

# MITIGATED NEGATIVE DECLARATION GWF OUTFALL REMOVAL PROJECT

July 2014

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**Lead Agency:**

California State Lands Commission  
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**Applicant:**

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## LIST OF ABBREVIATIONS AND ACRONYMS

<b>A</b>	AADT	Annual Average Daily Traffic
	ABAG	Association of Bay Area Governments
	A.D.	Anno Domini
	AHPA	Archaeological and Historic Preservation Act
	ARPA	Archaeological Resources Protection Act
<b>B</b>	BAAQMD	Bay Area Air Quality Management District
	BCDC	San Francisco Bay Conservation and Development Commission
	BMP	Best Management Practice
	BNSF	Burlington Northern Santa Fe
<b>C</b>	CAA	Clean Air Act
	CAAQS	California Ambient Air Quality Standards
	CARB	California Air Resources Board
	CBC	California Building Code
	CCAA	California Clean Air Act
	CCTA	Contra Costa Transportation Authority
	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
	CH <sub>4</sub>	Methane
	CMP	Coastal Management Program
	CNDDDB	California Natural Diversity Database
	CNEL	Community Noise Equivalent Level
	CO	carbon monoxide
	CO <sub>2</sub>	carbon dioxide
	CO <sub>2</sub> e	carbon dioxide equivalents
	CRHR	California Register of Historic Resources
	CSFM	California State Fire Marshal
	CSLC	California State Lands Commission
	CWA	Clean Water Act
	CZMA	Coastal Zone Management Act
<b>D</b>	dB	Decibels
	dBA	A-weighted decibels
	DDT	Dichlorodiphenyltrichloroethane
	DEPM	Division of Environmental Planning and Management
	DNL	Day-Night Level
	DPM	Diesel particulate matter
	DPS	Distinct Population Segment



<b>E</b>	EFH	Essential Fish Habitat
	EIR	Environmental Impact Report
	EOs	Executive Orders
	ESA	Endangered Species Act
	Estuary	San Francisco Bay Estuary
	ESU	Evolutionary Significant Unit
	et seq.	and the following
<b>F</b>	FCAA	Federal Clean Air Act
	FMP	Fishery Management Plan
	FPP	Fire Prevention Plan
<b>G</b>	GHG	Greenhouse Gas
	GWF	GWF Power Systems, L.P. (Applicant)
	GWP	Global Warming Potential
<b>H</b>	HDPE	high density polyethylene
	HMTA	Hazardous Materials Transportation Act
<b>I</b>	I-	Interstate
	IS	Initial Study
<b>L</b>	LBS	Pounds
	L <sub>dn</sub>	day-night average sound level
	LOS	Level of Service
<b>M</b>	MBTA	Migratory Bird Treaty Act
	MCE	Maximum Credible Earthquake
	mg/m <sup>3</sup>	milligrams per cubic meter
	µg/m <sup>3</sup>	micrograms per cubic meter
	MHW	mean high water
	MLW	mean low water
	MM	Mitigation Measures
	MMP	Mitigation Monitoring Plan
	MMPA	Marine Mammal Protection Act
	MMT	Million Metric Tons
	MND	Mitigated Negative Declaration
	MPA	Marine Protected Area
	MPO	Metropolitan Planning Organizations
	MRZ	Mineral Resource Zone
	MSA	Magnuson-Stevens Fishery Conservation and Management Act
<b>N</b>	NAAQS	National Ambient Air Quality Standards
	NCP	National Oil and Hazardous Substances Pollution Contingency Plan
	NHPA	National Historic Preservation Act
	NMFS	National Marine Fisheries Service
	NO <sub>2</sub>	nitrogen dioxide
	NO <sub>x</sub>	nitrogen oxides

	N <sub>2</sub> O	nitrous oxide
	NPDES	National Pollutant Discharge Elimination System
	NSR	New Source Review
<b>O</b>	O <sub>3</sub>	Ozone
	OHP	Office of Historic Preservation
	OPA	Oil Pollution Act
	OSPR	Office of Spill Prevention and Response
<b>P</b>	Pb	Lead
	PCBs	polychlorinated biphenyls
	PM	particulate matter
	PM <sub>10</sub>	particulate matter less than 10 micrometers
	PM <sub>2.5</sub>	particulate matter less than 2.5 micrometers
	PPB	parts per billion
	PPM	parts per million
	PPT	parts per thousand
<b>R</b>	RCRA	Resource Conservation and Recovery Act
	ROG	reactive organic gases
	RWQCB	Regional Water Quality Control Board
<b>S</b>	SFBAAB	San Francisco Bay Area Air Basin
	SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
	SMARA	Surface Mining and Reclamation Act
	SO <sub>2</sub>	sulfur dioxide
	SR-	State Route
	SWPPP	Storm Water Pollution Prevention Plan
	SWRCB	State Water Resources Control Board
<b>T</b>	TAC	toxic air contaminant
	TSCA	Toxic Substances Control Act
<b>U</b>	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
<b>W</b>	WEAP	Worker Environmental Awareness Program

## EXECUTIVE SUMMARY

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1

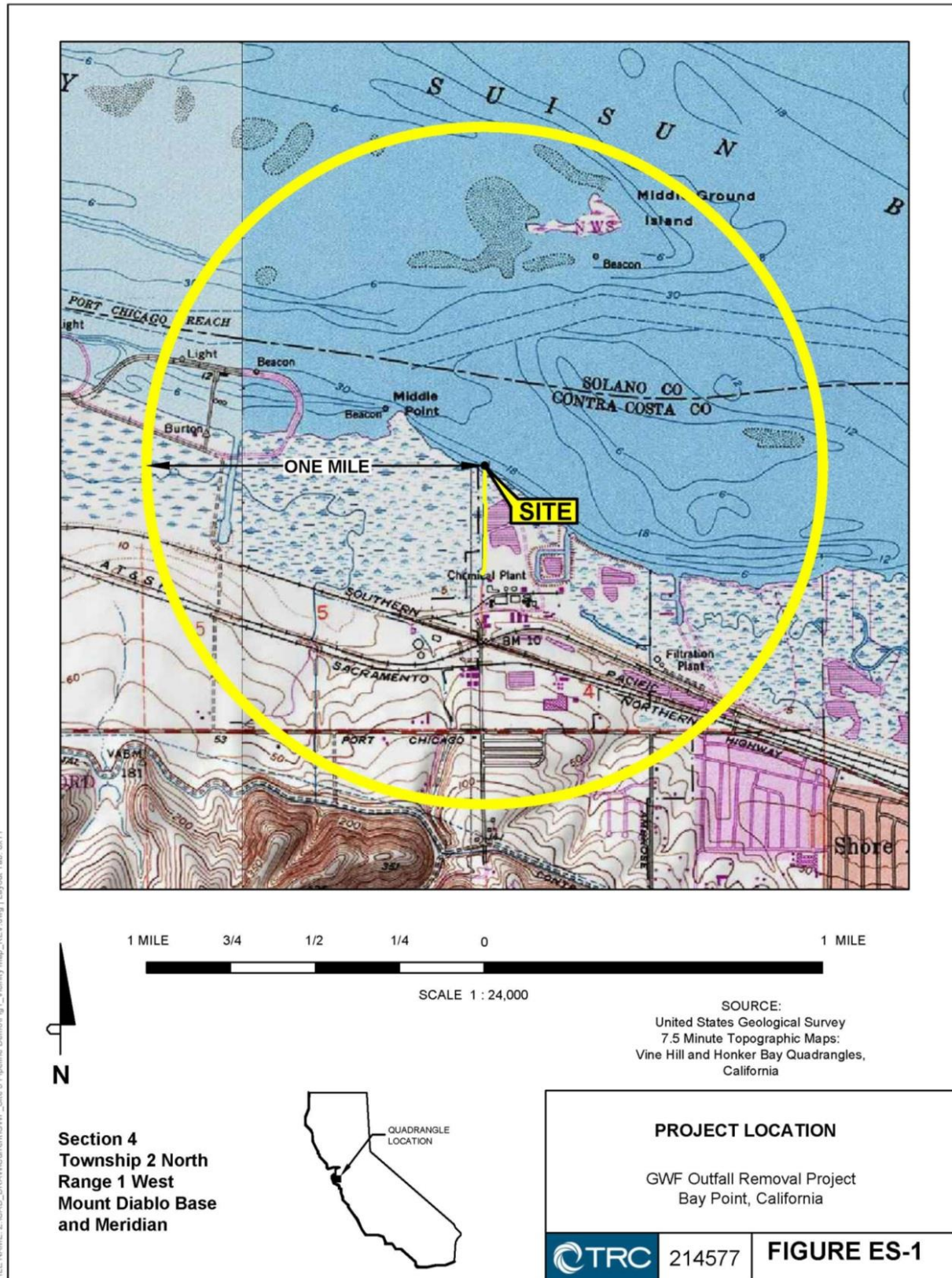
2 This Mitigated Negative Declaration (MND) has been prepared by the California State  
3 Lands Commission (CSLC), as lead agency under the California Environmental Quality  
4 Act (CEQA) (Pub. Resources Code § 21000 et seq.), to analyze and disclose the  
5 environmental effects associated with the proposed GWF Outfall Removal (Project).  
6 The Project would authorize GWF Power Systems, L.P. (GWF or Applicant) to remove  
7 an existing outfall structure (i.e., piping, diffusers and timber pile markers) that is no  
8 longer in service, in accordance with the terms and conditions of the existing CSLC  
9 lease (PRC 7230.1).

