8 mile south of the Project area; however, it is on the opposite side of State Route 160 looking west, away from the Project area. The closest camping site is located approximately 1,000 feet west of the Brannan Island SRA work area. The nearest sensitive receptor (residence) is located approximately 1,255 feet southwest of the Sherman Island work area. Project work areas are also visible from private agricultural lands along the east side of Threemile Slough south of the confluence with Sevenmile Slough. This area is fairly distant at approximately 1,500 feet east of the Project

work areas and supports agricultural uses and includes a private dirt road along the top of the waterside slope along Threemile Slough.

The Project area does not have substantial amounts of glare, lighting, or illumination, and ambient nighttime lighting and illumination levels are very low (Sacramento County 2010).

3.1.2 Regulatory Setting

No major federal laws, regulations, or policies regarding aesthetics are applicable 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 identified in Appendix B.

3.1.3 Impact Analysis

Project-related construction equipment and vessels at Brannan Island SRA and Sherman Island and within Threemile Slough would be temporarily visible from public and private roads, waterways, recreation facilities within Brannan Island SRA, and nearby rural residences. The potential also exists for the use of nighttime lighting, which could temporarily produce new sources of light or glare.

As consistent with the Environmental Setting, with the exception of impact b, the analysis below focuses on aesthetic resources at the Project work areas located within Brannan Island SRA, Sherman Island, and Threemile Slough.

a) Would the Project have a substantial adverse effect on a scenic vista?

Less than Significant Impact

There are no designated scenic vistas in the Project area. The Brannan Island Scenic View is located 0.8 mile south of the Project area and is on the opposite side of State Route 160 looking west, away from the Project area. The Project work areas include views of oak and riparian woodlands, agricultural land, and Threemile Slough. As a result, public views of the Project work areas are localized to these areas.

Recreationists at Brannan Island SRA would be able to view the Project area. The closest camping site is located approximately 1,000 feet west of the Brannan Island SRA work area, and the nearest residence is located approximately 1,255 feet southwest of the Sherman Island work area. The Project area can also be

viewed from Sherman Island East Levee Road. In addition, boaters on Threemile Slough would temporarily be able to see the Project barges and equipment.

However, the Project includes removal and remediation of existing pipelines and does not include new permanent aboveground structures or permanent changes that could affect existing viewsheds. Although the Project would include the use of large equipment such as barges, tugboats, and cranes, that would be present within open viewsheds of Threemile Slough, these activities would be temporary and limited to short durations when construction equipment is present on-site (approximately 3 months from August 1 through October 31) and would be demobilized (moved off-site) after construction. Additionally, at the end of project activities, terrestrial excavation areas would be recontoured and existing topsoil and riprap would be replaced, and disturbed areas would be reseeded. Therefore, impacts on scenic vistas from the Project would be less than significant.

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

Less than Significant Impact

There is one designated State Scenic Highway in the vicinity of the Project area, State Route 160, which runs along the Sacramento River at the confluence with Threemile Slough and is approximately 0.5 mile to the west of the Brannan Island SRA work area (Caltrans 2018).

As previously explained in the Environmental Setting, the Project work areas are not visible from State Route 160, a State Scenic Highway. Mobilization of construction vehicles and heavy equipment would use State Route 160 and Sherman Island East Levee Road for access to the Sherman Island work area, and work vessels would travel from the Sacramento River and under the State Route 160 bridge up Threemile Slough to the in-water work area. The Brannan Island Scenic View (0.8 mile south of the Project work areas) pertains to a westerly view (away from the Project work areas) of the Sacramento River from State Route 160. However, existing uses of the Sacramento River during the Project construction period (August 1 through October 31) include frequent transit of barges and work vessels and heavy presence of recreational boaters. The temporary and short duration (while traveling) presence of Project work vessels and presence of construction vehicles and heavy equipment within the

viewsheds of State Route 160 would not cause a substantial change from the existing visual setting from State Route 160. Therefore, the Project would have a less than significant impact on scenic resources.

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

Less than Significant with Mitigation

As mentioned in Section 3.1.1, *Environmental Setting*, the Project work areas are in an unurbanized area (U.S. Census Bureau 2023). Public views of the Project work areas are limited to motorists on Sherman Island East Levee Road (including some residences with obstructed views on the landward side of the levee), boaters on Threemile Slough, and recreationists at Brannan Island SRA.

Project activities would temporarily introduce terrestrial and marine construction equipment to these public viewsheds. However, Project construction would be short-term (3 months) and would not include new permanent, aboveground structures that would be visible after the Project is complete. Terrestrial work area soils would be recontoured and restored after construction; further, the submarine remediation of the L-131Y and L-131Z pipelines and removal of the L-131 East and L-131 West pipelines would occur along the riverbed of Threemile Slough and would not be visible or interfere with public views.

Vegetation removal is necessary for the Project to prepare for siting of excavators and other equipment and is discussed in detail in Section 3.4, *Biological Resources*. Although ground conditions for the waterside work area slopes on Brannan Island and Sherman Island would be restored to pre-project conditions, up to five California coastal live oak trees would be removed from the waterside slope of the Sherman Island levee and replanting of trees and woody shrubs on the levee slope is not expected as an authorized activity, in accordance with regulations of the U.S. Army Corps of Engineers, Central Valley Flood Protection Board, and Reclamation District 341 for levee maintenance purposes. Consequently, post construction views from Brannan Island SRA and Threemile Slough of the Sherman Island levee work area would be changed for an extended period of time due to the absence of mature trees and woody shrubs.

However, with implementation of **MM BIO-14: Site Restoration and Riparian Mitigation Plan**, all trees and woody shrubs proposed for removal within Project work areas would be replanted in the Brannan Island SRA work area at a 3:1 mitigation ratio. In addition, reseeding of grass species and reuse of existing topsoil to restore existing root systems and seed banks would occur within the Sherman Island levee work area. This site restoration work would enable native tree species, such as California coastal live oak, to naturally re-establish on the levee slope. While post-Project views of the waterside levee slope on Sherman Island would differ from pre-Project views, Project-related changes in visual quality would be minor and temporary and would be reduced as vegetation naturally grows and matures. Therefore, with implementation of **MM BIO-14,** the impact would be less than significant.

d) Would the Project 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

Project construction activities would occur in a rural area where ambient nighttime lighting and illumination is very low. There are three residences nearby on Sherman Island, as well as campsites on Brannan Island. Although Project work activities would be conducted predominantly during daylight hours (from approximately 7 a.m. to 5:30 p.m. each workday) and nighttime work is not expected to occur, limited nighttime operations (until approximately 8 p.m., in accordance with local noise requirements described in Section 3.14, *Noise*, Section 3.14.2, *Regulatory Setting*) may be required to complete the Project within the defined work window constraints. Additionally, for the duration of in-water work activities, all barges would utilize navigation and safety lighting at night to avoid nighttime collisions while the barges anchored within Threemile Slough and not in use, as consistent with other watercraft that may be present in the Project vicinity for nighttime navigation or overnight anchoring. Lighting requirements for potential nighttime work operations may have potential to affect nighttime views from public viewpoints and nearby residences, motorists on Sherman Island East Levee Road, and recreationists such as campers at Brannan Island SRA.

The intent of nighttime lighting for in-water and terrestrial work operations is to be seen, provide adequate lighting to safely conduct work operations, and provide navigation and safety lighting for mariners; however, lighting intensity would be as low as necessary to achieve these goals. In addition, nighttime lighting would

be temporary and of short duration, and would only be used if necessary due to schedule constraints. To reduce potential Project impacts caused by nighttime lighting, PG&E would implement **MM AES-1: Night-Lighting Minimization** to minimize substantial light and glare (including spillover light) and limit lighting intensity. During potential nighttime construction activities, all lighting would also be directed downward and onto specific work areas to ensure that potential impacts on nighttime views would be minimized to the extent possible.

MM AES-1: Night-Lighting Minimization.

If work activities extend into evening hours and night-lighting is required, Project lighting shall be as low in intensity as allowed by safety requirements and, to the extent possible, located, designed, and equipped to provide shielded and downward projected illumination onto work areas to minimize intensity and visibility of lighting from nearby areas.

3.1.4 Mitigation Summary

Implementation of the following mitigation measures would reduce Project-related impacts on aesthetic resources to less than significant.

MM AES-1: Night-Lighting Minimization

MM BIO-14: Site Restoration and Riparian Mitigation Plan

3.2 AGRICULTURE AND FORESTRY RESOURCES

AGRICULTURE AND FORESTRY RESOURCES - 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 work areas include the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County. The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County. Because these activities would use commercial vendors and ports and travel via designated truck haul routes and established shipping routes, there is no relevant agricultural or forestry setting to discuss for those areas. Therefore, the following discussion focuses on the agricultural and forestry setting of the Project work areas in Sacramento County (Figure 2-1).

The Sacramento County Zoning Code zones the western portion of the Sherman Island work area as Agricultural–80 Acres (AG-80), the eastern portion as Commercial Recreation (C-O), and the Brannan Island SRA work area as Recreation (O). The Project also includes a work area in Threemile Slough that is zoned as Delta Waterway (DW and DW-R) (Sacramento County 2026a). In 2022, Sacramento County was ranked 21st in California for total value of agricultural production, with grapes (wine), pears, milk, and corn as the lead commodities valued at $602,751,000 (CDFA 2024). In 2023, Sacramento County reported grapes (wine) as its largest commodity, at a value of $204,465,000 (Sacramento County 2023).

According to the California Department of Conservation's Important Farmland Finder mapping program (see additional information on this program under Section 3.2.2 Regulatory Setting), Prime Farmland does not occur within the Project work areas (DOC 2024). A portion of the Sherman Island work area boundary along the levee toe would occur adjacent to unimproved private land designated as Prime Farmland and Farmland of Local Importance (**Figure 3.2-1**). The closest Williamson Act contract area is located within the interior of Sherman Island to the south and Twitchell Island to the west (Sacramento County 2024a). No forest resources are located within the vicinity of the Project area.

Figure 3.2-1
Important Farmland Designations in the Project Area

3.2.2 Regulatory Setting

No federal laws, regulations, or policies pertaining to agricultural resources are relevant to the Project. State laws and regulations pertaining to agricultural resources that are relevant to the Project, including the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) and the Williamson Act, are briefly discussed here and identified in Appendix A. Local regulations including applicable county general plan policies are identified in Appendix B.

3.2.2.1 California Farmland Mapping and Monitoring Program

The California Department of Conservation started the FMMP as a system of mapping and monitoring important farmland in California based on soil and climatic characteristics. CEQA lead agencies are required to evaluate agricultural resources in environmental assessments based at least in part on the FMMP. The State's system was designed to document the amount of agricultural land in California that was being converted to non-agricultural land or transferred in or out of Williamson Act contracts.

The FMMP currently maps farmland within the state of California to produce Important Farmland Maps that represent a combination of soil quality information (physical and chemical features) and land use information (type and degree of vegetative cover and/or type and intensity of land disturbance or development). The maps are updated every 2 years using aerial infrared photographs and field reconnaissance to map existing land uses (e.g., urban, rural residential, natural vegetation, water, agriculture) in combination with Natural Resources Conservation Service digital soil survey data.

The California Public Resources Code (Sections 21060.1 and 21095) defines "agricultural land" under CEQA as those lands designated by the FMMP as either Prime Farmland, Farmland of Statewide Importance, and/or Unique Farmland. Appendix G of the CEQA Guidelines refers to these same three categories as "Farmland."

3.2.2.2 California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, or Williamson Act (Government Code §51200 et seq.), is the State's primary program aimed at conserving private land for agricultural and open space uses. The Williamson Act and

Farmland Security Zone Act programs are administered locally, and Sacramento County can enforce the contracts on lands within its unincorporated areas.

3.2.3 Impact Analysis

The Sherman Island work area would include lands zoned for agricultural use and would be adjacent to lands designated as Farmland of Local Importance. However, Project activities would be temporary, and they would not result in the conversion of agricultural lands, conflict with a Williamson Act contract, or conflict with zoning for forest land, timber land, or timber land zoned Timber Production.

As previously explained, the analysis below focuses on agriculture and forestry resources at the Project work areas located within Sacramento County (Figure 3.2-1).

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CEQA-designated 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 Impact

The Project work area contains no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. A portion of the Sherman Island construction staging area occurs adjacent to lands designated as Prime Farmland and Farmland of Local Importance (Figure 3.2-1). During construction, work activities would temporarily access the northern portion of Sherman Island as depicted on Figure 2-1 for approximately 3 months. However, Project activities would be contained outside areas of CEQA-designated Farmland and would not impact underlying soil quality, alter land use, or otherwise cause conversion of these lands as further explained in Section 3.4.3. under Impact a) of the Biological Resources Section. Further, use of the Sherman Island work area would be coordinated with the property owners before Project implementation to lessen potential impacts. Therefore, the impact would be less than significant.

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less than Significant Impact

No portions of the Project areas lie within or directly adjacent to land under a Williamson Act contract. In addition, the Project does not represent a change in land use and would not conflict with existing zoning in Sacramento County.

The Sherman Island work area does contain land zoned for agriculture by Sacramento County; however, Project activities within the Sherman Island work area would be conducted under a temporary construction easement on private lands, along the federal levee, and along Sherman Island East Levee Road, managed by Sacramento County. Project activities would be short-term and would not result in any permanent aboveground impacts that would conflict with any agricultural practices or result in the cancellation of a Williamson Act contract. Therefore, impacts would be less than significant.

c) Would the Project 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) Would the Project 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, therefore, would not be rezoned, adversely affected, or converted to non-forest use. Therefore, no impact on forestry resources would occur.

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

Less than Significant Impact

The Project would not introduce any changes to the existing environment that could directly or indirectly result in the conversion of farmland to non-agricultural uses or forest land to non-forest uses. The Project consists of short-term construction for pipeline remediation and removal activities in an area zoned for agricultural use and does not include any components that would modify local

hydrology, disrupt irrigation conveyance, extend utilities, or create development pressure in agricultural areas.

As discussed in Section 3.11, *Hydrology and Water Quality*, the Project would not alter drainage patterns or water availability, nor would it affect agricultural lands downstream. As discussed in Section 3.12, *Land Use and Planning*, the Project would not conflict with surrounding land use designations or zoning. As described in Section 3.15, *Population and Housing*, and Section 3.19, *Utilities and Service Systems*, the Project would not expand utility capacity or create conditions that could support new development in agricultural or forested areas. Because the Project would not involve indirect changes that could convert farmland or forest land to other uses, impacts would be less than significant.

3.2.4 Mitigation Summary

The Project would have no significant impact on agricultural or forestry resources; therefore, no mitigation is required.

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

The federal government has established ambient air quality standards to protect public health (primary standards) and welfare (secondary standards). California has established separate, more stringent standards. Federal and State standards have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), suspended particulate matter (PM), and lead. Particulate matter with a diameter of 10 microns or less (PM_{10}) includes inhalable particles such as dust; particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$) includes fine particles such as vehicle exhaust. In addition, California has standards for hydrogen sulfide (H_2S), sulfates, vinyl chloride, lead, and visibility-reducing particles.

The Project work areas are located in Sacramento County, which is within the Sacramento Valley Air Basin, where air pollutants are managed by the Sacramento Metropolitan Air Quality Management District (SMAQMD). Sacramento County is within the State ozone nonattainment area. Additionally, the County has elevated levels of fine and inhalable dust particles ($PM_{2.5}$ and PM_{10}) and is in nonattainment for both federal and State PM standards. The County is in attainment for all other federal and State standards.

In addition, the Project involves marine equipment mobilization and materials hauling and disposal in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait, Suisun Bay, and up the Sacramento River. Solano County is under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD), and is in similar attainment status as Sacramento County for all federal and State standards.

3.3.1.1 Local Climate and Meteorology

The Project is located within the Sacramento Valley Air Basin. The climate, meteorology, air quality, and air quality trends of the area have been described in detail in several planning and environmental documents and are best summarized in the Sacramento County 2024 Climate Action Plan (CAP [2024b]). The Project region can be described as having a warm summer Mediterranean climate characterized by warm, dry summers and cooler, mildly damp winters. In the summer, marine air or Delta breeze generally flows into the Sacramento Valley Air Basin from the San Joaquin- Sacramento Delta. Air pollution can thus be transported into the Basin from the Bay Area and the San Joaquin Valley. When the wind blows from the north, air from the Sacramento metro area can be transported into the Project region.

3.3.1.2 Sensitive Receptors and Surrounding Area Land Use

Some land uses are considered more sensitive to air pollution than others due to population groups. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present.

There are no sensitive receptors located within a 1,000-foot radius of the Project work areas. The nearest residence is located approximately 1,255 feet southwest of the Sherman Island work area.

3.3.1.3 Criteria Pollutants

Criteria air pollutants are those contaminants for which ambient air quality standards have been established for the protection of public health and welfare. Criteria pollutants include O_3, CO, oxides of nitrogen (NOX), reactive organic gases (ROG), SO_2, PM_{10}, and $PM_{2.5}$.

<u>Ozone</u>

O_3 is formed in the atmosphere through complex photochemical reactions involving NOX, ROG, and sunlight that occur over several hours. Since O_3 is not emitted directly into the atmosphere but is formed as a result of photochemical reactions, it is classified as a secondary or regional pollutant. These O_3-forming reactions take time, and therefore peak ozone levels are often found downwind of major source areas. O_3 is considered a respiratory irritant, and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from ozone exposure.

<u>Carbon Monoxide (CO)</u>

CO is primarily formed through the incomplete combustion of organic fuels. Higher CO values are generally measured during winter when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues, which can cause health effects to those with cardiovascular disease and can affect mental alertness and vision.

<u>Nitric Oxide (NO) and Nitrogen Dioxide (NO_2)</u>

NO is a colorless gas formed during combustion processes which rapidly oxidizes to form NO_2, a brownish gas. The highest nitrogen dioxide values are generally measured in urbanized areas with heavy traffic. 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)

SO_2 is a colorless, reactive gas that is produced from burning sulfur-containing fuels, such as coal and oil, as well as by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Particulate Matter

Ambient air quality standards have been set for PM_{10} and $PM_{2.5}$. Both consist of different types of particles suspended in the air, such as metal, soot, smoke, dust, and fine mineral particles. The particles' toxicity and chemical activity can vary, depending on the source. The primary source of PM_{10} emissions appears to be from the soil via road use, construction, agriculture, and natural windblown dust. Other sources include sea salt, combustion processes (such as those in gasoline or diesel vehicles), and wood burning. Primary sources of $PM_{2.5}$ emissions come from construction sites, wood stoves, fireplaces, and diesel truck exhaust. Particulate matter is a health concern because when inhaled it can cause permanent lung damage. While both sizes of particulates can be dangerous when inhaled, $PM_{2.5}$ tends to be more damaging because it remains in the lungs.

3.3.2 Regulatory Setting

Federal and State laws and regulations pertaining to air quality relevant to the Project are identified in Appendix A. Local regulations, including SMAQMD and YSAQMD rules and regulations as well as applicable County General Plan policies are identified in Appendix B.

Air pollution control within the Project area is administered on three governmental levels. The U.S. Environmental Protection Agency (USEPA) has jurisdiction under the Clean Air Act, the California Air Resources Board (CARB) has jurisdiction under the California Health and Safety Code and the California Clean Air Act, and both the SMAQMD and YSAQMD share responsibility with CARB for ensuring that all State and federal ambient air quality standards are attained. The USEPA and CARB classify an area as attainment, unclassified, or non-attainment, depending on whether the monitored ambient air quality data show compliance, insufficient data to determine compliance, or non-compliance with national or California ambient air quality standards (NAAQS or CAAQS), respectively.

3.3.2.1 Air Quality Standards

The USEPA established NAAQS to protect public health (primary standards) and welfare (secondary standards). The CARB established the more stringent CAAQS, which also requires air basins to be designated as in "attainment" or "non-attainment" based on meeting the CAAQS. NAAQS and CAAQS have been established for O_3, CO, NO_2, SO_2, suspended particulate matter (e.g., dust), and lead. In addition, California has standards for H_2S, sulfates, vinyl chloride, lead, and visibility-reducing particles. **Table 3.3-1** lists applicable ambient air quality standards.

Table 3.3-1. Ambient Air Quality Standards (State and Federal)

Pollutant	Averaging Time	California Standard	Federal Standard
Ozone (O3)	1-Hour	0.09 ppm	--
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1-Hour	20 ppm	35 ppm
	8-Hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm
	1-Hour	0.18 ppm	100 ppb
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.030 ppm
	24-Hour	0.04 ppm	0.14 ppm
	3-Hour	--	0.5 ppm (secondary)
	1-Hour	0.25 ppm	75 ppb
Respirable Particulate Matter (PM_{10})	Annual Geometric Mean	20 µg/m3	--
	24-Hour	50 µg/m3	150 µg/m3
Fine Particulate Matter ($PM_{2.5}$)	Annual Geometric Mean	12 µg/m3	9.0 µg/m3
	24-Hour	--	35 µg/m3
Hydrogen Sulfide (H_2S)	1-Hour	0.03 ppm	--
Vinyl Chloride	24 Hour	0.01 ppm	--
Sulfates	24 Hour	25 µg/m3	--

Pollutant	Averaging Time	California Standard	Federal Standard
Lead	30 Day Average	1.5 µg/m3	--
	Calendar Quarter	--	1.5 µg/m3
	Rolling 3-Month Average	--	0.15 µg/m3
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.	--

Note:
ppm=Parts per million
ppb= parts per billion
µg/m3= micrograms per cubic meter
Source: CARB, 2024

3.3.2.2 Air Quality Regulation and Planning

Air quality within the Project work areas is managed by SMAQMD, which has air quality plans and CEQA guidance documents that in general are focused on demographic forecasts and planned land use development, planned transportation system improvements or control measures, and development and planning of long-term stationary sources of air pollutant emissions. In October 2023, the SMAQMD, in cooperation with YSAQMD and other air districts, finalized the *Sacramento Regional 2015 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* to demonstrate how the 2015 8-hour ozone NAAQS of 70 ppb will be attained by 2032. This Plan indicates that since 1990, the Sacramento Federal Ozone Nonattainment Area (SNFA) shows a declining trend in exceedances of the 2015 8-hour ozone NAAQS and ozone design value concentrations. In addition, the ROG and NOX emissions inventory forecasts through 2032 show significant declines in mobile source emissions despite increasing population, vehicle activity, and economic development in the Sacramento region. Photochemical modeling results indicate that the combined reductions from existing local strategies as well as regional, State, and federal control measures are sufficient to demonstrate attainment by 2032 (SMAQMD 2023).

3.3.2.3 Significance Thresholds

The SMAQMD's Guide to Air Quality Assessment in Sacramento County (SMAQMD 2020) includes adopted significance thresholds for short-term Project (construction) and long-term (operational) air pollutant emissions, shown in **Table 3.3-2**. The $PM_{2.5}$ and PM_{10} thresholds in Table 3.3-2 only apply to projects that use all feasible Basic Construction Emissions Control Practices (BCECPs) included in SMAQMD's CEQA Guide (July 2019). Projects that fail to apply these measures must meet a $PM_{2.5}$ and PM_{10} threshold of 0 pounds per day.

While SMAQMD identifies both construction and operational thresholds, the Project does not have operational impacts because remediated pipeline operation and maintenance activities would not change from existing conditions. Therefore, operational thresholds of significance do not apply.

Table 3.3-2. SMAQMD Air Quality Thresholds of Significance

Pollutant/Precursor	Construction Emissions (Pounds/day)	Construction Emissions (Tons/year)
NOx	85	--
ROG	--	--
PM_{10}	80	14.6
$PM_{2.5}$	82	15

Mobilization of marine equipment and haul trucks would occur in Solano County, which is under the jurisdiction of the YSAQMD. The YSAQMD's CEQA thresholds of significance in the district's Handbook for Assessing and Mitigating Air Quality Impacts (YSAQMD 2007) for all Project-related air pollutant emissions are provided in **Table 3.3-3**.

Table 3.3-3. YSAQMD Air Quality Thresholds of Significance

Pollutant/Precursor	Construction Emissions
NOx	10 tons per year
ROG	10 tons per year
PM_{10}	80 pounds per day
CO	Substantially contribute to CO concentrations that would exceed the CAAQS

Although CO is emitted in vehicle exhaust, regional concentrations of CO have not exceeded federal or State standards for more than two decades. Occurrences of elevated localized CO concentrations, known as "hot spots," are often associated with heavy traffic congestion, which occurs most frequently at signalized intersections of high-volume roadways. YSAQMD does not provide screening volumes for potential CO hot spots and its guidance has not been updated since 2007. However, a nearby air district, the Bay Area Air District[2], recommends in its recent CEQA Air Quality Guidelines that a peak-hour vehicle screening level of 44,000 vehicles per hour be used as a level contributing to a potential CO hot spot. Intersections with vehicle volumes lower than 44,000 per hour are not expected to lead to any CO hot spots (BAAQMD 2023).

Project construction emission calculations (see Appendix C) considered all equipment that would be in use for the duration of construction, including emissions from marine equipment and haul trucks traveling to and from the Project work areas. See Sections 2.1.3, 2.2.2, 2.2.3, 2.4.1.2, 2.4.1.3, and 2.5 for descriptions of vehicle and vessel trips occurring in Solano County. This analysis compares Project emissions to the SMAQMD and YSAQMD thresholds of significance.

3.3.3 Impact Analysis

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

Less than Significant Impact

The Project is a natural gas pipeline remediation and removal project and would not extend service into new areas, provide increased capacity into underserved areas, or result in any increased long-term pipeline operations and maintenance (O&M). A review of the air quality plans for the SNFA, which includes both the YSAQMD and the SMAQMD, indicates that they focus primarily on projects that would increase emissions within the air districts' jurisdiction on a long-term basis. While the Project construction activities would cause daily emissions, they would not induce population growth nor affect population-based emissions inventory projections in SMAQMD's CAP or otherwise result in long-term air pollutant

[2] The Bay Area Air Quality Management District changed its name to "Bay Area Air District" in January 2025.

emissions. Therefore, the Project would not conflict with or obstruct implementation of the CAP, and the impact would be less than significant.

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 with Mitigation

Air pollutant emissions would be generated from heavy construction equipment exhaust and from soil disturbance during construction activities. These emissions include NOx and ROG because both are considered ozone precursors, potentially resulting in atmospheric ozone formation for which the Sacramento Valley Air Basin is in non-attainment. Conventional construction equipment such as dozers, excavators, drill rigs, generators, loaders, and trucks, as well as marine vessels and on-road motor vehicles for transporting materials and personnel, would all release exhaust. Fugitive dust emissions would also be generated from soil disturbing activities.

Project criteria pollutant emissions for the Project's construction equipment, marine engines, and on-road vehicles were estimated by Padre Associates, using the most recent emission factors and load factors from the California Emissions Estimator Model® (CalEEMod) User's Guide, CARB's 2021 Emission Factors (EMFAC) model, and the USEPA Ports Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions. The Project's maximum daily criteria pollutant emissions estimates are included in **Table 3.3-4**, which provides annual emission totals and compares them to SMAQMD and YSAQMD CEQA thresholds. ROG emissions do not have any applicable thresholds of significance provided by SMAQMD, but YSAQMD does have a threshold for ROG. Appendix C provides a copy of the Criteria Pollutants Emissions calculations supporting this analysis.

Emissions resulting from Project equipment and vessels would temporarily increase local pollutant concentrations. The primary criteria pollutants regulated by the SMAQMD and YSAQMD are ozone precursors NOX and ROG as well as CO, $PM_{2.5}$ and PM_{10}, as discussed in the Regulatory Setting, above.

Table 3.3-4. Total Estimated Construction Air Pollutant Emissions for the Project

Construction Phase	NOx	NOx	ROG	PM_{10}	PM_{10}	$PM_{2.5}$	$PM_{2.5}$
Unit	ppd	tpy	tpy	ppd	tpy	ppd	tpy
Pre-Construction Debris Survey	10.2	< 0.01	< 0.01	0.27	< 0.01	0.18	< 0.01
Terrestrial Remediation/Decommissioning	~~6.74~~ 7.60	~~0.05~~ 0.06	< 0.01	~~9.77~~ 10.22	0.06	~~1.60~~ 1.73	0.01
Marine Remediation/Decommissioning	32.9	0.48	0.02	0.80	0.01	0.80	0.01
Post-Construction Debris Survey	10.2	< 0.01	< 0.01	0.27	< 0.01	0.27	< 0.01
Project Total	~~60.04~~ 60.90	0.55	0.03	~~11.11~~ 11.56	0.07	~~2.85~~ 2.98	0.03
SMAQMD Threshold of Significance	85	N/A	N/A	80	14.6	80	15
YSAQMD Threshold of Significance	N/A	10	10	80	N/A	N/A	N/A
Exceeds Threshold?	No	No	No	No	No	No	No

Notes:
ppd= pounds per day
tpy= tons per year
Emissions shown above account for all construction activities, including marine equipment mobilization and materials hauling and disposal.
Source: Padre Associates, ~~2025~~ 2026

As discussed previously, CO hot spots would not occur because vehicle trips associated with the proposed Project would not exceed 44,000 trips at any peak hour. Based on project-specific information in Table 2-4, the maximum trip number would be 400 worker trips over the duration of the construction period, which would not trigger a CO hot spot in the area. In addition, Table 3.3-4 shows that the Project would be under the applicable thresholds for NOx, $PM_{2.5}$, and PM_{10}. However, to further reduce Project emissions and ensure the Project meets SMAQMD $PM_{2.5}$ and PM_{10} threshold criteria by utilizing all feasible BCECPs and

BMPs, the Project shall implement **MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices**.

> **MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices**
>
> The following Basic Construction Emissions Control Practices (BCECPs) shall be implemented during Project construction to allow the use of SMAQMD's non-zero particulate matter significance thresholds:
>
> - Control fugitive dust as required by District Rule 403 and enforced by District staff.
> - Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
> - Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
> - Use wet power vacuum street sweepers to remove any visible track out mud or dirt onto adjacent public roads at least once a day.
> - Limit vehicle speeds on unpaved roads to 15 miles per hour.
> - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. Provide clear signage that posts this requirement for workers at the entrances to the project site.
> - Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation.

With the implementation of **MM AQ-1**, all estimated Project criteria pollutant emissions would be below the SMAQMD and YSAQMD significance thresholds, and therefore the impact would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact

There are no sensitive receptors located within a 1,000-foot radius of the Project work areas. Project-related air pollutant emissions would be temporary, and dust emissions would be further reduced by implementation of **MM AQ-1**, which

includes dust control measures. Risk levels for sensitive receptors from toxic air contaminants drop substantially as distance from the source increases. With the short duration of construction, low levels of emissions as presented in Table 3.3-3, and the distance of nearby sensitive receptors from the Project work areas, the Project would not expose sensitive receptors to substantial pollutant concentrations, and therefore the impact would be 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. Project-related odors would dissipate quickly in open air and would be limited by adherence to SMAQMD and YSAQMD regulations. Persons potentially exposed to these odors would be limited to a residence (located over 1,000 feet away from Project work areas) and local farm workers located near Project activities. Due to the temporary nature of Project activities and lack of nearby sensitive populations, the impact would be less than significant.

3.3.4 Mitigation Summary

Implementation of the following mitigation measure(s) would reduce the potential for Project-related impacts to Air Quality:

MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices

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, or that is a species of interest to the State Lands Commission or the California Coastal Commission; or cause a marine wildlife population to drop below self-sustaining levels?	☐	☒	☐	☐
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?	☐	☒	☐	☐

BIOLOGICAL RESOURCES – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

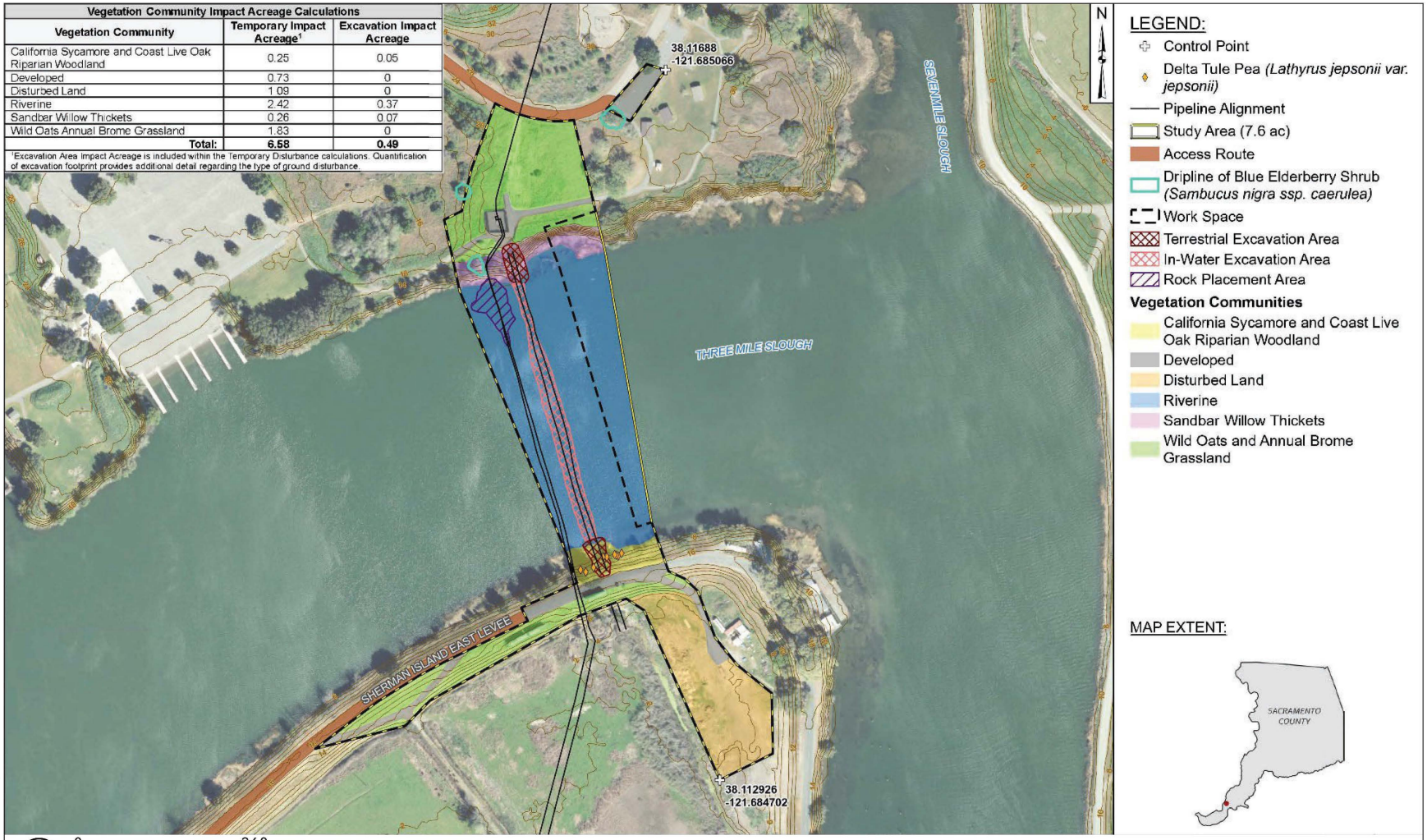
The following discussion contains information from the Biological Technical Report prepared for the Project by Padre Associates (2025), which is included as Appendix D, information on special status wildlife species with the potential to occur in the Project area, which is included in Appendix E, as well as the Preliminary Federal Aquatic Resources Delineation Report prepared for the Project, which is included as Appendix F.

3.4.1 Environmental Setting

The Project work areas occur within the Brannan Island SRA, Sherman Island, and Threemile Slough, located in southern Sacramento County, in the Delta region of California's Central Valley. This section describes the existing terrestrial and aquatic biological resources within the vicinity of the primary biological study area for the Project (**Figure 3.4-1**).

Vegetation Community Impact Acreage Calculations		
Vegetation Community	**Temporary Impact Acreage[1]**	**Excavation Impact Acreage**
California Sycamore and Coast Live Oak Riparian Woodland	0.25	0.05
Developed	0.73	0
Disturbed Land	1.09	0
Riverine	2.42	0.37
Sandbar Willow Thickets	0.26	0.07
Wild Oats Annual Brome Grassland	1.83	0
Total:	**6.58**	**0.49**

[1]Excavation Area Impact Acreage is included within the Temporary Disturbance calculations. Quantification of excavation footprint provides additional detail regarding the type of ground disturbance.



SOURCE: Padres Associates, Inc., 2024

D202200650.06 - PG&E Pipeline Removal and Remediation MND – Brannan Island\05 Graphics-GIS-Modeling-USE AZURE\MND

Figure 3.4-1
Biological Resources Impact Map

The Project also involves marine equipment mobilization and materials hauling and disposal in Solano County, which would utilize commercial vendors and ports, designated truck haul routes, and established shipping routes (through the Carquinez Strait, Suisun Bay, and up the Sacramento River). These activities are evaluated qualitatively.

The potential for the Project area to affect special status plant or wildlife species was assessed based on the information in Appendix D, Biological Technical Report; Appendix F, Preliminary Federal Aquatic Resources Delineation Report; a site visit of the Project work areas on September 22, 2025 with CSLC and PG&E Project teams; a desktop review of historic and current aerial imagery; biological resources databases including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2026a), California Native Plant Society Rare Plant Inventory (CNPS 2026), National Marine Fisheries Service (NMFS) Critical Habitat Mapper (NMFS 2026), and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (USFWS 2026); as well as publicly available scientific literature (Padre Associates 2024, 2025). Habitat quality and species distribution were considered in evaluating the likelihood of special status species occurrence in the Project area (see Appendix E).

3.4.1.1 Terrestrial Work Areas

The Project's terrestrial work areas are located on Brannan Island and Sherman Island, approximately 2.2 miles southeast of the city of Rio Vista. The Sherman Island work area includes a federal levee, the Sacramento County–maintained Sherman Island East Levee Road, and private land. The Brannan Island SRA work area consists of public land, including public trails and other recreational facilities (e.g., boat launch ramp, fishing pier, campgrounds, paved parking and other public support facilities).