10 The proposed Project is located on sovereign land in Suisun Bay connected by an  
11 easement to 555 Nichols Road, near Bay Point, in unincorporated Contra Costa County  
12 (see Figure ES-1). The property at 555 Nichols Road is a former GWF power plant that  
13 has been decommissioned and demolished. Removal and demolition of the outfall pipe  
14 is expected to occur from September 1 to October 31, 2014, and take approximately  
15 two consecutive weeks to complete, including mobilization, demolition, and  
16 demobilization.

17 The goal of the Project is the safe removal of high-density polyethylene (HDPE) piping,  
18 wood, and steel materials associated with the outfall structure that remain offshore  
19 within CSLC jurisdiction, while minimizing potential environmental impacts of the Project  
20 on the environment. The CSLC prepared an MND because it determined that, while the  
21 Initial Study (IS) identified potentially significant impacts related to the outfall removal  
22 activities, measures have been incorporated into the Project proposal and agreed to by  
23 GWF that avoid or mitigate those impacts to a point where no significant impacts would  
24 occur.

### 25 **PROPOSED PROJECT**

26 On August 10, 1988, the CSLC authorized a 30-year General Lease – Right-of-Way  
27 Use for the use and maintenance of three submerged pipe outfalls at three sites in  
28 Suisun Bay, named sites III, IV, and V. Of the three outfalls authorized, only the outfall  
29 at Site V was constructed. The outfall was used to discharge process wastewater from  
30 an electrical generating power plant in the unincorporated community of Bay Point,  
31 Contra Costa County. The outfall has been decommissioned since the power plant  
32 ceased operation in 2012 and, in 2013, the plant was demolished. On March 25, 2014,  
33 GWF submitted an application to the CSLC for the proposed removal of the outfall  
34 facilities and subsequent lease termination under the terms of the lease. The application  
35 includes the complete removal of in-water-HDPE pipe materials below mean high water  
36 (MHW), including steel and concrete ballast weight “baskets” and two wood pilings  
37 demarking the outfall landward of the Suisun Bay.



1 Elements of the outfall structure to be removed include:

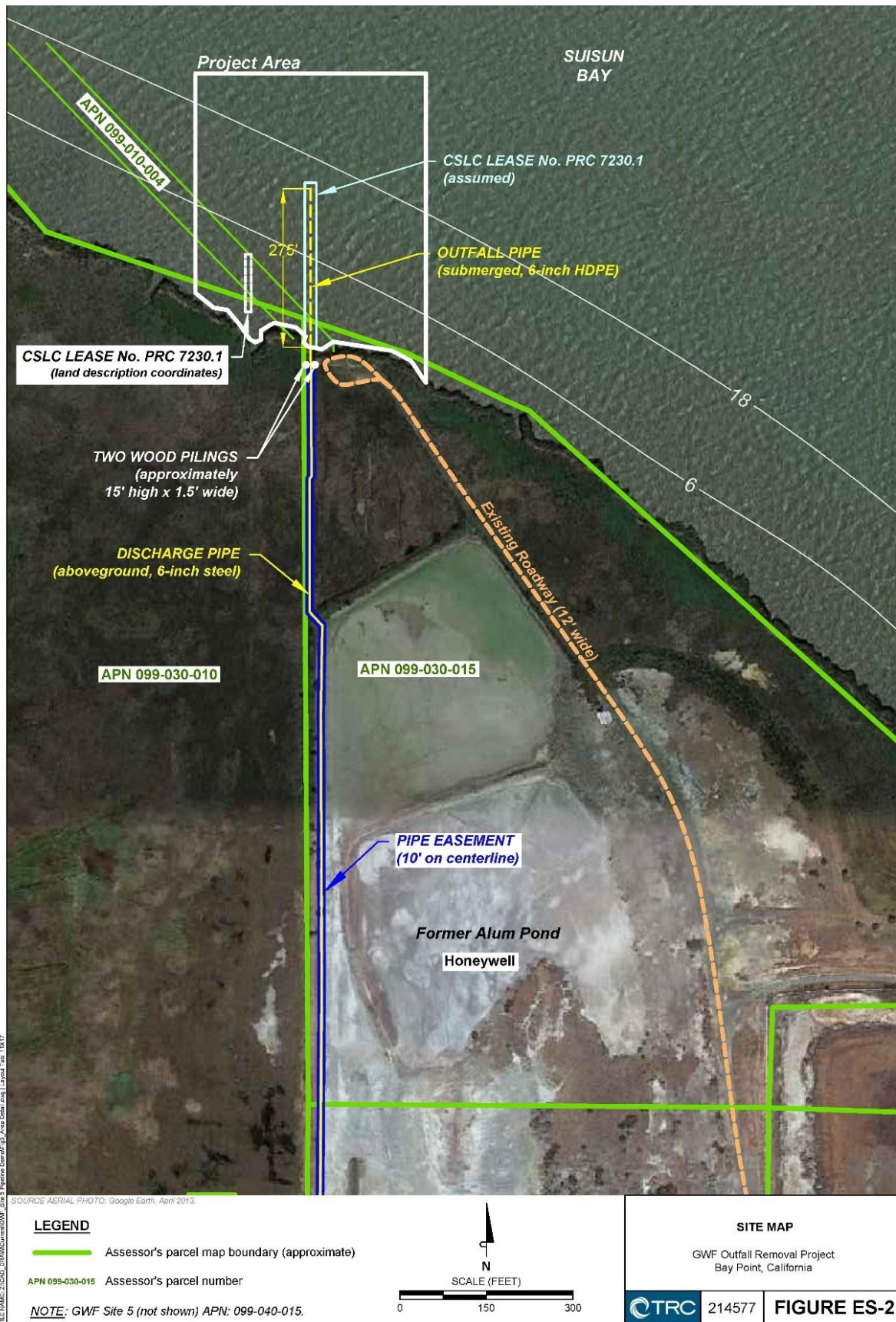
- 2 • An approximately 275-foot-long by 6-inch-diameter HDPE pipe running  
3 perpendicular to the shoreline into Suisun Bay with 15, 3-inch-diameter HDPE  
4 diffuser risers spaced at 30-inch intervals beginning at approximately 220 feet  
5 offshore; and
- 6 • Two 16-foot-high by one-foot-diameter wood piles on the shoreline below MHW,  
7 marking the point where the discharge pipe enters into Suisun Bay.

8 The piping will be removed in its entirety to the shoreline terminus at the MHW mark,  
9 where it connects to the onshore pipe. The two wood pile structures marking and  
10 protecting the outfall at the shoreline will be removed to at least 24 inches below the  
11 mud line. Removal activities will also include installation of a blind flange closure plate  
12 onto the land-portion terminus flange. None of the armor cover rock or bedding gravel  
13 will be removed from the pipe corridor and no other substrate fill, grade, levelling, or  
14 other restoration will be performed.

15 The removal activities will primarily be carried out from floating equipment staged from  
16 the water near the shoreline with the exception of a light utility work vehicle parked  
17 onshore that would be used to assist with servicing of equipment, providing equipment  
18 and support for cutting the wood piles, or for the expedient evacuation of an injured  
19 worker. This temporary vehicular access would use the existing 12-foot-wide levee  
20 road, shown in Figure ES-2. This existing road will also allow for access from onshore  
21 for the Applicant, its contractors, site monitors, agency representatives or other  
22 authorized personnel observing operations. The temporary access roadway is on  
23 private land and use is subject to authorization by the landowner (Honeywell  
24 International). All removal vessels, equipment and other materials would be removed at  
25 the Project completion.

26 Prior to initiating pipe removal, with the floating barge stationary (with anchor spuds in  
27 place) and securely moored adjacent to the pipe terminus, water jetting will be  
28 completed around the underside of the pipe, approximately five feet from the pipe  
29 terminus. A suitable, sturdy chain will be positioned around the pipe (a “choke”) to grip  
30 and enable lifting. The pipe will be lifted and peeled back (in 10- to 20-foot sections),  
31 and divers will relocate the choke/lifting chain along the pipe alignment as the pipe is  
32 recovered while working toward the shoreline. Water jetting activities are expected to  
33 occur only at the beginning of pipe removal activities. Divers will locate the diffuser  
34 section and install mechanical plugs into the top of the 3-inch vertical riser ports to  
35 contain the sediment.





1 The 6-inch HDPE submarine pipe will be disconnected from the land-portion  
2 aboveground steel pipe. This shoreline terminus of the 6-inch HDPE pipe will then be  
3 secured to the two timber pilings. A 100-foot-long semi-circular silt/turbidity curtain will  
4 be connected to the shoreline (east and west of the wood pilings) by driven stakes to  
5 encompass the wood pilings and outfall connection at the shoreline. An anchor will be  
6 placed near the apex of the semi-circle and at the end of each 50-foot section to hold  
7 the silt curtain in place.

8 Buoys will be affixed to the HDPE pipe section to help it float and keep it visible while  
9 securing the 6-inch outfall terminus to a larger buoy and mooring at the furthest point  
10 offshore. When the on-barge equipment is no longer able to “peel” the buried pipe off  
11 the bottom at the appropriate angle, the barge will be relocated closer to the shoreline  
12 and secured in place with the anchor spuds.