Vegetation communities were determined based on species composition and descriptions from *A Manual of California Vegetation* (Sawyer et al. 2009) but were modified as needed to accurately describe the existing habitat observed within the Project area. Plant species lists are provided for the Project area in *Biological Technical Report*, Appendix D (Padre Associates 2025). Below is a brief description of the six vegetation communities mapped within the Project area by Padre Associates (Appendix D).

Six vegetation communities, which are identified in Figure 3.4-1 and further described below and in Sections 3.4.1.2 through 3.4.1.4, were identified on-site during field surveys conducted in 2024. These vegetation communities include:

- California sycamore and coast live oak riparian woodland
- Developed
- Disturbed land
- Riverine
- Sandbar willow thickets
- Wild oats and annual brome grasslands

Wild oats and annual brome grasslands were present on Sherman Island along the landward levee slope adjacent to Sherman Island East Levee Road and throughout the majority of the upland habitat in the Brannan Island SRA work area. A non-natural vegetation community with a significant amount of human disturbance was also present within the southern portion of the Project area on Sherman Island. This community was classified as disturbed land (see Figure 3.4-1). Approximately 25 feet southwest of the disturbed land area boundary in the Sherman Island work area is an existing ditch lined with riparian vegetation (see **Figure 3.4-2** below), which is outside of the Project area. Riparian vegetation is also present near a portion of the work space boundary along the toe of the landside levee slope in the adjacent private land and outside of the Project area boundary (see Photograph F of Figure 6 in Appendix D). Along the south bank of Threemile Slough, California sycamore and coast live oak riparian woodland were present. On the bank of the Brannan Island SRA work area, a sandbar willow thicket was present along the steep banks. Lastly, there were developed areas present including roads and a parking lot within the work areas on both Brannan and Sherman islands.

3.4.1.2 Marine/Riverine Work Areas

<u>Riverine Habitat (Threemile Slough)</u>

The Project's Threemile Slough work area consists of a perennial channel that is about 560 feet wide. Threemile Slough flows into the Sacramento River approximately 1.25 miles downstream of the Project area and is also connected to the San Joaquin River to the east. Threemile Slough is highly channelized and leveed, bordered by agricultural lands and is classified as a riverine community. Aquatic habitat is characterized by slow-water glides and pools and has reduced water clarity and habitat diversity.

Figure 3.4-2. Photo of Riparian Corridor Adjacent to Agricultural Ditch

The Sacramento River serves as a migration corridor and/or provides other types of habitat (e.g., rearing, spawning) for Central Valley fall-/late fall-run Chinook salmon evolutionarily significant unit (ESU) (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon ESU (*O. tshawytscha*), Sacramento River winter-run Chinook salmon ESU (*O. tshawytscha*), Central Valley steelhead distinct population segment (DPS) (*O. mykiss*), white sturgeon (*Acipenser transmontanus*), North American green sturgeon southern DPS (*Acipenser medirostris*), longfin smelt, delta smelt, and Sacramento splittail (*Pogonichthys macrolepidotus*). These species could potentially occur in Threemile Slough as well, either as strays during adult upstream migration or rearing juveniles during outmigration to the San Francisco Bay and ocean.

However, aquatic habitat in the Project work area consists of a heavily altered (channelized, armored banks, lack of fish cover), relatively deep, high-velocity channel, with silt and sand substrate. This type of habitat typically carries a high

risk of predation because of the presence of non-native predatory fish, such as striped bass and largemouth bass. During a field survey in August 2024, small pockets of emergent hydrophytic vegetation were present growing on both banks of Threemile Slough, but these were not large enough to be considered separate vegetation communities. However, on the banks of the Brannan Islands and Sherman Island work areas, there were dense to sparse stands of tule (*Schoenoplectus acutus* var. *occidentalis)* along with submerged aquatic vegetation like Brazilian waterweed, Pondweed, and Parrot's feather. Water hyacinth (*Eichhornia crassipes*) was also observed floating on the water's surface along with small patches of frogbit. Many of the plant species observed within this community are classified as highly invasive species, including Brazilian waterweed, parrot's feather, and water hyacinth (Padre Associates, 2024).

During the September 22, 2025, site visit, similar areas of hydrophytic vegetation were present, including woody debris within the nearshore and along the waterline of both banks within the study area, including localized areas of milfoil species near the Brannan Island bank.

3.4.1.3 Sensitive Natural Communities

<u>California Sycamore and Coast Live Oak Riparian Woodland</u>

California sycamore and coast live oak riparian woodlands are typically found on the banks of intermittent streams, springs, seeps, and gullies and on the adjacent floodplains. This community can be found throughout California's Central Valley and the South Coast, Transverse, and Peninsular Mountain Ranges at elevations ranging from sea level to approximately 7,800 feet. This riparian woodland community is characterized by the dominance of western sycamore (*Plantanus racemosa*) or coast live oak (*Quercus agrifolia*) in the tree canopy. Associate species in the tree canopy can include white alder (*Alnus rhombifolia*), California black walnut (*Juglans hindsii*), Fremont cottonwood (*Populus fremontii* ssp. *Fremontii*), valley oak (*Q. lobata*), California bay (*Umbellularia californica*), and a variety of willow species including narrow-leaved willow (*Salix exigua*), Gooding's black willow (*Salix gooddingii*), and red willow (*Salix laevigata*). The understory of this community may have an open or intermittent shrub layer and a sparse or grassy herbaceous layer. This community is well adapted to intermittent flooding, and western sycamore often relies on flooding events to scour seeds for higher success in germination rates.

Within the Project area, California sycamore and coast live oak riparian woodland was present along the bank of the Sherman Island work area. The dominant species observed in the tree canopy was coast live oak. Narrow-leaved willow and California button willow (*Cephalanthus occidentalis*) were present in the shrub layer. Herbaceous species observed in this community were varied but included California rose (*Rosa californica*), Himalayan blackberry (*Rubus armeniacus*), delta tule pea (*Lathyrus jepsonii* var. *jepsonii),* Bermuda grass (*Cynodon dactylon*), lamp rush (*Juncus effusus*), ragweed (*Ambrosia sp.*), and curly doc (*Rumex crispus*). California sycamore and coast live oak riparian woodland is a sensitive natural community (S3) on CDFW's *California Natural Communities List* (CDFW 2023).

3.4.1.4 Potentially Jurisdictional Waters and Wetlands

Padre Associates conducted an aquatic resource delineation survey of the Project area and mapped the geographic extent of waters of the United States, including wetlands. The survey documented approximately 3.51 acres of federally jurisdictional waters of the United States within the Project area, and no federal wetlands (Padre Associates, 2024). The wetlands along the shoreline of Brannan Island and Sherman Island adjacent to Threemile Slough are considered wetlands of the State as further explained below.

<u>Tidal Riverine Waters</u>

Riverine waters are defined as aquatic resource features that are confined within a channel and lack dominance of trees, shrubs, persistent emergent herbs, mosses, or lichens. Wetlands that occur on a river's floodplain are classified separately from the riverine system because of the presence of vegetation cover (Cowardin et al. 1979). Within the riverine system classification there are four subsystems. These are tidal, lower perennial, upper perennial, and intermittent. Within the Project area, Threemile Slough is a tidal channel. This subsystem is characterized by its fluctuating water velocity caused by the ebb and flow of the tide. Tidal riverine waters typically have a muddy streambed with patches of sand. The existence of floodplains is common in tidal riverine systems.

In tidal systems, the limits of U.S. Army Corps of Engineers (USACE) jurisdiction on waters of the United States are defined by the high-tide line (HTL) (limits of Clean Water Act [CWA] Section 404 jurisdiction) and mean high-water line (limits of Rivers and Harbors Act Section 10 jurisdiction). See the Preliminary Federal Aquatic Resources Delineation Map (Appendix F, Figure 3) for the location of

the HTL on Threemile Slough within the Project area, and the limits of federal jurisdiction. A total of 3.51 acres of tidal riverine waters occur within the Project area.

Palustrine Forested 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 is below 0.5 parts per thousand (ppt) (Cowardin 1979).

Palustrine forested wetlands have a dominance of woody plants that are greater than 20 feet tall (trees). In the western United States, this wetland type is common on the fringes of river systems where higher soil moisture is present but frequent and violent flooding does not occur. The shoreline of the Sherman Island work area is jurisdictional as a water of the United States below the HTL, and it is classified as a palustrine forested wetland based on its physical properties. Within the Project area, this wetland type was part of the California sycamore and coast live oak riparian forest vegetation community and was located on the southern side of Threemile Slough. A total of 0.11 acre of palustrine forested wetlands occurs within the Project area.

Palustrine Scrub-Shrub Wetland

Palustrine scrub-shrub wetlands share the same characteristics of other palustrine systems as described above but have a dominance of woody plants that are less than 20 feet tall. Scrub-shrub wetlands often develop from adverse environmental conditions, like flooding and erosion, that prevent larger or older woody plants from developing. For this reason, a palustrine scrub-shrub wetland may be an early succession of a palustrine forested wetland and could develop into a forest given enough time to develop without adverse environmental conditions.

Within the Project area, palustrine scrub-shrub wetlands were present within the Brannan Island SRA Work Area below HTL. The shoreline of the Brannan Island SRA work area is jurisdictional as a water of the United States below the HTL, and it is classified as a palustrine scrub-shrub wetland based on its physical properties. Palustrine scrub-shrub wetlands were mapped within the sandbar willow thickets vegetation community and occurred only below the HTL within the Project area.

A total of 0.13 acre of palustrine scrub-shrub wetlands is present within the Project area.

3.4.1.5 Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or by areas of human disturbance or urban development. Topography and other natural factors, in combination with urbanization, have fragmented or separated large open-space areas. The fragmentation of natural habitat creates isolated "islands" of vegetation that may not provide sufficient area to accommodate sustainable populations and can adversely affect genetic and species diversity. Movement corridors mitigate the effects of fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between populations.

CDFW's California Essential Habitat Connectivity online data viewer provides a resource to view statewide areas of natural landscape blocks, areas that connect these landscape blocks, and areas that are important for biological conservation (Spencer et al. 2010). The Brannan Island SRA work area is within a small natural area. The nearest landscape block is located approximately 1 mile to the southwest on Sherman Island and crosses the Sacramento River. There is substantial agricultural development between the small natural area in the Brannan Island SRA work area and the natural landscape blocks, limiting the likelihood of animals using the Project area as a movement corridor. As a result, there are moderately suitable wildlife corridors throughout the Project area.

Threemile Slough serves as a migration corridor for anadromous fish between the Pacific Ocean and spawning habitat, primarily within the Sacramento and San Joaquin River watersheds.

3.4.1.6 Critical Habitat

Critical habitat is defined in Section 3(5)(A) of the federal Endangered Species Act (FESA) as the specific portions of the geographic area occupied by the species in which physical or biological features essential to the conservation of the species are found and that may require special management considerations or protection. Although critical habitat designations can cover large areas, the presence of primary constituent elements for federally listed species is required for a location to qualify as critical habitat. Threemile Slough within the Project area is designated critical habitat for Central Valley spring-run Chinook salmon,

Central Valley steelhead, green sturgeon, and delta smelt (NMFS 2005; USFWS 1994).

3.4.1.7 Special Status Species

Special Status Plants

This section includes a discussion of special status plant species that have potential to occur within the Project area based on habitat availability and known locations of species within the vicinity of the Project area. Eight species were determined to have a moderate to high likelihood of occurrence within the Project area and are discussed in detail below.

Bristly Sedge

Bristly sedge (*Carex comosa*) is a California Rare Plant Rank (CRPR) 2B.1 listed species. It is native throughout California and is found elsewhere in North America and beyond. It grows in wetland areas including lake-margins of marshes and swamps, coastal prairie, and valley and foothill grasslands (CNPS 2026). This sedge produces dense clumps of erect stems up to about 100 centimeters, and it blooms between July and September. Potentially suitable habitat is present at the Project area along Threemile Slough. The nearest recorded occurrence (Occ. 4; 1988) is a historic occurrence located approximately 3.9 miles southeast of the Project area. The nearest recent occurrence (Occ. 11; 2009) is located approximately 13.5 miles northeast of the Project area. Occurrences in this area are located in tidal marsh habitat along sloughs. This species was not observed during surveys conducted during the blooming period in August 2024; however, suitable habitat is present within the Project area.

Woolly Rose Mallow

Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*) is a CRPR List 1B.2 species. It is a perennial herbaceous species that blooms between June and September (CNPS 2026). It occurs in freshwater marsh habitat at elevations up to 400 feet and is often found growing in riprap and levees (CNPS 2026). Potentially suitable habitat is present along the north and south banks of Threemile Slough. Although the nearest recorded occurrence (Occ. 36) located approximately 2.1 miles north of the Project area is a historical observation from 1891, the nearest, recent occurrence (Occ. 97; 2012) is located approximately 4.1 miles southeast of the Project area on a small levee. This species was not observed

during surveys conducted in August 2024 during the blooming period; however, suitable habitat is present within the Project area.

Delta Tule Pea

Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) is a CRPR List 1B.2 species. It is a perennial herb associated with both brackish marshes and freshwater marshes throughout the Delta and Central Valley (CNPS 2026). The delta tule pea occurs at elevations ranging from approximately 0 to 15 feet and blooms between May and July (sometimes April through August) (CNPS 2026). Delta tule pea was observed within the Project area during surveys on August 15, 2024, on the south bank of Threemile Slough. The plants were not blooming but were still identifiable. The nearest recorded occurrence (Occ. 145; 2009) is located approximately 1.4 miles south of the Project area on the banks of Threemile Slough. Based on observations of individuals within the Project area, this species is present.

Mason's Lilaeopsis

Mason's lilaeopsis (*Lilaeopsis masonii*) is a State-listed rare species, and a CRPR List 1B.1 species. This species is found from approximately 0 to 35 feet in elevation and is associated with tidally influenced marsh habitats, mudflats, and levee banks in the Delta (CNPS 2026). It blooms between April and November (sometimes between June and August), but oftentimes the blooming window is much narrower given dynamic tidal environment in which this plant occurs. Suitable habitat is present at the Project area, particularly along the southern bank of Threemile Slough, although suitable mudflat substrate is limited because of the presence of existing riprap. Small areas of mud substrate are present in interstitial spaces between rocks observed in several locations on the south bank of Threemile Slough. Occurrences of this species, if present, would be limited to small populations or occurrences of individual plants in small areas of mudflat between individual rocks. The nearest recorded occurrence (Occ. 37; 2009) is located approximately 390 feet east of the Project area and 556 feet west of the Project area, along the edge of Brannan Island SRA. This species was not identified during surveys conducted in August 2024; however, small areas of suitable habitat occur within the Project area.

Delta Mudwort

Delta mudwort (*Limosella australis*) is a CRPR List 2B.1 species. 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 (CNPS 2026). It is found in association with other rare plants, especially Mason's lilaeopsis, delta tule pea, and Suisun Marsh aster. It blooms between May and August. Suitable habitat is present in the Project area, particularly along the southern bank of Threemile Slough, although suitable mudflat substrate is limited because of the presence of existing riprap. Small areas of mud substrate are present in interstitial spaces between rocks observed in several locations on the south bank of Threemile Slough. Occurrences of this species, if present, would be limited to small populations or occurrences of individual plants in small areas of mudflat between individual rocks. The nearest recorded occurrence (Occ. 57; 1986) is a historic occurrence located approximately 265 feet east of the Project area on the northeast side of Brannan Island SRA. The nearest, recent occurrence (Occ. 8; 2009) is located approximately 0.4 mile west of the Project area on the opposite side of Brannan Island. This species was not identified during surveys conducted in August 2024; however, small areas of suitable habitat occur within the Project area.

Antioch Dunes Evening-Primrose

Antioch dunes evening primrose (*Oenothera deltoides* ssp. *howellii)* is a federal- and State-listed Endangered species and a CRPR List 1B.1 species. This species is associated with inland dunes habitat at elevations of approximately 0 to 100 feet (CNPS 2026). It blooms between March and September. Limited suitable habitat is present for the species within the Project area on the north side of Threemile Slough in areas with sandy substrate, though no dunes occur within the Project area and sandy substrate within the Project area occur in areas of high disturbance. CNDDB occurrence #5 overlaps with the Project area on the north side of Threemile Slough. This occurrence of Antioch Dunes evening-primrose has been observed consistently since 1980 on the remnants of native dune habitat in the Brannan Island SRA and was observed during surveys conducted on August 15, 2024, approximately 200 feet east of the Project area, though the plants observed were highly desiccated from summer heat and were no longer blooming. This species was not identified in the Project area during surveys conducted in August 2024; however, marginally suitable habitat occurs within sandy substrate in the Project area.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is a CRPR List 1B.2 species. This species occurs in shallow freshwater wetland areas at elevations ranging from approximately 0 to 2,135 feet (CNPS 2026). It is a perennial herbaceous species

that blooms between May and October. Potentially suitable habitat is present along Threemile Slough in the Project area. The nearest recorded occurrence (Occ. 84; 2009) is located approximately 4.2 miles north of the Project location on an exposed sandy shoreline of the Sacramento River with similar site conditions to those present at the Project area. This species was not observed during surveys conducted during the blooming period in August 2024; however, suitable habitat is present within the Project area.

Suisun Marsh Aster

The Suisun Marsh aster (*Symphyotrichum lentum*) is a CRPR 1B.2 species of flowering plant found in freshwater and brackish marshes and swamps (CNPS 2026). Suisun marsh aster is found at lower elevations, ranging from sea level to approximately 10 feet. This species typically blooms between May and November. Suitable habitat is present along the banks of Threemile Slough in the Project area. The Project area is located within the mapped limits of CNDDB occurrence #32 from 2009, where Suisun marsh aster was found on both sides of Threemile Slough and along the southern portion of Brannan Island. This species was not observed during surveys conducted during the blooming period in August 2024; however, suitable habitat is present within the Project area.

<u>Special Status Wildlife</u>

This section includes a discussion of special status wildlife species that have potential to occur within the Project area based on habitat availability and known locations of species within the vicinity of the Project area. Twelve species were determined to have a moderate to high likelihood of occurrence within the Project area and are discussed in detail below.

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) is federally listed as threatened. VELB is completely dependent on its host plant, the elderberry, which is a common component of the riparian forests and adjacent upland habitats of California's Central Valley and foothills. Suitable habitat for VELB is typically defined as live elderberry stems measuring at least one inch in diameter at ground level. These live stems support the life cycle of the beetle for both food and cover (USFWS 2018). Elderberry shrubs are generally found along waterways and in floodplains that support remnant stands of riparian vegetation but are not inundated for long periods of time (USFWS 2018). Although VELB occurs in both riparian and upland woodland and scrub habitats,

VELB occupancy tends to be higher in riparian areas versus upland elderberry locations (USFWS 1999, 2017a). In addition to VELB's dependency on elderberry shrubs, they also rely on the surrounding riparian and upland habitat to disperse between shrubs. Thus, contiguous intact riparian systems are essential to dispersal and migration of VELB and are the essential habitat for VELB (USFWS 2017a).

Because VELB have limited flight range, they are reliant on contiguous habitat. Fragmentation of habitat leads to loss of subpopulations and decreases the likelihood of colonization of unoccupied habitats. The average distance between shrubs with exit holes is 65–165 feet with up to one-half mile between occupied clumps. In managed areas, such as rivers with a levee system and modified floodplain, USFWS considers riparian habitat and upland woodland and scrub habitat as associated elderberry habitat if it occurs in the floodplain of the waterway (USFWS 2017a). Although upland woodland and scrub require different hydrologic regimes, they provide similar connectivity to other riparian habitat in these manipulated systems and are believed to maintain connectivity between occupied and unoccupied habitats.

VELB modeled habitat was identified by the PG&E Multi-Region Habitat Conservation Plan (MRHCP) in the Brannan Island SRA Work Area and in the disturbed land area within the Sherman Island Work Area (ICF 2020). The nearest recorded VELB occurrence (Occ. 53; 1987) is located approximately 20.7 miles northeast of the Project area.

Padre biologists mapped blue elderberry shrubs during biological surveys conducted on August 15, 2024, to determine the extent of potentially suitable VELB habitat within the Project area and adjacent lands. Three blue elderberry shrubs were identified in the Brannan Island SRA work area and provide suitable habitat for VELB (*Biological Technical Report [Appendix D]*, Figure 3). One of the elderberry shrubs is located within the alignment of the two active pipelines, L-131Y and L-131Z proposed for remediation. This elderberry shrub may need to be removed for construction access to the bank of the Brannan Island SRA work area for remediation of the active pipelines in the northern portion of the Threemile Slough crossing. The other two blue elderberry shrubs occur at the perimeter of the Project area, and the dripline of both shrubs extend into the workspace. Both of these shrubs are on the very perimeter of the workspace and would not be directly affected or removed for completion of the Project.

Northwestern Pond Turtle

Northwestern pond turtle (NPT) (*Actinemys marmorata*) is federally proposed as threatened and a State species of special concern. The NPT was formerly categorized with the southwestern pond turtle (*Actinemys pallida*) as a single species known as the western pond turtle. Recent taxonomic revisions split the western pond turtle into two distinct species based on genetic and morphological differences, with *Actinemys marmorata* now recognized as the NPT and *Actinemys pallida* as the southwestern pond turtle. The NPT occurs primarily in northern and central California and southwestern pond turtle occurs primarily in southern California (USFWS 2023).

NPT are moderate-sized aquatic turtles that feed on plants, insects, worms, amphibians, crustaceans, and carrion. NPT are commonly found in permanent or seasonal ponds, lakes, marshes, rivers, streams, and irrigation ditches with rocky or muddy substrates surrounded by aquatic vegetation. These watercourses usually are within woodlands, grasslands, and open forests, between mean sea level and 6,560 feet above mean sea level. Turtles bask on logs or other emergent objects when water temperatures are lower than air temperatures. Slow-moving water is essential for reproduction and submerging for cover while fast-moving streams are preferred for feeding (USFWS 2023). Turtles use upland habitats for nesting, overwintering, dispersal, and aestivation. Nests are located at upland sites, often up to 0.25 mile (1,320 feet) from an aquatic site (Jennings and Hayes 1994; Stebbins and McGinnis 2012; Zeiner et al. 1988–1990). A variety of soil types can support nesting and aestivation, including well-draining aerated soil, friable, organic, and sandy substrate (USFWS 2023). Mating usually occurs in late April or early May through September but may occur year-round. Hatchling turtles are thought to emerge from the nest and move to aquatic sites in the spring (Jennings and Hayes 1994; Stebbins and McGinnis 2012; Zeiner et al. 1988-1990).

The nearest recorded occurrence (Occ. 1,344; 2016) is located approximately 1.8 miles east of the Project location near Seven Mile Slough. Threemile Slough provides suitable aquatic habitat to support NPT, and suitable basking sites were observed within the Project area during surveys. Potentially suitable nesting habitat is limited because of human disturbance, but it is present along the banks of the Brannan Island SRA and Sherman Island work areas, particularly in sandy substrate.

Giant Garter Snake

Giant garter snake (*Thamnophis gigas*) (GGS) is a federally and State-listed Threatened species known for its highly aquatic lifestyle. It occupies marshes, sloughs, rice fields, irrigation canals, and other slow-moving or still freshwater habitats characterized by emergent vegetation such as cattails, bulrushes, and willows, which provide essential cover and basking structure (USFWS 2017b). The species also depends on adjacent upland habitats during its active season (spring–summer) for thermoregulation and refuge, typically using small-mammal burrows or other subterranean features above flood elevations (USFWS 2017b).

Historically widespread across the Central Valley, GGS now persists primarily in fragmented populations within portions of the Sacramento Valley rice-growing region (including Sacramento, Sutter, Butte, Colusa, and Glenn counties), the western Yolo Bypass, and the eastern margin of the Delta from Laguna Creek/Elk Grove south to Stockton. Breeding generally occurs March–April, with live birth from mid-July through early September.

The nearest recorded occurrence (Occ. 150; 1998) is located approximately 1.4 miles southwest of the Project location where an individual was observed on the water side of a levee along the Sacramento River at Horseshoe Bend. A more recent nearby occurrence is located approximately 2.5 miles southeast of the Project area on the south side of Twitchell Island along the San Joaquin River where GGS were observed basking in 2016 (CNDDB Occ. #407).

Based on field surveys conducted in 2024 as explained in Appendix D, potentially suitable aquatic habitat is present at the Project area on the shorelines of the Brannan Island SRA and Sherman Island work areas. Emergent vegetation present within Threemile Slough could provide suitable cover and foraging habitat for GGS; however, only small pockets of emergent wetland vegetation occur within the Project area. Suitable upland habitat occurs in adjacent terrestrial areas, particularly north of Threemile Slough where small mammal burrows are present, though the density of small mammal burrows within the Project area was low (Padre 2025).

MRHCP modeled habitat for GGS includes aquatic habitat along the banks of Threemile Slough and upland habitat within terrestrial habitat on Sherman Island and Brannan Island (ICF 2020).

Golden Eagle

Golden eagle (*Aquila chrysaetos*) is a CDFW fully protected species. It favors expansive open habitats—such as grasslands, shrublands, and alpine areas—that support abundant prey and offer cliffs or tall trees for nesting, along with topographic features that generate the updrafts essential for soaring (Katzner et al. 2020). Golden Eagles are superb aerial hunters capable of remarkable speed and maneuverability, preying primarily on medium-sized mammals and birds, while also scavenging, especially in winter (Katzner et al. 2020).

Nesting habitat is associated with cliffs, and in California it is also associated with oak savanna and oak woodland (Katzner et al. 2020). Foraging habitat is typically open habitat such as grasslands (Katzner et al. 2020). Although potentially suitable large trees are present in the vicinity of the Project area, they are unlikely to support nesting of golden eagle because of their location in a public State recreational area with elevated levels of human disturbance. There is potential for golden eagles to use the Project area as foraging habitat.

Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a State endangered species candidate ~~species~~ and a species of special concern. Breeding and wintering habitat for this species consists of open areas characterized by short or sparse vegetation, ~~with~~ suitable mammal burrows or other underground refugia, and includes native prairie, pastures, fallow fields, road and railway rights-of-way, and urban habitats (Klute et al. 2003; CDFW 2012). Burrowing owls require mammal burrows or natural cavities surrounded by sparse vegetation for nesting and wintering (Klute et al. 2003; CDFW 2012). Foraging habitat includes open grasslands, cropland, pastures, and fallow fields that provide suitable prey and unobstructed sightlines ~~and areas with vegetation greater than 1 meter tall~~ (Klute et al. 2003; CDFW 2012). Although annual grasslands occur along the levee slope adjacent to Sherman Island East Levee Road and throughout much of the upland habitat within the Brannan Island SRA work area and California ground squirrels were observed at Brannan Island SRA, ~~though~~ burrow density in the Project area was low and no burrows suitable for burrowing owl nesting or wintering were identified. Based on the absence of suitable burrows, habitat within the Project area is limited primarily to foraging opportunities.

Burrowing owl records in the vicinity are limited and include a CNDDB occurrence from approximately 35 years ago and eBird observations from

approximately 13 years ago. There are several eBird observations at Brannan Island SRA and in the surrounding vicinity reporting individuals during both the overwintering (generally September through January) and breeding seasons (generally February through August); however, these records do not document nesting or overwintering within the Project area.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as State threatened. It is a breeding resident adapted to open grasslands and prairies (CDFW 2016). Swainson's hawk will also forage in managed wetlands during dry summer months (CDFW 2016). They often nest at the edge of riparian corridors with access to foraging habitat, but lone trees in agricultural fields and roadsides trees are often used as well (CDFW 2016). Valley oak (*Q. lobata*), Fremont cottonwood (*Populus fremontii*), walnut (*Juglans* sp.), and willow (*Salix* sp.) are the most commonly used nest trees (CDFW 2016). Breeding occurs from late March to late August (CDFW 2016).

The nearest recorded nest occurrence (CNDDB Occ. 1674; 2003) is located approximately 0.3 mile north of the Project area on Twitchell Island and consisted of a multi-year nest occurrence.

Suitable nesting habitat is present within the Project area and suitable foraging habitat occurs on-site and in the surrounding area. There are many suitable nesting trees for Swainson's hawk within one-half mile of the Project area including trees within the riparian corridor of Threemile Slough in the Project area. One Swainson's hawk was observed soaring over Brannan Island during surveys conducted on August 15, 2024, and many observations of Swainson's hawk have been made in recent years from other surveys in this area. There is high potential for Swainson's hawk nest occurrence within 0.5 mile of the Project area.

Northern Harrier

Northern harrier (*Circus hudsonius*) is a State species of special concern. This species nests on the ground in tall, dense vegetation, either solitarily or in loose colonies (Smith et al. 2020). Northern harriers hunt by coursing low over the ground, using both auditory and visual cues to capture mainly small- and medium-sized mammals and birds (Smith et al. 2020). Breeding occurs April to September, with peak activity June through July. In winter, they often form communal ground roosts.

The nearest recorded occurrence (Occ. 91; 2007) is located approximately 4.0 miles southwest of the Project area. Suitable foraging habitat is present in the Project area. The northern harrier is a ground-nesting species; therefore, the potential for nest occurrences in the Project area is limited because of the high level of disturbance present.

White-tailed Kite

White-tailed kite (*Elanus leucurus*) is a CDFW Fully Protected species. This species is found throughout California in a range of habitats including marshes, grassland, and oak woodlands, and commonly perches on top of treetops, wires, and fence posts (Dunk 2020). The white-tailed kite typically nests in the upper third of trees that can be anywhere from 10 feet to 160 feet tall, generally in open country and growing in isolation (Dunk 2020).

The nearest recorded occurrence (Occ. 193; 2007) is located approximately 0.5 mile southwest of the Project area, just east of Threemile Slough. Suitable foraging habitat is present in the Project area. Potentially suitable nesting habitat is also present in the trees and shrubs surrounding the Project area.

American Peregrine Falcon

American peregrine falcon (*Falco peregrinus*) is a CDFW Fully Protected species. This falcon breeds near water at varied nest sites, including natural cliff ledges and potholes, tall metropolitan buildings and bridges, and former nests of common raven and osprey on electric transmission towers and boat navigation channel markers (White et al. 2024). American peregrine falcon primarily hunts birds and is known to eat a wide variety of bird species. Typical prey species include shorebirds, ducks, pigeons, and songbirds, although peregrine falcons are also known to eat bats and occasionally fish and rodents (White et al. 2024).

There is no suitable nesting habitat within one mile of the Project area, although this species may be observed foraging within the Project area. Occurrence #79 from 2018 is mapped to a non-specific area within the Jersey Island quadrangle which includes the Project area. This species is known to nest on bridges in the region. There are numerous eBird observations in the vicinity of the Project area.

Song Sparrow—"Modesto" Population

The Modesto population of the song sparrow (*Melospiza melodia* pop. 1) is a State species of concern 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 bullrush and cattails as well as riparian willow (*Salix* sp.) thickets. Song sparrows also nest in riparian forests of valley oak with a sufficient understory of blackberry, along vegetated irrigation canals and levees (Shuford and Gardali 2008); however, nests appear to be more successful in early succession riparian wetland communities.

The nearest recorded occurrence (Occ. 41; 2008) is located approximately 1.3 miles southwest of the Project area, on the northern end of Decker Island. Suitable nesting and foraging habitat are present at the Project area. Song sparrows were observed during surveys conducted on August 15, 2024, although it is not clear if it was the Modesto population.

Bank Swallow

Bank swallow (*Riparia riparia*) is a State threatened species, and is a highly social, colony-nesting swallow with a nearly cosmopolitan breeding distribution (Garrison and Turner 2020). It nests primarily in vertical or near-vertical banks of rivers, streams, lakes, and coastal areas (Garrison and Turner 2020). Colonies can range from a few dozen to nearly 2,000 nests, but their locations shift frequently because suitable nesting habitat depends on continual natural or human-driven erosion, resulting in low site fidelity (Garrison and Turner 2020).

There is no suitable nesting habitat at the Project area to support this species. There is, however, a nearby nesting occurrence (Occ. 201; 2000) located approximately 990 feet northeast of the Project area at the Brannan Island SRA on a sandy outcrop along Sevenmile Slough 0.2 mile north of the confluence with Threemile Slough. This species has been commonly observed on Decker, Sherman, and Bradford islands in recent years. There is no open cliff face or suitable nesting habitat on the north or south banks of Threemile Slough within the Project area. Bank swallows have the potential to forage and migrate through the Project area; however, they are unlikely to nest within the Project area.

Western Red Bat

Western red bat (*Lasiurus blossevillii*) is a CDFW species of special concern. Western red bats are a nocturnal species that roost almost exclusively in trees. They prefer edge habitats in riparian areas near water, and roost in sycamore (*Platanus* spp.), cottonwood (*Populus* spp.), and ash (*Fraxinus* spp.), among other trees. In the Central Valley, western red bats can also be found in fruit and nut orchards (BCI 2025; CWHR 2025). They prefer roost sites that are protected from above, open below, and located above dark groundcover. They feed over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands (CWHR 2025). Western red bats typically hunt in more open-space areas along forest edges and are commonly spotted feeding around streetlights. They feed on a variety of insects such as moths, flies, cicadas, and ants (BCI 2025).

Suitable western red bat roosting habitat occurs in the riparian habitat along the Sacramento River within and in close proximity to the Project area. Foraging habitat for western red bat occurs in the open areas over the Sacramento River in and adjacent to the Project area, in the open areas over the urban land cover in the Project area, and in fields around the Project area.

<u>Special Status Fish</u>

This section includes a discussion of special status fish species that have potential to occur within the Project area based on habitat availability and known locations of species within the vicinity of the Project area. Nine species were determined to have a moderate to high likelihood of occurrence within the Project area and are discussed in detail below.

Chinook Salmon

The Chinook salmon (*Oncorhynchus tshawytscha*) that inhabit Threemile Slough are comprised of three distinct races, or ESUs: winter-run, spring-run, and fall-/ late fall-run. These races are distinguished by the seasonal differences in adult upstream migration, spawning, and juvenile downstream migration. Chinook salmon are anadromous fish, spending three to 5 years at sea before returning to fresh water to spawn. These fish pass through the Delta, including Threemile Slough, to reach their upstream spawning grounds. In addition, juvenile salmon migrate through the Delta en route to the Pacific Ocean. Therefore, Chinook salmon smolts may pass through and forage within the Project area during

emigration to the Pacific Ocean and thus have a high potential to occur within the Project area and vicinity.

Adult Sacramento River winter-run Chinook salmon, listed as endangered under the FESA and California Endangered Species Act (CESA), migrate upstream from December through July with a peak in March (Moyle 2002). Spawning is confined to the mainstem Sacramento River and occurs from mid-April through August (Moyle 2002). Juveniles emerge between July and October and are resident in their natal stream for five to 10 months, followed by an indeterminate residency period in estuarine habitats (Moyle 2002). Designated critical habitat for winter-run Chinook salmon includes the Sacramento River downstream from Keswick Dam, the Delta, and all waters of Suisun, San Pablo, and San Francisco bays west to the Golden Gate Bridge. Critical habitat does not occur in the Project area, however, the Sacramento River, approximately 1.25 miles downstream of the Project area, is designated as critical habitat. Adult winter-run may stray into Threemile Slough during migration, however, habitat at the Project area is not suitable for spawning.

Central Valley spring-run Chinook salmon, listed as threatened under the FESA and CESA, migrate to the Sacramento River from March to September, holding in deep, cold pools near spawning habitat until sexually mature. Spawning begins in late summer and fall, with peak spawning occurring between late August and October (Moyle 2002). Juvenile salmon emerge between November and December and are resident in streams for a period of three to 15 months before migrating to downstream habitats (Moyle 2002). The Project area occurs within designated critical habitat for Central Valley spring-run Chinook salmon.

The Central Valley fall-/late fall-run Chinook salmon ESU is not listed as threatened or endangered under CESA or FESA; however, it is classified as a federal species of concern by NMFS and California species of special concern. This ESU includes all naturally spawned populations of Central Valley fall-/late fall-run Chinook salmon in the Sacramento and San Joaquin rivers and their tributaries east of Carquinez Strait. Central Valley fall-/late fall-run Chinook salmon begin their upstream migration between June and December and spawn in the Sacramento River basin between September and December, peaking in October and November (Yoshiyama et al. 1998). Juvenile emigration through the Delta occurs between March and July (Yoshiyama et al. 1998).

To assess the potential for Chinook salmon to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven Interagency Ecological Program (IEP) studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were 143 occurrences of Chinook salmon within Threemile Slough and surrounding aquatic areas. Therefore, Chinook salmon is assumed to be present in the Project area during periods of migration.

Central Valley Steelhead

Within the Delta, the federally threatened Central Valley steelhead DPS may utilize the channel habitat within the Project area as a migratory corridor from the Pacific Ocean to spawning habitat. Additionally, steelhead smolts may pass through and forage within the Project area during emigration to the Pacific Ocean and therefore have a high potential to occur within the Project area and vicinity.

Steelhead are anadromous (sea-run) forms of rainbow trout and are nearly indistinguishable from resident rainbow trout that also reside in the same streams in which they spawn, with the exception of being larger when hatched (Moyle 2002). Winter-run steelhead are the most widespread reproductive ecotype and are the only type currently present in Central Valley streams (McEwan 2001).

The Central Valley steelhead DPS includes all naturally spawned populations of steelhead in the Sacramento and San Joaquin rivers and their tributaries below natural and manmade impassable barriers (excluding steelhead from San Francisco and San Pablo bays and their tributaries) as well as two artificial propagation programs: The Coleman National Fish Hatchery and the Feather River Hatchery steelhead hatchery programs. Central Valley steelhead adults migrate from the Pacific Ocean through the Delta through much of the year, with the peak migration period through occurring from September through December. Spawning occurs from December through April, and emergence of fry occurs between January and June (NMFS 2014). Juvenile steelhead spend 1 to 3 years in freshwater before emigrating as smolts. In general, juvenile emigration through the Delta occurs from December through August, with peak out-migration from January to May (McEwan 2001).