13 During low tidal cycles, particularly when working close to the shore in shallow water  
14 depths, the “peeling” back of the HDPE pipe from its corridor will be temporarily secured  
15 in order to recover the floating section of the pipe. The section of floating pipe will be  
16 lifted onto the deck of the barge. Mechanical “stopper” plugs will be placed at both ends  
17 of each pipe section to contain sediment.

18 The two timber piles located along the shoreline (next to the 6-inch steel flange  
19 connection) will be extracted and/or cut to 24 inches below the mud-line, floated and  
20 recovered onto the barge, and cut into manageable pieces as necessary. The timber  
21 piles are assumed to be coated with creosote residue and will be transported and  
22 properly disposed at Keller Canyon Landfill in Pittsburg.

23 Several environmental controls to be implemented include (but are not limited to):

- 24 • All engine-powered equipment used and operated upon and from the deck of the  
25 barge will use drip-pans or other means to retain fluids beneath the equipment.
- 26 • Only approved and certified fuel cans with “no-spill” spring loaded lids will be  
27 used when fueling up diesel or gas engines. Engines will be turned OFF and  
28 fueling will not be done over the water. A spill kit with absorbent diapers will be  
29 readily available next to each filling area.
- 30 • A continuous floating oil-absorbent sock will be deployed and maintained around  
31 the entire barge to contain any accidental leakage of fuel or hydraulic fluids.
- 32 • A turbidity curtain (100 linear feet) shall be installed and maintained around the  
33 shoreline terminus flange of the pipe to maximize sediment containment that may  
34 discharge from the pipe and/or be resuspended from the water bottom during  
35 removal. Additionally, turbidity will be minimized by removing the pipe with slow,  
36 controlled movements. Sawdust generated during timber piling cutting and

1 removal will also be contained in this curtain and/or skimmed and removed if  
2 floating in water (and disposed of in plastic bags).

- 3 • Cutting and removal of the timber piles 24 inches below the mudline will follow  
4 the methods identified by the U.S. Army Corps of Engineers (USACE) in its Best  
5 Management Practices for Pile Removal (dated March 1, 2007) to control  
6 turbidity and sediments re-entering the water column during pile removal, capture  
7 debris, and dispose of removed piles and debris.
- 8 • Native bay mud will be repositioned to accommodate wood pile cutting and will  
9 be replaced within the minor voids after cutting and piling removal is complete.
- 10 • The piles will be placed in a containment basin on the barge to capture any  
11 adhering sediment immediately after the pile is removed from the water. Piles will  
12 be cut into manageable lengths.
- 13 • The Project will use U.S. Coast Guard compliant stationary barge mooring  
14 equipment, including marker flags and nighttime illumination and flashers.
- 15 • A plastics recycling company will be hired by the Applicant to transport an  
16 estimated as 1,950 pounds (275 linear feet at 7.09 pounds per linear foot) of  
17 HDPE pipe materials. In the event recycling is not feasible, the pipe materials will  
18 be delivered to an off-site landfill.

19 The work will be scheduled during a time of year that minimizes effects to sensitive  
20 ecological resources, including threatened and endangered species as designated by  
21 National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS),  
22 and California Department of Fish and Wildlife (CDFW) (further described in Section  
23 3.4, Biological Resources). Onshore activities will be designed to avoid disturbance of  
24 tidal marsh habitat (identified in Section 3.4, Biological Resources).

## 25 **EXISTING CONDITIONS**

26 The proposed Project is located in Suisun Bay, in unincorporated Contra Costa County  
27 approximately 0.6 mile east of the Concord Naval Weapons Station Military Ocean  
28 Terminal, 0.8 mile south of Middle Ground Island, 3 miles west of the mouth of the  
29 Sacramento River, and 0.9 mile north of Port Chicago Highway. The general Project  
30 area is located on approximately 4 acres of ungranted sovereign lands, including an  
31 approximately 200-foot buffer surrounding the outfall/diffuser, which has an “actual”  
32 footprint of 0.003 acre (139.5 square feet). The Project will remove approximately 275  
33 feet of HDPE pipe. The Project area of disturbance used for analyzing impacts is  
34 approximately 0.06 acre of waters of the United States and State of California (i.e., 275  
35 feet by 10-foot corridor).



1 The Project site is located primarily offshore, with the only onshore portion being an  
2 existing levee road that may provide onshore access for emergency services. The  
3 contractor's shore base is anticipated to be at an existing marina facility no more than  
4 10 miles from the Project site.

5 The outfall is the terminus of an existing 6-inch steel discharge pipe which begins at the  
6 site of the now demolished power plant. It runs northerly on footings where it becomes  
7 aboveground, along relatively level ground berm above an aluminum sulfate pond and  
8 further north, a widespread coastal marsh with only small topographic changes as the  
9 land uses change from industrial, on a berm past the depressed aluminum sulfate pond,  
10 through coastal marsh, and to the shoreline. The Project does not include removal of  
11 this 1,400-foot, aboveground, 6-inch-diameter carbon steel pipe, as it is located entirely  
12 on private property not under the control of the Applicant.

13 There is no safe access to the Project site from upland locations. To the south of the  
14 Project is ChemTrade – Bay Point Works. The facility occupies approximately 26 acres,  
15 and is an operating sulfuric acid plant. Access to the property is controlled at the gate.  
16 Honeywell property is adjacent to the property and is an additional industrial use. To the  
17 west, the federally-controlled Port Chicago Military Ocean Terminal property is adjacent  
18 to the GWF pipe right-of-way.

19 The Contra Costa General Plan designates the area for Heavy Industrial and  
20 Public/Semi-Public land use which previously included the now demolished GWF power  
21 plant. Public/Semi-Public land is located to the southwest of the Project site within which  
22 is active use by the Burlington Northern Santa Fe (BNSF) Railroad and Union Pacific  
23 Railroad (UPRR). Residential uses are located more than 1 mile away. There are no  
24 sensitive land uses such as hospitals, retirement communities, or schools located  
25 adjacent to or within 1 mile of the Project site. Open Space surrounds the Project site,  
26 however, this Open Space designation serves as a conservation measure for the  
27 coastal marsh that is prevalent in the area, and is generally not accessible to the public.

## 28 **ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES**

29 The environmental factors checked below in Table ES-1 would be potentially affected  
30 by this Project; a checked box indicates that at least one impact would be a "Potentially  
31 Significant Impact" except that the Applicant has incorporated Project revisions,  
32 including the implementation of mitigation measures (MMs), that reduce the impact to  
33 "Less than Significant with Mitigation," as detailed in Section 3 of this MND. Table ES-2  
34 lists proposed MMs designed to reduce or avoid potentially significant impacts. With  
35 implementation of the proposed MMs, all Project-related impacts would be reduced to  
36 less than significant.

**Table ES-1 Environmental Issues and Potentially Significant Impacts**

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forest Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology and Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input checked="" type="checkbox"/> Hazards and Hazardous Materials	<input checked="" type="checkbox"/> Hydrology and Water Quality
<input type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise
<input type="checkbox"/> Population and Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Utilities and Service Systems	
<input type="checkbox"/> Mandatory Findings of Significance		
<input type="checkbox"/> Other Major Areas of Concern: Environmental Justice		

**Table ES-2 Summary of Proposed Project Mitigation Measures (MM)**

<b>Biological Resources</b>
MM BIO-1: Worker Environmental Awareness Program
MM BIO-2: Work Windows
MM BIO-3: In Water Turbidity Protections
MM BIO-4: Protection from Release of Toxic Substances
MM BIO-5: Confine Vehicle Use to Established Roadway.
<b>Hazards and Hazardous Materials</b>
MM BIO-3: In Water Turbidity Protections
MM BIO-4: Protection from Release of Toxic Substances
<b>Hydrology and Water Quality</b>
MM BIO-3: In Water Turbidity Protections
MM BIO-4: Protection from Release of Toxic Substances

1 **1.0 PROJECT AND AGENCY INFORMATION**

---

2 **1.1 PROJECT TITLE**

3 GWF Outfall Removal Project (Project)

4 **1.2 LEAD AGENCY AND PROJECT APPLICANT**

5 California State Lands Commission (CSLC)  
6 100 Howe Avenue, Suite 100-South  
7 Sacramento, CA 95825

8 Contact person:  
9 Holly Wyer, Environmental Scientist  
10 Division of Environmental Planning and Management  
11 holly.wyer@slc.ca.gov  
12 (916) 574-2399

13 **Applicant:**

14 GWF Power Systems, L.P. (GWF or Applicant)  
15 2100 Third Avenue North, Suite 600  
16 Birmingham, AL 35203

17 Contact person:  
18 Mr. Ken Kilgroe, Senior Vice President and Controller  
19 kkilgroe@harbert.net  
20 (205) 987-5544

21 **1.3 PROJECT LOCATION**

22 The proposed Project is located in Suisun Bay, in unincorporated Contra Costa County  
23 approximately 0.6 mile east of the Concord Naval Weapons Station Military Ocean  
24 Terminal, 0.8 mile south of Middle Ground Island, 3 miles west of the mouth of the  
25 Sacramento River, and 0.9 mile north of Port Chicago Highway.