Designated critical habitat for Central Valley steelhead includes all river reaches accessible to listed steelhead in the Sacramento and San Joaquin rivers and their tributaries, all river reaches and riparian zones of the Delta, and all waters of Suisun, San Pablo, and San Francisco bays west to the Golden Gate Bridge. As such, the Project area occurs within designated critical habitat for this species.

To assess the potential for Central Valley steelhead to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were two steelhead occurrences within Threemile Slough and surrounding aquatic areas in 2022. However, the Project area is located within the vicinity of recorded CNDDB occurrence #27 from 2012, where observations of steelhead have been recorded in the Delta consistently since 1976. In addition, Threemile Slough provides potential adult migration and juvenile rearing habitat. Therefore, Central Valley steelhead is assumed to be present in the Project area during periods of migration.

Green Sturgeon

The federally threatened southern DPS of North American green sturgeon (*Acipenser medirostris*) are the most widely distributed member of the sturgeon family and the most marine-oriented of the sturgeon species, entering rivers only to spawn. Within the freshwater portion of their range, green sturgeon distribution is limited by impassable barriers such as Shasta and Keswick dams (NMFS 2018). Historic and present records indicate that spawning of green sturgeon is limited exclusively to the Sacramento River watershed (NMFS 2018). Adults typically migrate upstream into rivers between late February and late July. Spawning occurs from March to July, with peak spawning from mid-April to mid-June. Adult green sturgeon broadcast their eggs in deep, fast water over large cobble substrate, where the eggs settle into the interstitial spaces (Moyle 2002). Larvae hatch from eggs between 6 and 8 days after spawning if temperature conditions are optimal. Larvae and young of year (fish less than 1 year old) forage and rear in riverine areas until they gain the ability to tolerate higher salinity concentrations.

Juvenile green sturgeon live in freshwater for up to 3 years using riverine, subtidal, and intertidal habitats in the lower Sacramento River and Delta (Klimley et al. 2015). Post-spawn fish behavior varies between holding for several months in the Sacramento River then out-migrating in the fall or winter or moving out of the river quickly during the spring or summer months (Heublein et al. 2009). Post-spawn out-migration through the Delta is also variable, with some adults traveling to the Pacific Ocean in 2 to 10 days and others remaining in the estuary for months.

Designated critical habitat for green sturgeon within California includes the Sacramento River downstream from Keswick Dam; the Delta; Suisun, San Pablo, and San Francisco bays; and all waters of Suisun, San Pablo, and San Francisco bays west to the Golden Gate Bridge. As such, the Project area is within the designated critical habitat for this species.

To assess the potential for green sturgeon to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were no occurrences of green sturgeon within Threemile Slough and surrounding aquatic areas. However, the Project area is located within the vicinity of CNDDB recorded occurrence #9 from 2019, where observations of green sturgeon have been recorded in the Delta consistently since 1963. In addition, juvenile green sturgeon were captured annually between 2015 and 2019 at the Sherman Island sampling station, approximately 7.7 miles downstream from the Project area (CDFW 2019). Furthermore, the Project area may provide year-round rearing habitat for juveniles and foraging habitat for non-spawning adults and subadults in the summer (NMFS 2018). Therefore, green sturgeon is assumed to be present in the Project area.

White Sturgeon

As with green sturgeon, white sturgeon (*Acipenser transmontanus*) is found from Ensenada, Mexico, to southeast Alaska. The San Francisco Bay population of white sturgeon—the only reproducing population of white sturgeon in California—was previously classified as a Species of Special Concern by CDFW. On July 12, 2024, CDFW approved white sturgeon as a candidate species for listing as threatened under CESA. Candidate species for listing under CESA are

granted full protection during the review process. Presently, there is no federal listing for white sturgeon and therefore, no critical habitat has been designated.

White sturgeon primarily inhabit estuaries of large river systems, migrating to fresh water to spawn. Spawning success has been hindered by the construction of dams, such as Shasta Dam on the Sacramento River and Oroville Dam on the Feather River. Spawning in California's Central Valley is now limited to the Sacramento River between Knights Landing and Colusa with observations of periodic spawning occurring in the Feather and San Joaquin rivers (Moyle 2002; Moyle et al. 2015; Beamesderfer et al. 2004; Jackson et al 2015). Prior to spawning, white sturgeon move into the lower reaches of rivers during the winter and migrate upstream to spawning areas between December and early June (Moyle et al. 2015). Like green sturgeon, white sturgeon broadcast their eggs in deep, fast water over large cobble substrate, where the eggs settle into the interstitial spaces (Moyle 2002). Larvae hatch from eggs between 4 and 12 days after spawning if temperature conditions are optimal (Wang 1986). Larvae and young-of-the-year use riverine areas to forage and rear until they gain the ability to tolerate higher salinity concentrations (McCabe and Tracy 1994). Recruitment success of juvenile white sturgeon is correlated with high spring flows and Delta outflow. High spring flows during juvenile rearing (i.e., between April and July) assist in moving larval sturgeon downstream into suitable rearing habitat quicker than years with low spring flows (Stevens and Miller 1970).

White sturgeon typically inhabit deep water over soft bottom substrates, feeding on or near the bottom (Moyle 2002). To assess the potential for white sturgeon to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were no occurrences of white sturgeon within Threemile Slough and surrounding aquatic areas. However, the Project area may provide year-round foraging habitat for juveniles. Therefore, white sturgeon is assumed to be present in the Project area.

Longfin Smelt

The longfin smelt San Francisco Bay-Delta DPS (*Spirinchus thaleichthys*) is a small, slender-bodied pelagic fish State listed as threatened and federally listed as

endangered. They typically measure approximately 3 inches in length as adults and generally live for 2 years, although some 3-year smelt have been observed.

Pre-spawning longfin smelt migrate upstream into the lower reaches of rivers during the late fall and winter. Spawning may occur from November through June, with peak spawning activity likely occurring from February through April (Moyle 2002). Longfin smelt have adhesive eggs and are presumed to spawn over sandy or gravel substrates, rocks, and aquatic plants (Moyle 2002). During spawning, each female produces approximately 5,000 to 24,000 eggs. It is estimated that total reproduction within a year is in the hundreds of millions of eggs or more (Moyle 2002). As with most fish, mortality rates for eggs and larvae in longfin smelt are high. Those that survive to the planktonic larval stage are transported into the western Delta and Suisun Bay during the late winter and spring where juveniles rear.

Longfin smelt have a 2-year lifecycle and reside as juveniles and pre-spawning adults in the more saline habitats within San Pablo Bay and Central Bay during a majority of their life (Moyle 2002). Movement patterns based on catches in CDFW fishery sampling suggest that longfin smelt actively avoid water temperatures greater than 22 degrees Celsius (°C) (72 degrees Fahrenheit) (Baxter et al. 1999). These conditions occur within the Delta during the summer and early fall, when longfin smelt inhabit more marine waters further downstream in the bays and are not present within the Delta.

Critical habitat for longfin smelt was designated on January 15, 2025, and includes waters from San Pablo Bay east to the confluence of the Sacramento and San Joaquin rivers at Sherman Lake (USFWS 2025). As such, the Project area does not occur in designated critical habitat for longfin smelt. However, Threemile Slough may serve as a migration corridor for longfin smelt during the fall and winter.

To assess the potential for longfin smelt to occur in the Project area, data from the past 10 years (2014–2024) were compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and were then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were 75 occurrences of longfin smelt within Threemile Slough and surrounding aquatic areas. Furthermore, the Project area occurs in the vicinity of CNDDB recorded occurrence #17 from 2012 where observations of longfin smelt have been recorded consistently since

1946. Therefore, longfin smelt are assumed present in the Project area during late fall and winter.

Delta Smelt

Delta smelt is federally listed as threatened and State listed as endangered. Delta smelt are endemic to the upper Sacramento–San Joaquin River estuary, and inhabit the freshwater portions of the Delta, the Sacramento and San Joaquin rivers, and the low-salinity portions of Suisun Bay. Delta smelt used to be one of the most common pelagic fishes in the upper Sacramento–San Joaquin estuary, but abundances have since substantially declined (USFWS 1993).

Delta smelt are a relatively small species (2–4 inches long) with an annual life cycle, although some individuals may live 2 years. Adult delta smelt migrate upstream into channels and sloughs of the Delta during winter to prepare for spawning. Delta smelt spend their entire life cycle in the San Francisco Bay-Delta estuary, typically inhabiting open waters of the Delta. Spawning occurs between February and July with peak spawning occurring from April through mid-May (Moyle 2002). Females deposit adhesive eggs on substrates such as gravel and sand. Eggs hatch, releasing planktonic larvae that are passively dispersed downstream by river flow. Larval and juvenile delta smelt rear in the estuary for 6–9 months before beginning their upstream spawning movement into freshwater areas of the lower Sacramento and San Joaquin rivers. During high flows, they sometimes move downstream into the Napa River, and sometimes, if the western end of Suisun Bay freshens, they do not move at all, or they move to the north side of the Suisun Marsh.

The delta smelt population is generally concentrated in the San Francisco estuary west of the confluence of the Sacramento and San Joaquin rivers in high-outflow years and in the north Delta in low-outflow years (Bennett 2005). Delta outflow determines the location of the salinity gradient and may strongly influence delta smelt distribution. USFWS data indicate that delta smelt are found in the San Francisco Bay-Delta estuary where salinity is generally less than 2 parts per thousand (ppt). Except when spawning in fresh water, delta smelt are most frequently caught in, or slightly upstream of, the entrapment zone, the area in the estuary where upstream bottom currents and downstream surface flows concentrate food particles, creating a critical feeding and nursery habitat that shifts with freshwater outflow (Bennett 2005).

Juvenile and adult delta smelt are usually most abundant in the central and west Delta during winter and early summer. Juvenile and adult delta smelt do not typically inhabit the south Delta during summer, when water temperatures exceed approximately 25°C, and high water clarity tends to keep them out during fall (Nobriga et al. 2008; Feyrer et al. 2007). Adult delta smelt spawn in the Delta during late winter and spring, and larvae occur in the Delta during spring.

The USFWS designated critical habitat for delta smelt in 1994 and includes all contiguous waters within the legal Delta, in addition to Suisun Bay and some outlying sloughs (USFWS 1994). Threemile Slough within the Project area is designated critical habitat for delta smelt. However, most of the habitat present within the Project area consists of steep banks, deep water, and low-quality cover, lacking the highly productive shallow water habitat preferred by delta smelt. The USFWS defines shallow water habitat as "all waters between Mean High Water and 3-meters below Mean Lower Low Water Mark" (USFWS 2004). There are some areas on the shorelines of the Brannan Island SRA and Sherman Island work areas that contain shallow water habitat; however, both shorelines are covered in riprap, providing limited spawning habitat for delta smelt.

To assess the potential for delta smelt to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were 4 occurrences of delta smelt within Threemile Slough and surrounding aquatic areas. Furthermore, the nearest recorded CNDDB occurrence (Occ. #7; 2019) is located approximately 0.6 mile west of the Project area, on the opposite side of Brannan Island in the Delta. Given the lack of suitable spawning habitat available in the Project area, delta smelt are likely only present in Threemile Slough during upstream migration to better quality spawning habitat.

Sacramento Splittail

Sacramento splittail (*Pogonichthys macrolepidotus*) are not listed under the CESA or FESA, but are considered a California Species of Special Concern. Sacramento splittail are a large (greater than 15 inches), long-lived cyprinid, endemic to the sloughs, lakes, and rivers of the Central Valley (Moyle 2002) and are most typically found in tidally influenced freshwater and estuarine habitats (e.g., the Delta and Suisun Bay) with salinities as high as 10–18 ppt (Moyle et al.

2004). Nonbreeding splittail can survive wide fluctuations in temperature and low dissolved oxygen levels (less than 1 milligram of oxygen per liter), allowing them to live in slow-moving sections of rivers and sloughs (Moyle et al. 2004).

Adult Sacramento splittail begin a gradual upstream migration toward spawning areas sometime between late November and late January. Sacramento splittail spawn and rear on terrestrial vegetation and debris on floodplains inundated by high spring flows from late February through April (Moyle 2002). Spawning is associated with conditions such as changing water levels, lower water temperatures, and increasing length of day (Moyle et al. 2004). In the Sacramento River Basin, important spawning areas appear to be the Yolo and Sutter bypasses as well as the Consumnes River floodplain. Ripe splittail have also been observed in the Napa and Petaluma rivers, Suisun Marsh, and the Sacramento River. Additionally, spawning occurs in the lower San Joaquin River (Moyle et al. 2015). Juveniles rear in floodplains until water starts to recede in April and May, causing juveniles to begin the downstream migration with the outgoing water. Juveniles rear in estuarine areas in the Delta for approximately one to two years before spawning for the first time (Moyle et al. 2015).

To assess the potential for Sacramento splittail to occur in the Project area, data from the past 10 years (2014–2024) was compiled from a collection of seven IEP studies (Bashevkin et al. 2024) and was then filtered by selecting all sampling sites within 1 mile of the Project area. Surveys included in the analysis were the Delta Juvenile Fish Monitoring Program, the Enhanced Delta Smelt Monitoring Program, and the Fall Midwater Trawl Survey. There were 8 occurrences of Sacramento splittail within Threemile Slough and surrounding aquatic areas. Given the lack of suitable spawning habitat available in the Project area, Sacramento splittail are likely only present in Threemile Slough during upstream migration to better quality spawning habitat. Rearing juveniles may also occur in the Project area during downstream migration to the central Delta.

Western River Lamprey

Western river lamprey (*Lampetra ayresi*) are considered a California Species of Special Concern (Moyle et al. 2015). River lamprey are found in large river systems from Juneau, Alaska, to San Francisco Bay in California. River lamprey appear to be concentrated only in particular rivers and only in the lower portions of these rivers.

River lamprey are anadromous, spending about 3 to 4 months in the ocean before migrating to fresh water in the fall. Adults spawn in small tributaries in the winter and spring, creating depressions in the gravel substrates of riffle systems. Once hatched, ammocetes (larval lamprey), move to silt sand back waters and bury themselves tail first. It is believed that ammocetes spend 3 to 5 years in freshwater before metamorphosing into adults. Metamorphosis occurs over a 9- to 10-month period. Once this occurs, river lamprey aggregate in large numbers and migrate toward the ocean in the spring (Moyle 2002).

Little information is available on the life history of river lamprey, but there are known to occur in the San Francisco Bay-Delta, including the Sacramento River. However, no individuals have been captured during IEP surveys in the past 10 years at stations near the Project area (Bashevkin et al. 2024). Given the lack of suitable spawning habitat available in the Project area, river lamprey are likely only present in Threemile Slough during upstream migration to better quality spawning habitat. Rearing juveniles may also occur in the Project area during downstream migration to the San Francisco Bay-Delta.

Pacific Lamprey

Pacific lamprey (*Entosphenus tridentatus*) are considered a California Species of Special Concern (Moyle et al. 2015). Pacific lamprey are the largest lampreys in California and are anadromous. Pacific lamprey may have highly diverse life histories and may have more than one run or individuals that do not migrate back to the ocean within the same river (Anglin 1994). The spawning period is usually from early March to late June, with some upstream migration observed as early as January and February (Entrix 1996; Trihey and Associates 1996). Ammocoetes hatch after 2 to 3 weeks and drift downstream to mud/silt substrate habitats where they rear for 4 to 7 years (Anglin 1994). After rearing, ammocoetes undergo metamorphosis and enter the ocean, although there is some evidence that some populations remain resident in freshwater (Moyle et al. 2015).

Pacific lamprey are known to occur in the San Francisco Bay–Delta and are considered still widespread throughout their range. However, overall abundance estimates throughout California suggest a declining trend (Moyle et al. 2015). However, Pacific lamprey is considered still widespread throughout their range. Furthermore, no individuals have been captured during IEP surveys in the past 10 years at stations near the Project area (Bashevkin et al. 2024). Given the lack of suitable spawning habitat available in the Project area, Pacific lamprey are

likely only present in Threemile Slough during upstream migration to better quality spawning habitat. Rearing juveniles may also occur in the Project area during downstream migration to the San Francisco Bay–Delta.

3.4.2 Regulatory Setting

Federal and state laws and regulations pertaining to biological resources and relevant to the Project are discussed below and further identified in Appendix A. Local and regional laws and regulations pertaining to biological resources and relevant to the Project are discussed below and further identified in Appendix B.

3.4.2.1 PG&E Habitat Conservation Plans

PG&E has USFWS-approved habitat conservation plans (HCPs) that provide a comprehensive framework to conserve and protect federally listed species in support of a federal incidental take permit for the covered species for PG&E (operations and maintenance) activities in the San Joaquin Valley Region, Bay Area Region, and Multiple Regions (Sacramento Valley and Foothills, North Coast, and Central Coast) (Jones & Stokes 2007; ICF 2017; ICF 2020). The Project work areas in Sacramento County are located within the MRHCP area. The MRHCP is model-based HCPs that incorporate the use of modeled habitat developed in collaboration with the USFWS for covered species. Modeled habitat is then used as a tool to automatically screen the impact area, determine covered species occupancy, and apply take coverage of the appropriate HCP.

The MRHCP shows modeled habitat for three species: VELB, GGS, and California tiger salamander. California tiger salamander has a low potential to occur in the Project area because of the lack of suitable aquatic breeding habitat and the presence of migration barriers from known occurrences. All relevant MRHCP field protocols and avoidance and minimization measures would be implemented as part of the Project. A full list of field protocols can be found in Table 7-1 of the Biological Technical Report (Appendix D), and a list of those applicable to the Project has been included in Appendix B.

3.4.3 Impact Analysis

Project-related construction noise, riverbed disturbance, and ground disturbance have the potential to disrupt special status plants, wildlife, and fish species and their habitat, including sensitive riparian communities and protected wetland habitats.

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, or that is a species of interest to the State Lands Commission or the California Coastal Commission; or cause a marine wildlife population to drop below self-sustaining levels?

Less than Significant with Mitigation

Heavy equipment operation and associated noise, riverbed disturbance, dust from ground disturbance including grading and excavation, and an increase in human presence have the potential to disrupt special status plants, wildlife, and fish species and their habitat.

Impacts on Special Status Plants

Construction of the proposed Project would entail clearing, grubbing, and ground disturbance in undeveloped areas of natural habitat with potential to support special status plant species. The following special status plant species could be affected:

- Bristly sedge (tidal marsh habitat along sloughs)
- Woolly rose mallow (riprap on sides of levees)
- Delta tule pea (tidal marsh)
- Mason's lilaeopsis (tidal mudflats)
- Delta mudwort (tidal mudflats)
- Antioch Dunes evening-primrose (sandy substrates)
- Sanford's arrowhead (marshes)
- Suisun Marsh aster (marshes)

These species could be directly affected by ground-disturbing activities—clearing, grubbing, tree removal, grading, and equipment movement. Indirect effects from construction activities such as grading could result in hydrologic alteration or the introduction of pathogens or invasive plant species on Project equipment and personnel footwear. Implementation of **MM BIO-1: Worker Environmental Awareness Training** and **MM BIO-2: Special Status Plant Avoidance** would ensure that Project personnel are made aware of special status species present in the work areas (based on a pre-construction botanical

survey) and that special status plants ~~present in the work area be~~ are avoided to the extent feasible. In addition, it should be noted that California Fish and Game Code Section 1913 provides utilities with an exemption from CESA permitting requirements for listed plants within the utility right of way[3].

In-water work may generate temporary increases in turbidity and indirectly impact special status plants. Increases in turbidity may adversely affect habitat, and the water column could receive temporarily suspended sediments or organic matter. Large-scale increases of organic matter within a water column, usually associated with fine sediments such as silts and clays, may increase dissolved nutrient concentrations and result in increased algal blooms or decreased dissolved oxygen. These changes in nutrient and oxygen availability could temporarily impact special status plants that reside in or near aquatic habitats (as listed above). However, the turbidity caused by pipeline removal and barge operations is expected to be minor, relatively short term, and generally localized to the immediate area. After construction work, sediments would disperse, and background levels would be restored within hours of disturbance. To address these potential impacts, **MM BIO-3: Biological Monitoring, MM BIO-4: Turbidity Monitoring Plan, and MM HYDRO-1: Stormwater Pollution Prevention Plan** (Section 3.11, *Hydrology and Water Quality*) would be implemented to minimize potential indirect effects from changes in water quality on special status plant species.

With the implementation of these measures, the impacts to special status plant species would be less than significant.

MM BIO-1: Worker Environmental Awareness Training.

Prior to the start of construction, a qualified biologist, approved by CSLC staff, shall provide worker environmental awareness training to inform

[3] Specifically, Section 1913(b) states: "…the removal of endangered or rare native plants from a canal, lateral ditch, building site, road, or other right-of-way by the owner of the land or his agent, or the performance by a public agency or a publicly or privately owned public utility of its obligation to provide service to the public, shall not be restricted because of the presence of rare or endangered plants". In addition, Section 1913(c) requires the landowner to provide the CDFW with at least 10 days' notice to allow for plant salvage prior to affecting the species.

construction personnel about protected biological resources, including special status species that could occur in the Project work areas, their habitat, sensitivity to human activities, legal protections, penalties for violation of state and federal laws, information about wetlands and waters of the United States and/or State, and required Project mitigation measures and reporting requirements. The training shall include photos of special status species to aid in identification, information about how to properly clean Project personnel footwear to prevent the transfer of seeds and pathogens from non-Project work sites, the qualified biologist's contact information, and the CSLC's point of contact. All construction personnel must undergo this training before working on the Project, and a sign-in sheet shall be maintained to keep a record of those trained.

MM BIO-2: Special Status Plant Avoidance.

30 days before the start of construction, a qualified botanist, approved by CSLC staff, shall survey the Project impact area, following the CNPS Botanical Survey Guidelines and with consideration to prior plant surveys conducted in the work areas (see Appendix D), for the presence of special status plant species, including bristly sedge, woolly rose mallow, Delta tule pea, Mason's lilaeopsis, Delta mudwort, Antioch Dunes evening-primrose, Sanford's arrowhead, and Suisun Marsh aster species within all permanent and temporary impact areas.

If a special status plant species is discovered, it shall be flagged and the following measures shall be implemented:

- An appropriate no-disturbance buffer determined by the qualified botanist shall be established around the occurrence. Protective fencing will be installed under the guidance of the qualified botanist to delineate the no-disturbance buffer and protect the special status plant species from work impacts. Fencing will be installed before ground-disturbing work begins and remain in place until work is complete.
- If <u>any</u> special status plant species are discovered on-site that cannot be avoided, the Applicant shall <u>consult</u> ~~coordinate~~ with the appropriate agencies (e.g., USFWS, CDFW) prior to the start of construction ~~to determine and implement appropriate~~ <u>regarding</u> species-specific <u>avoidance and minimization</u> measures <u>and applicable permitting requirements in accordance with the Federal Endangered</u>

Species Act and California Endangered Species Act ~~(e.g., transplantation or harvesting and planting seed, followed by success monitoring) to minimize impacts to the special status plant species~~.

MM BIO-3: Biological Monitoring.

A qualified biological monitor, approved by CSLC staff, shall survey the onshore work area for sensitive plant and wildlife species no more than 24 hours before the start of Project activities. In addition, the biological monitor shall monitor Project activities within surface water and sensitive habitats, and other activities that have the potential to affect special status species on a daily basis once Project activity begins. If at any time during Project activities any special status species are observed within the Project area, work around the individuals' immediate area shall be stopped or work shall be redirected to an area within the Project area that would not affect these species ~~until the individual is relocated by a qualified biologist (i.e., transplanting or harvesting of seeds for plant species, relocation for wildlife species)~~. Work would not resume until appropriate avoidance measures have been implemented, the species has left the work area on its own accord (for wildlife species), or consultation with the USFWS, NFMS, and/or CDFW, as appropriate, has been completed and direction has been provided regarding further action. ~~Listed wildlife species would be allowed to leave of their own volition, unless coordination with USFWS and/or CDFW provide authorization for relocation by a qualified biologist with appropriate handling permits. Work would resume once the individual 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 the CSLC and consult with the appropriate agencies to resolve the impact before restarting work in the area.~~

If a State-listed plant species, California Rare Plant Rank (CRPR) 1A or 1B species, or Native Plant Protection Act (NPPA) rare plant species is identified within or immediately adjacent to the work area, work shall be halted in the vicinity of the occurrence and a qualified botanist shall evaluate the potential for Project-related impacts. The occurrence shall be clearly marked and avoided to the maximum extent feasible through establishment of environmentally sensitive areas, buffer zones, or other protective measures. No removal, collection, transplantation, seed

harvesting, or disturbance of listed plant species shall occur unless specifically authorized by CDFW and/or USFWS. If impacts to a listed plant species cannot be avoided, the Applicant shall consult with CDFW and/or USFWS regarding appropriate avoidance, minimization, mitigation, and permitting requirements prior to resuming work in the affected area.

MM BIO-4: Turbidity Monitoring Plan.

A Turbidity Monitoring Plan shall be implemented during all in-water work, including in-water site preparation and restoration, such as removal and replacement of large woody debris, to ensure that turbidity levels upstream and downstream of the Project area are compliant with regulatory requirements. The turbidity monitoring plan shall include requirements for assessing preconstruction (background) turbidity levels. A qualified environmental monitor, approved by CSLC staff, shall be present during in-water work to regularly monitor turbidity levels upstream and downstream of in-water work activities. Silt curtains shall be installed around in-water work areas to contain turbidity. If the results of the turbidity monitoring plan detect a Project-related increase in turbidity outside the area contained by the silt curtains that exceeds the allowable thresholds for increased turbidity, as defined by regulatory permits, corrective measures shall be implemented. Corrective measures may include alteration to the timing and duration of in-water work, or minor modifications in methodology of Project activities to reduce the in-water excavation turbidity.

Impacts on Special Status Wildlife

Effects on Special Status Birds

Special status birds, as well as bird nests protected by the federal MBTA, the FESA, the Bald and Golden Eagle Protection Act, the CESA, and/or the California Fish and Game Code, could be directly affected during construction of the Proposed Project. These species and the nature of their occurrence at the Proposed Project area are as follows.

- Golden eagle (foraging only)
- Western burrowing owl (foraging)
- Swainson's hawk (nesting and foraging)
- Northern harrier (foraging only)
- White-tailed kite (nesting in trees near open foraging habitat)

- Peregrine falcon (foraging)
- Song sparrow - "Modesto" population (nesting and foraging)
- Bank swallow (foraging only)

Nesting impacts

Swainson's hawk is a State-listed species with known nesting occurrences within 0.3 mile of the Project area (on Twitchell Island) and is therefore likely to have potentially disrupted breeding activities in or near the Project's work areas. Any Project activities that take place outside the Swainson's hawk nesting season, which occurs from March 1 to September 15, would avoid potential impacts. As mentioned in Section 2.6, *Anticipated Project Work Schedule, Equipment, and Personnel*, the Project is anticipated to occur over a 3-month work window from August 1 to October 31, avoiding the majority of the Swainson's hawk nesting season. For any construction occurring during the nesting season, implementation of **MM BIO-1** and **MM BIO-3** would ensure that any special status birds present in the work area are identified and avoided by informed construction personnel. Additionally, **MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys** would require Project activity postponement or, if infeasible, active monitoring and the establishment of buffers to protect active Swainson's hawk nests and nestlings.

> **MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys.**
>
> For Project activities within Swainson's hawk nesting season (March 1 to September 15), a qualified biologist, approved by CSLC staff, shall conduct preconstruction Swainson's hawk nesting surveys ~~no more than 72 hours before any construction disturbance~~ within a 0.5-mile radius of the Project area. To meet the minimum level of protection for the species, surveys should be completed during at least the two survey periods immediately prior to Project initiation. Swainson's hawk survey periods are: Period I. January 1 to March 20; Period II. March 20 to April 5; Period III. April 5 to April 20; Period IV. April 21 to June 10; and Period V. June 10 to July 30. No fewer than three surveys must be completed in each survey period and surveys should not be initiated during period IV (only observations of known or suspected nests) (Swainson's Hawk Technical Advisory Committee 2000).

If active Swainson's hawk nests are identified near the Project area, ~~then based on nest protection buffers outlined in PG&E's Nesting Bird Management Plan,~~ consultation with CDFW to develop a Swainson's hawk take avoidance and monitoring plan shall occur and the following measures shall be required:

- Postpone Project activities within ~~0.25~~ 0.5 mile of the nest until after the young have fledged and are no longer dependent on the nest tree.
- If it is not possible to postpone Project activities, construction may only proceed with both CDFW approval and nest monitoring by a qualified raptor biologist. If the monitoring biologist observes signs of distress, then they shall have the authority to stop construction work. If the nest is abandoned because of Project-related disturbance but the nestlings are still alive, the Applicant is required to fund the nestlings' recovery, rearing in captivity, and subsequent controlled release.

White-tailed kite, northern harrier, American peregrine falcon, and Modesto song sparrow could all have potential nests near construction areas. Construction activities including vegetation removal and ground clearing could affect these bird species as well as others protected under the MBTA. Vegetation within the Project area could provide nesting habitat, and Project activities could potentially impact nesting birds. The Applicant is prohibited from causing the take, possession, or destruction of these birds, their nests, or eggs. Disturbance that causes nest abandonment or loss of reproductive effort could also be considered a "take." Although some terrestrial work activities could occur outside the nesting season and would thus avoid this potential impact, for any activities occurring during the nesting season (which is February 1 through August 31), **MM BIO-6: Nesting Bird Season Preconstruction Surveys** would require preconstruction surveys to identify active nests and provide buffers if any are present. With the implementation of this measure, the impact on nesting special status birds would be less than significant.

MM BIO-6: Nesting Bird Season Preconstruction Surveys.

If Project-related vegetation removal and ground-clearing activities are scheduled between February 1 and August 31, then two preconstruction nesting surveys shall be conducted ~~no more than one week~~ within 14 days before the start of construction, with the final survey being conducted 48 hours prior to the start of construction, in potential nesting habitat within

~~350~~ 500 feet of the Project area ~~to identify nest sites~~. If an active raptor or passerine bird nest is identified, ~~an appropriate species-specific nest protection buffer shall be recommended based on PG&E's Nesting Bird Management Plan and site-specific conditions.~~ a minimum 250-foot buffer for passerines and a minimum 500-foot buffer for raptors shall be implemented, unless adjusted by a qualified biologist. A preconstruction nesting survey report shall be prepared and submitted to CDFW and CSLC staff within one week of completing preconstruction surveys that outlines the surveys conducted, nest locations identified, and ~~recommended~~ proposed nest protection buffers. Construction activities shall be prohibited within the established buffer zones until the young have fledged.

Foraging Impacts

All eight special status bird species identified in Section 3.4.1.7 have potential foraging habitat within the Project area. Construction activities including vegetation removal and other ground-clearing would affect foraging habitat and behavior. However, these terrestrial impacts would be temporary and short-term, localized, only affect a small proportion of available foraging habitat in the area, and would not result in a permanent loss of habitat. Therefore, the impacts on foraging birds would be less than significant.

Effects on Special Status Bats

Western red bat could be affected by ground disturbance by heavy equipment, vegetation removal, and high noise levels, which could result in impacts on occupied roosts, direct mortality of young, and the abandonment of roosts with bats unable to fly.

Indirect construction effects (i.e., reduced fitness) may also occur through the loss or degradation of roosts from Project–related noise and vibration; the loss or degradation of future roosting, or foraging habitat; Project-related trash that could attract and increase predator populations around the Project area; or reduced prey abundance through vegetation removal/loss or soil compaction. The Project is scheduled to occur primarily during daylight hours when roosting bats are less sensitive to noise impacts. Further, the Project would mostly occur outside of the maternal roosting season (May through August) (see below for discussion of aquatic work windows and Section 2.6 for project work schedule).

Nevertheless, implementation of **MMs BIO-1, BIO-3,** and **BIO-7: Roosting Bat Avoidance** would reduce impacts on special status bats to less than significant.

MM BIO-7: Roosting Bat Avoidance.

No more than one week prior to the start of construction, a qualified biologist, approved by CSLC staff, shall identify potentially suitable bat roosting habitat features (e.g., trees with dense foliage, cavities and/or peeling bark, structural cavities, tall shrubs, bridges, buildings, abandoned bird nests) in the work area before the initiation of construction and maintenance activities. Suitable habitat features will be inspected during the preconstruction survey in advance of clearing, grubbing, construction, and maintenance activities, or other activities with potential to disturb roosting bats in applicable work areas, to verify that roosting bats are absent. If evidence of use by roosting bats is detected during the survey, the qualified biologist shall conduct a focused nighttime emergence survey as needed. The preconstruction survey will determine (1) locations of active bat roosts, species identification (if possible), and approximate count of individuals; (2) identification of potential direct and indirect Project-related disturbing activities; and (3) a description of protective measures to be implemented before and during construction or operation to avoid impacts on roosting bats. If a special status bat species or a maternity colony that may be disturbed by Project activities is identified, CDFW will be notified by CSLC and any recommendations on appropriate work area buffers will be followed. If an active maternity roost is found in an area that would be affected by Project or maintenance activities, then activities with potential to disturb the colony shall be initiated outside of the maternity season (April 15 to August 31), or until young are volant (e.g., capable of flight), or the colony is no longer active.

If the preconstruction survey indicates no evidence or observation of use by roosting bats, no further action is required, and construction may begin at the direction of the qualified biologist.

Effects on Special Status Reptiles

GGS and NPT could be affected by construction activities, vegetation removal, and increased human presence near Threemile Slough. Threemile Slough and the surrounding upland areas are modeled GGS habitat in the MRHCP, which

has a moderate potential to occur. NPT has a high potential to occur because of the presence of suitable aquatic basking and nesting habitat.

The Project activities would temporarily disturb foraging and basking habitat for GGS and NPT and could affect potential GGS burrows and NPT nesting habitat. However, these terrestrial impacts would be temporary and short-term, localized, only affect a small proportion of habitat in the vicinity, and would not result in a permanent loss of habitat. Temporary impacts on GGS habitat would be further minimized by avoiding burrows and other refuge habitat where possible, consistent with the PG&E MRHCP. **MM BIO-1** would ensure Project personnel and crews are aware of and take caution to avoid wildlife that may occur in the work areas. **MM BIO-3** would require biological pre-activity surveys and monitoring to ensure the Project work areas are and remain clear of any special status animal species before the start of work and would require the Applicant to halt Project activities if wildlife enters the work area. **MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys** is consistent with the PG&E MRHCP and would ensure Project activities or worksite preparation occur within the GGS active season when snakes are not overwintering in terrestrial habitat and are active and able to avoid disturbance, provide exclusion fencing to prevent GGS entry, and relocate any affected individuals to habitat outside the Project area. **MM BIO-9: Northwestern Pond Turtle (NPT) Preconstruction Surveys** would provide separate preconstruction surveys for NPT and their nests, exclusion barriers, monitoring, and relocation for any NPT found in the Project area. Implementation of **MM HYDRO-1** would preserve existing vegetation and effective soil cover to reduce the risk of erosion and impacts to burrows. With the implementation of these measures, the impacts to GGS and NPT would be less than significant.

MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys.

Project activities shall be conducted during the GGS active season (May 1 to October 1) to the extent practicable. A qualified biologist, approved by the CSLC, shall conduct a survey and identify where exclusion fencing is needed within the Project area. If needed, a solid exclusion fence shall be installed around the perimeter of work sites and shall be inspected weekly.

If work will be conducted during the inactive period (October 2 to April 30), then the Applicant shall conduct preparation work during the snake's active period to make construction areas ready for work during the

inactive season. Preparation work shall comply with the MRHCP. If GGS are encountered during construction activities, snakes shall be allowed to move away from construction activities, or if relocation is required, a permitted biologist with USFWS and CDFW approval shall follow approved handling protocols and move snakes to the nearest appropriate habitat out of harm's way.

MM BIO-9: Northwestern Pond Turtle (NPT) Preconstruction Surveys.

A qualified biologist, approved by the CSLC, shall conduct preconstruction surveys for NPT and their nests 48 hours before ground disturbance to ensure that individuals are not present in the work area. Prior to ground disturbance activities, a barrier, such as wildlife exclusion fencing, shall be placed around the excavation area to prevent NPT from moving into work areas. A qualified biological monitor shall be present to monitor Project activities during all in-water work and initial ground disturbance that has the potential to affect special status species. Should NPT be found within the work areas, a qualified biologist in consultation with CDFW shall relocate the species outside of work area barriers. If NPT nests are identified, an appropriate nest protection buffer shall be recommended for CDFW approval based on site specific conditions. Construction activities shall be prohibited within the established buffer zone until the hatchlings emerge.

Effects on Valley Elderberry Longhorn Beetle

There is a large elderberry shrub that occurs over the in-service L-131Y and L-131Z pipeline right-of-way, in the Brannan Island SRA work area. This shrub is within the planned vegetation removal area for accessing the pipelines to address the depth of burial. Completion of the pipeline remediation activities may require removal of all or a portion of the blue elderberry cluster. The shrub had several stems greater than 1 inch in diameter and would be considered potential VELB habitat located within riparian habitat. Two additional blue elderberry shrub clusters were mapped at the perimeter of the Project area but would not be removed for the Project.

VELB is a covered species under the PG&E MRHCP and both the Brannan Island SRA work area and portions of the Sherman Island work area are modeled habitat for the VELB. The MRHCP provides distinctions between temporary and permanent impacts that accommodate shrub accounting and annual

mitigation based on impacts on the VELB habitat, species life history, and past discussions with USFWS regarding impacts (ICF 2020). The MRHCP provides a consistent ability to track and mitigate impacts on VELB by using the following definitions:

- **Permanent Impact on VELB Habitat**. Any covered activity that results in removal of an entire elderberry shrub with at least one stem greater than 1 inch in diameter at ground level will be counted as a permanent impact on one shrub.
- **Temporary Impact on VELB Habitat**. Any covered activity that results in pruning of one or more elderberry shrub stems greater than 1 inch in diameter at ground level, where pruning is at 6 feet or below in height, when the plant is left in place will be counted as a temporary impact. Any covered activity that results in pruning of elderberry shrub stems, regardless of stem diameter, beyond 6 feet above ground level during the months of March through May, when adult VELB is most likely to be present will also be counted as a temporary impact.

Potentially significant impacts on VELB from Project activities, if individuals are present, include injury or mortality caused by vehicle, equipment, or foot traffic, and damage to elderberry shrubs. **MM BIO-1** would ensure Project personnel and crews are aware of and take caution to avoid special status species habitat (e.g., elderberry shrubs) that may occur in the work areas. **MM BIO-3** would require biological pre-activity surveys and monitoring to ensure the Project work areas are and remain clear of any special status animal species before the start of work and would require the Applicant to halt Project activities if wildlife enters the work area before the start of work. Additionally, and consistent with the PG&E MRHCP, implementation of **MM BIO-10: Elderberry Shrub Avoidance Buffers** and **MM BIO-11: Elderberry Shrub Trimming** would ensure that Project activities limit impacts on elderberry shrubs by providing guidance on how to trim elderberry shrubs to limit impacts on any VELB in the area. With the implementation of these measures, the impact on the VELB would be less than significant.

MM BIO-10: Elderberry Shrub Avoidance Buffers.

When ground-disturbing activities will be implemented within 20 feet of blue elderberry, a qualified biologist, approved by CSLC staff, will identify a work exclusion zone (i.e., 5 to 20 feet of the dripline of all blue elderberry shrubs, depending on the size of the shrub), with pin flagging or other

appropriate means, within which ground disturbance, tree felling, and equipment and vehicle operation will be avoided or minimized. Except for cut stump treatment of removed trees (non-elderberry), herbicides will not be used within this zone.

MM BIO-11: Elderberry Shrub Trimming.

If trimming blue elderberry shrub is determined to be necessary, all trimming will occur in compliance with PG&E's Multi-Region Habitat Conservation Plan (MRHCP). Trimming of branches and stems less than 1 inch will occur between June 1 and February 28/29. Stems greater than 1 inch will be avoided to the greatest extent practicable. If stems greater than 1 inch are required to be removed, these activities will be overseen and documented by a qualified biologist, approved by CSLC staff, in compliance with the MRHCP and the Valley Elderberry Longhorn Beetle Habitat Impact Report Field Form and included in the MRHCP annual report for the purposes of impact and mitigation tracking. Compensatory mitigation is provided for permanent impacts on the VELB in accordance with the MRHCP Conservation Strategies.

<u>Impacts on Special Status Fish</u>

Sediment Disturbance and Water Quality Effects

Construction of the proposed Project would involve in-water work (e.g., debris removal, pipeline removal, restoration of rock cover over active pipelines) that could result in the release of sediments into Threemile Slough. Suspended sediments in the water column have the potential to affect fish by disrupting normal feeding behavior, reducing growth rates, increasing stress levels, and reducing respiratory functions. Increased suspended solids can also affect aquatic organisms by reducing dissolved oxygen levels and light transmission, and when the sediment in the suspended solids resettles, it could have the potential to smother aquatic habitats and organisms. Changes in light transmission have the potential to limit photosynthesis and reduce foraging abilities for organisms that rely on visual signals for feeding (e.g., salmonids) (Anchor Environmental 2003). Substantially depressed oxygen levels (i.e., below 5.0 milligrams per liter) may cause respiratory stress to aquatic life, and levels below 3.0 milligrams per liter may cause mortality.

Research with salmonids has shown that high turbidity concentrations can: reduce feeding efficiency, decrease food availability, reduce dissolved oxygen

in the water column, result in reduced respiratory functions, reduce tolerance to diseases, and can also cause fish mortality (Berg and Northcote 1985; Gregory and Northcote 1993; Velagic 1995; Waters 1995). Even small pulses of turbid water will cause salmonids to disperse from established territories (Waters 1995), which can interrupt normal movement patterns, displace fish into less suitable habitat, and/or increase competition and predation, decreasing chances of survival. Nevertheless, much of the research mentioned above focused on turbidity levels significantly higher than those likely to result from the Project activities. The small pulses of moderately turbid water expected from the construction activities could cause minor physiological and behavioral effects, such as dispersing listed fish from established territories, potentially increasing interspecific and intraspecific competition, as well as predation risk for the small number of affected fish.

However, turbidity increases would be relatively brief and generally confined to within a few hundred feet of the Project activity. Turbidity levels would initially be higher than baseline levels, but the sediment would disperse and be re-deposited quickly, and background levels would be expected to be restored within hours of the disturbance. Therefore, fish would be able to use their preferred habitats and continue their normal migration routes in a matter of hours. To minimize impacts on special status fish, **MMs BIO-1**, **BIO-3**, and **BIO-4** would require: environmental training for all Project personnel regarding the listed species; biological monitoring during all in-water work to monitor for and avoid special status species; and monitoring of turbidity levels and implementation of corrective measures if thresholds are exceeded.

Construction activities could also accidentally introduce contaminants such as fuels, oils, hydraulic fluids, and other chemicals/compounds into the aquatic environment either directly through spills or incrementally through surface runoff from haul routes and staging areas. Given sufficient scale, such alterations to aquatic habitats could affect fish by altering water temperature, pH, clarity, or chemical composition, as well as stream substrates, most likely by introducing silt, sand, soil, or gravel. These alterations could render otherwise suitable habitat unsuitable for fish, at least temporarily, or they could introduce contaminants that would affect fish health, reproductive success, and juvenile survivorship. If present in sufficient concentrations, contaminants could be toxic to fish and prey organisms occupying adjacent aquatic habitats. Contaminants could also alter oxygen diffusion rates and cause acute and chronic toxicity to aquatic

organisms, thereby reducing growth and survival and possibly causing mortality of listed fish.

As described in Section 3.10, Hazards and Hazardous Materials, and Section 3.11, Hydrology and Water Quality, Project construction activities would be required to comply with numerous regulations to ensure that construction-related fuels and other hazardous materials are transported, used, stored, and disposed of safely to protect worker safety, and to reduce the potential for such fuels or other hazardous materials to be released into the environment, including stormwater and downstream receiving water bodies. Furthermore, as required by **MM HYDRO-1** and **MM HAZ-1**, contractors would be required to prepare and implement a Project Work and Safety Plan and a Stormwater Pollution Prevention Plan for construction activities. These plans would detail the proper use and storage of hazardous materials during construction, describe spill prevention measures, include protocols for responding to an accidental spill or release of hazardous materials, and describe construction best management practices (BMPs) to reduce fugitive dust, minimize erosion, and maintain water quality. Implementation of these measures would ensure that potential impacts on special status fish would be less than significant.

Direct Habitat Impacts

Decommissioning and removal of the inactive pipelines and possible removal of other debris (e.g., large logs and aquatic vegetation) may cause temporary, short-term impacts to the approximately 55-linear-foot band of shallow water habitat on the south side of Threemile Slough. The excavation of the L-131 East and West pipelines would result in a temporary depressional area across the channel bottom. While, this area would gradually infill and transition back towards surrounding river bottom conditions for this area, there would be short-term direct impacts to bottom habitat; there would be no permanent loss of shallow-water habitat for special status fish species. To minimize direct impacts to special status fish species, PG&E shall implement **MM BIO-12: In-Water Work Window** to establish an in-water work window from August 1 through October 31 to avoid direct impacts on habitat during sensitive life stages for special status fish species including smelt (spawning) and Chinook salmon and steelhead (juvenile emigration). Furthermore, as part of Project implementation for remediation of the active L-131Y and L-131Z pipelines, rock would be placed from slightly above the mean high tide line of the Brannan Island shoreline and waterward into Threemile Slough to remediate the shallow depth of burial and

pipeline exposure and restore the pipelines to as-built depth of cover. This would reduce the steep slope along the shoreline, resulting in an expansion of shallow water habitat on the north side of Threemile Slough from 27 linear feet to 40 linear feet. Similar sized rock as currently exists would be used so as to not change the character of the bottom substrate. With implementation of mitigation, impacts to special status fish species would be less than significant.

MM BIO-12: In-Water Work Window.

In-water work will be conducted during the seasonal work window of August 1 through October 31 (July 1 through October 31 for salmonids; August 1 through November 30 for smelt; combined work window of August 1 through October 31 for salmonids and smelt) to avoid and/or minimize potential adverse effects to listed fish. This work window will avoid the spawning period for delta smelt and longfin smelt, and the juvenile emigration period for Chinook salmon and steelhead. If an extension to the work window is needed, the seasonal work window may be extended to November 30, with authorization from NMFS and CDFW, if the authorization does not require formal Section 7 ESA consultation, a take permit, or additional mitigation measures. Prior to rock placement, the contractor shall implement a NMFS-approved soft-start procedure for rock placement activities that gradually initiates rock placement and includes a designated waiting period to allow sturgeon to voluntarily leave the area before full rock placement activities commence.

Introduction and Spread of Invasive/Nonnative Species

The use of barges, watercrafts, and dive gear have the potential to introduce and spread invasive/nonnative aquatic species, such as zebra and quagga mussels and golden mussels (*Limnoperna fortunei*) from the Project area to the port location (or vice versa). Invasive species have the potential to prey upon and/or outcompete native species, including special status species, for resources including food and habitat.

In October 2024, the first North American detection of golden mussels occurred in the Delta (CDFW 2025). Since then, golden mussels have spread, including a recent detection near the Project area in March 2025 at the Brannan Island SRA boat launch (CDFW 2026b). Golden mussels can spawn multiple times per year, producing thousands of planktonic offspring called veligers. They inhabit fresh and brackish water environments with water temperatures ranging from 41 to

95 degrees Fahrenheit (CDFW 2025). They typically reside in water with constant salinity of 3 parts per thousand or less, but are able to survive fluctuations of higher salinities (CDFW 2025). They form byssal threads (strong, fibrous proteins secreted by some bivalves) to anchor themselves to both manufactured and natural surfaces like rocks, docks, watercrafts, and aquatic plants (CDFW 2025). Golden mussels can inflict ecological impacts by altering aquatic food webs and physically crowding out native species.

Golden mussels can be moved, intentionally or unintentionally, into a new area through a variety of different pathways such as:

- Carried in ballast water of ships and released with that water.
- Moved attached to watercraft and/or equipment from one in-water location to another.
- Moved overland attached to watercraft and in-water equipment.
- Moved overland in water contained within watercraft and equipment (CDFW 2025).

Introduction of golden mussels can cause environmental, recreational, and economic impacts, and it is important to prevent further spread. Currently, golden mussels have not been detected west of Pittsburg (CDFW 2026b). As described in Section 2.1.3, *Threemile Slough Work Area*, work vessels would be coming from a home port at Mare Island (lower end of Napa River near San Pablo Bay), where they would return with waste materials (e.g., removed pipe sections) after construction. The port location is west of known golden mussels locations; however, it is possible that the barges and other work vessels may transport golden mussels back to port after stationed at the Threemile Slough work area, a known golden mussels location.

Additionally, Project activities have the potential to spread fragments of highly invasive plants during construction. Many highly invasive plant species are observed within the in-water portions of the Project areas, including Brazilian waterweed, parrot's feather, water hyacinth, and Eurasian watermilfoil. In-water work and disturbance during remediation and decommissioning work activities, including manual removal of aquatic vegetation by divers, could generate plant fragments that could be carried downstream and propagate, thus further spreading aquatic invasive plants.

In order to prevent the spread of golden mussels and other aquatic invasive/ nonnative plant and animal species and limit impacts to native species,

including special status species, all work vessels subject to the California Marine Invasive Species Act (Public Resources Code section 71200 et seq., see Appendix A) must fully comply with applicable ballast water and vessel biofouling management requirements to minimize the introduction and spread of aquatic invasive species. Additionally, PG&E shall implement **MM BIO-13: HACCP and Decontamination Plan** to further reduce the potential to translocate invasive, non-native species. This document shall align with CDFW's Aquatic Invasive Species (AIS) Decontamination Protocols (CDFW 2022), regulations in title 14 of the California Code of Regulations, Fish and Game Code sections 2300–2302, and California Department of Water Resources (DWR n.d.) invasive mussel mitigation practices. The HACCP and Decontamination Plan would describe watercraft and equipment inspection and decontamination protocols. As part of implementation of **MM BIO-13**, all construction personnel would be required to take invasive species awareness and watercraft inspection and decontamination training before the start of work to learn best practices to minimize the spread of invasive species. With implementation of **MM BIO-13**, impacts from the spread of golden mussels and other aquatic invasive species would be less than significant.

Additionally, to help prevent the spread of fragments of invasive aquatic plants, the Project would use turbidity/silt curtains as part of implementing **MM BIO-4**. Turbidity curtains would temporarily contain plant fragments from spreading downstream, and with implementation of **MM BIO-13**, plant fragments would be removed and properly disposed of prior to moving the turbidity curtain. With the implementation of these mitigation measures, impacts from aquatic invasive species on native and special status species would be less than significant.

MM BIO-13: HACCP and Decontamination Plan.

A Hazard Analysis Critical Control Point (HACCP) and Decontamination Plan must be developed to prevent the spread of golden mussels and invasive aquatic plants during Project activities and shall be submitted to CSLC staff for review and approval at least 30 days prior to the start of Project activities. The HACCP and Decontamination Plan shall outline Project activities, describe all in-water equipment, identify potential pathways for the spread of aquatic invasive species, and include methods to prevent the movement of species and for decontamination, as applicable. Possible decontamination methods could include:

- Spray the work skiff and crew transport vessel (see Section 2.2.3) and in-water equipment, including submersible excavation pump, wet suits, masks, and snorkels, with hot water (greater than 140 degrees Fahrenheit) for at least 10 seconds (Comeau et al. 2011; Morse 2009).
- Freeze in-water gear such as masks, snorkels, and wet suits at less than minus 5 degrees Fahrenheit for at least 5 hours (McMahon et al. 1993).
- Use a quaternary ammonium compound solution to soak in-water gear for at least 10 to 15 minutes (Britton and Dingman 2011).
- Move Project barges to full salinity water (at least 30 parts per thousand) for at least 36 hours post-Project activities to kill any attached golden mussels, if present.

All construction personnel must review and sign the HACCP and Decontamination Plan, as well as be given training on identification of potential invasive species in Project work areas and implementation of watercraft inspection and decontamination protocols before the start of work.

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?

Less than Significant with Mitigation

Impacts on Sensitive Communities

Riparian habitat occurs on the banks of the Brannan Islands SRA and Sherman Island work areas, including a narrow band of mature trees, primarily coast live oak, within the Sherman Island work area and dense willow shrub cover within the Brannan Island SRA work area. This includes one sensitive natural community on the bank of the Sherman Island work area, the California sycamore and coast live oak riparian woodland. Workspace within this riparian habitat would be reduced to the minimum necessary for successful completion of the Project, and tree removal within the workspace areas would be minimized to the extent feasible; however, vegetation would need to be removed for equipment access and pipeline removal from Threemile Slough. As discussed in Section 2.2, *Site Preparation, Staging, and Mobilization*, a total of six trees and two areas of brush would be removed for completion of the Project. This includes five coast

live oak trees, ranging in size from six inches to 32 inches in diameter, and one miscellaneous brush area (approximately 7,000 square feet in size) to be removed from the Sherman Island work area, and one coast live oak tree, 6 inches in diameter, and one miscellaneous brush area (approximately 13,000 square feet in size) to be removed from the Brannan Island SRA work area. Implementation of **MM BIO-14: Site Restoration and Riparian Mitigation Plan** would minimize impacts to sensitive natural communities through the restoration of vegetation after completion of pipeline removal and remediation activities. Additionally, on Sherman Island riparian vegetation is present along an existing ditch (see Figure 3.4-2) and near the landside levee toe (see Photo F of Figure 6 in Appendix D); this vegetation is in close proximity to the construction staging boundaries at these locations and therefore has potential to be impacted from construction staging activities. Implementation of **MM BIO-14** and **MM BIO-15: Riparian Habitat Protection Measures** would reduce impacts to sensitive natural communities to less than significant.

MM BIO-14: Site Restoration and Riparian Mitigation Plan.

A Site Restoration and Riparian Mitigation Plan (Plan) shall be developed to provide for the replacement of riparian vegetation damaged or removed from Project work areas ~~due to Project activities~~ and for the restoration of other vegetative components of the work areas to pre-Project conditions to the extent feasible. The Plan shall be submitted to the CSLC and the agencies with jurisdiction (California Department of Fish and Wildlife, California Department of Parks and Recreation and, if applicable, any flood control agencies with jurisdictional authority over restoration of the Sherman Island levee) for review and approval at least 30 days before the start of construction.

~~The Plan shall provide for restoration of the vegetative components of the work areas to pre-Project conditions to the extent feasible and establish performance criteria and monitoring to ensure timely restoration to pre-Project conditions, subject to approval by levee authorities for consistency with adopted plans of flood control. If replacement of trees and large woody shrubs is restricted onsite for consistency with levee authority requirements or other constraints, off-site replacement of trees and large woody shrubs shall be required.~~

The Plan shall require that all ~~woody vegetation~~ coast live oak and native trees (with a diameter at breast height (DBH) greater than or equal to 2

inches and equal to or less than 6 inches), as well as native shrubs including ~~native~~ willows~~,~~ and blue elderberry shrubs~~, and coast live oak trees~~ removed from both the Sherman Island and Brannan Island SRA work areas for construction of the Project be replanted at a 3:1 mitigation ratio within an established riparian restoration area within state-owned property at the Brannan Island SRA. For each coast live oak tree removed with a DBH greater than 6 inches, a 6:1 mitigation ratio shall be required. Tree plantings, such as locally collected willow cuttings, nursery stock seedlings, and/or container plants (minimum 1-gallon size for elderberry shrubs and ~~minimum 5-gallon size for~~ live oaks), would be installed in riparian restoration areas located above the restored rock slope protection and/or mean high tide line. The Plan shall detail an appropriate native herbaceous riparian seed mix to be hydro-seeded on the disturbed levee surface within the Sherman Island work area, where replanting woody vegetation is not feasible~~, as well as requirements for monitoring to ensure adequate growth is established~~. The riparian seed mix shall also be applied to riparian restoration areas on Brannan Island to ensure surface coverage of disturbed areas.

The Plan shall also outline monitoring requirements and performance criteria, developed in consultation with CDFW, to ensure adequate growth and successful revegetation in all replanted or seeded areas. ~~The Plan shall provide for restoration of the vegetative components of the work areas to pre-Project conditions to the extent feasible and establish performance criteria and monitoring to ensure timely restoration to pre-Project conditions,~~ subject to approval by levee authorities for consistency with adopted plans of flood control. If replacement of trees and large woody shrubs is restricted onsite for consistency with levee authority requirements or other constraints, off-site replacement of trees and large woody shrubs shall be required.

The Plan shall also include measures for reuse of existing topsoil to preserve roots, rhizomes, and seedbank material, ~~performance monitoring to ensure successful revegetation,~~ and if applicable, any temporary irrigation methods that will facilitate site restoration.

MM BIO-15: Riparian Habitat Protection Measures.

On Sherman Island, the construction staging work space boundary shall have a minimum 50-foot setback from top of bank on the northeast side

of the existing ditch to ensure avoidance of impacts to riparian vegetation. The 50-foot setback boundary shall be demarcated in the field to identify the boundary. No construction staging activities shall occur within the 50-foot setback.

Along the landside levee slope within the Sherman Island construction staging boundary, all parking, access, operation, and maintenance of vehicles, heavy equipment, and construction materials shall be limited to existing dirt roads and established vehicle parking areas, including pull out parking areas along Sherman Island East Levee Road. The work space boundary shall not extend landward of the levee toe, and work activities along the unimproved landside levee slope and levee toe boundary shall be limited to mowing of herbaceous vegetation (an existing levee maintenance activity), construction fencing, and stormwater and erosion control activities, such as installation of silt fencing, fiber rolls, etc., to contain and separate the work space boundary from the adjacent riparian vegetation.

Impacts on Critical Habitat and Essential Fish Habitat (EFH)

The aquatic portions of the Project area are designated as critical habitat for Central Valley spring-run Chinook salmon, Central Valley steelhead, green sturgeon, and delta smelt. These areas are also designated EFH, as defined in the Magnuson-Stevens Fishery Conservation and Management Act, for multiple species of commercially important fish managed under the Pacific Salmon Fisheries Management Plan.

In-water work activities within Threemile Slough will include removing the inactive pipeline and adding rock for remediation of depth of coverage over the active pipelines. There would be a short-term increase in turbidity during construction activities that could impact critical habitat and EFH used by listed fish species. Implementation of **MMs BIO-1**, **BIO-3**, **BIO-4**, **BIO-12**, and **BIO-13**, and the BMPs in **MM HYDRO-1**, described in Section 3.11, *Hydrology and Water Quality*, would avoid significant impacts and reduce the level of impact on critical habitat to less-than-significant levels.

Additionally, as discussed in Section 2.2.1, site preparation for in-water work activities may include removal of logs or woody debris, if they are present in the in-water work areas, that would interfere with remediation of the active pipelines and/or excavation activities for the inactive pipelines. Logs and in-

water woody debris serve as critical habitat for threatened fish species. Therefore, the Project would implement **MM BIO-16: Replacement of In-Water Woody Debris** to replace any woody debris removed prior to in-water construction activities to ensure impacts to critical and essential fish habitat are less than significant.

> **MM BIO-16: Replacement of In-Water Woody Debris.**
>
> If in-water large woody debris is removed during site preparation activities (e.g., downed logs and other woody debris identified during pre-construction debris surveys of the in-water remediation and pipeline removal work areas), the woody debris will be stockpiled within an onshore work space area and, at the completion of Project construction activities, shall be placed (reused) at an in-water location for replacement of habitat in accordance with the approved Lake and Streambed Alteration Agreement with California Department of Fish and Wildlife.

Therefore, the ecological function of aquatic habitat would return to existing, pre-Project conditions and thus not appreciably diminish the quality of the critical habitat. Consequently, this impact on designated critical habitat would be less than significant with mitigation.

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

The pipeline remediation and the removal of the inactive pipelines would result in impacts on aquatic resources (waters of the United States and wetlands) regulated by USACE under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The Project would also result in impacts on aquatic resources regulated by the Central Valley RWQCB under Section 401 of the Clean Water Act and CDFW under Section 1600 of the California Fish and Game Code.

A preliminary aquatic resource delineation was conducted for the Project to determine the geographic extent of federal and State regulatory jurisdiction (Padre Associates 2024); federal jurisdictional wetlands have not been identified within the Project area. A total of 0.12 acre of fill would be placed for remediation of the pipeline exposures and to ensure sufficient depth of coverage on the active pipelines, and up to 2.58 acres of temporary

disturbance to jurisdictional waters of the United States and waters of the State may occur during the decommissioning phase of the Project, including approximately 0.41 acre of excavation for pipeline removal. To minimize aquatic resources impacts, PG&E must receive and comply with permits for Project activities issued by the USACE, the Central Valley RWQCB, and CDFW. Additionally, implementation of **MM HYDRO-1** would require use of BMPs to further reduce erosion, turbidity, and sedimentation to waters and wetlands to ensure water quality is protected. Finally, the Site Restoration and Riparian Mitigation Plan in **MM BIO-14** includes restoration measures for riparian areas impacted within the Brannan Island SRA and Sherman Island work areas. With the implementation of these measures, the impacts on State or federally protected jurisdictional waters would be less than significant with mitigation.

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

Impacts to aquatic habitat will be temporary and limited to a relatively small area. Nevertheless, the Project may interfere with the movement of native resident or migratory fish species and their associated migration corridors, a potentially significant impact. The Project area is located along Threemile Slough, which may provide habitat for many common and special status aquatic species, particularly delta smelt, longfin smelt, steelhead, Chinook salmon, and green sturgeon. Aquatic habitat in the Project area consists of a heavily altered (channelized, armored banks), relatively deep, high velocity channel, with silt and sand substrate covered by rip rap. This type of habitat typically carries a high risk of predation because of the presence of non-native predatory fish, such as striped bass and largemouth bass. While special status fish may be present in the Project area during migration periods and for foraging, the presence of special status fish species within the Project area is expected to be temporary and transient.

MM BIO-12 dictates that in-water work would only occur from August 1 through October 31 to minimize the potential for impacts on special status fish species. Scheduling in-water work for this period would limit the potential for the occurrence of migratory fish species by confining construction activities to periods outside of peak migration events and reproductive periods.

Additionally, several BMPs designed to protect aquatic species and habitat from the impacts of construction activities would be in effect during all in-water work. These are described and referenced in Section 3.11 of this IS/MND and are applicable here to ensure the protection of migration routes. Implementation of **MMs HYRDO-1** and **HAZ-1** would avoid direct and indirect impacts of construction activities on water quality that could impact fish migration and reproduction. Further, implementation of **MM BIO-4** would require monitoring of turbidity levels, and require corrective measures, if thresholds are exceeded, to address the effects of increased turbidity to surrounding areas which could impact the movement of fish species through the Project area in Threemile Slough.

Project work activities could also impact the movement and migration of terrestrial wildlife species. As discussed in Section 2.2, terrestrial work activities would result in the removal of a small number of trees and shrubs on the Sherman Island and Brannan Island SRA work areas. While this could affect migratory wildlife, including bird species, the overall riparian corridor would remain intact and would continue to provide adequate cover for movement and foraging of resident and migratory species.

Additionally, as discussed in Section 3.4.1.7, GGS may occur within the modeled GGS habitat along Threemile Slough and the Sacramento River. NPT also has potential for occurrence along Threemile Slough. Habitat disturbance could, therefore, temporarily interfere with the GGS and NPT movement corridors and impact potential daily or seasonal migrations, but would not result in permanent impacts or habitat loss. **MM BIO-8** is consistent with the PG&E MRHCP and would provide exclusion fencing to prevent GGS entry as well as relocate any affected individuals to portions of the movement corridor that are outside the Project area. **MM BIO-9** would provide exclusion fencing to prevent NPT entry and would relocate any NPT to their movement corridor outside the Project area. With the implementation of these measures, the impact would be less than significant.

Finally, implementation of **MM BIO-1** and **MM BIO-3** would further reduce potential impacts to fish and wildlife movement and migration by requiring environmental awareness training for all Project personnel regarding potential listed species in the Project areas and by having biological monitors present during all work activities to identify individuals in project areas and avoid or relocate them as necessary.

Therefore, Project impacts on native resident or migratory fish and wildlife species and their associated migration corridors would be less than significant with mitigation.

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

Less than Significant with Mitigation

Impacts Related to Local Policies

Sacramento County General Plan Policies CO-58, CO-59, CO-63, and CO-75 seek to protect wetlands, riparian vegetation, oak woodlands, wildlife corridors, special status species habitat, and other natural habitats. As discussed under questions a) through d), above, the Project has the potential to adversely impact terrestrial and aquatic sensitive habitats that would potentially impact sensitive terrestrial and aquatic wildlife. **MMs BIO-1** through **BIO-16** would provide Project planning, surveys, monitoring, and restoration to avoid or minimize Project impacts on wildlife and native habitats, which would also meet the intent of the relevant local government goals, objectives, and policies. With the implementation of these measures, the 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

The PG&E MRHCP, discussed in Section 3.4.2.3, provides a comprehensive framework to conserve and protect listed species for PG&E operations and maintenance activities in multiple regions (Sacramento Valley and Foothills, North Coast, and Central Coast). GGS and VELB are the only potentially occurring covered special status species that may be affected by the Project. Mitigation Measures BIO-8, BIO-10, and BIO-11 are consistent with all relevant MRHCP field protocols and avoidance and minimization measures that would be implemented as part of the Project (see Appendix D). In addition, MRHCP standard field protocols would be implemented where physically possible and when not in conflict with other regulatory obligations or safety considerations. Therefore, there would be no conflict with provisions of the MRHCP or any other HCP, and no impact.

3.4.4 Mitigation Summary

Implementation of the following mitigation measures would reduce the potential for Project-related impacts on special status species, sensitive natural communities, State or federally protected wetlands, and local policies protecting biological resources to less than significant:

MM BIO-1: Worker Environmental Awareness Training

MM BIO-2: Special Status Plant Avoidance

MM BIO-3: Biological Monitoring

MM BIO-4: Turbidity Monitoring Plan

MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys

MM BIO-6: Nesting Bird Season Preconstruction Surveys

MM BIO-7: Roosting Bat Avoidance

MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys

MM BIO-9: Northwestern Pond Turtle (NPT) Preconstruction Surveys

MM BIO-10: Elderberry Shrub Avoidance Buffers

MM BIO-11: Elderberry Shrub Trimming

MM BIO-12: In-Water Work Window

MM BIO-13: HACCP and Decontamination Plan

MM BIO-14: Site Restoration and Riparian Mitigation Plan

MM BIO-15: Riparian Habitat Protection Measures

MM BIO-16: Replacement of In-Water Woody Debris

MM HAZ-1: Project Work and Safety Plan

MM HYDRO-1: Stormwater Pollution Prevention Plan

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 § 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The Project area includes the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County, in the Delta region of California's Central Valley. Padre Associates, Inc. (Padre) completed the *Phase I Archaeological Study, PG&E L-131Y and L-131Z Three Mile Slough Crossings Pipeline Remediation Project, Sacramento County, California* (Appendix G of this document) to inform the baseline conditions and identify cultural resources within the proposed Project area that could be impacted by the proposed Project (Letter and Letter 2024). The environmental setting is based on information provided in the Padre cultural resources study. The ethnographic context is provided in Section 3.6, *Cultural Resources—Tribal*.

The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County. Because these activities would use commercial vendors and ports and travel via designated truck haul routes and established shipping routes, there is no relevant cultural resources setting or impacts to discuss for those areas. Therefore, the following discussion focuses on the cultural resources setting and impacts of the Project work areas in Sacramento County.

3.5.1.1 Precontact Context

Archaeologists working in the Delta region of the Central Valley have generally recognized the following major precontact periods of cultural adaptation within the last 10,000 years: Paleo-Indian, Windmiller Pattern, Berkeley Pattern, the Meganos Tradition (an amalgamation of the Windmiller and Berkeley patterns), and the Augustine Pattern. These major periods are described below.

Paleo-Indian Period (ca. 10,000 to ca. 4,500 years Before Present [B.P.])

Because of the rapid accumulation of alluvial (stream-deposited) sediments that occurred during the late Holocene epoch, very few archaeological data exist regarding early human occupation of the Delta region of the Central Valley during the Paleo-Indian period. Although 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 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 (large chunks removed from a stone using blunt force). 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, ca. 4,500 to ca. 2,500 B.P.)

The human settlement strategy of the Windmiller Pattern in the Central Valley was predominantly riverine, with most sites found on the valley floor along rivers or marshes. Other Windmiller Pattern sites have been identified atop small knolls above floodplains. The archaeological record contains examples of numerous projectile point forms and ground stone artifacts, which are associated with processing of wild seeds and acorns.

Berkeley Pattern (Middle Period, ca. 2,500 to ca. 1,500 B.P.)

Berkeley Pattern sites display a trend toward a more specialized economy that procured seeds for dietary purposes. The distribution of Berkeley Pattern sites displays a more diverse environmental range, although riverine settings are still common. Deeply stratified midden deposits with milling and ground stone artifacts are common to Berkeley Pattern sites, indicating prolonged occupations spanning multiple generations. Berkeley Pattern sites contain projectile points

predominantly made from obsidian and are non-stemmed in form, becoming progressively smaller and lighter over time and culminating in the introduction of the bow and arrow during the late precontact period.

Meganos Tradition (ca. 1,500 B.P. to ca. 1,000 B.P.)

A cultural tradition resembling an amalgamation of Windmiller Pattern and Berkeley Pattern traits was established between the tidal marsh people of the south San Francisco Bay and those to the north. Other cultural traits associated with the Meganos Tradition include marine snail saucer and saddle beads, and increased occurrences of otter bone in habitation and resource processing sites. The Meganos Tradition is indicative of a semi-sedentary settlement arrangement, marked by increased seasonal movement of villages. During the upper Middle Period, the Meganos Tradition extended into the Fremont Plain of the southeast Bay and mixed with the populations in the Santa Clara Valley.

Augustine Pattern (Late Period, ca. 1,500 to ca. 150 B.P.)

The Augustine Pattern is characterized by a shift in the general subsistence pattern, specifically the introduction of the bow and arrow for hunting and acorns becoming the dominant food resource. This pattern is typified by increased population size, expanded trade and exchange networks, and great elaboration of ceremonial and social organization, which includes the development of social stratification. Other traits associated with the Augustine Pattern are increased sedentary villages and a monetary economy that exchanged beads as currency.

3.5.1.2 Regional Historic Period Context

The modern history of Northern California, which includes Sacramento County, is grouped into three distinct periods: Spanish, Mexican, and American. Because of its distance from San Francisco Bay, the Project area was largely isolated from the Spanish and Mexican periods of California history. The following section briefly references major events from these periods.

Spanish Period (A.D. 1775 to 1822)

The earliest overland exploration of the region was the Fages-Crespi Expedition in 1772. In 1775, Captain Manuel Ayala's expedition explored San Francisco Bay and later ventured up the Sacramento and San Joaquin rivers in search of suitable sites to establish missions. In 1776, Mission San Francisco de Asís (Mission

Dolores) in San Francisco was established as the region's first mission. It was followed 3 months later by Mission Santa Clara de Asís and in 1797 with the Mission San José de Guadalupe. The missions functioned as procurement and dispersal hubs for local economic resources, and as military outposts and proxies of secular governance. The establishment of the mission system decimated local villages and dramatically transformed the lives of Native peoples from throughout California. Untold numbers of Native people were killed outright or enslaved—brought into the missions as "neophytes" for both labor and forced conversion into the Catholic faith. Disease epidemics also ravaged the people housed in the missions, further fracturing communities and culture.

Mexican Period (A.D. 1822 to 1850)

In 1821, Mexico declared independence from Spain; a year later, California became a Mexican territory. After the missions were secularized in 1834, lands were gradually transferred to private ownership via a system of land grants. The Project area is east of the Rancho Los Ulpinos land grant, which included 17,726 acres patented to John Bidwell by Governor Manuel Micheltorena in 1844.

After the Bear Flag Revolt in 1846, California gained its independence from Mexico and the United States gained control of the territory. California became the 31st state on September 9, 1850. Although the Treaty of Hidalgo promised that all property belonging to the Californios would be respected, the Land Act of 1851 required all land grant owners to prove their title and ownership rights. Bidwell filed a claim and patented the Rancho Los Ulpinos land grant in 1866. Meanwhile, Rancho Los Ulpinos was subdivided into 20 parcels and sold in 1855. In 1857, Colonel N.H. Davis purchased a parcel and founded the town of Rio Vista, originally called "Brozos del Rio." The town included a wharf that could accommodate daily steamers traveling up to Sacramento.

American Period (A.D. 1850 to present)

The discovery of gold in the Sierra Nevada in 1849 prompted a population surge throughout Northern California. The increased demand for supplies and provisions also increased the volume and market value of livestock, timber, and agricultural products. Additional changes in land use involved widespread logging, which greatly accelerated with the increased demand for railroad ties, mine timbers, and building materials.

Sherman Island, located at the extreme western end of the Delta, was the first of the "peat islands" to install levees. The reclamation of Sherman Island began in

July 1865, and the entire levee was completed in 1869. Originally the levee was a 3- to 5-foot wall built from local peat soils. After a series of damaging floods in the 1870s through the early 1900s, privately owned and funded reclamation districts attempted to rebuild the levees using Chinese labor. With flood damage occurring more or less every year, the local reclamation districts experimented with alternative materials and construction methods for levee building, eventually using dredged materials. In 1913, the U.S. Army Corps of Engineers began work on widening and deepening the Sacramento River. In conjunction with the State of California and landowners in the San Joaquin–Sacramento Drainage District, millions of cubic yards of spoils were used to construct new levees. Numerous systematic modifications and rehabilitation projects occurred throughout the 20th century, including levee slope repairs, addition of riprap splash caps, raising of levee crowns, and road replacements and repairs.

Before 1921, the southern tip of Brannan Island was a swampy portion of the Delta. The area was later acquired by the Sacramento–San Joaquin Drainage District for the State Reclamation Board for use by the U.S. Army Corps of Engineers. Between 1926 and 1929, the swamp was filled with sand and silt that was dredged and pumped from the Sacramento River to widen the channel for shipping. Spoils from the dredging were used to raise the elevation of the area some 20–40 feet above the water level, making it the highest spot east of the Sacramento River for miles. Eventually, Brannan Island SRA was established on the spoils pile.

3.5.1.3 Records Search Results

Padre Associates completed a review of PG&E's Confidential Cultural Resources Database on August 9, 2024. The search included a review of all recorded historic-era and precontact archaeological sites within a 0.5-mile radius of the Project work areas, and of known cultural resource surveys and technical reports.

The records search identified 37 previous cultural resource studies within a 0.5-mile radius of the Project area, 12 of which included portions of the Project area. Six previously recorded cultural resources are documented in and within a 0.5-mile radius of the Project area. Two of these six resources are within the Project area: P-34-000553, Sherman Island Levee, and P-34-005225, Sacramento River Tribal Cultural Landscape.

P-34-000553. In 2006, JRP Historical Consulting recorded and evaluated the Sherman Island Levee and recommended the resource as not eligible for listing

on the National Register of Historic Places or the California Register because of lack of significance and integrity.

P-34-005225. The Project area is located within the Sacramento River Tribal Cultural Landscape, a 55-mile-long corridor of the Lower Sacramento River extending from the confluence with the Mokelumne River at Collinsville north to the confluence with the Feather River at Verona. The character-defining features of this landscape are the waterways, tule habitat, fisheries, and other wildlife.

This resource is eligible for the National Register of Historic Places and California Register of Historical Resources (California Register) under Criterion A/1 for its association with the cultural practices and beliefs of the Nisenan and Plains Miwok, maintaining the continuing cultural identity of the living descendants, and contributing to the broader patterns of prehistory.

See Section 3.6, *Tribal Cultural Resources*, for the results of the Sacred Lands file search from the Native Americal Heritage Commission.