26 Refer to Section 2, Project Description, for further details on the Project location.

27 **1.4 ORGANIZATION OF MITIGATED NEGATIVE DECLARATION**

28 This Mitigated Negative Declaration (MND) is intended to provide the CSLC, as lead  
29 agency under the California Environmental Quality Act (CEQA; Pub. Resources Code §  
30 21000 et seq.), and other responsible agencies with the information required to exercise  
31 their discretionary responsibilities with respect to the proposed Project. The document is  
32 organized as follows:

- 1 • Section 1 provides the Project background, Agency and Applicant information,  
2 Project Objectives and anticipated agency approvals, and a summary of the  
3 public review and comment process.
- 4 • Section 2 describes the proposed Project including its location, layout,  
5 equipment, and facilities. Section 2 also provides an overview of the Project's  
6 operations and schedule.
- 7 • Section 3 provides the Initial Study (IS), including the environmental setting,  
8 identification and analysis of potential impacts, and discussion of various Project  
9 changes and other measures that, if incorporated into the Project, would mitigate  
10 or avoid those impacts, such that no significant effect on the environment would  
11 occur. The IS was conducted by the CSLC pursuant to section 15063 of the  
12 State CEQA Guidelines.<sup>1</sup>
- 13 • Section 4 includes an environmental justice analysis and discussion consistent  
14 with CSLC Policy.
- 15 • Section 5 presents the Mitigation Monitoring Program (MMP).
- 16 • Section 6 presents information on report preparation and references.
- 17 • Appendices. The appendices include specifications, technical data, and other  
18 information supporting the analysis presented in this MND.
  - 19 ○ Appendix A Essential Fish Habitat Assessment and Fisheries Biological  
20 Assessment
  - 21 ○ Appendix B Shoreline Biological Habitat Assessment
  - 22 ○ Appendix C Air Quality and Greenhouse Gas Emissions Calculations
  - 23 ○ Appendix D Mailing List

## 24 **1.5 PROJECT BACKGROUND AND OBJECTIVES**

25 GWF is proposing to remove an existing outfall pipeline and ancillary structures (i.e.,  
26 piping, diffusers and timber pile markers) that are no longer in service. The outfall was  
27 used to discharge industrial process wastewater (i.e., cooling tower blowdown) from a  
28 now demolished power plant. The outfall was operated in compliance with the San  
29 Francisco Bay Area Regional Water Quality Control Board (SFBRWQCB) through the  
30 National Pollutant Discharge Elimination System (NPDES) Order No. R2-2010-0096,  
31 NPDES No. CA0029122.

32 GWF is currently subject to the terms and conditions of an existing lease (PRC 7230.1)  
33 with the CSLC related to the outfall structures, and is proposing to remove all specified

---

<sup>1</sup> The State CEQA Guidelines are found in California Code of Regulations, Title 14, section 15000 et seq.

1 improvements so that the lease can be terminated. To meet its obligations, GWF has  
2 identified the following Project objectives:

- 3 • Remove the existing 275-foot-long high-density polyethylene (HDPE) piping,  
4 diffusers, and steel materials associated with the outfall structure that remain  
5 offshore within the current CSLC jurisdiction;
- 6 • Remove the two wood pilings at the shoreline terminus of the HDPE pipeline by  
7 cutting to at least 24 inches below the mudline;
- 8 • Cap the terminus of the onshore portion of the wastewater pipeline; and
- 9 • Terminate CSLC Lease No. PRC 7230.1 upon successful Project completion.

## 10 **1.6 PUBLIC REVIEW AND COMMENT**

11 Pursuant to State CEQA Guidelines sections 15072 and 15073, a lead agency must  
12 issue a proposed MND for a minimum 30-day public review period. Local, regional,  
13 State, and federal agencies and the public will have the opportunity to review and  
14 comment on the document. Responses to written comments received by the CSLC  
15 during the 30-day public review period will be incorporated as appropriate into the  
16 proposed MND. In accordance with State CEQA Guidelines section 15074, subdivision  
17 (b), the CSLC will review and consider the proposed MND, together with any comments  
18 received during the public review process, prior to taking action on the MND and the  
19 Project.

## 20 **1.7 APPROVALS AND REGULATORY REQUIREMENTS**

21 The CSLC's authority is set forth in Division 6 of the California Public Resources Code  
22 and it is regulated by the California Code of Regulations, Title 2, sections 1900–2970.  
23 The CSLC has authority to issue leases or permits for the use of sovereign lands held in  
24 the public trust, including all ungranted tidelands, submerged lands, and the beds of  
25 navigable lakes and waterways, as well as certain residual and review authority for  
26 tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub.  
27 Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or  
28 ungranted, as well as navigable lakes and waterways, are subject to the protections of  
29 the Common Law Public Trust. As general background, the State of California acquired  
30 sovereign ownership of all tidelands and submerged lands and beds of navigable lakes  
31 and waterways upon its admission to the U.S. in 1850. The State holds these lands for  
32 the benefit of all people of the State for statewide Public Trust purposes, which include  
33 but are not limited to waterborne commerce, navigation, fisheries, water-related  
34 recreation, habitat preservation and open space. On tidal waterways, the State's  
35 sovereign fee ownership extends landward to the mean high tide line, except for areas  
36 of fill or artificial accretion. For the proposed Project, the CSLC has received an  
37 application for removal of the outfall.

- 1 The CSLC must comply with CEQA when it undertakes an activity defined by CEQA as  
 2 a "project" that must receive some discretionary approval (i.e., the CSLC has the  
 3 authority to deny the requested lease, permit, or other approval) which may cause either  
 4 a direct physical change in the environment or a reasonably foreseeable indirect change  
 5 in the environment. CEQA requires the CSLC to identify the significant environmental  
 6 impacts of its actions and to avoid or mitigate those impacts, if feasible.
- 7 In addition to the CSLC, the Project is subject to the review and approval of other  
 8 federal, State and local entities with statutory and/or regulatory jurisdiction over various  
 9 aspects of the Project (see Table 1-1).

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

Permitting Agency		Anticipated Approvals/Regulatory Requirements
<b>Federal</b>	U.S. Army Corps of Engineers (USACE)	Clean Water Act (CWA) Section 404 (under Nationwide Permit No. 12)
	U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation under Federal Endangered Species Act (if necessary)
	National Marine Fisheries Service (NMFS)	
<b>State</b>	California Department of Fish and Wildlife (CDFW)	California Endangered Species Act review
	San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)	Clean Water Act Section 401 Water Quality Certification
	San Francisco Bay Conservation and Development Commission (BCDC)	Minor Permit Amendment

- 10 Because Project components are proposed in Suisun Bay within the jurisdiction of the  
 11 San Francisco Bay Conservation and Development Commission (BCDC), Table 1-2  
 12 identifies coastal-related U.S. and California laws and programs that are relevant to the  
 13 Project; specific policies are listed in Section 3, Environmental Analysis and Checklist,  
 14 of this MND for each environmental issue area.

**Table 1-2. Major Coastal Laws, Regulations, and Policies (Multiple Environmental Issues)**

<b>U.S.</b>	Coastal Zone Management Act (CZMA) (42 USC 4321 et seq.)	<p>The CZMA recognizes a national interest in coastal zone resources and in the importance of balancing competing uses of those resources, giving full consideration to aesthetic, cultural and historic, ecological, recreational, and other values as well as the needs for compatible economic development. Pursuant to the CZMA, coastal states develop and implement comprehensive coastal management programs (CMPs) that describe uses subject to the CMP, authorities and enforceable policies, and coastal zone boundaries, among other elements. The CZMA also gives state coastal management agencies regulatory control (“federal consistency” review authority) over federal activities and federally licensed, permitted or assisted activities, if the activity affects coastal resources; such activities include military projects at coastal locations and outer continental shelf oil and gas leasing, exploration and development. The California Coastal Commission (CCC) and San Francisco Bay Conservation and Development Commission (BCDC) coordinate California’s federally approved CMPs and federal consistency reviews within their respective jurisdictions.</p>
<b>CA</b>	<p>McAteer-Petris Act (Gov. Code §§ 66650-66661)</p> <p>Suisun Marsh Preservation Act of 1977 (Pub. Resources Code §§ 29000-29014)</p> <p>Coastal Management Program for San Francisco Bay</p>	<p>BCDC, which was created by the State Legislature in 1965, is charged with:</p> <ul style="list-style-type: none"> <li>• Regulating filling and dredging in San Francisco Bay (including San Pablo and Suisun Bays, sloughs and certain creeks and tributaries that are part of the Bay system, salt ponds, and certain other areas diked-off from the Bay).</li> <li>• Protecting Suisun Marsh, the largest remaining wetland in California, by administering the Suisun Marsh Preservation Act in cooperation with local governments.</li> <li>• Regulating new development within the first 100 feet inland from the Bay to ensure that maximum feasible public access to the Bay is provided.</li> <li>• Minimizing pressures to fill the Bay by ensuring that the limited amount of shoreline area suitable for high priority water-oriented uses is reserved for ports, water-related industries, water-oriented recreation, airports and wildlife areas.</li> <li>• Pursuing an active planning program to study Bay issues so that BCDC plans and policies are based upon the best available current information.</li> <li>• Administering the federal CZMA within the San Francisco Bay segment of the California coastal zone to ensure that federal activities reflect BCDC policies.</li> <li>• Participating in a region wide program to prepare a Long Term Management Strategy for dredging and dredge material disposal in San Francisco Bay.</li> <li>• Participating in California's oil spill prevention and response planning program.</li> </ul> <p>The McAteer-Petris Act authorizes BCDC to prepare an enforceable plan for the long-term use of the bay and its shoreline through the San Francisco Bay Plan (Bay Plan) and to incorporate the Plan’s policies into State law. Permits from BCDC are required for most projects proposed along the shoreline within its jurisdiction. Nearly all of the policies and the implementing authority for the Coastal Management Program for San Francisco Bay are contained in individual pieces of comprehensive coastal zone management legislation (McAteer-Petris and Suisun Marsh Preservation Acts), in separate comprehensive plans (e.g., Bay Plan and Suisun Marsh Protection Plan), and in other appendices to the Program document.</p>

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2 **2.1 NEED FOR PROJECT**

3 On August 10, 1988, the California State Lands Commission (CSLC) authorized a 30-  
4 year General Lease – Right-of-Way Use for the use and maintenance of three  
5 submerged pipe outfalls at three sites in Suisun Bay, named sites III, IV, and V. Of the  
6 three outfalls authorized, only the outfall at Site V was constructed. The outfall was used  
7 to discharge process wastewater from an electrical generating power plant in the  
8 unincorporated community of Bay Point, Contra Costa County. The outfall has been  
9 decommissioned since the power plant ceased operation in 2012. In 2013, the plant  
10 was demolished. On March 25, 2014, GWF Power Systems, L.P. (GWF or Applicant)  
11 submitted an application to the CSLC for the proposed removal of the outfall facilities  
12 and subsequent lease termination under the terms of the lease. The application  
13 includes the complete removal of in-water high-density polyethylene (HDPE) pipe  
14 materials below mean high water (MHW), including steel and concrete ballast weight  
15 “baskets” and two wood pilings demarking the outfall landward of the Suisun Bay.

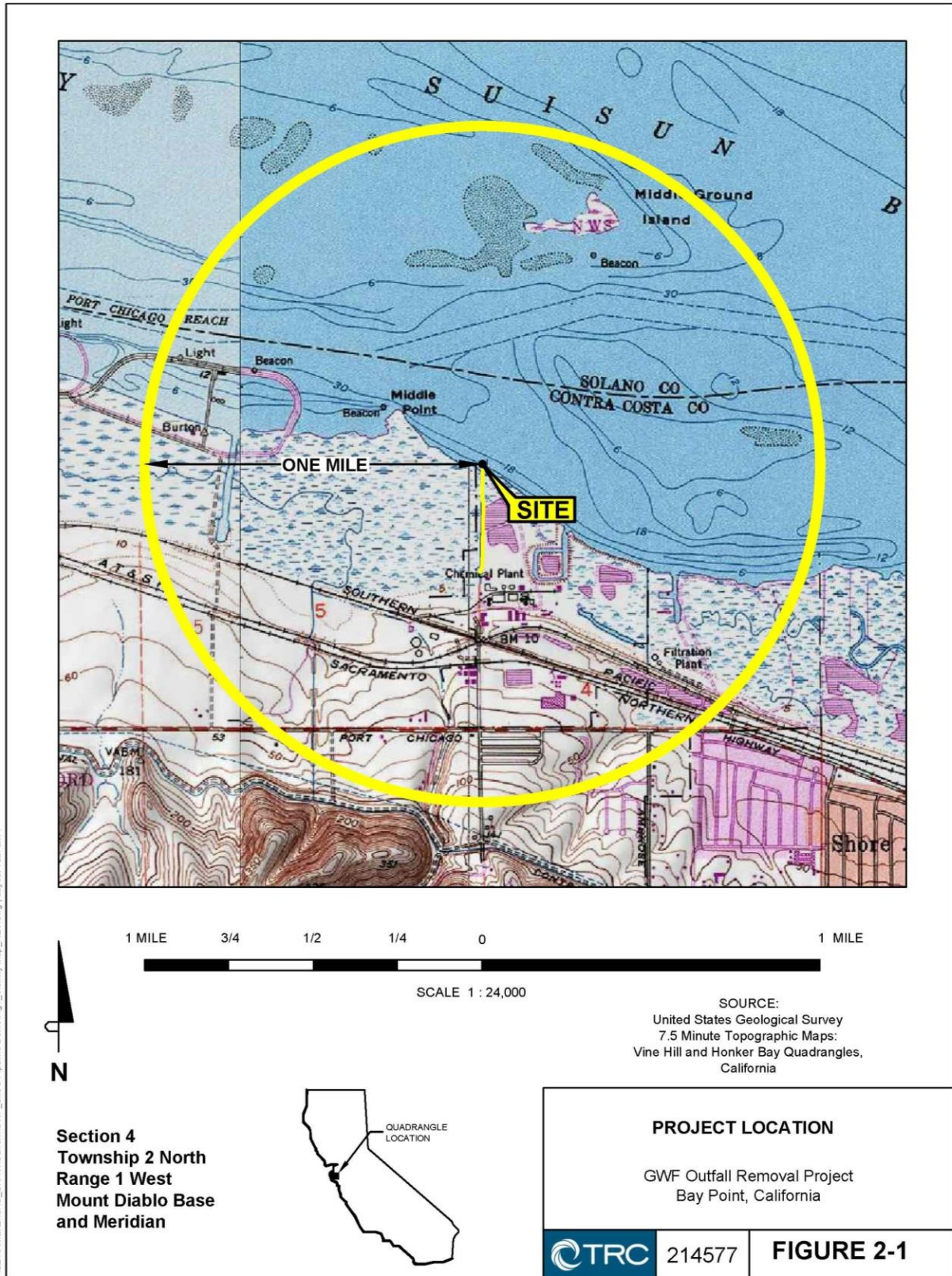
16 **2.2 PROJECT LOCATION**

17 The proposed Project is located in the Suisun Bay, near the city of Bay Point in  
18 unincorporated Contra Costa County (see Figure 2-1). The property at 555 Nichols  
19 Road, upland of the outfall location, is a former GWF power plant that has been  
20 decommissioned and demolished.

21 The outfall is situated approximately 0.6 mile to the east of the Concord Naval Weapons  
22 Station, Military Ocean Terminal; 0.8 mile to the south of Middle Ground Island in  
23 Suisun Bay; approximately 1.9 miles to the west of McAvoy Yacht Harbor in Bay Point  
24 and further (about 3 miles total along the shoreline) to the west of the mouth of the  
25 Sacramento River; and 0.9 mile to the north of Port Chicago Highway.

26 **2.3 EXISTING FACILITIES**

27 The general Project area is approximately 4 acres of ungranted sovereign lands,  
28 including an approximately 200-foot buffer surrounding the outfall/diffuser, which has an  
29 “actual” footprint of 0.003 acre (139.5 square feet). The Project is to remove  
30 approximately 275 feet of HDPE pipe. The Project area of disturbance used for  
31 analyzing impacts is approximately 0.06 acre of waters of the United States and the  
32 State of California (i.e., a 275-foot-by-10-foot corridor).



FILE NAME: Z:\CAD\_DRAWING\current\GWF\_Site5 Pipeline Demo\fig\_1\_Vicinity Map\_REV1.dwg | Layout Tab: 8x11

1 The Project site is located primarily offshore, with the only onshore portion being an  
2 existing levee road that may provide onshore access for servicing of equipment,  
3 providing support for cutting the wood piles, or for the expedient evacuation of an  
4 injured worker. The contractor's shore base is anticipated to be at an existing marina  
5 facility no more than 10 miles from the Project site.

6 The outfall is the terminus of an existing 6-inch steel discharge pipe which begins at the  
7 site of the now demolished power plant. It runs northerly on footings where it becomes  
8 aboveground, along relatively level ground berm above an aluminum sulfate pond and  
9 further north, a widespread coastal marsh with only small topographic changes as the  
10 land uses change from industrial, on a berm past the depressed aluminum sulfate pond,  
11 through coastal marsh, and to the shoreline. The Project does not include removal of  
12 this 1,400-foot, aboveground, 6-inch-diameter carbon steel pipe, as it is located entirely  
13 on private property not under the control of the Applicant.

14 There is no safe access to the Project site from upland locations. To the south of the  
15 Project is ChemTrade – Bay Point Works. The facility occupies approximately 26 acres,  
16 and is an operating sulfuric acid plant. Access to the property is controlled at the gate.  
17 Honeywell property is adjacent to the property and is an additional industrial use. To the  
18 west, the federally-controlled Port Chicago Military Ocean Terminal property is adjacent  
19 to the GWF pipe right-of-way

20 The Contra Costa County General Plan designates the area for Heavy Industrial and  
21 Public/Semi-Public land use which previously included the now demolished GWF power  
22 plant. Public/Semi-Public land is located to the southwest of the Project site within which  
23 is active use by the Burlington Northern Santa Fe (BNSF) Railroad and Union Pacific  
24 Railroad (UPRR). Residential uses are located more than 1 mile away. There are no  
25 sensitive land uses such as hospitals, retirement communities, or schools located  
26 adjacent to or within 1 mile of the Project site. Open Space surrounds the Project site,  
27 however, this Open Space designation serves as a conservation measure for the  
28 coastal marsh that is prevalent in the area, and is generally not accessible to the public.