3.5.1.4 Cultural Resources Surveys

Padre archaeologists conducted a pedestrian survey of the Project area on August 14 and 15, 2024, to examine the ground surface for evidence of archaeological materials. All exposed soils were inspected for precontact archaeological materials (e.g., stone tools, lithic debitage, ground stone), historic-period artifacts (e.g., metal, glass, ceramics), and discoloration that might indicate the presence of archaeological deposits. Survey transects were spaced at intervals of no more than 5 meters, where feasible. Ground visibility ranged from 0 to 100 percent with asphalt, gravel, and dense vegetation accounting for areas of lesser visibility. The survey did not identify any surface indications of archaeological resources.

A search was also conducted of the Commission's Shipwrecks Database, which did not identify any known recorded shipwreck sites in the Project vicinity.

3.5.2 Regulatory Setting

Federal and State laws and regulations pertaining to cultural resources that are relevant to the Project are identified in Appendix A. Local regulations including applicable county general plan policies are identified in Appendix B.

3.5.3 Impact Analysis

The Project involves pipeline removal and remediation within the Sacramento River Tribal Cultural Landscape, a historical resource, and construction-related ground disturbance that could uncover previously unrecorded archaeological resources.

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

Less than Significant Impact

Two previously recorded resources are within the Project area: the Sherman Island Levee (P-34-000553) and the Sacramento River Tribal Cultural Landscape (P-34-005225). The Sherman Island Levee (P-34-000553) does not meet the criteria for listing in the California Register because of a lack of historical significance and integrity; therefore, it is not considered a historical resource for the purposes of CEQA.

The Project would remove existing inactive pipelines and place rock material to remediate existing, exposed pipelines within the boundaries of the Sacramento River Tribal Cultural Landscape (P-34-005225), which is considered a historical resource for the purposes of CEQA. However, the Project would not demolish or alter physical characteristics, nor would it change elements within the historic setting of the Sacramento River Tribal Cultural Landscape (P-34-005225). Therefore, the Project would not have the potential to cause a substantial adverse change to the significance of the Sacramento River Tribal Cultural Landscape (P-34-005225), as defined in section 15064.5 of the CEQA Guidelines.

Based on the above assessment, the Project would have a less-than-significant impact on historical resources.

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

Less than Significant with Mitigation

No surface indications of archaeological resources were identified during the pedestrian survey. The results of the records search of PG&E's Confidential Cultural Resources Database indicate that no previously recorded archaeological resources were identified in or within 0.5 mile of the Project area. In addition, the Project area lacks stable land surfaces that would have been available for

human habitation, and the potential to encounter buried archaeological resources is considered low. However, excavations for the Project could encounter archaeological deposits and result in an adverse change to a buried archaeological deposit that could qualify as a historical resource and/or an archaeological resource. Thus, potentially significant impacts related to buried archaeological deposits could result from Project construction. Implementation of **MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources** would ensure that in the event of a discovery of a previously unknown cultural or tribal cultural resource, all personnel know how to proceed, and further disturbance would halt until the resource has been appropriately assessed and treated, if necessary. With the implementation of this measure, the impact would be less than significant.

MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources.

If any potential tribal cultural resources, archaeological resources, or other cultural resources are discovered by the designated on-site archaeologist, the Tribal Monitor(s) from the United Auburn Indian Community (UAIC) and other monitor(s) if one is requested by an affected tribe or other Project personnel during construction activities, all work shall cease within 100 feet of the find or an agreed-upon distance based on the Project area and the nature of the find. The work stoppage shall remain in place until (a) the PG&E cultural resource specialist, the designated on-site archaeologist, and the Tribal Monitor(s) have jointly determined the nature of the discovery and (b) either the archaeologist/cultural resources specialist (for cultural resources) or the Tribal Monitor(s) (for tribal cultural resources) has determined the significance of the discovery. <u>If the discovery is located within the Brannan Island State Recreation Area, the California Department of Parks and Recreation shall be notified and consulted prior to any continuation of ground disturbance.</u> Tribal cultural resources shall not be photographed or subjected to any studies beyond such inspection as may be necessary to determine the nature and significance of the discovery.

If the discovery is confirmed as potentially significant or a tribal cultural resource, an Environmentally Sensitive Area will be established using fencing or other suitable material to protect the discovery during subsequent investigation. No ground-disturbing activities will be permitted

within the Environmentally Sensitive Area until the area has been cleared for construction. The exact location of the resources within the Environmentally Sensitive Area must be kept confidential, and measures shall be taken to secure the area from site disturbance and potential vandalism. Impacts on previously unknown significant cultural and tribal cultural resources shall be avoided through preservation in place if feasible.

If the on-site archeologist or Tribal Monitor(s), as appropriate, determines that damaging effects on the cultural or tribal cultural resource can be avoided in place, then work in the area may resume, provided that the area of the discovery remains clearly marked for no disturbance. 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

No human remains are known to be in or near the Project site. Although unlikely, unmarked burials could be unearthed during subsurface construction activities; consequently, the Project could disturb human remains, including those interred outside of formal cemeteries. Implementation of **MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains** 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 implementation of this measure, the impact would be less than significant.

MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains.

If human remains or associated grave goods (e.g., non-human funerary objects, artifacts, animals, ash, or other remnants of burning ceremonies) are encountered, all ground-disturbing activities shall halt within 100 feet of the discovery or other agreed-upon distance based on the Project area and the nature of the find. The remains will be treated with respect and dignity and in keeping with all applicable laws including California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98. If representatives are not already on-site when a

discovery is made, the Project archaeologist or their designated on-site cultural resources specialist, tribal representative(s), the Applicant, and the CSLC shall be notified immediately. The archaeologist shall contact the County Coroner within 24 hours. If human remains are determined by the County Coroner to be of Native American origin, the County Coroner shall notify the Native American Heritage Commission within 24 hours of this determination, and the Native American Heritage Commission shall identify a Most Likely Descendent. No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented. Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will not be governed by public disclosure requirements of the California Public Records Act (California Government Code §6250 et seq.).

3.5.4 Mitigation Summary

Implementation of the following mitigation measures would reduce potential 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

TRIBAL CULTURAL RESOURCES - 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:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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

The Project area includes the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County, in the Delta region of California's Central Valley.

The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County. These activities would use commercial vendors and ports and travel via designated truck haul routes and established shipping routes and would not create new disturbance associated with implementation of the Project. Therefore, the following discussion focuses on the tribal cultural resources setting and impacts of the Project work areas in the Threemile Slough vicinity.

3.6.1.1 Ethnographic Context

The Project area is located within territory traditionally associated with the Eastern Miwok. For thousands of years, the many cultures and bands of the Eastern Miwok people have inhabited the area from:

- Present-day Walnut Creek in Contra Costa County to the Delta;
- Along the lower Mokelumne and Cosumnes rivers and along the Sacramento River from present-day Rio Vista to Freeport;
- The foothill and mountain areas of the upper Mokelumne River and Calaveras River watersheds;
- The upper Stanislaus River and Tuolumne River watersheds; and
- The upper Merced River and Chowchilla River watersheds.

These bands and communities, including the Bay, Plains, Northern Sierra, Central Sierra, and Southern Sierra Miwok, were culturally diverse and thriving long before the disruptions brought by Spanish invasion and the establishment of the mission system, and they remain so today.

Historically, no single Miwok tribal organization encompassed all the speakers of Miwokan languages, nor was there a single tribal organization that encompassed an entire division. The Plains Miwok lived along both sides of the Sacramento River from approximately 5 miles south of its confluence with the American River downstream to Rio Vista. Today, Native people of Miwok descent continue to inhabit their ancestral homeland, actively revitalizing their language, cultural practices, and traditional ecological knowledge. They remain deeply connected to the land, protecting sacred places, restoring cultural landscapes, and advocating for continued access to practice traditional lifeways in an environment that has been heavily altered through development.

Aside from tobacco, the Eastern Miwok did not cultivate plants, nor did they domesticate animals other than the dog. Subsistence was primarily focused on

gathering 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 large mammals such as mule deer (*Odocoileus hemionus*), tule elk (*Cervus nannodes*), and pronghorn antelope (*Antilocarpa americana*). Other important food sources, particularly for the Plains Miwok, included freshwater fish such as lampreys and sturgeon and game birds such as quail and various species of waterfowl. Salmon was preeminent among the Eastern Miwok, with trout holding a similar preeminence for those living in the mountains. Fishing was accomplished through a variety of techniques that included cast netting, drag nets towed behind tule rafts, stationary nets placed across narrow waterways, and, for larger species such as salmon, harpooning and spearing. The Bay Miwok in particular used milkweed (*Asclepias* spp.), California fremontia (*Fremontodendron californicum*), and Indian hemp (*Apocynum cannabinum*) in net-making for fishing activities. Freshwater clams, mussels, and land snails were also gathered from riverine environments.

The Miwok primarily used the bow and arrow for both large game hunting and warfare. Bows were generally sinew-backed, and large-game hunting arrows would often feature a detachable foreshaft that would remain in the prey even if the main shaft were broken or removed. Miwok inhabiting lower elevations would select wood from ash (*Fraxinus latifolia*), oak (*Quercus* spp.*),* willow (*Salix* spp.), pepperwood, maple, and hazel to construct their arrow shafts.

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." The coiled technique was often employed for crafting winnowing trays (a flat, woven tray used for separating grain from chaff), parching baskets, and various types of truncated conical baskets. Other Miwok textiles included tule mats, which were used extensively by the Plains Miwok.

The Eastern Miwok made several distinct types of dwellings. The Bay Miwok used a thatched structure, which used poles to form an inner, conical frame, over which was arranged thatching of brush, grass, or tule. Other Miwok structures included assembly houses that were 40–50 feet in diameter, semisubterranean, 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 2–3 feet deep.

Across the region, Miwok peoples continue to maintain cultural continuity, strengthen community ties, and practice traditions that have shaped their homelands since time immemorial.

3.6.1.2 Tribal Coordination

The Commission contacted the Native American Heritage Commission (NAHC), which maintains two databases, the Sacred Lands File and Native American Contacts, to assist cultural resources specialists in identifying cultural resources of concern to California Native Americans. Commission staff contacted the NAHC to obtain information about known cultural and tribal cultural resources and request a list of Native American tribal representatives who may have geographic or cultural affiliation in the Project area. The NAHC responded on October 6, 2025, stating that the Sacred Lands File database did not include any previously identified sacred sites in the Project area. The NAHC also forwarded a list of 31 tribal contacts for 13 Native American tribes. Two tribes on the NAHC list have geographic and cultural affiliation in Sacramento County and have submitted a written request to the Commission for notification of CEQA projects pursuant to Public Resources Code § 21080.3.1. (Assembly Bill 52 Chapter 532, Statutes of 2014).

On December 2, 2025, the Commission sent Project notification letters and an invitation to consult under Assembly Bill 52 to the United Auburn Indian Community of the Auburn Rancheria and the Wilton Rancheria. The Commission also notified the 11 other tribes on the NAHC contact list to ensure that all tribes would have an opportunity to provide meaningful input on the potential for tribal cultural resources to be found in the Project area and recommend steps to be taken to ensure that adverse impacts on tribal cultural resources are avoided.

The outreach letters were sent to chairpersons and representatives of the following tribes:

- Buena Vista Rancheria of Me-Wuk Indians
- Calaveras Band of Mi-Wuk Indians
- California Valley Miwok Tribe
- Chicken Ranch Rancheria of Me-Wuk Indians
- Confederated Villages of Lisjan Nation
- Guidiville Rancheria of California
- Ione Band of Miwok Indians

- Jackson Rancheria Band of Miwuk Indians
- Nashville Enterprise Miwok-Maidu-Nishinam Tribe
- Northern Valley Yokut/Ohlone Tribe
- Pakan'yani Maidu of Strawberry Valley Rancheria

The Commission received a response to the Assembly Bill 52 notification letter from the United Auburn Indian Community of the Auburn Rancheria. The tribe did not request consultation but requested that a tribal monitor be present during ground-disturbing work. The Confederated Villages of Lisjan Nation also responded; they indicated that the project is outside of their traditional territory and deferred to affiliated tribes. As of the Draft IS/MND's publication, no other tribes have responded to the outreach letters for the Project.

3.6.2 Regulatory Setting

Federal and State laws and regulations pertaining to tribal cultural resources that are relevant to the Project are identified in Appendix A. Local regulations including applicable county general plan policies are identified in Appendix B.

3.6.3 Impact Analysis

The Project work areas in Sacramento County involve construction-related ground disturbance that could uncover previously unrecorded tribal cultural resources.

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

The results of the records search of PG&E's Confidential Cultural Resources Database as described in Section 3.5, *Cultural Resources*, indicate that the Project area is within the boundaries of the Sacramento River Tribal Cultural Landscape (P-34-005225), which is eligible for listing in the California Register of Historical Resources (California Register). The Project would remove existing pipelines and place additional rock to remediate existing, exposed pipelines; however, it would not demolish or alter physical characteristics, nor would it change elements within the historic setting of the Sacramento River Tribal Cultural Landscape (P-34-005225). Therefore, the Project would not have the potential to cause a substantial adverse change to the significance of the Sacramento River Tribal Cultural Landscape (P-34-005225).

As discussed in Section 3.5, *Cultural Resources*, archaeological deposits that qualify as tribal cultural resources could be encountered during Project excavation. Such resources could be eligible for listing in the California Register or a local register of historical resources, or the lead agency, in its discretion and supported by substantial evidence, could determine the resources to be significant pursuant to the criteria set forth in Public Resources Code section 5024.1, subdivision (c). Should deposits be encountered during Project excavation, this could result in an adverse change to a tribal cultural resource. Thus, significant impacts related to tribal cultural resources could result from construction of the Project. Implementation of **MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources** and **MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains** (see Section 3.5, *Cultural Resources*) would ensure that impacts related to any tribal cultural resources or the unanticipated discovery of human remains that may be encountered during Project excavation would be less than significant.

3.6.4 Mitigation Summary

Implementation of the following mitigation measures would reduce potential 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

Electricity and natural gas in both Solano County and Sacramento County are provided by PG&E (PG&E 2014a, 2014b) and delivered through its network of existing electric facilities, such as the natural gas pipelines associated with the Project (L-131Y and L-131Z). A buried natural gas pipeline owned and operated by a third party, Lodi Gas Storage, extends from Brannan Island SRA across Threemile Slough and through Sherman Island, underlying the northern sections of the L-131 East and L-131 West pipelines proposed for removal.

The Project would include the use of gasoline and diesel fuels during construction activities. Gasoline is the most commonly used transportation fuel by volume in California, with 97 percent of all gasoline in use by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2026a). Diesel fuel is the second most commonly used transportation fuel by volume in California, with 17 percent of all fuel sales; nearly all heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, construction equipment, and military vehicles and equipment have diesel engines (CEC 2026b). In 2024, Sacramento County consumed an estimated 540 million gallons of gasoline and 51 million gallons of diesel, while Solano County consumed an estimated 185 million gallons of gasoline and 28 million gallons of diesel (CEC 2026c).

3.7.2 Regulatory Setting

No major federal laws, regulations, or policies regarding energy are applicable to the Project.

In efforts to reduce greenhouse gas emissions and associated climate change impacts, State and local government agencies have implemented policies and initiatives aimed at reducing non-renewable fuel use, increasing energy efficiency, and encouraging the adoption of renewable energy resources. California has adopted significant reduction targets and strategies in the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), which lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279 (CARB 2022). Additional State laws and regulations pertaining to energy and relevant to the Project are identified in Appendix A.

At the local level, Sacramento County and Solano County have both implemented respective climate action plans, which identify strategies and measures to reduce greenhouse gas emissions and align with the intent of the State's reduction targets (Sacramento County 2024b; Solano County 2011). Additional local regulations including applicable county general plan policies are identified in Appendix B.

3.7.3 Impact Analysis

Project implementation would temporarily increase demand for non-renewable energy (diesel fuel and gasoline) to operate vehicles, vessels, and construction equipment; however, Project implementation would not result in an increase in future maintenance-related energy demand (diesel fuel and gasoline).

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

Less than Significant Impact

The Project would involve the use of heavy equipment, motor vehicles, and vessels, all powered by non-renewable, petroleum-based fuel sources for remediation (L-131Y and L-131Z) and removal (L-131 East and L-131 West) of the existing natural gas pipelines. As such, Project activities would result in temporary consumption of energy resources, including gasoline and diesel fuel. The Project would include temporary use of electricity for nighttime lighting; however, the

Project does not include components which would result in a permanent demand for electricity. Further, although the Project would remove previously decommissioned natural gas infrastructure, the Project would not include the use of natural gas, or result in an increased need or decreased supply of these resources.

Pipeline remediation and removal would be conducted in an efficient manner, such that consumption of energy resources would not be wasteful, inefficient, or unnecessary. As identified in Appendix B, Sacramento County and Solano County require the use of energy-efficient technology and practices to minimize emissions and maximize energy efficiency. In addition, Appendices A and B list State and local requirements to restrict equipment idling and other practices that would unnecessarily consume fuel.

The use of fuels for Project construction would be temporary and limited to construction activities, lasting approximately 3 months. Through remediation of the active L-131Y and L-131Z pipelines, the Project would also reduce the risk of accidental release of natural gas resources that could occur if exposed pipelines were damaged. Therefore, the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and impacts would be less than significant.

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

Less than Significant Impact

The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Although the Project would result in the temporary use of gasoline and diesel fuels during the 3 months of construction activities, the Project would not result in a permanent increase in the use of gasoline or diesel fuels in the Project area or conflict with the goals of State and local plans, including the County of Sacramento General Plan and Climate Action Plan and the Solano County General Plan and Climate Action Plan (see Appendix B). Rather, the Project would allow for the continued use of existing infrastructure, while reducing the risk of damage that could result in gas leaks and service interruptions.

Additionally, as mentioned above, the Project would include the use of energy-efficient technology and practices to minimize emissions and maximize energy

efficiency. Importantly, the Project would not obstruct future implementation of renewable energy projects, as it would not include any changes to existing land uses or introduce new permanent aboveground structures that could prevent development of such projects. Therefore, less-than-significant impacts would occur.

3.7.4 Mitigation Summary

The Project would not result in significant impacts related 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?	☐	☐	☐	☒

GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES - Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.8.1 Environmental Setting

The Project work areas include the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County. The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County. Because these activities would use commercial vendors and ports and travel via designated truck haul routes and established shipping routes, there is no relevant geologic setting to discuss for those areas. Therefore, the following discussion focuses on the geologic setting of the Project work areas in Sacramento County.

3.8.1.1 Regional and Site Geomorphology and Geology

The Project area is in the Sacramento-San Joaquin Delta, within the Great Valley geomorphic province in California's Central Valley. The Great Valley geomorphic province is characterized by an alluvial plain, about 50 miles wide and 400 miles long, that is located between the Coast Ranges and the Sierra Nevada. It is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. To the north, the Sacramento Valley floodplain is interrupted by the Sutter (Marysville) Buttes, an isolated Plio-Pleistocene volcanic plug about 2,000 feet high. The valley is filled with nearly flat-lying sediments as much as 20,000–40,000 feet thick (Fuller et al. 2015).

3.8.1.2 Project Area Geomorphology and Geology

The channel of Threemile Slough was mapped by Wagner and Gutierrez (2017) as composed primarily of Holocene mud. Sherman Island is underlain primarily by Holocene Delta mud. Brannan Island is underlain primarily by dredge spoils (Wagner and Gutierrez 2017; Dawson 2009).

3.8.1.3 Seismicity and Seismic Hazards

"Faults" are planar features within Earth's crust that have formed to release strain caused by the dynamic movements of its major tectonic plates. An earthquake is produced when these strains overcome the inherent strength of Earth's crust and the rock ruptures along a fault line. The rupture causes seismic waves that propagate through the crust, producing the ground-shaking effect of an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at Earth's surface.

Geologists commonly use the age of offset rocks as evidence of fault activity: The younger the displaced rocks, the more recently the earthquakes have occurred. To evaluate the likelihood that a fault would produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. The California Geological Survey defines an "active fault" as one that has had surface displacement within Holocene time (within the last 11,700 years); the U.S. Geological Survey uses displacement within the last 15,000 years to define an active fault. A "Quaternary fault" is defined as a fault that has shown evidence of surface displacement during the Quaternary period (the last 2.6 million years) unless direct geologic evidence demonstrates inactivity during the Holocene or longer.

The State of California has established "Alquist-Priolo Special Studies Zones" in areas where Holocene faults pose a risk of surface fault rupture or displacement. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates the construction and development of buildings intended for human occupancy to avoid rupture hazards from surface faults.

Based on the available geologic data, the Project area is not in a designated Alquist-Priolo Earthquake Fault Zone (CGS 2024). There are three faults within 10 miles of the Project area (**Table 3.8-1**).

Table 3.8-1. Faults within 10 Miles of the Project Area

Fault Name	Age	Sense of Slip	Approximate Distance from the Project Area
Rio Vista Fault	Late Quaternary	Unspecified	1.5 miles west
Midland Fault Zone	Undifferentiated Quaternary	Reverse	2 miles east
Davis Fault	Undifferentiated Quaternary	Unspecified	10 miles southwest

Source: CGS 2015

The nearest active faults include the Concord and Green Valley faults, located more than 20 miles west of the Project area, and the Hayward Fault, located 35 miles west of the Project area.

"Liquefaction" occurs where strong ground motions produce a rise in pore water pressures that in turn causes granular material to briefly lose strength and behave like a liquid. This can lead to settlement, lateral spreading, and damage to structures, even in areas of flat topography. Ground motions have the potential to trigger liquefaction in areas of water-saturated, loose unconsolidated granular sediment. The risk of liquefaction is highest in areas with high predicted ground motions, unconsolidated sediments, and shallow groundwater.

The Project area has not been evaluated for liquefaction by the California Geological Survey. However, Bradford Island, located approximately 1.75 miles south of the Project area, is mapped as a liquefaction zone (CGS 2024). Groundwater in the Project area is expected to be shallow; therefore, the Project area is susceptible to liquefaction.

3.8.1.4 Soil Characteristics

The Project area comprises three work areas: two terrestrial work areas located at Brannan Island SRA and on Sherman Island, and one marine/riverine work area. The soils underlying the Brannan Island SRA work area are classified as 244-xeropsamments, 1–15 percent slopes, or artificial levee fill. The soils underlying the Sherman Island work area are classified as 139-Egbert Clay, 0–2 percent slopes. Xeropsamments, 1–15 percent slopes, is described as moderately well-drained dredge piles deposited on floodplains or natural levees. Hazards include erosion and unstable cutbanks subject to sloughing.

Egbert clay, 0–2 percent slopes, is described as poorly drained with a high water table and subject to subsidence with a high shrink-swell potential (NRCS 2026).

Landslides

Landslide is a general term used to describe the downslope movement of soil, rock, and organic material under the effects of gravity. Landslides can be caused by natural events (e.g., rainfall, earthquakes, and soil erosion) or human activities (e.g., grading) that can result in unstable slopes. Important factors affecting slope stability include the steepness of the slope and the strength of rock or soil materials.

The ground surface in the Project area includes slopes for levees but is otherwise relatively flat. No records of major landslides were found for the Project area; The USGS maps the bank around Brannan Island as moderately susceptible to landslides (USGS 2026). However, the USGS mapping is generalized and at a large scale. The actual site is well vegetated, has rip-rap at the toe of the slope, and has not experience landsliding.

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. However, extraction–induced subsidence is not currently considered the primary driver of subsidence within the Project area. In the present day, land subsidence in the Delta is caused primarily by microbial oxidation of organic or peat deposits. Subsidence rates on Sherman Island are between 0 and 0.41 centimeter per year (Deverel et al. 2016). The Deveral study notes that subsidence is largely driven by agricultural activities (the proposed staging area is not under active agricultural use) and suggests mitigation if the amount of subsidence exceeds about 0.4 centimeter per year.

3.8.2 Regulatory Setting

Federal and State laws and regulations pertaining to geology, soils, and paleontological resources that are relevant to the Project are identified in Appendix A. Local laws and regulations pertaining to geology, soils, and paleontological resources, including applicable county general plan policies, are identified in Appendix B.

3.8.3 Impact Analysis

The Project area is not in proximity to an active fault; however, the Project area may be subject to seismic shaking and liquefaction, and the coastline of Brannan Island is potentially susceptible to landslides. Project activities as they relate to geology, soils, and paleontological resources include temporary removal of topsoil and native soils during excavation activities and temporary disturbance of deposits along the riverbed of Threemile Slough (Holocene Delta mud and dredge spoils).

Project activities occurring in Solano County include equipment mobilization, materials hauling, and waste disposal. These activities would occur at existing industrial facilities (e.g., CS Marine, Vulcan Materials Company) and marine vessel and haul vehicle travel would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and recreational watercraft and vehicles. These activities do not have the potential to impact geology and soils; accordingly, the analysis below focuses on geology and soils at the Project work areas located within Sacramento County.

a) Would the Project 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?

Less than Significant with Mitigation

As discussed in Section 3.8.1, Environmental Setting, the Project area is not located within any Alquist-Priolo fault zones (CGS 2024), and the nearest known active fault (the Clayton Fault) is approximately 20 miles to the southwest. However, the Project area may be subject to seismic shaking and liquefaction during a seismic event because of the relatively shallow groundwater table.

The Project would remove the inactive L-131 East and West pipelines, portions of which lie within Brannan Island, Sherman Island, and Threemile Slough. The Project would also involve the remediation of the active L-131Y and L-131Z pipelines within Threemile Slough. The Project would not introduce any new, permanent structures that would be susceptible to adverse effects related to seismic hazards.

Project construction and implementation would involve ground disturbance that would have the potential to disturb slope stability. However, all terrestrial excavations would be conducted in accordance with standards established by the U.S. Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health (Cal/OSHA) to avoid cutback sloughing. Additionally, excavations along the Sherman Island levee would be performed in accordance with requirements of the agencies responsible for the levee: the Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and Sherman Island Reclamation District 341. Furthermore, the Project would implement a Project work and safety plan (PWSP), as required under **MM HAZ-1: Project Work and Safety Plan** (see Section 3.10, *Hazards and Hazardous Materials*). The Project work and safety plan (PWSP) would include emergency protocols and other safety measures that would prevent substantial adverse effects during Project construction.

Once pipeline removal is completed, terrestrial excavation areas would be recontoured and existing topsoil and riprap would be replaced, as described in Section 2.4.1.3, *Excavation Backfill and Compaction*, in accordance with required regulations, ensuring slope stability. In addition, implementation of **MM BIO-14: Site Restoration and Riparian Mitigation Plan** would ensure the restoration of vegetation on the north and south banks of Threemile Slough.

Therefore, although the Project would temporarily increase soil instability during pipeline removal, pipeline removal activities would be conducted in accordance with OSHA and Cal/OSHA standards. Additionally, the Project would be required to implement a PWSP under **MM HAZ-1**, which includes emergency protocols in the event of slope or soil failure, and the north and south banks would be restored with general site restoration (Section 2.5) and implementation of **MM BIO-14**. The Project is not expected to have substantial, permanent effects related to site stability during a seismic event, because the Project area would be remediated in accordance with regulatory agency requirements and because the Project would not introduce any additional,

permanent structures in the Project area. Impacts would be less than significant with mitigation.

b) Would the Project result in substantial soil erosion or the loss of topsoil?

Less than Significant with Mitigation

Topsoil would be temporarily removed during excavation and pipeline removal. However, this topsoil would be replaced as part of backfilling and site restoration and would not be lost as a result of Project activities. Additional fill material may be imported as needed to restore the excavation areas to pre-Project contours. Excavation on the bank of the Brannan Island SRA work area would be compacted to match the relative compaction of adjacent, undisturbed soils. Restoration of the Sherman Island levee's post–pipeline removal area would be conducted in accordance with agency requirements, as discussed above. Vegetation removed during Project activities would be restored in accordance with **MM BIO-14**. Marine excavation and sedimentation are discussed in Section 3.11, *Hydrology and Water Quality*.

Additionally, **MM HYDRO-1: Stormwater Pollution Prevention Plan** (see Section 3.11, *Hydrology and Water Quality*) requires a stormwater pollution prevention plan (SWPPP) that would include erosion and sediment control best management practices and housekeeping measures to be implemented during Project activities. These best management practices include source control measures such as wetting of dry and dusty surfaces to prevent fugitive dust emissions, preservation of existing vegetation, 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. With implementation of these mitigation measures, the impact would be less than significant with mitigation.

c) Would the Project 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 with Mitigation

As discussed in Section 3.8.1, *Environmental Setting*, the Project area on Sherman Island, which would be used for staging activities, experiences some naturally occurring subsidence as a result of the compression of peat materials. However,

the Project would not result in the construction of any new structures or pipelines that could permanently cause geologic units or soil to become unstable.

Project excavation activities for terrestrial and marine pipeline removal would have the potential to result in temporary geological or soil instability. All Project excavations would be conducted in accordance with OSHA and Cal/OSHA standards, which would minimize effects related to soil instability during Project activities. Additionally, the Project would implement a SWPPP under **MM HYDRO-1**, which would require implementation of soil stability measures to prevent on- or off-site runoff. Restoration of the Brannan Island SRA and Sherman Island work areas would use the same native earth material to backfill excavation along Brannan and Sherman islands. Levee reconstruction and restoration would be conducted in accordance with agency guidelines. Therefore, although the Project would temporarily result in geologic or soil instability, with implementation of mitigation, the impacts would be less than significant.

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

No Impact

The soils present in the Project area have been identified as potentially expansive. However, the Project would not result in any permanent new structures that would create a substantial risk to life or property as a result of their location in expansive soils. Therefore, no impact would occur.

e) Would the Project 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

No septic tanks or alternative wastewater disposal systems are proposed as part of the Project. Therefore, no impact would occur.

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

Less than Significant Impact

Geologic units in the Project area consist of Holocene Delta mud and dredge spoils. Although these geologic deposits are considered too young to have a

high potential for paleontological resources, these units may be underlain by more sensitive geologic formations, such as the Montezuma Formation.

However, excavation for the Project would occur primarily in previously disturbed areas along the existing pipelines. Therefore, Project activities are not anticipated to directly or indirectly destroy a unique paleontological resource or geologic feature, and impacts would be less than significant**.**

3.8.4 Mitigation Summary

Implementation of the following mitigation measure(s) would reduce potential Project-related impacts related to geology, soils, and paleontological resources to less than significant.

MM BIO-14: Site Restoration and Riparian Mitigation Plan

MM HAZ-1: Project Work and Safety Plan

MM HYDRO-1: Stormwater Pollution Prevention Plan

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) trap heat in the atmosphere by preventing some of the solar radiation that hits the earth from being reflected back into space. Some GHGs occur naturally and are needed to keep the earth's surface habitable. However, over the past 100 years, human activities have substantially increased the concentration of GHGs in our atmosphere. This has intensified the natural greenhouse effect, increasing average global temperatures.

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO_2, CH_4, and N_2O occur naturally and are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing, natural gas leaks from pipelines and industrial processes, and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. N_2O emissions are also largely attributable to agricultural practices and soil management. Other human-generated GHGs include fluorinated gases such as HFCs, PFCs, and SF_6, which have much higher heat-absorption potential than CO_2 and are byproducts of certain industrial processes.

CO_2 is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs has on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. For example, CH_4 and N_2O are substantially more potent GHGs than CO_2, with GWPs of 25 and 298 times that of CO_2, respectively, which has a GWP of 1 (CARB 2026).

In emissions inventories, GHG emissions are typically reported as metric tons of CO_2 equivalent ($MTCO_2e$). CO_2e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in higher quantities and it accounts for the majority of GHG emissions in CO_2e, both from commercial developments and human activity in general.

The Project work areas are located in Sacramento County, which is within the Sacramento Valley Air Basin, where air pollutants are managed by the Sacramento Metropolitan Air Quality Management District (SMAQMD). In addition, the Project involves marine equipment mobilization and materials hauling and disposal in Solano County within the Yolo Solano Air Quality Management District (YSAQMD), using designated truck haul routes and established shipping routes through the Carquinez Strait, Suisun Bay, and up the Sacramento River.

3.9.2 Regulatory Setting

Federal and State laws and regulations pertaining to GHG emissions and relevant to the Project are identified in Appendix A. Local regulations including applicable County General Plan policies are identified in Appendix B.

Various entities address GHG emissions at the State and regional levels. In efforts to reduce and mitigate climate change impacts, State and local governments are implementing policies and initiatives aimed at reducing GHG emissions. California, one of the largest State contributors to the national GHG emissions inventory, has adopted significant reduction targets and strategies. The State Legislature passed Senate Bill (SB) 32 (Pavley; Chapter 249, Statutes of 2016), which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation AB 197 (Eduardo Garcia; Chapter 250, Statutes of 2016), which provided direction for developing

the California Air Resources Board's (CARB) Scoping Plan for Climate Change. The 2022 Scoping Plan, adopted by CARB in December 2022, expands on prior Scoping Plans and responds to AB 1279 (Chapter 337, Statutes of 2022) by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the State's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier (CARB 2022). The Sacramento County Climate Action Plan (CAP) was adopted by the Board of Supervisors on November 5, 2024. The CAP serves as a comprehensive plan to reduce GHG emissions through identifying strategies and measures to meet State GHG emissions reduction targets for 2030 and 2045. The CAP also focuses on measures that would help to reduce GHG emissions associated with the implementation of the General Plan, as well as aligns with other County emission reduction initiatives (Sacramento County, 2024). The following measure and associated action would be applicable to the Project:

- **CAP MEASURE GHG-16: Expand the Use of Zero-Emission Construction and Agricultural Equipment.** Through this measure, the County intends to develop a pathway to phase out fossil-fuel-powered construction and agricultural equipment and encourage the use of zero-emission equipment, including electric and hydrogen powered equipment. The County will promote existing incentives and conduct targeted outreach.
  - **Action GHG-16-e:** Require that all projects implement SMAQMD Basic Construction Emission Control Practices (Best Management Practices) for reducing construction emissions as part of project conditions of approval.

The Solano County Climate Action Plan was adopted in June 2011 and does not include any applicable measures or associated actions that would be applicable to the Project.

3.9.2.1 GHG Emissions Thresholds of Significance

The SMAQMD has adopted thresholds of significance for GHG emissions for construction and operational phases of projects. Construction projects have a GHG emissions threshold of 1,100 metric tons of $MTCO_2E$ per year.

While SMAQMD identifies both construction and operational thresholds, the Project does not have operational impacts because remediated pipeline operation and maintenance activities would not be changed from existing baseline conditions; therefore, operational thresholds of significance do not apply.

The Yolo-Solano Air Quality Management District has not adopted thresholds of significance for GHG emissions. For the purposes of this analysis, Project GHG emissions will be compared to the SMAQMD thresholds to determine significance.

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

GHG emissions for heavy construction equipment and marine vessels proposed to be utilized during each phase of Project construction activities were estimated by Padre Associates using established emission factors from CARB's California Emissions Estimator Model (CalEEMod) User's Guide, Default Data Tables and the 2020 USEPA Ports Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions. Emissions associated with worker travel to and from the Project work areas and haul-truck traffic were estimated using emission factors from the CARB's 2021 EMission FACtor model. A tabulation of assumptions, references, and calculations for the Project GHG emission estimates are provided in Appendix C (Padre Associates, 2025). **Table 3.9-1** lists the estimated total Project GHG emissions calculated for each phase of Project construction. As stated above, CO_2e is calculated as the product of the mass emitted of a given GHG and its specific GWP; CH_4 has a GWP of 25 times that of CO_2, N_2O has a GWP of 298 times that of CO_2, and CO_2 has a GWP of 1. The Project does not have an operational phase since pipeline operation and maintenance activities would not change from current levels. Therefore, the Project was not evaluated as an operational project under SMAQMD thresholds of significance and only construction related GHG emissions were estimated. Total Project emissions were estimated to be 12~~0~~3 $MTCO_2e$, which is below the SMAQMD GHG significance threshold of 1,100 $MTCO_2e$ per year; therefore, the impact would be less than significant.

Table 3.9-1. Estimated GHG Emissions (Metric Tons)

Construction Phase	CO2	CH4	N2O	CO2e
Pre-Construction Debris Survey	1.11	0.00003	0.00008	1.03
Terrestrial Construction	~~46.6~~ 50.0	0.006	~~0.003~~ 0.004	~~43.3~~ 46.4
Marine Construction	81.4	0.009	0.001	74.3
Post-Construction Debris Survey	1.108	0.00003	0.00008	1.03
Project Total	~~130~~ 134	0.015	~~0.004~~ 0.005	~~120~~ 123

Construction Phase	CO2	CH4	N2O	CO2e
SMAQMD Threshold of Significance	N/A	N/A	N/A	1,100
Exceeds Threshold?	N/A	N/A	N/A	No

Note: Emissions shown above account for all construction activities, including marine equipment mobilization and materials hauling and disposal.

Source: Padres Associates, ~~2025~~ 2026

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

Less than Significant with Mitigation

The applicable plans adopted for the purpose of reducing GHG emissions are CARB's 2022 Scoping Plan Update and the Sacramento County CAP. The 2022 Scoping Plan Update contains one measure focused on emissions from construction and requires that 25 percent of energy demand from all construction equipment be electrified by 2030 and 75 percent by 2045. However, construction of the proposed Project would be complete well before 2030 and therefore would align with the State-level targets. The County CAP includes one applicable measure for construction that is focused on phasing out fossil-fuel powered construction equipment and encourages the use of zero-emissions equipment. With implementation of **MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices** (see Section 3.3, *Air Quality*), the Project would be consistent with the applicable measures in the County CAP by implementing the SMAQMD Basic Construction Emissions Control Practices. The proposed Project would generate only temporary GHG construction emissions and would not conflict with the Sacramento County CAP GHG policies or measures. Therefore, with implementation of mitigation, the impact would be less than significant.

3.9.4 Mitigation Summary

Implementation of the following mitigation measure would reduce potential Project-related impacts from greenhouse gases to less than significant.

MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices

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?	☐	☐	☐	☒

HAZARDS AND HAZARDOUS MATERIALS – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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

As discussed in Section 1.3, *Project Location*, PG&E's gas pipeline corridor is located across Threemile Slough near the northernmost point of Sherman Island and approximately 600 feet upstream of the Brannan Island SRA boat launch ramp in Sacramento County. The pipeline corridor connects gas distribution service from Brannan Island on the north to Sherman Island on the south. The Brannan Island work area consists of public land, including public trails and other recreational facilities (e.g., boat launch ramp, fishing pier, campgrounds, paved parking, and other public support facilities). The Sherman Island terrestrial work area includes the federal levee and private land. Threemile Slough is designated by the Federal Emergency Management Agency (FEMA) as a Special Flood Hazard Area (Zone AE with base flood elevation of 9 feet). Upland areas on the north side of the Project area (Brannan Island) are in areas of minimal flood hazard (Zone X) (FEMA 2023). Refer to Section 3.11, *Hydrology and Water Quality*, for further discussion related to flooding.

The Project also involves marine equipment mobilization and materials hauling and disposal using commercial vendors and ports in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait and Suisun Bay and up the Sacramento River.

3.10.2 Regulatory Setting

Federal and State laws and regulations pertaining to hazards and hazardous materials that are relevant to the Project are identified in Appendix A. Local

laws and regulations pertaining to hazards and hazardous materials, including applicable county general plan policies, are identified in Appendix B.

3.10.2.1 Definition of Hazardous Materials

A "hazardous material" is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (California Health and Safety Code §25501, subd. (n)). The term "hazardous materials" refers to both hazardous substances and hazardous wastes. Under federal and State laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

In some cases, past industrial or commercial activities on a site have resulted in spills or leaks of hazardous materials or wastes to the subsurface, resulting in soil or groundwater contamination. Depending on the type and concentration of contamination, hazardous materials can threaten human health and the environment if present in the soil, groundwater, or the air. The four primary exposure pathways through which an individual can be exposed to a hazardous material or waste are inhalation, ingestion, bodily contact, and injection. Exposure can result from an accidental release of hazardous materials during transport, storage, or handling. Disturbance of contaminated subsurface soil during construction can also cause exposure to workers, the public, or the environment through excavation, stockpiling, handling, or transport of such soils.

3.10.2.2 Hazardous Materials

In California, regulatory databases listing hazardous materials sites provided by numerous federal, State, and local agencies are consolidated in the "Cortese List" pursuant to Government Code section 65962.5, which has been in effect since 1992. However, subsequent changes to the availability of web-based information have made the consolidation of this list no longer necessary and various responsible agencies maintain the following lists and databases:

- List of hazardous waste and substances sites from the California Department of Toxic Substances Control (DTSC) EnviroStor database.

- List of leaking underground storage tank sites by county and fiscal year from the State Water Resources Control Board (State Water Board) GeoTracker database.
- List of solid waste disposal sites identified by the State Water Board with waste constituents exceeding hazardous waste levels outside the waste management unit.
- List of "active" cease and desist orders and cleanup and abatement orders from the State Water Board.
- List of hazardous waste facilities subject to corrective action pursuant to section 25187.5 of the Health and Safety Code, as identified by DTSC and listed in its EnviroStor database.

These five databases identify sites with suspected and confirmed releases of hazardous materials to subsurface soil and/or groundwater. The State Water Board's GeoTracker database includes leaking underground storage tanks, permitted underground storage tanks, U.S. Department of Defense sites, and Cleanup Program sites. DTSC's EnviroStor database includes federal and State response sites; voluntary, school, and military cleanups and corrective actions; and permitted sites. The reporting and statuses of these sites change as hazardous materials sites are identified, monitored, and cleaned up. Typically, a listed site is considered no longer to be of concern once it has been demonstrated that existing site uses combined with the levels of identified contamination present no substantial risk to human health or the environment and the case is closed by the overseeing agency.

According to a review of the GeoTracker and EnviroStor databases, the Project area is not included as an active leaking storage tank site or a Cleanup Program site, nor are there any open cases within 1 mile of the Project area (State Water Board 2026; DTSC 2026). According to GeoTracker, there are two closed clean-up sites that could have had potential impacts on groundwater quality. One site (PG&E Brannan Island [SL0606708321]) is located approximately 2,100 feet to the north on Brannan Island and the other site (PG&E Compressor K12/18 [SI0606702734]) is located approximately 3,100 feet to the south on Sherman Island. However, both sites have met regulatory standards for clean-up, indicating minimal or no lasting contamination in the vicinity of the Project area (State Water Board 2026). Additionally, per the Clean Ups in My Community database, there are no hazardous materials cleanup sites within one-quarter mile of the Project area (USEPA 2026).

3.10.2.3 Schools

No schools exist within one-quarter mile of the Project area. The nearest school, Orchard Park School, is located approximately 8.5 miles south of the Project area.

3.10.2.4 Airports

There are no public or private-use airports within 2 miles of the Project area. Rio Vista Municipal Airport is located 5 miles north of the Project area.

3.10.2.5 Wildfire Hazard

"Wildfire" is defined as an unplanned, unwanted wildland fire that can result from human-made or natural causes (California Government Code §51177). Wildland fires affect grass, forest, and brushlands, and any structures on these lands, creating the potential for injury, loss of life, and property damage. Fuel sources, topography, and climate are the primary factors influencing the degree of risk.

The Project area is not located in a High Fire Hazard Severity Zone in a State Responsibility Area, or in a Fire Hazard Severity Zone in a Local Responsibility Area (CAL FIRE 2025).

3.10.3 Impact Analysis

The Project would involve the routine use of hazardous materials that could potentially create a hazard to the environment or the public through routine or accidental conditions. However, the Project, including truck and boat routes, are not within a quarter-mile of an existing or proposed school, nor is the Project site located within two miles of an airport. Other Project activities as they relate to hazards and hazardous materials include the potential obstruction of an emergency plan or evacuation route.

a) Would the Project 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

Construction equipment, work vessels, and vehicles, described in Section 2.6, *Anticipated Project Work Schedule, Equipment, and Personnel*, would involve the use of routine hazardous materials such as petroleum products (oil, gasoline,

and diesel fuels), automotive fluids (antifreeze and hydraulic fluids), and other chemicals (e.g., adhesives, solvents).

Construction activities would be required to comply with numerous hazardous materials regulations described in Section 3.10.2, *Regulatory Setting*, as identified in Appendices A and B. These regulations are designed to ensure the safe transportation, use, storage, and disposal of hazardous materials to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. To further minimize the exposure of the public to hazardous materials, PG&E would be required to implement **MM HAZ-1: Project Work and Safety Plan.** The Project Work and Safety Plan (PWSP) would specify the means and methods that would be employed to comply with permit conditions and safety requirements during Project construction. The PWSP would apply to both the pipeline remediation and pipeline removal scopes of work within both the terrestrial and marine work areas.

The PWSP would include a Critical Operations and Curtailments Plan to identify critical operations, such as anchoring near utilities, refueling of vessels and equipment, unsafe weather conditions, and potential loss of anchorage, and would discuss curtailments or measures to avoid or mitigate risks from these critical operations, including spill prevention and clean-up measures. The PWSP would also include a marine safety and anchoring plan, which would address vessel traffic and safety. The PWSP would also include an emergency response plan, a diving safety plan, and a hazardous spill response plan. Implementation of the PWSP would minimize the exposure of the public and the environment to significant hazards through the routine transport, use, or disposal of hazardous materials. Hazardous materials training for Project work crews and environmental monitoring of remediation and removal activities by qualified personnel would be required to document compliance with CEQA mitigation measures and permit requirements. With the implementation of these measures, the impact would be less than significant.

MM HAZ-1: Project Work and Safety Plan.

A Project Work and Safety Plan (PWSP) shall be developed and submitted to CSLC staff, as well as any other pertinent agencies, for review and approval at least 30 days prior to the start of Project activities. The PWSP shall include the following (at a minimum):

- Contact Information

- Summary of the Project Execution Plan
- Emergency response plans
- Site safety plan, including measures for proper transportation, storage, and handling of hazardous materials during all stages of Project construction (including mobilization and demobilization)
- Critical Operations and Curtailments Plan
- Marine safety and anchoring plan
- Diving safety plan
- Hazardous Spills Response and Contingency Plan, which shall include details about the following:
  - Secondary containment: All hazardous materials (fuels, lubricants) shall be stored in a dedicated staging area with secondary containment (e.g., berms or spill pallets) capable of holding 110% of the largest container's volume
  - Refueling protocols: No refueling shall occur within 100 feet of the Threemile Slough bank or any active drainage.
  - Spill Clean-Up and Kits: "Type II" spill kits (absorbent pads, booms, and neutralizers) shall be maintained at each work area and on every service truck.
  - Plan for waste disposal of any hazardous materials

b) Would the Project 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 discussed above, the Project would involve the use, transportation, and disposal of hazardous materials and wastes. The Project would comply with all applicable federal and State requirements and related best management practices.

Accidental spills resulting from construction activities are typically small and localized and would be cleaned up in a timely manner in accordance with the Hazardous Spills Response and Continency Plan as part of **MM HAZ-1**. Further, construction contractors are contractually responsible for their hazardous materials

and are required by their contracts to store and dispose of these materials properly in compliance with federal and State laws. Terrestrial components of the Project would be subject to **MM HYDRO-1**: **Stormwater Pollution Prevention Plan** (see Section 3.11, *Hydrology and Water Quality*)**.** Under a SWPPP, control measures would be put in place to reduce the potential for groundwater or surface water contamination.

The L-131 East and L-131 West pipelines proposed for removal under the Project were active until approximately 1989 to 1990, when the pipelines were flushed and filled with concrete and rendered inactive. As a result, the release of hydrocarbons is not anticipated during pipeline cutting and removal. However, the pipelines are of an undetermined age and could have been installed before 1972. These pipelines could have an asphaltic pipe wrap, commonly used as insulation before the 1980s. Their removal would therefore have the potential to expose workers to asbestos, classified as a known carcinogen (National Cancer Institute 2021). PG&E and construction contractors would be required to implement **MM HAZ-2: Asbestos Exposure Minimization**. Implementation of MM HAZ-2 includes proper handling protocols by certified professionals according to air district and worker safety regulations for minimizing asbestos exposure.

Additionally, and as discussed previously, the Project would implement a PWSP under **MM HAZ-1**.

Terrestrial construction components would have the potential to interfere with existing utility lines or infrastructure, potentially resulting in the exposure of workers or the environment to hazardous materials. To minimize the potential for the accidental disturbance of underground utilities, PG&E would be required to implement pre-excavation 811 notifications, pursuant to California Government Code Section 4216, to notify owners of existing utilities, such as the nearby Lodi Gas Storage pipeline, of upcoming Project activities that may affect their infrastructure, and to request that existing pipelines be located and marked so the Project team can take appropriate measures to avoid impacts on existing pipelines. Additionally, before cutting of the two inactive pipelines that cross Threemile Sough, save-a-valves would be installed near each end of each pipeline to verify that the pipelines are not pressurized and that hydrocarbons are not present.

Additional hazardous materials that could be encountered or released during construction could include contaminated soils, incidental spill waste, and concrete washout. As a result, the potential exists to encounter contaminated

soil. Should contaminated materials be discovered, soil would be separated for on-site testing, management, and disposal, as detailed in **MM HAZ-3: Soil Testing and Disposal.** Should hazardous materials be discovered during trenching, work would cease immediately until proper soil testing is conducted and containment and disposal occur (if necessary). With adherence to **MM HAZ-3** in the event of the identification of contaminated soils or groundwater, there would be minimal effect on the public or the environment through the accidental release of hazardous materials into the environment.

After Project construction is complete, project work areas should return to baseline conditions; however, work in the Threemile Slough channel would have the potential to create a public safety hazard should significant debris be left in the channel bed. To minimize the potential for the creation of such a hazard, PG&E would adhere to **MM HAZ-4: Bathymetric Surveys and Debris Removal Measures** and conduct bathymetric and surficial features multi-beam debris surveys both pre- and post-construction to ensure that all Project-related debris is removed and that the Threemile Slough channel continues to support navigation and other beneficial uses.

With adherence to **MMs HYDRO-1, HAZ-1, HAZ-2, HAZ-3, and HAZ-4,** and compliance with applicable federal and State requirements, the Project would not create a significant hazard to the public through the accidental release of hazardous materials. Impacts would be less than significant with mitigation.

MM HAZ-2: Asbestos Exposure Minimization.

Construction personnel shall be informed of the potential presence of asbestos-containing material (ACM) at the Project area prior to their assignment. After exposing the existing pipeline for removal, and prior to the start of cutting and removal activities, a certified asbestos inspector/ consultant shall test whether the coating consists of ACM greater than 1 percent by weight. If testing reveals the coating contains ACM less than 1 percent by weight, the pipeline segment shall be treated as normal construction waste and no additional measures are required. If testing reveals the coating contains ACM equal to or greater than 1 percent by weight, the materials shall be abated by a certified asbestos abatement contractor in accordance with the regulations and notification requirements of SMAQMD Rule 902 and in accordance with applicable worker safety regulations. All ACM removed from the pipeline segment shall be labeled, transported, and disposed of at a verified and approved ACM disposal

facility. Sections of pipe or other waste will be transported to a recycling facility if the results of characterization indicate that recycling is feasible.

MM HAZ-3: Soil Testing and Disposal.

In the event that soils or groundwater are suspected of being contaminated (indicated by visual, olfactory, or other evidence) and are removed during site-grading activities or excavation activities, site activities will cease until the excavated soil is tested for contaminants. If the excavated soil is contaminated above permissible regulatory hazardous waste levels, the soil will be contained and disposed of at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet State and federal regulations.

MM HAZ-4: Bathymetric Surveys and Debris Removal Measures.

Pre- and post-Project bathymetric and surficial features multi-beam debris surveys of the riverbed shall be conducted using a vessel equipped with a multibeam sonar system or equivalent method acceptable to the CSLC. The pre-Project survey, used in conjunction with previously collected data, shall serve to fully identify pre-Project bottom contours, debris, and any exposed utilities. A copy of the survey shall be submitted to CSLC staff for review 30 days before Project implementation. A post-Project bathymetric and surficial features multi-beam debris survey shall also be performed after Project activities are complete, and the results shall be compared to the initial baseline survey. Any anomalous objects that were not already found and identified in the pre-Project survey and that remain unidentified during the bathymetric and debris surveys would be positively identified using methods such as divers or ROV. All Project-related debris will be recovered. A Project close-out report with drawings shall be submitted to CSLC staff within 60 days of Project completion.

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

No Impact

There are no existing or proposed schools within one-quarter mile of the proposed Project. Therefore, no impact would occur related to hazardous emissions or the

exposure of acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

d) Would the Project 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 is not located on a site that is included on a list of hazardous materials sites (per the provisions of Government Code §65962.5, commonly referred to as the "Cortese List") (SWRCB-DTSC 2014). Therefore, no impact would occur.

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 area is not located within 2 miles of a public airport or public use airport. The Project area is also not located within an airport land use plan. No impact would occur.

f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant with Mitigation

Although the Project area is located primarily in unincorporated Sacramento County, numerous emergency response plans are applicable to the Delta, primarily concerning flooding. Such plans include the Central Valley Flood Projection Plan, the California Department of Water Resources' FloodSAFE Initiative, the Delta Multi-Hazard Coordination Task Force Report, and numerous Central Valley Project and State Water Project Reoperation Studies. Chapter 7 of the Delta Plan, adopted by the Delta Stewardship Council in 2013 and amended in 2024, synthesizes applicable emergency plans in the Delta Area and provides recommendations based on the applicable plans (Delta Stewardship Council 2024).

In the Delta Plan, flood emergencies are identified as the primary safety concern potentially affecting the Delta. In a Delta flood emergency, response efforts by local and State emergency management professionals are guided by California's Standardized Emergency Management System. The Standardized Emergency Management System was established by Government Code section 8607, subdivision (a), and provides effective management of multiagency and multijurisdictional emergencies in California, including flood emergencies.

Construction of the Project would involve the removal of inactive pipelines up the waterside slope of the Sherman Island levee. To ensure that the Sherman Island levee remains in working order post-construction, excavations in the waterside slope of the Sherman Island levee and subsequent restoration would be performed in accordance with the requirements of the agencies responsible for the levee: the Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and Sherman Island Reclamation District 341. These requirements typically include excavating at a 2-to-1 (horizontal to vertical) or flatter slope. Adherence to such design criteria would ensure that the levee section affected during Project construction would be returned to existing conditions and continue to be adequately used for flood control purposes.

As discussed in further detail in Section 3.18, *Transportation*, State Route 160 provides emergency access for local communities in the Delta and may be used in the event of an evacuation. Excavations in the Sherman Island work area would occur within the waterside levee slope up to the levee crown. A long-arm excavator would be positioned at the levee crown and within the southbound lane of Sherman Island East Levee Road (Sacramento County Road No. 2H0020), which would require one-way controlled traffic during excavation operations in accordance with an encroachment permit from Sacramento County. As a result, Project construction could cause traffic congestion that could affect emergency access and/or evacuation in these areas. To reduce impacts on terrestrial traffic, PG&E would implement **MM TRA-1: Traffic Control Plan (Terrestrial)** (see Section 3.18, *Transportation*), to facilitate emergency access by requiring appropriate signage, traffic cones, and flaggers to reduce potential traffic hazards and circulation impacts.

Project in-water construction activities would not affect aquatic emergency access, as access around the Threemile Slough work area would be maintained (See Section 3.17, *Recreation*), use of the Brannan Island SRA Boat Ramp would remain open to public use, and the Project would only require the use of a single dock for temporary periods.

Furthermore, the Project would implement a PWSP, including the development of a coordinated emergency response plan, under **MM HAZ-1**. Therefore, implementation of the PWSP, along with coordination with applicable agencies during levee construction and remediation, would minimize interference with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant with mitigation.

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

Less than Significant Impact

As discussed in Section 3.10.1, *Environmental Setting*, and 3.20, *Wildfire*, the Project area is not located in an area with significant risk of wildland fires; the Project work areas are not located in a High Fire Hazard Severity Zone in a State Responsibility Area or in a Fire Hazard Severity Zone in a Local Responsibility Area (CAL FIRE 2025). However, woody vegetation is present along the banks of Threemile Slough. No structures would be constructed as part of Project implementation; the Project would not expose people to a significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

3.10.4 Mitigation Summary

Implementation of the following mitigation measures would reduce potential Project-related impacts from hazardous materials to less than significant.

MM HYDRO-1: Stormwater Pollution Prevention Plan

MM HAZ-1: Project Work and Safety Plan

MM HAZ-2: Asbestos Exposure Minimization

MM HAZ-3: Soil Testing and Disposal

MM HAZ-4: Bathymetric Surveys and Debris Removal Measures

MM TRA-1: Traffic Control Plan (Terrestrial)

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?	☐	☒	☐	☐

HYDROLOGY AND WATER QUALITY - Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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

As described in Chapter 2, the Project would require terrestrial work areas on Sherman Island and Brannan Island SRA, as well as an in-water work area across Threemile Slough in the Delta. Each is discussed in the context of hydrology and water quality as follows.

The Project also involves marine equipment mobilization and materials hauling and disposal in Solano County, which would use commercial vendors and ports, designated truck haul routes, and established shipping routes (through the Carquinez Strait and Suisun Bay and up the Sacramento River).

3.11.1.1 Terrestrial Areas

Terrestrial work areas would include upland work areas on Sherman Island for parking and equipment staging. Pipeline removal of the inactive L-131 East and West pipelines would occur on the waterside levee slope of Sherman Island. Terrestrial work areas include the federal levee and private land on Sherman Island. Brannan Island SRA and Threemile Slough would also be used for work areas as described in Section 2.1. The Sherman Island terrestrial work area (on the southern side of the site) includes disturbed land that would be used for parking, equipment staging and refueling, and temporary sanitation facilities. Removal of the terrestrial portion of the inactive L-131 East and West pipelines would occur on the waterside levee slope of Sherman Island. Terrestrial equipment would be mobilized to complete this work as described in Section 2.2.1. The topography on the Sherman Island side is flat, except for the

levee. Decomposition of organic matter in soil and resulting land subsidence is the main geomorphic process.

The northern and western portions of the Project work area are within the Brannan Island SRA, which is an elevated bluff underlain with dredge spoils. The Brannan Island SRA includes developed paved areas, upland grasslands, and sandbar willow thickets proposed for terrestrial excavation areas. Upland and riparian habitats are depicted on Figure 3.4-1 and discussed in more detail in Section 3.4.

3.11.1.2 Marine/Riverine Areas

As described in Section 2.2, the Project would also entail in-water work including mobilization of marine equipment such as a derrick barge, materials, barge, tugboats, and transport vessels to complete the pipeline remediation and proposed pipeline segment removal activities. Fluvial erosion and deposition are the main geomorphic processes within the bed and banks of Threemile Slough. Soil types that have been mapped by the Natural Resources Conservation Service are identified in the Project's wetland delineation (Appendix F). The Project area is underlain by Egbert clay, 0 to 2 percent slopes and Xerospamments, 1 to 15 percent slopes, and water.

<u>Surface Waters</u>

The surface waters at the Project work area include Threemile Slough in the western portion of the Delta waterways, located between the Sacramento and San Joaquin rivers. Threemile Slough is a tidally influenced waterway, flowing into the Sacramento River east of the San Francisco Bay estuary with high turbidity representative of the Delta conditions. Threemile Slough is a navigable waterway pursuant to Section 10 of the Rivers and Harbors Act of 1899 and a water of the United States under Section 404 of the Clean Water Act; therefore, it is subject to U.S. Army Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act (as described in Appendix A).

<u>Surface Water Quality</u>

Threemile Slough is not considered impaired and is not listed on the Clean Water Act 303(d) list; however, it is tidally influenced by the Sacramento River, a portion of which (from the Sacramento City Marina to the Suisun Marsh wetlands) is listed for toxicity, pyrethroids, fipronil, and water temperature (Central Valley RWQCB, 2024). The primary water quality concern is temperature due to its effect on

native fish species. Among the identified beneficial uses of these waterways, as outlined in the *Water Quality Control Plan of the Sacramento and San Joaquin Basins* (Basin Plan) are fish spawning, fish migration, and cold freshwater habitat. Additional water quality information is provided in the regulatory setting (Appendix A).

Groundwater

The Project area is in the Sacramento Valley Groundwater Basin and Solano Subbasin, under the groundwater management of the Sacramento County and Solano Subbasin Groundwater Sustainability Agencies (GSAs). Seasonal groundwater level fluctuations occur with rising levels occurring in response to winter recharge events and lower levels resulting from increased agricultural groundwater demand during the summer and fall (Sacramento County GSA 2021). Groundwater quality within the Solano Groundwater subbasin is safe for agricultural, urban and drinking water uses. The main constituents of concern include total dissolved solids, nitrate, arsenic, boron, hexavalent, chromium, and chloride (Solano Subbasin GSA 2024).

Flood Hazards

Threemile Slough is designated by the Federal Emergency Management Agency (FEMA) as a Special Flood Hazard Area (Zone AE with base flood elevation of 9 feet). Upland areas on the north side of the Project area (Brannan Island) are in areas of minimal flood hazard (Zone X) (FEMA 2023).

The Project area also includes the Sherman Island RD 341 levee system (on the southern bank of Threemile Slough), which is a federal flood control project and federally regulated by U.S. Army Corps of Engineers criteria (Padre Associates 2025). The Project vicinity also includes flood control structures from the Brannan-Andrus LMD-RD 0556 levee system, which is part of the Sacramento flood control system.

Tsunami and Seiche

The Project is not in the coastal zone; therefore, there is no risk of flooding associated with tsunamis. There are no enclosed water bodies of sufficient size in the Project area to result in seiches. The Project area is approximately 30 miles east of San Pablo Bay and 50 miles east of the Pacific Ocean. Given the distances to these water bodies, there is no risk of tsunami or seiche inundation.

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. At the regional level, the applicable policies and programs pertinent to hydrology and water quality include the following. Additional local regulations including applicable County General Plan policies are identified in Appendix B.

3.11.2.1 Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin

The Project area is located in the water quality jurisdiction of Region 5, the Central Valley Regional Water Quality Control Board, which establishes regulatory standards and water quality objectives in the *Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin*, commonly referred to as the Basin Plan (Central Valley RWQCB 2019). The Basin Plan identifies existing and potential beneficial uses for surface water and groundwater and provides numerical and narrative water quality objectives designed to protect those uses. Projects must not result in adverse effects on designated beneficial uses (described under surface waters in Section 3.11.1, "Environmental Setting").

Pursuant to the Basin Plan, for Delta waters, the general objectives for turbidity apply, and are subject to the following limits:

> *Except for periods of storm runoff, the turbidity of Delta waters shall not exceed 50 NTUs [nephelometric turbidity units] in the waters of the Central Delta and 150 NTUs in other Delta waters. Exceptions to the Delta specific objectives will be considered when a dredging operation can cause an increase in turbidity. In this case, an allowable zone of dilution within which turbidity in excess of limits can be tolerated will be defined for the operation and prescribed in a discharge permit.*

3.11.2.2 National Pollutant Discharge Elimination System

California Water Code section 13263(i) sets forth the circumstances under which National Pollutant Discharge Elimination System (NPDES) general order coverage may apply to a project, consistent with federal regulations, specifically section 122.28 of title 40 CFR. Discharges from natural gas facilities including those from conventional or in-water excavation, construction, testing, maintenance,

operation, and/or repair activities for natural gas facilities within those categories may be regulated under General Order WQ 2017-0029-DWQ (NPDES No. CAG670001). Site dewatering related to excavation, construction, testing, maintenance and repair of natural gas facilities is among the activities covered under this general discharge permit (SWRCB 2017).

Alternatively, projects that include disturbance of one or more acres of land surface, would be subject to the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater General Permit) (Order No. 2022-0057-DWQ). This general permit is administered and enforced by the regional water quality control boards (in the case of the Project, the Central Valley Regional Water Quality Control Board, or Region 5).

The Construction Stormwater General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. Because the Project would entail more than one acre of disturbance and temporary impacts, the Construction Stormwater General Permit would be obtained by PG&E to cover associated stormwater discharges.

The Construction Stormwater General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off-site into receiving waters. The BMPs fall into several categories—erosion control, sediment control, waste management, and good housekeeping—and are intended to protect surface water quality by preventing eroded soil and construction-related pollutants from migrating off-site from the construction area. Routine inspection of all BMPs is required.

3.11.2.3 PG&E Habitat Conservation Plans

PG&E has U.S. Fish and Wildlife Service–approved habitat conservation plans that provide a comprehensive framework to conserve and protect federally

listed species in support of a federal incidental take permit for the covered species for PG&E (operations and maintenance) activities in the San Joaquin Valley Region, Bay Area Region, and Multiple Regions (Sacramento Valley and Foothills, North Coast, and Central Coast) (Jones & Stokes 2007; ICF 2017, 2020). The Project work areas in Sacramento County are located within the Multi-Region Habitat Conservation Plan (MRHCP) area. Field protocols and impact avoidance minimization measures listed in Appendix B include standard erosion and sediment control BMPs and other measures intended to protect water quality. These field protocols would be implemented for activities covered by the PG&E MRHCP.

3.11.3 Impact Analysis

Project-related construction activities would involve hazardous substances and cause ground disturbance and riverbed disturbance. These activities have the potential to result in alteration of hydrology, toxic substance release, runoff, turbidity, sedimentation, and erosion, affecting water quality.

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

Less than Significant with Mitigation

The Project would entail both ground-disturbing activities and in-water work, both of which have the potential to violate water quality standards, mobilize sediment, and degrade surface water and groundwater quality.

It is anticipated that regulatory approvals would include a federal Clean Water Act Section 401 water quality certification, and coverage under the *Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality*, pursuant to State Water Resources Control Board Water Quality Order No. 2003-003-DWQ. Additionally, PG&E would obtain discharge coverage under the Construction Stormwater General Permit and would implement a SWPPP, as described in Section 3.11.2. The Project would comply with the terms and conditions of these and other permits, as noted in Table 1-1 in Section 1.0.

<u>Terrestrial Areas</u>

Terrestrial ground disturbing activities such as excavation, grading, trenching or other site work could result in erosion or conditions of runoff, which due to the

proximity of these activities, could compromise the water quality of Threemile Slough. Temporary and permanent disturbance area calculations per vegetation community are provided in Figure 3.4-1 and total approximately 9.1 acres. Pipeline excavation would result in an estimated 0.12 acres of ground disturbance. Indirect effects could also occur through the inadvertent release of contaminants (such as fuels and oil from construction equipment) that could be transported from upland staging and work areas to Threemile Slough or other nearby waters through runoff. Excavation and other ground disturbances associated with construction could require groundwater dewatering because of the shallow groundwater table on the Sherman Island side. Construction could alter site hydrology/drainage through soil compaction on (unpaved) upland areas, which could change infiltration conditions and otherwise affect water quality.

It is anticipated that the Project would obtain coverage for dewatering and discharge under the state Construction Stormwater General Permit (Order No. 2022-0057-DWQ). To ensure that the Project site disturbance does not result in violations of water quality standards, the Project would implement **MM HYDRO-1: Stormwater Pollution Prevention Plan** to reduce the risk of ongoing erosion and reduce violations of water quality by capturing silt, sediment, and other pollutants that would otherwise be mobilized through runoff.

MM HYDRO-1: Stormwater Pollution Prevention Plan.

PG&E or its designated contractor shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ). At a minimum, the SWPPP shall include measures to:

- Provide adequate soil moisture levels to prevent excessive fugitive dust emissions, while also not contributing to conditions of runoff.
- To the extent possible, preserve existing vegetation and effective soil cover (e.g., through use of geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediment from being dislodged by wind, rain, or flowing water. Specific areas identified for avoidance will be determined based on biological surveys (per Mitigation Measure BIO-2), feasibility, and other factors.
- Install and maintain erosion control materials, such as straw wattles, coir fiber rolls, or similar devices; provide sediment basins, as needed

(depending on site conditions) to capture soil, silt, and sediment that could be mobilized through construction activity.

- Establish and enforce measures such as designating areas for construction vehicle storage, maintenance, and fueling an adequate distance from wetlands and surface waters, maintain proper handling procedures for hazardous materials, and waste management Best Management Practices (such as daily trash removal and covering debris bins) to provide procedural and structural measures to prevent the release of pollution, wastes, and materials used at the construction 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 Commission staff a minimum of 30 days before Project implementation.

As described in Section 3.10, *Hazards and Hazardous Materials*, to minimize the exposure of the public and environment to hazardous materials through their routine transport, use, or disposal, the Project would be required to develop and implement a Project Work and Safety Plan (PWSP). **MM HAZ-1: Project Work and Safety Plan** (see Section 3.10, *Hazards and Hazardous Materials*) would ensure proper handling, transportation, and storage of hazardous materials and include clean-up measures for spill response, among other requirements. The PWSP would reduce source inputs and thereby lower the potential for water quality violations.

Additionally, **MM HAZ-3: Soil Testing and Disposal** (Section 3.10, *Hazards and Hazardous Materials*) would be implemented. As required by this mitigation measure, in the event that contaminated soil is discovered during terrestrial excavation activities, measures would be taken to minimize releases of potentially hazardous materials. Specific to water quality, any excavated soils or groundwater suspected of being contaminated would be tested and, if contaminated above permissible regulatory levels, contained and disposed of at a licensed waste facility. Such measures would also reduce the Project's risk of water quality violations.

<u>Marine/ Riverine Areas</u>

Violations of water quality could occur directly through turbidity and siltation of Threemile Slough during Project activities. In-water debris or vegetation removal could also temporarily increase turbidity. Water quality violations could also result

if toxic substances were accidentally released during barge equipment/materials hauling, Or could occur indirectly during construction if pollutants were mobilized (from terrestrial areas) into Threemile Slough through site runoff.

MM BIO-4: Turbidity Monitoring Plan requires installation of silt curtains before the start of all in-water work activities to contain turbidity to the area immediately surrounding the work areas, as well as turbidity monitoring and corrective measures. At the conclusion of work, suspended solids in the water column would naturally settle by gravity, and as such would not present ongoing impacts affecting the quality of the water or aquatic habitat (discussed in Section 3.4, *Biological Resources*). In addition, implementation of **MM HAZ-1** would protect against the accidental release of hazardous or toxic substances, and **MM HYDRO-1** would be implemented to avoid the effects of site runoff.

With the implementation of these mitigation measures, impacts to water quality would be less than significant.

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

No Impact

The proposed Project is a natural gas utility maintenance Project that would place no demand on groundwater supplies. The Project would not require the use of groundwater or surface water resources. The Project would not interfere with groundwater recharge because very limited impervious surfaces would be added. If necessary, the Project would use the existing municipal water source at Brannan Island SRA to service water truck tanks used for dust suppression and as needed for construction activities, which would require low volumes of water given the small area of terrestrial work areas. Because the two 10-inch pipeline segments proposed for removal were previously inspected and filled with concrete, no pigging or flushing of these decommissioned segments is required before removal. Therefore, the Project would not require large quantities of water for its implementation. Overall, the Project would not impede sustainable groundwater management and would have no impact related to decreased groundwater supplies.

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

Minor, temporary changes to upland site drainage during construction could result from excavation, equipment and materials staging, and other temporary disturbance associated with construction activities. Construction would entail excavation and removal of pipe segments within the north and south banks of Threemile Slough as described in Section 2.4.1. Once the terrestrial pipeline removal is completed, excavations would be backfilled and compacted to match the relative compaction of adjacent undisturbed soils or consistent with required design standards. As described in Section 3.10, a PWSP would be required to reduce the risk of a release of pollutants associated with construction.

In the absence of measures to reduce runoff, ground disturbance could result in substantial erosion across the Project area and siltation of Threemile Slough or other adjacent waters. PG&E would implement standard erosion and sediment control BMPs as required by the Multi-Region Habitat Conservation Plan (as described in Appendix B) within the disturbance footprints at each terrestrial excavation location to minimize erosion, turbidity, and sedimentation to waters of the U.S. and waters of the state. Implementation of these standard BMPs would help to capture runoff and reduce erosion and siltation (Padre Associates 2025). To ensure that other construction activities (including equipment maintenance and refueling) do not result in conditions of substantial erosion, siltation, or runoff of the Project area or pose ongoing threats to adjacent land and water quality, the following mitigation measures would be implemented: **MM HAZ-1**, **MM HAZ-3,** and **MM HYDRO-1**.

Implementing these mitigation measures would reduce impacts to 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;

Less than Significant Impact

Minor, temporary changes to upland site drainage during construction could result from excavation, equipment and materials staging, and other temporary

disturbance associated with construction activities. The Project does not involve any new terrestrial impervious surfaces or permanent drainage features that could alter the rate or amount of storm runoff. Once the terrestrial pipeline removal is completed, excavations would be backfilled and compacted to match the relative compaction of adjacent undisturbed soils or consistent with required design standards. Therefore, the impact would be less than significant.

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

Less than Significant Impact

The terrestrial work areas are not located in an area with a planned stormwater drainage system, and are not anticipated to adversely affect any existing stormwater drainage systems. Construction staging areas would occur on existing paved, disturbed, and compacted areas, such as existing parking lots, trails, and dirt roads and parking areas. Within the Brannan Island portion of the Project area, an existing paved parking lot would be used for parking of vehicles and equipment, and would serve as the access location for movement of heavy equipment to and from work areas. There would be no new impervious surfaces or features added to the upland that would provide substantial additional sources of polluted runoff. Use of the parking lot is not anticipated to generate runoff that would adversely affect any existing stormwater drainage systems, if present. Therefore, less-than-significant impacts would occur.

iv) *Impede or redirect flood flows?*

Less than Significant with Mitigation

<u>Terrestrial Work Areas</u>

At the conclusion of construction, terrestrial excavation areas for pipeline removal along the north bank of Threemile Slough in the Brannan Island SRA would be restored to preconstruction gradients and soil conditions for slope stabilization and restoration of drainage patterns. Sherman Island levee disturbance areas would be restored in a manner consistent with Central Valley Flood Protection Board and RD 341 requirements as required by the conditional authorizations issued by those agencies. Trees, shrubs, and ground plants would be removed in the immediate areas where pipeline excavation is proposed and

post-construction new vegetation would be planted for surface coverage in accordance with **MM BIO-14: Site Restoration and Riparian Mitigation Plan**.

Marine/Riverine Work Areas

The subsurface excavation required for pipeline removal could temporarily alter the flow of Threemile slough by modifying the contours of the bed of the channel during the instream work. Additionally, the proposed placement of rock associated with the pipeline remediation could alter the flow of the waterway; however, as discussed in the Project Description, the post-construction remediation area would be restored to 1990 as-built hydrologic conditions. As identified in Figure 1-2, the existing shoreline of Brannan Island adjacent to the in-water rock placement area is armored with riprap that has also been in place since 1990 for the active pipelines for shoreline protection. After pipeline removal, the in-water excavation area would have a temporary and partial depressional area that is anticipated to naturally fill in with sediment and bring the depressional area back into equilibrium to match surrounding contours and conditions of the bed of Threemile Slough.

Although the Project work areas are expected to return to baseline conditions after Project completion, work in the Threemile Slough channel could have the potential to create a hazard or impediment to the natural flow of the waterway should significant debris be left in the channel bed. To minimize the potential for the creation of an impediment to flow, PG&E would adhere to **MM HAZ-4: Bathymetric Surveys and Debris Removal Measures** (Section 3.10, *Hazards and Hazardous Materials*) and conduct bathymetric and surficial features multi-beam debris surveys both pre- and post-construction to ensure that all Project-related debris is removed and that the Threemile Slough channel continues to support natural flows and does not impede the flow of water during flood conditions.

With implementation of these mitigation measures, hydrological impacts would be less than significant.

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

Less than Significant Impact

As noted in Section 3.11.1, *Environmental Setting*, the Project area is not in a tsunami or seiche zone; therefore, there are no risks for release of pollutants

associated with these hazards. However, the Project area is in a special flood hazard area and entails minor alteration of a flood control structure under federal and non-federal jurisdiction (the Sherman Island levee). Temporary flood risks could increase for the surrounding area during excavation of the pipelines in the Sherman Island levee. However, the removal of decommissioned pipelines would decrease long-term risks to this area, as it would improve the overall integrity of the flood control structure once complete. As designed, the Project would minimize flood risk by excavating small segments within the levee system in sequence across the levee. The alteration agreements and encroachment permits from the Central Valley Flood Protection Board and RD 341 contain seasonal limits that preclude construction during the rainy season between November 1 and April 15. Because Project work would occur during the dry season, the temporary excavation would not increase flood risk or release pollutants due to inundation. Impacts would be less than significant.