## 29 **2.4 DESCRIPTION OF THE PROPOSED PROJECT**

30 GWF proposes to remove the in-water portions of the outfall/diffuser piping and the  
31 wood pile markers at the outfall point. Elements of the outfall structure to be removed  
32 include:

- 33 • An approximately 275-foot-long by 6-inch-diameter HDPE pipe running  
34 perpendicular to the shoreline into Suisun Bay with fifteen 3-inch-diameter HDPE  
35 diffuser risers spaced at 30-inch intervals beginning at ~220 feet offshore; and
- 36 • Two 16-foot-high by 1-foot-diameter wood piles on the shoreline below MHW,  
37 marking the point where the discharge pipe enters into Suisun Bay.

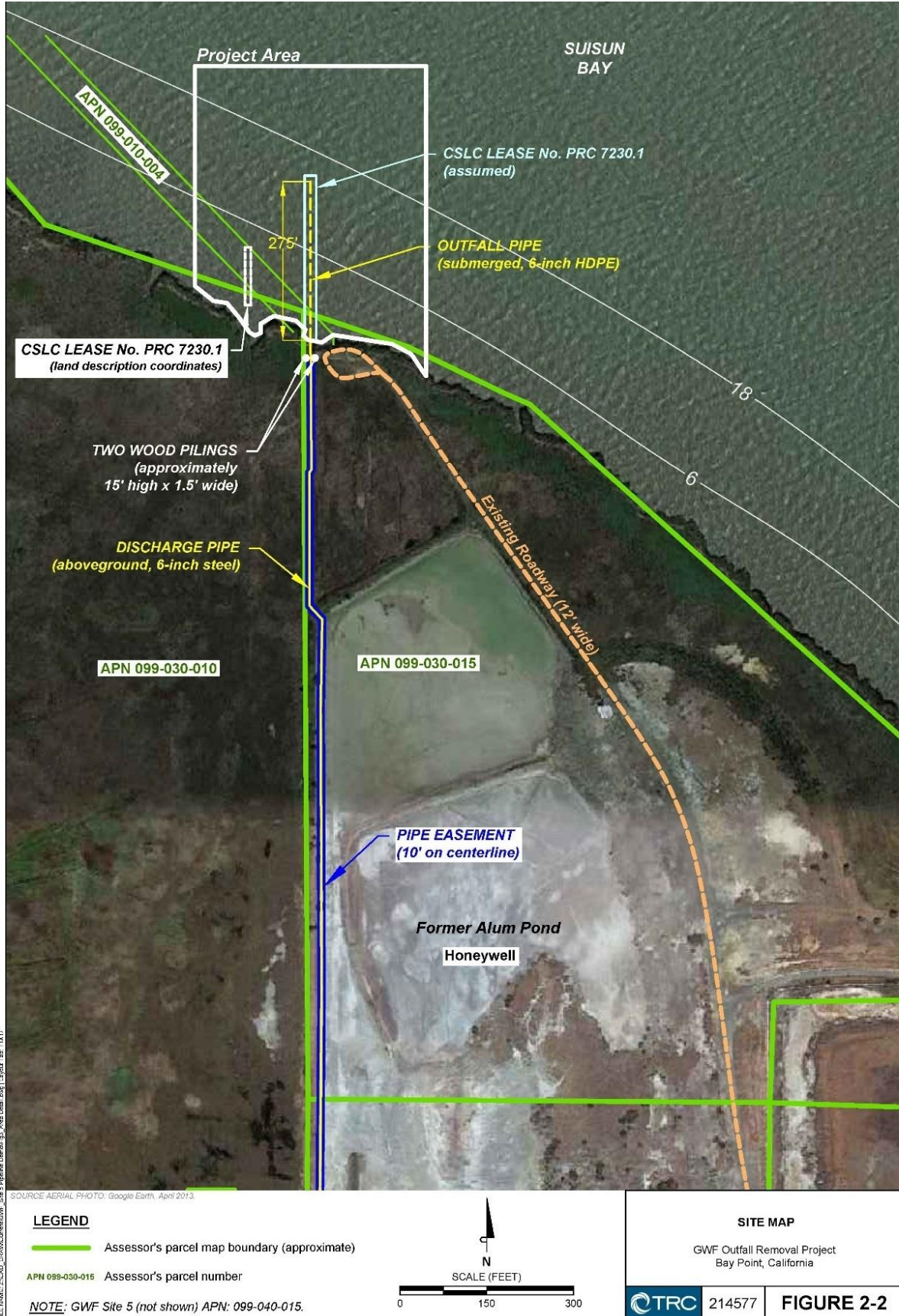
1 The piping will be removed entirety to the shoreline terminus at the MHW mark, where it  
2 connects to the onshore pipe. The two wood pile structures marking the outfall at the  
3 shoreline and protecting the outfall, will be removed to at least 24 inches below the mud  
4 line. Removal of the outfall pipe will also include the removal, demolition and disposal of  
5 both of the wood piles along with the installation of a blind flange closure plate onto the  
6 land-portion terminus flange. None of the armor cover rock or bedding gravel will be  
7 removed from the pipe corridor and no other substrate fill, grade levelling or other  
8 restoration will be performed.

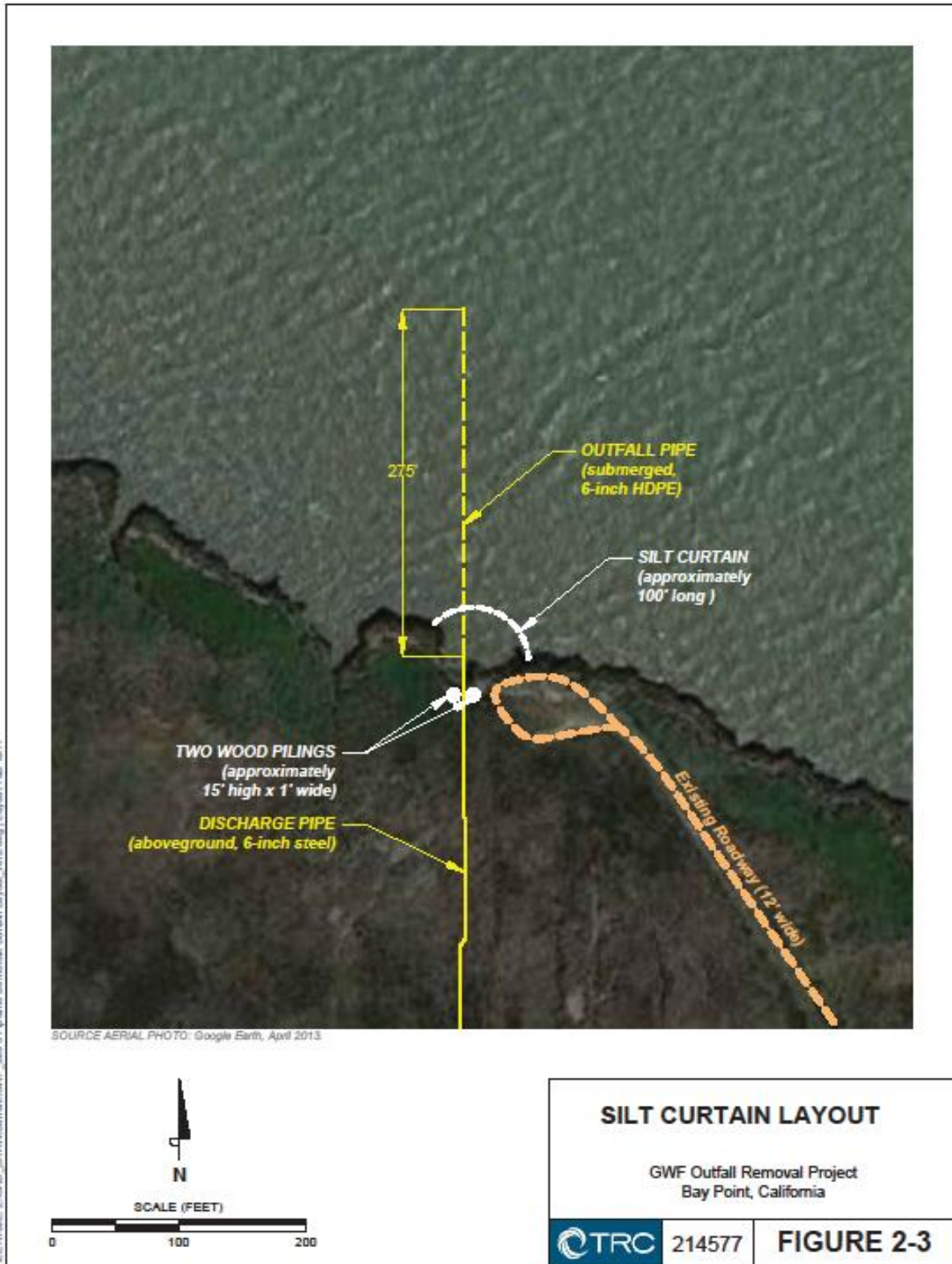
9 The removal activities will primarily be carried out from floating equipment staged from  
10 the water near the shoreline with the exception of a light utility work vehicle parked  
11 onshore that would be used to assist with servicing of equipment or for the expedient  
12 evacuation of an injured worker. This temporary vehicular access for emergency  
13 services would use the existing 12-foot-wide levee road, shown in Figure 2-2. This  
14 existing road will also allow for access from onshore for the Applicant, its contractors,  
15 site monitors, agency representatives or other authorized personnel observing  
16 operations. The temporary access roadway is on private land and use is subject to the  
17 authorization by the landowner (Honeywell International). Prior approval will be  
18 necessary. All removal vessels, equipment and other materials would be removed at the  
19 Project completion.