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

Less than Significant with Mitigation

As discussed under criterion b, the Project would not require groundwater resources or impede sustainable groundwater management and would not decrease groundwater supplies.

The Project would entail equipment/materials hauling via barge and both terrestrial and aquatic excavation that could result in release of hazardous substances, erosion, mobilization of runoff, and siltation of Threemile Slough or connected water bodies. However, as discussed under criteria a and c, mitigation measures would be implemented to prevent accidental release of hazardous materials, stormwater pollution, runoff, contain and monitor turbidity, and restore the Project area after construction. Therefore, implementation of the measures discussed under criteria a and c (**MM HYDRO-1, MM BIO-4, MM BIO-14, MM HAZ-1, MM HAZ-3**, and MM **HAZ-4**) would prevent erosion and reduce runoff. Therefore, the Project would not result in water quality violations, and there would be no conflict with the Basin Plan, its objectives, or beneficial uses of surface waters. Impacts would be less than significant with mitigation.

3.11.4 Mitigation Summary

With the implementation of the following mitigation measures, Project-related impacts to hydrology and water quality would be less than significant.

MM HYDRO-1: Stormwater Pollution Prevention Plan

MM BIO-4: Turbidity Monitoring Plan

MM BIO-14: Site Restoration and Riparian Mitigation Plan

MM HAZ-1: Project Work and Safety Plan

MM HAZ-3: Soil Testing and Disposal

MM HAZ-4: Bathymetric Surveys

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 work areas are located approximately 2.2 miles southeast of Rio Vista within an unurbanized area in Sacramento County (U.S. Census Bureau 2023). The Project area includes the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough. The Project would also involve marine equipment mobilization and materials hauling and disposal using commercial vendors and ports in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait and Suisun Bay, and up the Sacramento River.

3.12.1.1 Terrestrial Areas

The terrestrial portions of the Project area include the northernmost point of Sherman Island (the Sherman Island work area) and the southeast portion of Brannan Island SRA (the Brannan Island SRA work area), including the boat launch ramp. The Project work areas are located near the eastern end of the Delta in Sacramento County. Land uses for the Brannan Island SRA are managed by the California Department of Parks and Recreation and proposed work activities in the SRA require authorization of a Right of Entry permit. Land uses with the Sherman Island levee are managed and regulated by the Central Valley Flood Protection Board, Reclamation District 341, and the U.S. Army Corps of Engineers. The Sacramento County General Plan designates the Project's terrestrial work areas as Agriculture (Sacramento County 2018). The Sacramento

County Zoning Code zones the western portion of the Sherman Island work area as Agricultural–80 Acres (AG-80), the eastern portion as Commercial Recreation (C-O), and the Brannan State Island SRA work area as Recreation (O) (Sacramento County 2026a). In addition, the Project area is located within the Primary Zone of the Delta as defined by the Delta Protection Act of 1992.

The Brannan Island SRA work area consists of public land, including public trails and other recreational facilities (e.g., boat launch ramp, fishing pier, campgrounds, paved parking, and other public support facilities). The Sherman Island terrestrial work area includes the federal levee, county-maintained Sherman Island East Levee Road, and private lands that are not in active use but are zoned for agriculture and commercial recreation.

3.12.1.2 Marine/Riverine Areas

The marine portion of the Project area is located within Threemile Slough, adjacent to the northernmost point of Sherman Island and southeast of the Brannan Island SRA boat launch ramp. This area lies within State sovereign lands under the jurisdiction of the Commission, which manages waterways for public trust purposes including commerce, navigation, fisheries, recreation, and environmental preservation. The Project's Threemile Slough work area is zoned Delta Water (DW and DW-R). Existing marine uses in the Project area are limited to vessel passage, in-water recreation activities, and waterside levee maintenance activities.

3.12.2 Regulatory Setting

There are no federal or State laws, regulations, or policies pertaining to land use and planning that are relevant to the Project. Local regulations including applicable county general plan policies are identified in Appendix B.

3.12.3 Impact Analysis

Project implementation would not affect an established community and would not result in any new or modified land uses.

Project activities occurring in Solano County include equipment mobilization, materials hauling, and waste disposal. These activities would occur at existing industrial facilities (e.g., CS Marine, Vulcan Materials Company) and marine vessel and haul vehicle travel would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and

recreational watercraft and vehicles. These activities do not have the potential to impact land use and planning; accordingly, the analysis below focuses on land use and planning at the Project work areas located within Sacramento County.

a) Physically divide an established community?

No Impact

Project construction would occur within the Sherman Island, Brannan Island SRA, and Threemile Slough work areas. These areas are characterized by agricultural production, levee infrastructure, public recreation facilities, and open water. There are rural residences in the vicinity of the Project work areas, but the closest established community is Rio Vista, approximately 2.2 miles northwest. Temporary site preparation activities would include installation of fencing around work areas, but this fencing would not physically divide established communities and would be removed upon completion of the Project. Project activities would be temporary and would occur within existing managed lands, including a federal levee, agricultural lands, and established SRA facilities, and would not introduce a new land use. Further, site restoration would restore all Project work areas. Remediation work within Threemile Slough would restore rock cover to the 1990 as-built condition, maintaining the existing boating corridor rather than introducing a new barrier. Therefore, the Project would have no impact on an established community.

b) Would the Project 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?

Less than Significant Impact

Project activities would be temporary and would occur within existing managed areas. Project activities would not require changes to land use designations, zoning districts, or applicable plans. Project activities within the Sherman Island work area would be conducted under a temporary construction easement on private lands and along the federal levee, including the county-maintained Sherman Island East Levee Road. Project activities within the Brannan Island SRA work area would be conducted under a right of entry permit with temporary trail closures. Remediation activities within Threemile Slough would restore rock cover to the 1990 as-built condition, thereby maintaining existing connectivity via the waterway. Temporary construction staging would include fencing and

closures that would be removed after the estimated 3-month work period, and site restoration activities would restore all work areas consistent with land use policies related to the protection of agricultural, recreational, navigational uses, and flood control in the Delta (Sacramento County 2017a).

Project activities would not change existing land uses as designated by Sacramento County, and Project activities would not involve incompatible uses. Therefore, Project impacts would be less than significant.

3.12.4 Mitigation Summary

The Project would not result in significant impacts on land use; 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 work areas include the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County. Mineral resources in Sacramento County include natural gas, petroleum, sand, gravel, clay, gold, silver, peat, topsoil, and lignite. The principal mineral resources in production are aggregate (sand and gravel) and natural gas. The closest significant mineral deposit area is located outside of the city of Galt, approximately 18 miles northeast of the Project area. The Project area is mapped as MRZ-1, indicating that no significant mineral deposits are present (Dupras 1999).

The Project would also involve marine equipment mobilization and materials hauling and disposal using commercial vendors and ports in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait and Suisun Bay, and up the Sacramento River. Mineral resources mined or produced in Solano County include mercury, sand and gravel, clay, stone products, calcium, and sulfur (Solano County 2008). The nearest mineral resource zone is located approximately 25 miles west of the Project area, north of Suisun Marsh in Vallejo. This area is categorized as MRZ-2, indicating that the area contains mineral deposits that geologic data indicate to be significant, containing known economic mineral deposits (Miller and Busch 2013). The quarry

in this area, Vulcan Materials Company, is the source of the rock used as part of the proposed pipeline remediation.

3.13.1.1 Mineral Land Classification under the Surface Mining and Reclamation Act

According to maps of mineral resource zones within Sacramento County, the Project area is located within areas zoned as MRZ-1, or areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources (CGS 2018; O'Neal and Guis 2018).

3.13.1.2 Oil, Gas, and Geothermal Resources

Sacramento County is one of the 28 counties in California that produce gas and oil. The California Geologic Energy Management Division[4] oversees the oil, natural gas, and geothermal industries in California, and regulates the drilling, operation, and permanent closure of energy resource wells. The division's online mapping application, Well Finder, was reviewed to determine the presence of any oil, gas, or geothermal resources on and around the Project area. The Project area is underlain by the Rio Vista Gas Field, one of California's largest producing areas (Sacramento County 2017b). There is one idle well 180 feet north of the Project area on Brannan Island and one plugged well 500 feet south of the Project area on Sherman Island.

There are two idle wells near the Project area, one 400 feet north and one 1,500 feet south of the pipe staging area. The nearest active well is 1,300 feet east of the Project area on Twitchell Island (CalGEM 2026).

3.13.2 Regulatory Setting

Federal and State laws and regulations pertaining to mineral resources that are relevant to the Project are identified in Appendix A. Local policies and regulations pertaining to mineral resources, including county general plan policies, that are relevant to the Project are identified in Appendix B.

3.13.3 Impact Analysis

The Project work areas are located on Brannan and Sherman Islands, which are underlain by an active gas field. However, Project activities would not involve

[4] Formerly known as the California Division of Oil, Gas, and Geothermal Resources.

any disturbance to existing wells in the active gas field. Areas of ground disturbance are not located in an area with known mineral resources.

Project activities occurring in Solano County include equipment mobilization, materials hauling, and waste disposal. These activities would occur at existing industrial facilities (e.g., CS Marine, Vulcan Materials Company) and marine vessel and haul vehicle travel would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and recreational watercraft and vehicles. These activities do not have the potential to impact mineral resources; accordingly, the analysis below focuses on mineral resources at the Project work areas located within Sacramento County.

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

No Impact

Although the Project work areas are underlain by an active gas field, no active wells are located in the Project area. Additionally, there are no known mineral resource recovery sites or known mineral resources in or near the Project work areas. Further, equipment mobilization and materials hauling from Solano County would be limited to transportation of materials, equipment, and debris at commercial vendors and ports and along established shipping routes and roadways, and impacts would be temporary and transient. Project activities would not include the development of new structures or other components that would hinder access to nearby mineral extractions. Therefore, no impact would occur.

3.13.1 Mitigation Summary

The Project would have no impact on 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 three Project work areas include two terrestrial work areas, located on Sherman Island and Brannan Island SRA, and one marine work area located within the waters of Threemile Slough. The Project also involves marine equipment mobilization and materials hauling and disposal in Solano County, which would utilize commercial vendors and ports, designated truck haul routes, and established shipping routes (from Mare Island and through the Carquinez Strait, Suisun Bay, and up the Sacramento River to the Threemile Slough work area). As these are existing vessel and vehicle transit routes with sound sources similar to the Project activities, the Project would not introduce an appreciable change to the noise baseline setting for these locations. Therefore, Environmental

Setting is focused on the Project work areas at Brannan Island, Sherman Island, and Threemile Slough.

The location of the Project work areas are surrounded by mostly open space, recreational areas, and agricultural land. The nearest noise-sensitive receptor to any terrestrial or marine work area is a single-family residence located approximately 1,255 feet southwest of the Sherman Island work area in unincorporated Sacramento County. The nearest vibration-sensitive structure is an unoccupied structure 150 feet northeast of the Sherman Island work area. The Project work areas are located close to one another and share similar existing noise environments. These noise environments consist of vehicles traveling along Sherman Island East Levee Road and within Brannan Island SRA, operation of watercraft within Threemile Slough and the Brannan SRA boat launch area, recreational noises from Brannan Island SRA, agricultural noises from surrounding agricultural lands, and natural noises from Threemile Slough such as wind, rough chop, and shoreline wave run-up. State Route 160 and the Sacramento River are located approximately 0.5 mile from the Project work areas; the non-linear north/south bend of the Threemile Slough channel over the 0.5 mile distance also serves as a physical barrier to sound travel. Details on the basics of environmental acoustics and vibration along with vibration calculations for the project can be found in *Appendix H*

3.14.2 Regulatory Setting

Federal and State laws and regulations pertaining to noise that are relevant to the Project are identified in Appendix A. Local regulations are discussed below. Additional local regulations including applicable county general plan policies are identified in Appendix B.

3.14.2.1 Sacramento County

The Noise Element of the Sacramento County General Plan (Sacramento County 2022a) contains the following policies and standards related to noise that may be applicable to the Project:

- **Policy NO-8:** Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) (refer to section below) addresses construction noise within the County.

Chapter 6.68 of the Sacramento County Code establishes noise standards and requirements applicable to Project-related noise generation. Subsection 6.68.090

provides exemptions from the noise standards detailed in Chapter 6.68. Activities relevant to the project that are exempt from noise provisions of Chapter 6.68 include:

> Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Provided; however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

3.14.2.2 Solano County

There are no policies in the Solano County Code or General Plan Noise Element pertaining to noise that are relevant to the applicable Project activities.

3.14.3 Impact Analysis

Project-related noise generation may adversely affect noise-sensitive land uses (residences) near the Project area. Noise impacts related to biological resources are discussed in Section 3.4.3.

Project activities occurring in Solano County (e.g., equipment mobilization, materials hauling, waste disposal) could affect surrounding sensitive receptors along shipping and haul routes. However, Project-related activities would not substantially change the existing noise environment in these areas; Project-related marine mobilization would occur at existing industrial facilities (e.g., CS Marine), and marine vessel and haul vehicle travel would be limited and intermittent and would occur on waterways and roadways that are regularly traveled by commercial and recreational watercraft and vehicles. Accordingly, the analysis below focuses on noise and vibration at the Project work areas located within Brannan Island SRA, Threemile Slough, and Sherman Island.

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 marine construction equipment and activities in the Threemile Slough work area that would generate noise include barges, marine vessels, tugboats, submersible excavation pumps, rock placement, and underwater pipe removal.

The terrestrial construction equipment and activities at the Sherman Island and Brannan Island SRA work areas that would generate noise include light-duty trucks, an air compressor, welding machine, excavator, wheeled loader, terrestrial pipeline removal, excavation backfill, and vegetation removal and replanting.

Typical noise levels for terrestrial construction equipment such as excavators, and loaders range from 80 dBA to 85 dBA at 50 feet (FTA 2018). Marine vessels and construction equipment would be diesel combustion based and are therefore assumed to generate similar noise levels as terrestrial diesel construction equipment.

Even though noise from construction activities may be noticeable at the nearest sensitive receptor, the noise impacts would be less than significant for the following reasons:

1. Project construction would occur on and around Threemile Slough, which is used by recreational and industrial water vessels that generate high noise levels, including noise levels from public use of the Brannan Island SRA boat ramp and parking lot approximately 600 feet southwest (down river) of the Project work areas. Thus, Project noise levels would not be excessive in comparison with other common activities in the work area and would not represent a substantial change to the environment.
2. The Project would have a short construction timeline, lasting only 3 months.
3. The Project would comply with the allowable work hours established by the Sacramento County Code and would therefore be exempt from Sacramento County noise standards. As discussed in Section 3.14.2, *Regulatory Setting*, the relevant Sacramento County noise regulations require that construction activities take place between 6:00 a.m. and 8:00 p.m. Monday through Friday and 7:00 a.m. and 8:00 p.m. on

Saturday. Construction activities for the Project are planned to occur from 7 a.m. to 5:30 p.m. each day. Although nighttime work is not expected to occur, limited nighttime operations may be required to complete the Project within the defined work window constraints. As explained in the Regulatory Setting, Project construction noise activities are exempt from Chapter 6.68 of Sacramento County Code, which allows work to continue after 8:00 p.m. However, if nighttime construction operations were necessitated, work activities would be limited to 8:00 p.m., and would otherwise comply with the daytime noise limits of Chapter 6.68 of Sacramento County Code.

Thus, for the reasons described above, Project construction would not generate noise levels that exceed applicable standards or otherwise result in substantial temporary noise levels in excess of ambient noise levels. The Project would not include any operational noise sources, since there would be no operational changes with the active pipelines. Therefore, this impact would be less than significant.

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

Less than Significant Impact

Operational construction equipment can cause varying degrees of vibration that spread through the ground and diminish in strength with distance. These groundborne vibrations could have an impact on existing structures and the people that use them. Vibration is measured in "peak particle velocity" (PPV), defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts on buildings.

The nearest structure is an unoccupied structure150 feet northeast of the Sherman Island work area, and the nearest occupied vibration sensitive receptor is a single-family residence approximately 1,255 feet southwest of the Sherman Island work area. Although there are a few structures east of the Sherman Island work area, those structures are abandoned and not considered in this analysis.

The nearest single-family residence is located on Sherman Island, which is under the jurisdiction of Sacramento County. Sacramento County does not have vibration criteria for construction projects; therefore, this analysis uses FTA's vibration standards and the California Department of Transportation's human

response guidance (Caltrans 2020) to determine potential vibration impacts from the Project.

Of the construction equipment anticipated for the Project, cranes operating at the project area and trucks hauling materials would have the highest groundborne vibration levels. A loaded truck passing by residences and structures on Sherman Island East Levee Road would generate a vibration, or peak particle velocity (PPV), of 0.076 in/sec at 25 feet. Crane clam shovel drops occurring in the Project areas would generate a PPV 0.005 at the nearest structure (150 feet from the project area) and a less than 0.001 in/sec at the nearest residential structure (1,255 feet from the project area). This vibration level is well below FTA's 0.12 in/sec standard for extremely susceptible vibration damage to buildings. Pass-by tuck vibrations may be perceptible to occupants at residences along Sherman Island East Levee Road, but they would be quick and intermittent while the trucks passed by the residences. Crane vibrations would not be perceptible at the nearest residence because they are lower than the 0.035 in/sec threshold that the California Department of Transportation considers to be "barely perceptible."

Based on the analysis above, the Project would not generate excessive groundborne vibrations or noise. Therefore, this impact would be less than significant.

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

There are no airports within 2 miles of the Project area. The closest airport is Stockton Metropolitan Airport, approximately 28 miles from the Project area. Therefore, Project workers would not be exposed to excessive noise levels generated by aircraft, and no impact would occur.

3.14.4 Mitigation Summary

The Project would not result in significant impacts related to noise or vibration; 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 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 housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.15.1 Environmental Setting

The Project area is located in Sacramento County and would include work areas in Threemile Slough, at Brannan Island SRA, and on Sherman Island. The Project would also involve marine equipment mobilization and materials hauling and disposal using commercial vendors and ports in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait and Suisun Bay and up the Sacramento River.

The Project area is composed primarily of recreation areas, open space, and largely undeveloped private lands; as a result, the area is largely rural and surrounding population density is relatively low. The Project work areas are located approximately 2.2 miles southeast of Rio Vista within an unurbanized area (U.S. Census Bureau 2023). According to the U.S. Census, Sacramento County had a population of 1,585,055 in 2024 while the city of Rio Vista had a population of 10,248 in 2024. As of 2024, Sacramento County had 608,149 housing units (U.S. Census Bureau 2024a). Project work areas are zoned as Agricultural–80 Acres (Ag-80), Commercial Recreation (C-O), Recreation (O), and Delta Water (DW and DW-R) (Sacramento County 2026a).

3.15.2 Regulatory Setting

No major federal or State laws, regulations, or policies regarding population and housing are applicable to the Project. Local regulations including applicable county general plan policies are identified in Appendix B.

3.15.3 Impact Analysis

The Project consists of short-term construction for pipeline remediation and removal activities. The Project does not include any changes in the operation of the active L-131Y and L-131Z pipelines or include components that would directly or indirectly induce population growth, displace housing, or create a demand for replacement housing.

Project activities occurring in Solano County (equipment mobilization, materials hauling, and waste disposal) do not have the potential to impact population and housing; accordingly, the analysis below focuses on population and housing at the Project work areas located within Sacramento County.

a) Induce substantial 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 short-term construction for pipeline remediation and removal activities in a non-urbanized area (U.S. Census Bureau 2023). The Project does not include components that would directly induce population growth by altering existing land uses or include new infrastructure and public services that would induce population and housing growth.

Additionally, the Project would not indirectly provide the opportunity for population growth by extending natural gas service into new areas; the Project would remediate (but not expand) existing, active pipelines and remove inactive pipelines. Therefore, no impact would occur.

b) Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact

The Project would occur in a non-urbanized area (U.S. Census Bureau 2023) and does not include any components that would displace housing or create a

demand for replacement housing. Approximately 30 construction workers are anticipated to be needed to complete the work over a 3-month construction season; however, workers from the existing local workforce would be used to the extent feasible. The Project would therefore not displace substantial numbers of existing housing or generate the need for new permanent housing. No impact would occur.

3.15.4 Mitigation Summary

The Project would have no impact related 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 area is located in unincorporated Sacramento County and also includes equipment mobilization, materials hauling, and waste disposal in Solano County. The nearest incorporated city is Rio Vista, located approximately 2.2 miles northwest of the Project work area. The Project area includes areas designated as Agricultural–80 Acres (AG-80), Commercial Recreation (C-O), Recreation (O), and Delta Waterway (DW and DW-R) (Sacramento County 2026a).

Fire Protection: The Project area is generally not inhabited and has a low fire risk because of its generally high soil moisture content and the adjacent Sacramento River. The Project area is served by the Delta Fire District (Sacramento County 2010, 2017b). The Rio Vista Fire Station is the closest station to the Project area, located at 350 Main Street, approximately 2.9 miles to the north. The fire

department is staffed by six personnel (one chief officer, one captain, two engineer/paramedics, one firefighter/paramedic, and one intern firefighter) (Rio Vista Fire Department 2022). The fire station maintains two Type 1 engines, two Type 3 engines, three chief response vehicles, one Type 2 water tender, one Zodiac boat, and one 95-foot aerial platform (City of Rio Vista 2026).

Police Protection: The Sacramento County Sheriff's Department provides specialized law enforcement services to Sacramento County and local police protection to the unincorporated areas of the county, including the Project area (Sacramento County 2017b). The nearest sheriff's department facility is located 13 miles northeast of the Project area at 14160 Grove Street in Walnut Grove. The California Highway Patrol also provides police protection for the region surrounding the Project area.

Schools: The nearest school to the Project area is Riverview Middle School, located at 525 South 2nd Street in Rio Vista, approximately 2.5 miles north of the work areas.

Parks: The nearest parks to the Project area are Sandy Beach County Park, located along the Sacramento River approximately 2 miles northwest of the work areas, and Bruning Park, located approximately 2.8 miles north of the work areas in the city of Rio Vista. The Brannan Island SRA work area is located within the Brannan Island SRA. Impacts on parks are discussed in Section 3.18, *Recreation*.

3.16.2 Regulatory Setting

There are no major federal or state laws, regulations, and policies potentially applicable to this Project. Local policies pertaining to public services that are applicable to the Project, including applicable county general plan policies, are identified in Appendix B.

3.16.3 Impact Analysis

The Project consists of short-term construction for pipeline remediation and removal activities; the Project would not include new or physically altered governmental facilities, nor would it result in the need for new or physically altered governmental facilities.

Project activities occurring in Solano County include equipment mobilization, materials hauling, and waste disposal. These activities would occur at existing industrial facilities (e.g., CS Marine, Vulcan Materials Company) and marine

vessel and haul vehicle travel would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and recreational watercraft and vehicles. These activities do not have the potential to impact public services; accordingly, the analysis below focuses on public services at the Project work areas located within Sacramento County.

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 construction for pipeline remediation and removal activities in an area that does not contain and is not zoned for residential housing or commercial development. The Project would not include components that would alter existing land uses, introduce new housing or businesses, extend or expand utility infrastructure, or otherwise directly or indirectly increase the population, resulting in increased demand for public services. The Project would not generate a need for any new government facilities or public services during or after proposed activities are completed. Once the Project is complete, the Project area would be returned to pre-Project conditions. Therefore, no impact would occur.

3.16.4 Mitigation Summary

The Project would have no impact on 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?	☐	☐	☒	☐
c) Would the project interfere with existing use of recreation facilities or offshore recreational boating opportunities?[5]	☐	☒	☐	☐

3.17.1 Environmental Setting

The Project would take place in the Delta region of Sacramento County, with marine equipment mobilization, materials hauling, and waste disposal occurring in Solano County. The Delta Region is composed primarily of open space and agricultural lands that are bounded by a network of roadways and waterways that make up the Delta, including the Sacramento River and Threemile Slough.

[5] 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).)

3.17.1.1 Terrestrial Areas

The Project work areas are primarily composed of public lands used for recreational purposes including the Brannan Island SRA and Threemile Slough. The Project area also includes work areas on Sherman Island, which include private lands zoned for agriculture and commercial recreation and the Sherman Island Levee. The Brannan Island SRA is approximately 336 acres in size and is operated by the California Department of Parks and Recreation. The SRA offers terrestrial recreational opportunities, including camping, picnicking, swimming, birding, and fishing, as well as boating. Boating launch facilities at the SRA include the Brannan Island Public Boat Ramp and Delta Vista Berthing Area. The SRA also includes a small visitor center, and is typically a high-use recreation area that receives heavy use from May through October (State Parks 2026). Specific work areas within the SRA include use of the primary access road within the SRA, a public parking and picnic area near the waterside slope work area, and trails within this area, including use of the public boat ramp (see Figure 2-1).

On Sherman Island, recreation opportunities include fishing, which could occur along the waterside slope of the Levee along the shoreline of the Sherman Island work area. A portion of the Sherman Island work area includes private commercial recreation lands; however, these lands are currently vacant and not used for recreational use.

Other recreation facilities in the Project vicinity include the private Duck Island RV Park and Fishing Resort, approximately 2 miles north of the Project work areas, and Sandy Beach County Park, approximately 2 miles northwest of the Project work areas in Solano County. Hunting occurs primarily on private lands, although some hunting is also allowed on State and federally owned lands near the Project area (Sacramento County 2017a).

3.17.1.2 Marine/Riverine Areas

The Project area and the Delta region provide various marine/riverine-based recreational opportunities. As discussed in Section 1.7.1, *California State Lands Commission*, California holds all tidelands, submerged lands, and navigable waterways in public trust for statewide trust-consistent uses including navigation, recreation, and habitat protection, with state ownership generally extending landward to the mean high-tide line. The CSLC has authority to issue leases or permits for the use of sovereign land held in the Public Trust, as well as certain

residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. Navigable waterways in the Project area such as the Sacramento River and Threemile Slough are publicly accessible and used for various recreational opportunities including boating, fishing, hunting, birding, and swimming.

Several thousand boat berths are located in the Delta. Publicly owned boat ramps in the Project area include one ramp located at Sandy Beach County Park, as well as 10 ramps within Brannan Island SRA. However, most of the marine/riverine-based recreational opportunities within the Delta are accessible only through private marinas (Sacramento County 2017a), with public fishing opportunities where accessible from public roads. The nearest privately owned marina is Owl Harbor, approximately 3 miles east of the Project work areas.

3.17.2 Regulatory Setting

No federal laws and regulations relevant to recreation are applicable to the Project area. State laws and regulations pertaining to recreation that are relevant to the Project are identified in Appendix A. Local regulations including applicable county general plan policies are identified in Appendix B.

3.17.3 Impact Analysis

The Project would occur within Threemile Slough and Brannan Island SRA, which support recreational boating and other recreational activities and could temporarily affect boating access and other recreational activities.

Project activities occurring in Solano County include equipment mobilization, materials hauling, and waste disposal. These activities would occur at existing industrial facilities (e.g., CS Marine, Vulcan Materials Company) and marine vessel and haul vehicle travel would be limited and intermittent and occurring on waterways and roadways that are regularly travelled by commercial and recreational watercraft and vehicles. These activities do not have the potential to impact recreational resources; accordingly, the analysis below focuses on recreational resources at the Project work areas located within Sacramento County.

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?

Less than Significant Impact

The Project would take place within Brannan Island SRA and Threemile Slough, both of which are commonly used for recreational activities including fishing, boating, and camping. Project activities would use portions of the SRA as work areas (see Figure 2-1), which would result in temporary trail closures, use of the Brannan Island Public Boat Ramp or Delta Vista Berthing Area to launch crew boats, and use of large equipment within the SRA and within the Threemile Slough channel. As a result, the Project could temporarily reduce access to or disrupt recreational opportunities, resulting in the use of other facilities near the Project area.

However, Project construction activities would generally be short-term, lasting approximately 3 months, and would result in no permanent reductions in recreational opportunities or access in the area. Although the Project would require the use of portions of the SRA and Threemile Slough, the majority of these areas would remain open to the public. Boating access, while temporarily reduced, would be maintained within these areas.

After completion of the Project, construction equipment would be demobilized, and as discussed in Section 2.5, *Site Restoration and Demobilization*, a site restoration and riparian mitigation plan would be prepared and disturbed areas would be revegetated and restored as consistent with CA State Parks requirements. The Project would not result in permanent changes to access or availability of recreational resources at Brannan Island SRA or within Threemile Slough, and the use of neighboring and regional alternative recreational areas due to Project construction activities would be minor and short-term (over one 3-month construction season) and would not result in physical deterioration of those facilities. Impacts would be less than significant.

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?

Less than Significant Impact

The Project would not require the construction or expansion of recreational facilities. The Project involves remediation of the L-131Y and L-131Z pipelines and

removal of the L-131 East and L-131 West pipelines. The Project would take place within Brannan Island SRA and Threemile Slough and would result in the use of recreational facilities as Project work areas within the SRA and the Threemile Slough channel.

Project construction activities would generally be short-term, lasting approximately 3 months. The Project would include remediation and removal of existing natural gas pipelines but would not include structures that could permanently disrupt or expand recreational access or opportunities in the Project area. Further, the Project would not result in the creation of or need for new housing, the displacement of existing housing, or changes in land use that would require an expansion of existing recreation facilities or the development of new recreation facilities in the Project area.

After the completion of Project construction, construction equipment would be demobilized and a site restoration plan would be implemented in accordance with California Department of State Parks and Recreation requirements. As a result, the Project would not result in significant impacts on recreational facilities at Brannan Island SRA or within Threemile Slough, and no new or expanded recreational facilities would be required as a result of the Project. Therefore, impacts would be less than significant.

c) Would the Project interfere with existing use of recreation facilities or offshore recreational boating opportunities?

Less than Significant with Mitigation

The Project would include terrestrial and in-water work for approximately 3 months—from August 1 through October 31—to remediate the L-131Y and L-131Z pipelines and remove the L-131 East and L-131 West pipelines. Project work areas are described in Section 2.1.

Within Brannan Island SRA, areas temporarily closed to public use include a public parking area, a day use picnic area, and trails within the work space areas in the vicinity of the waterside slope of the Brannan Island SRA work area as depicted in Figure 2-1. As previously explained, these activities would be temporary and short duration and the SRA would otherwise remain open to public use, including all SRA roads, during Project construction activities within the SRA. To reduce temporary impacts to recreational users at Brannan Island SRA, PG&E will implement **MM REC-1: Construction Noticing and In-Water Safety Measures**, which would require noticing of Project activities around Project work

areas. These notices would enable recreationalists to plan for use of alternative areas and to exercise caution around Project work area.

Equipment required for marine work is discussed in Section 2.2.2, *Marine Equipment Mobilization*, while submarine construction activities are discussed in detail in Sections 2.3 and 2.4, which outline pipeline remediation and removal activities. The derrick barge, materials barge, and vessels required for pipeline removal and remediation within Threemile Slough would temporarily reduce recreational activities within some portions of Threemile Slough and raise safety concerns for recreational boaters in the vicinity of the work area. Access would be limited around the construction equipment, particularly while divers are in the water. However, restricted access would be short-term, would not prevent recreational boats from moving upstream and downstream during Project activities, and would not limit access to other surrounding recreational areas.

To maintain public safety, in-water work would require a safety perimeter in Threemile Slough that could temporarily affect waterway navigation and recreational use of the area for boaters by redirecting boat traffic around the work area. This would include warning buoys which would be set 500 feet upstream and downstream of the work area designating a vessel speed limit of 5 miles per hour. Additionally, for the duration of in-water work activities, all barges would be equipped with navigation and safety lighting at night to avoid collisions while not in use.

To reduce impacts to recreational users of the SRA and recreational boaters on Threemile Slough to a less than significant level, PG&E would implement **MM REC-1**, requiring notices to be posted at all local marinas and boat launches, and signs to be installed along the banks of the slough upstream and downstream of the work area to inform SRA users and boaters about Project work activities.

MM REC-1: Construction Noticing and In-Water Safety Measures.

Prior to work activities at Brannan Island SRA, the Applicant or its designated contractor shall coordinate with SRA staff to develop and post information at Brannan Island SRA concerning Project work locations, times, and other details of activities that may preclude recreational use of those work areas. At all times, while Project activities are taking place at Brannan Island SRA, signage shall be available to recreational users at the SRA to provide notice to the public that Project activities are taking place and to exercise caution.

Prior to in-water activity, PG&E or its designated contractor shall post information at all local marinas and launch facilities concerning Project work locations, times, and other details of activities that may pose hazards to recreational boaters. At all times while Project activities are taking place in Threemile Slough, warning signs and buoys shall be installed 500 feet upstream and downstream of the work site to provide notice to the public that Project activities are taking place and to exercise caution. The warning buoys shall also designate a vessel speed limit of 5 miles per hour in Project work areas. Additionally, all in-water activity shall be described in a Local Notice to Mariners to be submitted to the U.S. Coast Guard at least 15 days prior to Project implementation (in-water work). The Notice shall include:

- Type of operation (i.e., diving operations, construction)
- 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

With the implementation of **MM REC-1**, impacts to recreation would be less than significant.

3.17.4 Mitigation Summary

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

MM REC-1: Construction Noticing and In-Water Safety Measures

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 Project area includes the southern shore of Brannan Island and northernmost tip of Sherman Island, and in-water components within Threemile Slough, within Sacramento County. The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County, using designated truck haul routes and established shipping routes through the Carquinez Strait and Suisun Bay, and up the Sacramento River.

3.18.1.1 Site Access and Regional Context—Terrestrial Work Areas

Sherman Island and Brannan Island SRA are located near the eastern end of the Delta. Regional access to both areas is provided primarily by State Route (SR) 160. Access to the Sherman Island work area would occur along Sherman Island East Levee Road, while access to the Brannan Island SRA work area would occur through the SRA's internal roadway system. There are no designated bikeways or transit facilities in Sacramento County that are located within or near the

Project area (Sacramento County 2022a). Additional information regarding recreational facilities in the terrestrial portion of the Project area is provided in Section 3.17, *Recreation*. No regional rail lines traverse the Project area (Sacramento County 2022b).

SR 160 is a two-lane rural scenic highway running along the Sacramento River through the Delta. Originally meant for lower traffic volumes at moderate speeds, SR 160 and the other major State highways in the Delta (SRs 4 and 12) are now heavily used for regional trucking, recreational access, and commuting. SR 160 provides emergency access for the Delta (Sacramento County 2026b). According to the California Department of Transportation's 2023 annual traffic counts, peak-hour traffic on SR 160 south of SR 12 reached approximately 1,500 vehicles, with an average annual daily traffic volume of 16,000 vehicles (Caltrans 2023a). The average annual daily truck volume at this location was reported as 1,693 trucks, or 9.3 percent of the 18,200 daily traffic volume (Caltrans 2023b).

Project-related terrestrial activities would occur primarily within Sacramento County; however, mobilization of construction materials, equipment, and debris would take place in Solano County. Mobilization would be provided through established regional truck routes and local roadway networks that are designed to support industrial uses.

3.18.1.2 Site Access and Regional Context—Marine/Riverine Work Areas

Marine activities would occur within Threemile Slough, a channel connecting the Sacramento River to the San Joaquin River within the Delta. The Brannan Island SRA public boat ramp is located along Threemile Slough approximately 600 feet downstream of the Threemile Slough work area. The Delta Vista Berthing Area is located along Threemile Slough approximately 1,000 feet west of the Threemile Slough work area. See Section 3.17, *Recreation*, for further details on recreational facilities in the marine portion of the Project area.

Pipeline removal and remediation in the marine portion of the Project area would occur within Sacramento County. Mobilization of construction materials and marine equipment would originate in Solano County. Project vessels would operate within existing, established navigation channels in Solano County, and no in-water activities outside the immediate removal and remediation area are proposed.

3.18.2 Regulatory Setting

Federal and State laws and regulations pertaining to transportation that are relevant to the Project are identified in Appendix A. Local regulations, including applicable county general plan policies applicable to transportation, are identified in Appendix B.

3.18.3 Impact Analysis

Project-related construction equipment and vessels use and staging at Sherman Island and Brannan Island SRA and within Threemile Slough would temporarily affect terrestrial and marine traffic. Regional emergency routes may also experience increased congestion temporarily.

a) Would the Project 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 would not result in a permanent change to the existing or planned circulation system in the Project areas. The Project would not involve any new or modified land uses that would generate long-term vehicle trips or other features that may conflict with programs or plans addressing the local or regional circulation system. Vehicle trips associated with the Project would not use any Sacramento County roadway segments subject to congestion management plan measures or strategies (SACOG 2019). The Sacramento County Active Transportation Plan identifies a proposed Class II bike lane along SR 160 (Sacramento County 2022a). During the 10-day delivery, preparation, and staging period for transporting terrestrial equipment to Sherman Island and the 3-month work window, truck traffic at the intersection of SR 160 and Sherman Island East Levee Road would temporarily increase, resulting in a short-term impact on bicycle facilities. However, no specific construction date is established for the proposed Class II bike lane. The impact would be less than significant.

b) Would the Project 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 assessing transportation impacts. In December

2018, the Governor's Office of Planning and Research (now known as the Governor's Office of Land Use and Climate Innovation) provided an updated technical advisory to help evaluate transportation impacts under CEQA. In particular, the Technical Advisory provides 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. Further, as the Project is not a land use or a transportation project, CEQA Guidelines section 15064.3(b)(3) identifies that "…(f)or many projects, a qualitative analysis of construction traffic may be appropriate." As such, this IS/MND provides a qualitative analysis of the Project's construction traffic.

The Project consists of four components that would occur over a 3-month work window. During this period, no more than 31 personnel would travel to the site each day from nearby residences, hotels, or rental properties. Temporary traffic increases would occur during the initial transport of equipment to staging areas and as trucks depart the Project area with materials for recycling or disposal.

A total of 400 construction worker trips is expected over the 3-month work period. In Sacramento County, ~~A~~ a total of eight trips is expected from a local equipment yard within 25 miles of the terrestrial work areas for equipment transport ~~from Solano County to the terrestrial work areas in Sacramento County~~, and 28~~eight~~ trips would occur for the transport of waste materials from terrestrial work areas in Sacramento County to the Potrero Hills Landfill (or similar disposal site) in Solano County. ~~Each transport period is expected to last 10 days.~~ In addition, ~~A~~ a total of 22~~two~~ trips is expected for the delivery of site restoration materials ~~from Solano County~~ to the terrestrial work areas ~~in Sacramento County~~ from a local source within 25 miles. ~~An additional three trips are expected within Solano County for the transport of waste materials from the home port to the landfill.~~ Project activity in Solano County would be limited to brief equipment mobilization, delivery of rock materials to the Mare Island home port from the Vulcan Materials Company quarry, and ~~minimal material and~~ waste transport from the home port to the Potrero Hills Landfill or similar disposal site using existing haul routes (see Table 2-4, *Pickup and Delivery Estimates*). No separate Solano County transportation policies conflict with the CEQA vehicle miles traveled methodology.

Given the temporary nature of the Project, and because the total number of truck trips would remain below the screening thresholds identified in the Governor's Office of Planning and Research's Technical Advisory and the

Sacramento County Transportation Analysis Guidelines, transportation impacts associated with the Project would be less than significant.

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

Less than Significant with Mitigation

Terrestrial Project activities would not involve roadway modifications or introduce incompatible uses that would increase traffic hazards. Some temporary parking, staging, and work areas would be located along Sherman Island East Levee Road for approximately 3 months, which would be limited to existing pullout areas. No permanent features would be constructed that would increase roadway hazards due to design or incompatible uses. Additional parking and staging areas would be located in the private land area of Sherman Island.

Project-related vehicle trips associated with equipment delivery, materials transport, and waste hauling would represent a negligible increase relative to existing commercial traffic levels; however, the Project would require the use of a long-arm excavator that could impede traffic and increase hazards along the Sherman Island East Levee Road.

Excavations in the Sherman Island work area would occur within the waterside levee slope up to the levee crown. A long-arm excavator would be positioned at the levee crown and within the southbound lane of Sherman Island East Levee Road (Sacramento County Road No. 2H0020), which would require one-way controlled traffic during excavation operations in accordance with an encroachment permit from Sacramento County. To reduce impacts on terrestrial traffic, PG&E would implement **MM TRA-1: Traffic Control Plan (Terrestrial)**, to facilitate emergency access and reduce potential hazards to motorists by requiring appropriate signage, traffic cones, and flaggers to reduce impacts. With implementation of **MM TRA-1**, the impact would be less than significant.

> **MM TRA-1: Traffic Control Plan (Terrestrial).**
>
> Prior to commencement of Project activities, a traffic control plan shall be submitted to the Commission for review and approval. It shall include measures to reduce Project-related traffic congestion at SR 160 and Sherman Island East Levee Road and will address construction staging of

equipment within Project roadways and any resulting lane closures. The plan shall include appropriate signage, traffic cones, and flaggers to reduce potential hazards to motorists and workers during the Project and reduce potential conflicts with emergency access.

Upon approval, the traffic control plan shall be submitted to the County of Sacramento, and an encroachment permit will be obtained for construction activities within County maintained roadways.

Transportation conditions in Solano County would remain unchanged under the Project, and the impact would be less than significant.

Marine Project activities include remediation work within Threemile Slough. Remediation work would restore rock cover to the 1990 as-built condition, maintaining existing land use rather than introducing a new barrier. Marine Project activities would require the use of a derrick barge, materials barge, two tugboats, a vessel, and a work skiff required for pipeline removal and remediation within Threemile Slough. These activities would temporarily restrict marine traffic in the Project area, create potential traffic hazards, and raise vessel safety concerns. However, for the duration of in-water work activities, all barges would be equipped with navigation and safety lighting to avoid nighttime collisions. In addition, warning buoys would be set 500 feet upstream and downstream of the work area designating a speed limit of 5 miles per hour. Notices for the Project would be posted at all local marinas and boat launches, and signs would be installed along the banks of the slough upstream and downstream of the work area to inform mariners.

To reduce impacts on marine traffic, PG&E would implement **MM REC-1: Construction Noticing and In-Water Safety Measures** (Section 3.17, *Recreation*), which requires pre-Project notifications and warning signs to ensure that Project activities are coordinated with local marinas and the U.S. Coast Guard. These measures would ensure adequate notice to vessel operators regarding the planned construction schedule and the need for caution near the in-water work area.

With implementation of **MM TRA-1** and **MM REC-1**, the impact would be less than significant.

d) Would the Project result in inadequate emergency access?

Less than Significant with Mitigation

SR 160 provides emergency access for local communities in the Delta. Project activities would not result in any road closures; however, they may cause traffic congestion that could affect emergency access. SR 160 provides access to Brannan Island SRA's internal system of roads that would provide access to the work area; SR 160 also provides access to Sherman Island East Levee Road. The increase in Project-related traffic may cause traffic congestion that could affect emergency access.

Additionally, as mentioned above, excavations in the Sherman Island work area would occur within the waterside levee slope up to the levee crown. A long-arm excavator would be positioned at the levee crown and within the southbound lane of Sherman Island East Levee Road (Sacramento County Road No. 2H0020), which would require one-way controlled traffic during excavation operations in accordance with an encroachment permit from Sacramento County. To reduce impacts on terrestrial traffic, PG&E would implement **MM TRA-1**, to facilitate emergency access by requiring appropriate signage, traffic cones, and flaggers to reduce potential traffic hazards and circulation impacts. With implementation of **MM TRA-1**, the impact would be less than significant.

MM TRA-1: Traffic Control Plan (Terrestrial)

3.18.4 Mitigation Summary

Implementation of the following mitigation measures would reduce the potential for Project-related impacts on transportation to less than significant.

MM REC-1: Construction Noticing and In-Water Safety Measures

MM TRA-1: Traffic Control Plan (Terrestrial)

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?	☐	☐	☒	☐

UTILITIES AND SERVICE SYSTEMS – Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

3.19.1 Environmental Setting

The Project work areas are located in rural Sacramento County outside of the Urban Service Boundary (Sacramento County 2010), and utility services are typically provided through on-site systems or contracted directly with private service providers. This includes the use of groundwater or surface diversions for water supply, septic or collection systems for wastewater management, and drainage ditches or direct infiltration for stormwater management. Electric and natural gas service is provided by PG&E (PG&E 2014a, 2014b), while telecommunication services are provided by Frontier, T-Mobile, and Unwired Ltd. (Broadbandnow 2026).

In the Project work areas, PG&E owns the four natural gas transmission pipelines included as part of the proposed Project.

A buried natural gas pipeline owned and operated by a third party, Lodi Gas Storage, extends from Brannan Island SRA across Threemile Slough and through Sherman Island, and it underlies the northern sections of the L-131 East and West pipelines. The third-party pipeline was installed via horizontal directional drilling within a pipeline casing approximately 40 feet below the river bottom (Lodi Gas Storage, LLC. 2001).

Project-related non-hazardous solid waste would be sent to the Potrero Hills Landfill, located in Solano County approximately 25 miles from the Project area ~~in Suisun City~~. The Recology Hay Road facility is the closest hazardous waste facility to the Project area, located approximately 21 miles away in Vacaville.

3.19.2 Regulatory Setting

Federal and State laws and regulations pertaining to utilities and service systems that are relevant to the Project are identified in Appendix A. These laws include the Hazardous Materials Transportation Act, the Toxic Substances Control Act,

and California policies related to handling hazardous waste, such as California Code of Regulations title 22 and the California Hazardous Waste Control Act.

Local regulations including applicable county general plan policies are identified in Appendix B.

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 work areas would require equipment mobilization and site preparation, remediation of the active L-131Y and L-131Z pipelines within Threemile Slough, removal of the terrestrial and submarine portions of the inactive L-131 East and L-131 West pipelines, and post-construction restoration of the Project area and demobilization activities.

Although the Project would remediate existing, active natural gas pipelines, the Project does not require, and would not result in, the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electrical power, natural gas, or telecommunications facilities in the Project area. Therefore, there would be no impact.

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

Less than Significant Impact

As described in Chapter 2, *Project Description*, the Project duration would be approximately three months. The Project could involve limited use of municipal water supplies at the Brannan Island SRA to service water tank vehicles for dust suppression, street sweeping, cleaning of equipment, etc., which would be temporary and low volume given the small size of terrestrial work areas. Construction workers may have limited use of existing water supply services at the Project work areas within Brannan Island SRA for drinking water, restroom uses, and other water uses available to the public. However, the Project would generally not require large amounts of water, and it is not anticipated to use

surface water or groundwater resources. No long-term water demand would be created, and no new or expanded water infrastructure or entitlements would be needed. Therefore, the impact related to water supply would be less than significant.

c) Would the Project 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?

Less than Significant Impact

Wastewater generated by the Project would be limited to the use of portable restrooms which would be provided on-site for workers at the Sherman Island work area, and the use of existing public restrooms at the Brannan Island SRA. However, the use of these restroom facilities would be limited to the 3-month construction window and would not result in large amounts of waste that could affect capacity. Regarding the use of portable toilets at the Sherman Island work area, wastewater generated would be disposed of by the construction contractor at a municipal wastewater treatment plant located within 50 miles of the Project area. Regarding the existing public restrooms at Brannan Island SRA work area, the wastewater generated would not be substantial enough to significantly affect system capacity. Therefore, it is anticipated that the current SRA restroom facilities would provide adequate capacity. Further, because the L-131 East and L-131 West pipelines were previously inspected and filled with concrete, pigging[6] and flushing of the decommissioned pipelines would not be necessary before removal, and no wastewater is anticipated from these activities.

The Project would not generate the need for long-term wastewater treatment and would not affect the capacity of any wastewater treatment providers. Therefore, the impact would be less than significant.

[6] "Pigging" is the practice of using pipeline inspection devices generally referred to as "pigs" or "scrapers," to perform various maintenance operations.

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

Less than Significant Impact

The Project would generate limited amounts of solid waste including the removed L-131 East and L-131 West pipeline sections, demolished concrete, miscellaneous debris, and materials packaging. Organic waste would include trees, shrubs, and other assorted vegetative debris, which would be removed from the Project work areas. However, the generation of solid waste associated with the Project would be temporary (during the approximate 3-month construction work period) and limited to construction activities.

Project-related non-hazardous solid waste would be sent to the Potrero Hills Landfill in Solano County. As discussed in Section 2.4, *L-131 East and L-131 West Pipeline Removal*, non-hazardous solid waste generated in terrestrial work areas would be sent by truck, totaling approximately 28 ~~two~~ trips (Table 2-4). Solid waste generated in marine work areas would be transported via barge to Mare Island (home port), where it would then be transported by truck to the Potrero Hills Landfill, totaling approximately three trips (Table 2-4). The Potrero Hills Landfill is permitted for disposal of industrial, construction, and demolition waste. According to available records, as of 2006, the Potrero Hills Landfill had a remaining capacity of 13,872,000 cubic yards and a cease-operation year of 2048 (CalRecycle 2026a).

The removed pipeline sections may contain asbestos; this would be determined prior to construction as described in Section 2.2, *Site Preparation, Staging, and Mobilization*. Pipeline sections would be recycled if feasible or would be sent to a hazardous materials disposal facility near the Project area. Any hazardous solid waste resulting from Project implementation would be disposed of in compliance with local and State regulations at a facility licensed to accept such materials. The Recology Hay Road facility accepts asbestos-containing materials and could be used to dispose of hazardous solid waste generated by the Project. According to available records, as of 2010, the facility had a remaining capacity of 30,433,000 cubic yards and a cease-operation year of 2077 (CalRecycle 2026b).

The Project would not generate significant amounts of solid waste. The facilities discussed above have adequate capacity to accept Project-generated solid waste, and when feasible, construction debris would be recycled for future

reuse consistent with State and local regulations. Therefore, the impact would be less than significant.

e) Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant with Mitigation

Disposal of hazardous materials used during Project construction, including gasoline, diesel, hydraulic fluids, lubricants, coolants, and solvents, is discussed in Section 3.10, *Hazards and Hazardous Materials*.

Solid waste would be disposed of in accordance with local, State, and federal laws and regulations as required by Project plans and specifications. Project-generated solid waste not determined to be hazardous would be recycled to the extent feasible or disposed of at the Potrero Hills Landfill.

However, hazardous solid waste, if improperly disposed of, is considered a potentially significant impact. Should it be determined that the L-131 East and L131 West pipelines contain asbestos, implementation of **MM HAZ-2: Asbestos Exposure Minimization** (Section 3.10, *Hazards and Hazardous Materials*), would ensure that the pipelines would be recycled, if feasible, or disposed of through a permitted hazardous waste treatment, storage, or disposal facility as directed by a Cal/OSHA-Certified Asbestos Consultant.

Disposal of solid waste generated by the Project would not affect regional compliance with State-mandated municipal solid waste diversion and recycling requirements. Further, as discussed in criterion d) above, the Project would generate limited amounts of solid waste. With implementation of **MM HAZ-2**, the impact would be less than significant.

3.19.4 Mitigation Summary

Implementation of the following mitigation measure would reduce the potential for Project-related impacts to utilities and service systems to less than significant.

MM HAZ-2: Asbestos Exposure Minimization

3.20 WILDFIRE

WILDFIRE - 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 work areas include the southern shore of Brannan Island SRA and northernmost tip of Sherman Island, and in-water components within Threemile Slough, located in southern Sacramento County. The Project would also involve marine equipment mobilization and materials hauling and disposal in Solano County.

"Wildfire" is defined as an unplanned, unwanted wildland fire that can result from human-made or natural causes (California Government Code §51177). Wildland fires affect grass, forest, and brushlands, and any structures on these lands, creating the potential for injury, loss of life, and property damage. Fuel sources, topography, and climate are the primary factors influencing the degree of risk.

The Project work areas are not located in a High Fire Hazard Severity Zone in a State Responsibility Area or in a Fire Hazard Severity Zone in a Local Responsibility Area (CAL FIRE 2025).

The Project area is served by the Delta Fire Protection District in Sacramento County. Portions of the marine vessel route are in the Montezuma Fire Protection District and the Suisun Fire Protection District in Solano County. The truck haul route is located in the city of Vallejo, and the Vulcan Materials quarry is located in the East Vallejo Fire District.

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 that are relevant to the Project are identified in Appendix A. Local goals, policies, or regulations, including county general plan policies applicable to this area with respect to wildfire, are identified in Appendix B.

3.20.3 Impact Analysis

The Project is not located in a High Fire Hazard Severity Zone and would not create a permanent impairment of an adopted emergency response plan or emergency evacuation plan.

a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant with Mitigation

The Project is not located in a High Fire Hazard Severity Zone, and while the Project may temporarily impede emergency access by increasing traffic during construction or with proposed construction activity on Sherman Island East Levee Road, the Project would not create a permanent impairment of an adopted emergency response plan or emergency evacuation plan.

As discussed in Section 3.10, *Hazards and Hazardous Materials*, multiple emergency response plans that apply to the Delta have the potential to cover the Project area; however, the emergency response plans primarily address flood emergencies.

Construction of the Project would involve the removal of inactive pipelines up the waterside slope of the Sherman Island levee. To ensure that the Sherman Island levee remains in working order post-construction, excavations in the waterside slope of the Sherman Island levee and subsequent reconstruction and restoration would be performed in accordance with the requirements of the agencies responsible for the levee: the Central Valley Flood Protection Board, the U.S. Army Corps of Engineers, and Sherman Island Reclamation District 341. These requirements typically include excavating at a 2-to-1 (horizontal to vertical) or flatter slope. Adherence to such design criteria would ensure that levees affected during Project construction are returned to existing conditions and continue to be adequately used for flood control purposes. The waterside slope on Brannan Island would also be reconstructed and restored to ensure continued function as a flood control structure.

As discussed in further detail in Section 3.18, *Transportation*, State Route 160 provides emergency access for local communities in the Delta and may be used in the event of an evacuation. Excavations in the Sherman Island work area would occur within the waterside levee slope up to the levee crown. A long-arm excavator would be positioned at the levee crown and within the southbound lane of Sherman Island East Levee Road (Sacramento County Road No. 2H0020), which would require one-way controlled traffic during excavation operations in accordance with an encroachment permit from Sacramento County. Additionally, Project construction could cause traffic congestion that could affect emergency access. To reduce impacts on terrestrial traffic, PG&E would implement **MM TRA-1: Traffic Control Plan (Terrestrial)** (see Section 3.18, *Transportation*) to facilitate emergency access by requiring appropriate signage, traffic cones, and flaggers to reduce potential traffic hazards and circulation impacts.

Furthermore, the Project would implement a PWSP under **MM HAZ-1: Project Work and Safety Plan** (see Section 3.10, *Hazards and Hazardous Materials*), which would include an emergency response plan. The emergency response plan would cover multiple emergency situations in accordance with federal, State, and local regulations and would include contact information for emergency response authorities. Implementation of **MM HAZ-1** and **MM TRA-1**

would minimize interference with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant with mitigation.

b) Would the Project, 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) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment?

d) Would the Project 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?

Less than Significant Impact

The Project work areas are not located in a High Fire Hazard Severity Zone in a State Responsibility Area or in a Fire Hazard Severity Zone in a Local Responsibility Area (CAL FIRE 2025). The Project would not involve permanent occupants or habitable structures. The only occupants at the Project site would be construction workers present during working hours for Project construction. Additionally, the Project would not require the installation of roads, fuel breaks, emergency water sources, power lines, or other utilities. Other than the sides of the levees, the Project sites are relatively flat and adjacent areas would not be subject to post-fire slope instability. However, construction equipment may introduce new potential ignition sources to the Project area, and PG&E employees and contract partners must follow the fire safety practices outlined in PG&E Utility Procedure EMER-4102P-01 when performing work or operating outdoors on or near any forest-, brush-, or grass-covered land as required by Utility Standard EMER-4102S(PG&E 2024). Adherence to PG&E field protocols would ensure that Project construction would not contribute to an increase in wildfire risk. Therefore, the impact would be less than significant.

3.20.4 Mitigation Summary

Implementation of the following mitigation measures would reduce potential Project-related impacts from wildfire to less than significant.

MM HAZ-1: Project Work and Safety Plan

MM TRA-1: Traffic Control Plan (Terrestrial)

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

The lead agency shall find that a project may have a significant effect on the environment and thereby require an Environmental Impact Report (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 mitigation measures 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 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	☐	☐	☒	☐

MANDATORY FINDINGS OF SIGNIFICANCE –	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
effects of other current projects, and the effects of past, present, and 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 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 Section 3.4, *Biological Resources*, 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 a plant or animal community, or reduce the number or restrict the range of an endangered, rare, or threatened species. Implementation of **MM BIO-1: Worker Environmental Awareness Training**, **MM BIO-2: Special Status Plant Avoidance**, **MM BIO-3: Biological Monitoring**, **MM BIO-4: Turbidity Monitoring Plan**, **MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys**, **MM BIO-6: Nesting Bird Season Preconstruction Surveys, MM BIO-7: Roosting Bat Avoidance**, **MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys**, **MM BIO-9: Northwestern Pond Turtle Preconstruction Surveys**, **MM BIO-10: Elderberry Shrub Avoidance Buffers**, **MM BIO-11: Elderberry Shrub Trimming**, **MM BIO-12: In-Water Work Window**, **MM BIO-13: HACCP and Decontamination Plan**, **MM BIO-14: Site Restoration and Riparian Mitigation Plan**, **MM BIO-15: Riparian Habitat Protection Measures**, and **MM BIO-16: Replacement of In-Water Woody Debris**, as well as **MM HYDRO-1: Stormwater Pollution Prevention Plan** (Section 3.11, *Hydrology and*

Water Quality) and **MM HAZ-1: Project Work and Safety Plan** (Section 3.10, *Hazards and Hazardous Materials*), 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 Section 3.5, *Cultural Resources* and Section 3.6, *Cultural Resources – Tribal*. Based on cultural resources records of the area, the Project area is within the boundaries of the Sacramento River Tribal Cultural Landscape (P-34-005225); however, cultural resources are unlikely to be adversely affected by Project-related activities which are temporary and limited in scope. Further, implementation of **MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources** and **MM CUL-2/TCR-2 : Unanticipated Discovery of Human Remains** 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 resource areas: Aesthetics (Section 3.1); Air Quality (Section 3.3); Biological Resources (Section 3.4); Cultural Resources (Section 3.5); Cultural Resources – Tribal (Section 3.6); Geology, Soils, and Paleontological Resources (Section 3.8); Greenhouse Gas Emissions (Section 3.9); Hazards and Hazardous Materials (Section 3.10); Hydrology and Water Quality (Section 3.11); Recreation (Section 3.17); Transportation (Section 3.18); Utilities and Service Systems (Section 3.19); and Wildfire (Section 3.20). However, measures have been identified that would reduce these impacts to less than significant with mitigation.

For any Project-related impact to contribute cumulatively to impacts of past, present, or reasonably foreseeable projects, the other projects would need to be reasonably foreseeable, result in an impact on the same resource area, occur at the same time, and occur within an area overlapping the proposed Project. Upon a query of Sacramento County and Solano County, no projects were identified that would meet the above criteria for cumulative effects. There

are no known major construction projects planned at Brannan Island SRA during the proposed Project's scheduled work activities. Further, the Project will require a Right of Entry Permit from the California Department of Parks and Recreation, which would ensure that Project activities do not conflict with operations of the SRA.

Mobilization of work vessels would occur from the port in Mare Island and through the Carquinez Strait, Suisun Bay, and up the Sacramento River to the Threemile Slough work areas, with demobilization of work vessels occurring in the opposite direction at the completion of Project work activities. Vessel transits would be limited in number and of short duration in established vessel transit lanes and would not conflict with other vessel operations in those lanes. Therefore, cumulative impacts would be 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, hazards and hazardous materials, 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 implementation of mitigation measures or compliance with standard regulatory requirements.

As such, with the implementation of **MM AES-1: Night-Lighting Minimization** (Section 3.1, *Aesthetics*), **MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices** (Section 3.3, *Air Quality*), **MMs BIO-1** through **BIO-16** (Section 3.4, *Biological Resources*), **MM CUL-1/TCR-1** and **MM CUL-2/TCR-2** (Sections 3.5 and 3.6, *Cultural Resources* and *Cultural Resources-Tribal*), **MM HAZ-1**, **MM HAZ-2: Asbestos Exposure Minimization**, **MM HAZ-3: Soil Testing and Disposal**, **MM HAZ-4: Bathymetric Surveys and Debris Removal Measures** (Section 3.10, *Hazards and Hazardous Materials*), **MM HYDRO-1**(Section 3.11, *Hydrology and Water Quality*), **MM REC-1: Construction Noticing and In-Water**

Safety Measures (Section 3.17, *Recreation*), and **MM TRA-1: Traffic Control Plan (Terrestrial)** (Section 3.18, *Transportation*), Project impacts would be less than significant.

3.21.2 Mitigation Summary

Implementation of the following mitigation measures would reduce the potential for Project-related impacts to less than significant:

MM AES-1: Night-Lighting Minimization

MM AQ-1: Implement SMAQMD Basic Construction Emissions Control Practices

MM BIO-1: Worker Environmental Awareness Training

MM BIO-2: Special Status Plant Avoidance

MM BIO-3: Biological Monitoring

MM BIO-4: Turbidity Monitoring Plan

MM BIO-5: Swainson's Hawk Nesting Season Avoidance or Preconstruction Surveys

MM BIO-6: Nesting Bird Season Preconstruction Surveys

MM BIO-7: Roosting Bat Avoidance

MM BIO-8: Giant Garter Snake Work Window and Preconstruction Surveys

MM BIO-9: Northwestern Pond Turtle (NPT) Preconstruction Surveys

MM BIO-10: Elderberry Shrub Avoidance Buffers

MM BIO-11: Elderberry Shrub Trimming

MM BIO-12: In-Water Work Window

MM BIO-13: HACCP and Decontamination Plan

MM BIO-14: Site Restoration and Riparian Mitigation Plan

MM BIO-15: Riparian Habitat Protection Measures

MM BIO-16: Replacement of In-Water Woody Debris

MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources

MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains

MM HAZ-1: Project Work and Safety Plan

MM HAZ-2: Asbestos Exposure Minimization

MM HAZ-3: Soil Testing and Disposal

MM HAZ-4: Bathymetric Surveys and Debris Removal Measures

MM HYDRO-1: Stormwater Pollution Prevention Plan

MM REC-1: Construction Noticing and In-Water Safety Measures

MM TRA-1: Traffic Control Plan (Terrestrial)

4.0 OTHER 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 or Commission) consideration of the Project. The considerations addressed below are:

- Climate change and sea level rise
- Recreational fishing
- Environmental justice
- Significant Lands Inventory
- Other considerations may be addressed in the staff report presented at the time of the Commission's consideration of the Project.

4.1 CLIMATE CHANGE AND SEA LEVEL RISE

The climate crisis and rising sea levels are impacting California's coastal and inland waterways now. Likely impacts to the lease premises include, but are not limited to, sea level rise, saltwater intrusion, prolonged drought, extreme heat, and changes to the intensity and timing of precipitation events. These impacts can exacerbate natural hydrological processes such as erosion, scour, and sedimentation. The inactive L-131 East and West pipelines are being removed from the lease premises and thus not subject to climate change and sea level rise impacts. These impacts may affect the active L-131 Y and Z pipelines and rock coverage over the pipelines subject to the proposed lease, located on Threemile Slough.

Water levels in tidally-influenced rivers will rise as sea levels rise. The California Ocean Protection Council updated the State of California Sea Level Rise Guidance in 2024 to provide a synthesis of the best available science on sea level rise projections and rates for multiple emissions scenarios. Commission staff evaluated the "intermediate-high" and "high" scenarios due to the vulnerability and exposure of the lease location and the continued global reliance on fossil fuels. The San Francisco tide gauge was used for the projected sea level rise scenario for the lease region, as listed in **Table 4-1**.

Table 4-1. Projected Sea Level Rise for San Francisco

Year	Intermediate-High (feet)	High (feet)
2040	0.7	0.8
2050	1.0	1.3
2070	2.2	2.9
2100	4.8	6.5

Note: Projections are with respect to a 2000 baseline.
Source: Table 6, State of California Sea Level Rise Guidance: 2024 Update

In addition to rising seas, warmer temperatures have led California and the Southwest region to experience a megadrought from 2000 to 2022, measured as the driest 22 years in the past 1200 years, and more megadroughts are projected through the end of the century (Fifth National Climate Change Assessment: Southwest Region, 2023). Hotter and drier conditions have led to declines in snowpack volumes, higher-elevation snow lines, earlier snowmelt, and reduced overall runoff. Streamflow and river volumes are lower and will be drawn down farther as temperatures continue to rise and demand for water increases. Despite the region's increasing aridity, flooding from extreme precipitation events is projected to increase, attributed to earlier snowmelt, sea level rise, and more intense and frequent atmospheric rivers. Minor and moderate flooding (flooding events defined as disruptive to damaging), attributed to higher water levels, is expected to increase five to ten orders of magnitude by 2100, according to NOAA's 2022 Sea Level Rise Technical Report.

The lease premises are likely to experience more extreme conditions over the lease term than in the past, due to climate change. Changes to the timing and amount of runoff from the higher elevations of the watershed, stronger storm surge, and rising water levels will result in higher flood risks. Bank stability may be compromised due to increased channel erosion and undercutting from more intense precipitation and floods. Flooding, erosion, scour, caused by extreme storms and high flows could erode or displace rock coverage over the active pipelines or cause erosion along the banks of Threemile Slough. Structures on the lease premises may be exposed to saltier water and corrode faster than before. Conversely, drought could lower water levels for longer portions of the year and expose structures that were historically designed to be submerged to air, wind, and heat. Structures may be at increased risk for damage from exposure to extreme heat and floods.

To reduce the likelihood of adverse impacts to the lease premises and improvements, PG&E should periodically inspect the depth of burial of the active pipelines and monitor for loss of coverage and pipeline degradation and perform future remediation when necessary to ensure the required depth of coverage is maintained. Any future construction or activities on State lands would require a separate authorization from the Commission. Regular maintenance, as referenced in the lease, may reduce the likelihood of severe structural degradation or dislodgement.

4.2 RECREATIONAL FISHING

The Sacramento River and Threemile Slough support recreational fishing in the Project area, with fishing boats launched at the Brannan Island Public Boat Ramp and Delta Vista Berthing Area immediately adjacent to the Project work areas, the private Duck Island RV Park and Fishing Resort approximately 2 miles north of the Project work areas, Sandy Beach County Park approximately 2 miles northwest of the Project work areas, and several other private marinas to the east, such as Owl Harbor which is approximately 3 miles from the Project work areas.

As discussed in Section 2.6, Anticipated Project Work Schedule, Equipment, and Personnel, in-water work would be conducted between August 1 and October 31 when migratory fish such as salmonids are unlikely to be present. Further, at any one time, it is estimated that in-water pipeline removal and remediation activities would temporarily affect only a limited portion of the width of Threemile Slough, which is approximately 620 feet wide in the Project area. Therefore, fishermen would have free passage around Project barges and vessels during Project activities. The Brannan Island SRA boat ramp would also remain open to public boat launching during Project work activities. With implementation of **MM BIO-4: Turbidity Monitoring Plan**, turbidity would be substantially contained within the in-water work area. Overall, the Project is not anticipated to significantly affect recreational fishing opportunities in Threemile Slough; however, **MM REC-1** and **MM REC-2** (Section 3.17, *Recreation*) have been included to provide noticing to recreational users and address in-water construction safety concerns to ensure impacts are less than significant.

4.3 ENVIRONMENTAL JUSTICE

"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 updated Environmental Justice Policy in December 2018 (Item 75) to ensure that environmental justice is an essential consideration in the CSLC's processes, decisions, and programs.[7] 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."[8]

4.3.1 U.S. Census Bureau Statistics

Tables 4-1a through 4-1c present 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 2024 American Community Survey 5-Year Estimates (U.S. Census Bureau 2024b).[9] The Project work areas are located in Sacramento County, and specifically fall within Census Tract No. 98 in Sacramento County, which includes the larger regional vicinity surrounding the Project.

4.3.2 Population and Economic Characteristics

4.3.2.1 Demographics

As indicated in **Table 4-2a**, regionally the population in Sacramento County is comprised of an approximately 59.6 percent white and 40.4 percent non-white population. Demographics within the Census Tract including the Project corridor are also predominantly white, at approximately 76.0 percent. The percentage of Hispanic or Latino persons within Sacramento County is approximately 29.6 percent, whereas the State of California as a whole is 40.8 percent.

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[7] https://www.slc.ca.gov/wp-content/uploads/sites/355/2018/11/EJPolicy.pdf
[8] *Id*.
[9] https://www.census.gov/programs-surveys/acs

Table 4-2a. Environmental Justice Statistics (Race)

Parameter	California	Sacramento County	Census Tract 98
White	33.6%	59.6%	76.0%
Black or African American	6.4%	10.6%	2.2%
American Indian and Alaska Native	1.8%	1.6%	0.15%
Asian	17%	19.4%	2.18%
Native Hawaiian	0.5%	1.4%	0.0%
Hispanic or Latino (of Any Race)	40.8%	24.6%	29.6%

Source: U.S. Census Bureau data.census.gov; last accessed February 19, 2026.

4.3.2.2 Socioeconomics

As shown in **Table 4-2b**, from a regional standpoint, Sacramento County has a lower-than-average median household income level ($92,175) compared to the State of California ($99,122), and Census Tract 98 (Sacramento County) is lower than the State median at $81,250. With respect to populations (all families) living below the established poverty level, Sacramento County and Census Tract 98 sit at approximately 12.0 and 6.3 percent, respectively.

Table 4-2b. Environmental Justice Statistics (Income and Population)

Parameter	California	Sacramento County	Census Tract 98
Total population	39,305,309	1,524,553	2,062
Median household income	$99,122	$92,175	$81,250
Percent (%) below the poverty level (all families)[1]	11.8%	12.0%	6.3%

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 these data. Source: data.census.gov, last accessed February 20, 2026 (DP05 – ACS Demographic and Housing Estimates and DP03 – Selected Economic Characteristics); 2024 ACS 5-Year Estimates.

As shown in **Table 4-2c**, Sacramento County residents are primarily employed in educational services and health care and social assistance; professional, scientific, and management, and administrative and waste management services; and public administration. Residents in Census Tract 98 in Sacramento County are primarily employed in construction; educational services and health

care and social assistance; and the arts, entertainment, and recreation, and accommodation and food services.

Table 4-2c. Environmental Justice Statistics (Employment Industry – Percentage of Total Population)

Parameter	California	Sacramento County	Census Tract 98
Agriculture, forestry, fishing and hunting, mining	2.1%	0.9%	5.1%
Construction	6.5%	7.1%	26.9%
Manufacturing	8.3%	5.2%	3.0%
Wholesale trade	2.0%	1.6%	1.6%
Retail trade	9.7%	9.4%	11.3%
Transportation and warehousing, and utilities	5.9%	7.2%	5.6%
Information	2.8%	1.3%	1.4%
Finance and insurance, and real estate and rental and leasing	5.4%	5.3%	1.2%
Professional, scientific, and management, and administrative and waste management services	14.9%	12.4%	1.5%
Educational services and health care and social assistance	22.9%	24.1%	17.5%
Arts, entertainment, and recreation, and accommodation and food services	9.8%	9.0%	13.5%
Other services, except public administration	4.8%	4.9%	7.3%
Public administration	4.7%	11.6%	1.1%

Source: data.census.gov, last accessed February 20, 2026 (DP05 – ACS Demographic and Housing Estimates and DP03 – Selected Economic Characteristics); 2019 ACS 5-Year Estimates.

4.3.3 California Office Of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen Results

According to the California Office of Environmental Health Hazard Assessment (OEHHA 2022) California Communities Environmental Health Screening Tool (CalEnviroScreen) 4.0 data, the Project's vicinity in Sacramento County has a score in the 50th to 60th percentile, meaning that 40 to 50 percent of all census

tracts in California have greater population vulnerability or environmental burdens. However, this area also reported a high score for groundwater threats (77), impaired water (92), pesticides (78), and drinking water (72) factors. These factors, when combined with socioeconomic community components such as poverty and unemployment reported by OEHHA in the Project vicinity, could result in increased vulnerability to environmental impacts.

4.3.4 Conclusion

Project activities would require short-term construction during the pipeline remediation and decommissioning activities. As noted above, a majority of the Project corridor is located within an area that has been identified as having somewhat vulnerable populations and existing environmental burdens. While the Project work areas are located within an area that has recorded lower median family income, it has a lower percentage of families below the established poverty level than the state as a whole. Specifically, the Project vicinity is impacted by impaired ground, surface, and drinking water as well as pesticides, hazardous waste, and solid waste. As such, any Project activities that would have the potential to contribute to this burden would be considered significant.

The Project would have the potential for short-term construction-related impacts to the affected resources in Chapter 3 that have the potential to contribute to existing circumstances affecting environmental justice communities. However, following incorporation of identified mitigation measures, the 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 the 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 and recreation by removing pipeline segments across the Project corridor that could become exposed over time.

4.4 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 work areas are identified in the Significant Lands Inventory as parcel number 34-113-000 (Threemile Slough, Sacramento

County), which includes the submerged land in Threemile Slough immediately adjacent to the southern shore of Brannan Island and the western shore of Twitchell Island, and the northern and eastern shores of Sherman Island. The subject lands are classified in use category Class B, which authorizes limited use. Environmental values identified for these lands are mostly biological, including fish spawning habitat, critical ecosystems, fishery or wildlife habitat, and 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.

5.0 MND PREPARATION SOURCES AND REFERENCES

This Initial Study/Mitigated Negative Declaration (IS/MND) was prepared by the staff of the California State Lands Commission's (CSLC) Division of Environmental Science, Planning, and Management (DESPM), with the assistance of Environmental Science Associates (ESA). The analysis in the MND is based on information identified, acquired, reviewed, and synthesized based on DESPM guidance and recommendations.

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Tierra Groff, Biologist III, ESA	MND Section 3.4 Biological Resources (Terrestrial)
Daniel Huang, Biologist IV, ESA	MND Section 3.4 Biological Resources (Terrestrial)

Name and Title	MND Sections
Nicole Dunkley, Biologist II, ESA	MND Section 3.4 Biological Resources (Aquatic)
Paul Bergman, Regional Business Group Director, ESA	MND Section 3.4 Biological Resources (Aquatic)
Lora Holland, Cultural Resources Specialist IV, ESA	MND Sections 3.5 Cultural Resources and 3.6 Cultural Resources - Tribal
Heidi Koenig, Cultural Resources Specialist V, ESA	MND Sections 3.5 Cultural Resources and 3.6 Cultural Resources - Tribal
Emily Kline, Environmental Scientist I, ESA	MND Sections 3.8 Geology, Soils and Paleontological Resources, 3.10 Hazards and Hazardous Materials, 3.13 Mineral Resources, and 3.20 Wildfire
Michael Burns, Environmental Scientist V, ESA	MND Sections 3.8 Geology, Soils and Paleontological Resources, 3.10 Hazards and Hazardous Materials, and 3.13 Mineral Resources
Maria Hensel, Planner III, ESA	MND Section 3.11 Hydrology and Water Quality
James Cobb, Planner I, ESA	MND Section 3.14 Noise
Chris Dugan, Air Quality and Acoustics Analyst V, ESA	MND Section 3.14 Noise
Marisol Guzman, Planner I, ESA	MND Sections 3.12 Land Use and 3.18 Transportation
Julie Nichols, Editor, ESA	Entire MND
Megan Rhode, Editor, ESA	Entire MND
Kristine Olsen, Senior Publications Specialist, ESA	Entire MND
Jacob Andersen, GIS Analyst, ESA	Figures

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