20 Prior to initiating pipe removal, with the floating barge stationary (with anchor spuds in  
21 place) and securely moored adjacent to the pipe terminus, water jetting will be  
22 completed around the underside of the pipe, approximately five feet from the pipe  
23 terminus. A suitable, sturdy chain will be positioned around the pipe (a “choke”) to grip  
24 and enable lifting. The pipe will be lifted and peeled back (in 10- to 20-foot sections),  
25 and divers will relocate the choke/lifting chain along the pipe alignment as the pipe is  
26 recovered while working toward the shoreline. Water jetting activities are expected to  
27 occur only at the beginning of pipe removal activities. Divers will locate the diffuser  
28 section and install mechanical plugs into the top of the 3-inch vertical riser ports to  
29 contain the sediment.

30 The 6-inch HDPE submarine pipe will be disconnected from the land-portion above  
31 ground steel pipe. This shoreline terminus of the 6-inch pipe will then be secured to the  
32 two timber pilings. A 100-foot-long semi-circular silt/turbidity curtain will be connected to  
33 the shoreline (east and west of the wood pilings) by driven stakes to encompass the  
34 wood pilings and outfall connection at the shoreline. An anchor will be placed near the  
35 apex of the semi-circle and at the end of each 50-foot section to hold the silt curtain in  
36 place. The layout of the silt curtain is shown in Figure 2-3.







1 Buoys will be affixed to the HDPE pipe section to help it float and keep it visible while  
2 securing the 6-inch outfall terminus to a larger buoy and mooring at the furthest point  
3 offshore. When the on-barge equipment is no longer able to “peel” the buried pipe off  
4 the bottom at the appropriate angle, the barge will be relocated closer to the shoreline  
5 and secured in place with the anchor spuds.

6 During low tidal cycles, particularly when working close to the shore in shallow water  
7 depths, the “peeling” back of the HDPE pipe from its corridor will be temporarily secured  
8 in order to recover the floating section of the pipe. The section of floating pipe will be  
9 lifted onto the deck of the barge. Mechanical “stopper” plugs will be placed at both ends  
10 of each pipe section to contain sediment.

11 The two timber piles located along the shoreline (next to the 6-inch steel flange  
12 connection) will be extracted and/or cut to 24 inches below the mud-line, floated and  
13 recovered onto the barge, and cut into manageable pieces as necessary. The timber  
14 piles are assumed to be coated with creosote residue and will be transported and  
15 properly disposed at Keller Canyon Landfill in Pittsburg.

16 Several environmental controls to be implemented include (but are not limited to):

- 17 • All engine-powered equipment used and operated upon and from the deck of the  
18 barge will use drip-pans or other means to retain fluids beneath the equipment.
- 19 • Only approved and certified fuel cans with “no-spill” spring loaded lids will be  
20 used when fueling up diesel or gas engines. Engines will be turned OFF and  
21 fueling will not be done over the water. A spill kit with absorbent diapers will be  
22 readily available next to each filling area.
- 23 • A continuous floating oil-absorbent sock will be deployed and maintained around  
24 the entire barge to contain any accidental leakage of fuel or hydraulic fluids.
- 25 • A turbidity curtain (100 linear feet) shall be installed and maintained around the  
26 shoreline terminus flange of the pipe to maximize sediment containment that may  
27 discharge from the pipe and/or be resuspended from the water bottom during  
28 removal. Additionally, turbidity will be minimized by removing the pipe with slow,  
29 controlled movements. Sawdust generated during timber piling cutting and  
30 removal will also be contained in this curtain and/or skimmed and removed if  
31 floating in water (and disposed of in plastic bags).
- 32 • Cutting and removal of the timber piles 24 inches below the mudline will follow  
33 the methods identified by the U.S. Army Corps of Engineers (USACE) in its Best  
34 Management Practices for Pile Removal (dated 1 March 2007) to control turbidity  
35 and sediments re-entering the water column during pile removal, capture debris,  
36 and dispose of removed piles and debris.



- 1 • Native bay mud will be repositioned to accommodate wood pile cutting and will  
2 be replaced within the minor voids after cutting and piling removal is complete.
- 3 • The piles will be placed in a containment basin on the barge to capture any  
4 adhering sediment, immediately after the pile is removed from the water. Piles  
5 will be cut into manageable lengths.
- 6 • The Project will use U.S. Coast Guard compliant stationary barge mooring  
7 equipment, including marker flags and nighttime illumination and flashers.
- 8 • A plastics recycling company will be hired by the Applicant to transport an  
9 estimated as 1,950 pounds (275 linear feet at 7.09 pounds per linear foot) of  
10 HDPE pipe materials. In the event recycling is not feasible, the pipe materials will  
11 be delivered to an off-site landfill.

12 The work will be scheduled for a time of year that minimizes effects to sensitive  
13 ecological resources, including threatened and endangered species as designated by  
14 National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS),  
15 and California Department of Fish and Wildlife (CDFW) (further described in Section  
16 3.4, Biological Resources). Onshore activities will be designed to avoid disturbance of  
17 tidal marsh habitat (identified in Section 3.4, Biological Resources).

## 18 **2.5 PROJECT SCHEDULE**

19 The Project is scheduled to occur over a consecutive 2-week period between  
20 September 1 and October 31. The entire removal operation is scheduled to be  
21 performed during 5-day weekday work weeks (estimated at 10 work days total). The  
22 schedule includes time to stage/mobilize all equipment to the pipe outfall location,  
23 remove and recover approximately 275 linear feet of 6-inch-diameter HDPE outfall pipe  
24 and remove and dispose of both shoreline timber piling and for the transit and recycling  
25 of all HDPE pipe materials.

26 The timing of the Project in September or October falls within the work window generally  
27 accepted by the USFWS, from the Carquinez Strait to Collinsville (i.e., the Lower  
28 Estuarine River) of August 1 through November 30 (Levine-Fricke 2004 and TRC,  
29 March 2014). The precise schedule dates will depend on the environmental work  
30 windows acceptable for performing the work to ensure that impacts to sensitive  
31 ecological species are minimized to the extent feasible.

32 The Project's schedule also falls within the non-nesting season (September through  
33 January) of onshore special status species likely to be present in the marsh habitat  
34 adjacent to the outfall and the existing levee road.



### 3.0 ENVIRONMENTAL CHECKLIST AND ANALYSIS

---

1  
2 This section contains the Initial Study (IS) that was completed for the proposed Project  
3 in accordance with the requirements of the California Environmental Quality Act  
4 (CEQA). The IS identifies site-specific conditions and impacts, evaluates their potential  
5 significance, and discusses ways to avoid or lessen impacts that are potentially  
6 significant. The information, analysis and conclusions included in the IS provide the  
7 basis for determining the appropriate document needed to comply with CEQA. For the  
8 Project, based on the analysis and information contained herein, the California State  
9 Lands Commission (CSLC) has found that the IS shows that there is substantial  
10 evidence that the Project may have a significant effect on the environment but revisions  
11 to the Project would avoid the effects or mitigate the effects to a point where clearly no  
12 significant effect on the environment would occur. As a result, the CSLC has concluded  
13 that a Mitigated Negative Declaration (MND) is the appropriate CEQA document for the  
14 Project.

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

- 21 • **Potentially Significant Impact.** This column is checked if there is substantial  
22 evidence that a Project-related environmental effect may be significant. If there  
23 are one or more “Potentially Significant Impacts,” a Project Environmental Impact  
24 Report (EIR) would be prepared.
- 25 • **Less than Significant with Mitigation.** This column is checked when the  
26 Project may result in a significant environmental impact, but the incorporation of  
27 identified Project revisions or mitigation measures would reduce the identified  
28 effect(s) to a less than significant level.
- 29 • **Less than Significant Impact.** This column is checked when the Project would  
30 not result in any significant effects. The Project’s impact is less than significant  
31 even without the incorporation of Project-specific mitigation measures.
- 32 • **No Impact.** This column is checked when the Project would not result in any  
33 impact in the category or the category does not apply.

34 The environmental factors checked below would be potentially affected by this Project;  
35 a checked box indicates that at least one impact would be a “Potentially Significant  
36 Impact” except that the Applicant has agreed to Project revisions, including the  
37 implementation of mitigation measures, that reduce the impact to “Less than Significant  
38 with Mitigation.”

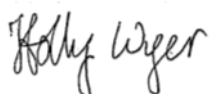
<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forest Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology and Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input checked="" type="checkbox"/> Hazards and Hazardous Materials	<input checked="" type="checkbox"/> Hydrology and Water Quality
<input type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise
<input type="checkbox"/> Population and Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Utilities and Service Systems	
<input type="checkbox"/> Mandatory Findings of Significance		
<input type="checkbox"/> Other Major Areas of Concern: Environmental Justice		

1 Detailed descriptions and analyses of impacts from Project activities and the basis for  
 2 their significance determinations are provided for each environmental factor on the  
 3 following pages, beginning with Section 3.1, Aesthetics. Relevant laws, regulations, and  
 4 policies potentially applicable to the Project are listed in the Regulatory Setting for each  
 5 environmental factor analyzed in this IS.

6 **AGENCY DETERMINATION**

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

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



June 18, 2014

Signature

Date

Holly Wyer, Environmental Scientist  
 Division of Environmental Planning and Management  
 California State Lands Commission

1 **3.1 AESTHETICS**

<b>AESTHETICS – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.1.1 Environmental Setting**

3 The Project area is located along the southern shore of the Suisun Bay near Bay Point,  
 4 Contra Costa County. Two active railway lines, Burlington Northern Santa Fe (BNSF)  
 5 and Union Pacific Railroad (UPRR), and a historically Heavy Industry land use area lie  
 6 south of the Project area, immediately upland. The Project area is located within open  
 7 space areas designated by Contra Costa County. The Suisun Bay waterway and  
 8 shoreline are part of the ‘Scenic Waterways’ system, as designated in the Open Space  
 9 Element of the Contra Costa County General Plan 2005-2020. The designation  
 10 identifies the major scenic resources in the County.

11 The federal ship channel passes the site, parallel to the shoreline, approximately  
 12 1,200 feet north of the outfall/diffuser pipe. Other public uses of Suisun Bay are  
 13 recreational boating and fishing, none of it accessible at the Project site. The adjacent  
 14 uplands are privately owned and in industrial use, on a secured, gated site, with no  
 15 public access, and with active rail lines adjacent to the Project site, there would be no  
 16 safe access to the water body from upland locations.

17 The outfall is situated approximately 0.6 mile to the east of the Concord Naval Weapons  
 18 Station, Military Ocean Terminal; 0.8 mile to the south of Middle Ground Island in  
 19 Suisun Bay; approximately 1.9 miles to the west of McAvoy Yacht Harbor in Bay Point  
 20 and further (about 3 miles total along the shoreline) to the west of the mouth of the  
 21 Sacramento River; and 0.9 mile to the north of Port Chicago Highway.

1 **3.1.2 Regulatory Setting**

2 **Federal and State**

3 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 4 Project are identified in Table 3.1-1.

**Table 3.1-1 Laws, Regulations, and Policies (Aesthetics)**

<b>U.S.</b>	CZMA (see Table 1-2).	
<b>CA</b>	California Scenic Highway Program	The California Scenic Highway Program, managed by the California Department of Transportation, was created to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. State highways identified as scenic, or eligible for designation, are listed in California Streets and Highways Code section 260 et seq.
<b>CA</b>	San Francisco Bay Plan (see also Table 1-2)	The Bay Plan provides the San Francisco Bay Conservation and Development Commission (BCDC) policies on Appearance, Design, and Scenic Views around the Bay. Several of these policies are to ensure and maintain the visual quality around the Bay.

5 **Local**

6 The Contra Costa County General Plan 1995-2020 outlines development goals and  
 7 policies that promote protection of the scenic qualities of the County. Specifically, the  
 8 General Plan identifies the following scenic resource goals and policies that are  
 9 applicable to the Project site:

- 10 • Goal 9-12 To preserve the scenic qualities of the San Francisco Bay/Delta  
 11 estuary system and the Sacramento–San Joaquin River/Delta shoreline.
- 12 • Policy 9-27 The appearance of the County shall be improved by eliminating  
 13 negative features such as non-conforming signs and overhead utility lines, and  
 14 by encouraging aesthetically designed facilities with adequate setbacks and  
 15 landscaping.
- 16 • Policy 9-28 Maintenance of the scenic waterways of the County shall be  
 17 ensured through public protection of the marshes and riparian vegetation along  
 18 the shorelines and delta levees, as otherwise specified in the General Plan.

19 **3.1.3 Impact Analysis**

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

21 **Less than Significant Impact.** The Project site is located in unincorporated Contra  
 22 Costa County designated waterways. During removal activities, there would be several  
 23 short-term, temporary impacts to views of the scenic waterway. Temporary impacts  
 24 include the anchoring of a barge offshore as well as smaller vessels needed to transport  
 25 workers or other equipment. The presence of marine vessels would be consistent with

1 views of Suisun Bay, and all removal vessels, equipment and other materials would be  
2 removed at the Project completion. Scenic impacts would be short-term, occurring over  
3 the approximate 2-week period. The removal of the outfall pipe would ultimately result in  
4 improved aesthetic benefits to the area. Therefore, the Project would not have a  
5 substantial adverse effect on a scenic vista.

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

8 **No Impact.** No Federal, State or locally designated scenic highway corridors are  
9 located in, or are visible from, the Project site. Therefore, the Project would have no  
10 impact on scenic resources including, but not limited to, trees, rock outcroppings, and  
11 historic buildings within a State scenic highway corridor.

12 ***c) Substantially degrade the existing visual character or quality of the site and its***  
13 ***surroundings?***

14 **No Impact.** The Project would remove the high density polyethylene (HDPE) pipe and  
15 HDPE diffuser risers from the scenic waterway. All removal would occur from in water  
16 and the pipe is currently underwater. Two 16-foot-high by 1-foot-wide wood piles on the  
17 shoreline would also be removed. The removal of the pipe and associated wood piles  
18 would improve views of the Suisun Bay. The Project is consistent with the Contra Costa  
19 County's General Plan, Scenic Resource Policy 9-27, which promotes the removal of  
20 negative features from scenic areas. Removal of the HDPE pipe and associated  
21 structures would ultimately increase the aesthetic quality of the Project site. Therefore,  
22 the Project would not degrade the existing visual character or quality of the Project site  
23 and its surroundings.

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

26 **No Impact.** No new source of visual glare or substantial light is expected to occur due  
27 to the Project. Removal activities would be performed typically between 7 a.m. and 5  
28 p.m., except for periods when required by tide conditions. Because removal activities  
29 would occur during daylight hours, the U.S. Coast Guard (USCG) does not require any  
30 additional substantial lighting. Since the barge will be moored overnight during the  
31 removal activities, the Project will use USCG compliant stationary barge mooring  
32 equipment requirements, including marker flags and nighttime illumination and flashers.  
33 The nighttime illumination and flashers, identifying the location of the moored vessel to  
34 potential nearby water craft, will not have an adverse effect on nighttime views in the  
35 area. Presence of marine vessels, temporary facilities, and equipment would be short-  
36 term and completely removed at the Project completion. Therefore, there would be no  
37 new impact on visual glare or light.

1 **3.1.4 Mitigation Summary**

- 2 The Project would not result in significant impacts to Aesthetics; therefore, no mitigation  
3 is required.

1 **3.2 AGRICULTURE AND FOREST RESOURCES**

<b>AGRICULTURE AND FOREST RESOURCES<sup>2</sup></b> - Would the Project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.2.1 Environmental Setting**

3 The Project site is located within the waters of Suisun Bay, near Bay Point, Contra  
 4 Costa County. Onshore activities are limited to the use of the levee road for emergency  
 5 access over a 2-week period. The Project site is bordered by open space and land  
 6 designated for heavy industrial use. There is no land designated for agricultural use  
 7 within approximately 2 miles of the Project site.

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

1 **3.2.2 Regulatory Setting**

2 **Federal and State**

3 Federal and State laws and regulations pertaining to this issue area and relevant to the  
4 Project are identified in Table 3.2-1.

**Table 3.2-1 Laws, Regulations, and Policies (Agriculture and Forest Resources)**

<b>CA</b>	Williamson Act (Gov. Code §§ 51200-51207)	This Act enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use, and provides landowners with lower property tax assessments in return. Local government planning departments are responsible for the enrollment of land into Williamson Act contracts. Generally, any commercial agricultural use would be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit.
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5 **Local**

6 The Land Use Element of the Contra Costa County General Plan 1995-2020 contains  
7 policies related to agricultural land use. During Project review, proposed uses on the  
8 edges of land use designations are required to be evaluated to ensure compatibility with  
9 adjacent planned uses.

10 Measure C, passed in 1990, established a 65/35 Land Preservation Standard to limit  
11 urban development to no more than 35 percent of the land in the County. At least 65  
12 percent of all land in the County is required to be preserved for agriculture, open space,  
13 wetlands, parks, and other non-urban uses.

14 **3.2.3 Impact Analysis**

15 ***a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide***  
16 ***Importance (Farmland), as shown on the maps prepared pursuant to the***  
17 ***Farmland Mapping and Monitoring Program of the California Natural Resources***  
18 ***Agency, to non-agricultural use?***

19 **No Impact.** The Project would have no impact on Prime Farmland, Unique Farmland or  
20 Farmland of Statewide Importance because there are no current or planned agricultural  
21 uses at the site.

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

23 **No Impact.** The Project would not conflict with existing zoning for agriculture because  
24 the site is designated light industrial in the Contra Costa County 2005-2020 General  
25 Plan and zoned heavy industrial. The site is not operated under a Williamson Act



1 contract with any local governments for the purpose of restricting specific parcels of  
2 land to agricultural or related open space use.

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

7 **No Impact.** No forest lands or timberlands are located in the vicinity of the site;  
8 therefore, there would be no impact.

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

10 **No Impact.** No forest lands or timberlands are located in the vicinity of the site;  
11 therefore, there would be no impact.

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

15 **No Impact.** The Project would not alter the existing environment such that farmland or  
16 forest land would be converted to non-agricultural or non-forest uses.

### 17 **3.2.4 Mitigation Summary**

18 The Project would not result in significant impacts to Agricultural and Forest Resources;  
19 therefore, no mitigation is required.

1 **3.3 AIR QUALITY**

<b>AIR QUALITY</b> – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.3.1 Environmental Setting**

3 **Regional Context**

4 The Project site is located in Contra Costa County, which is part of the San Francisco  
 5 Bay Area Air Basin (SFBAAB). The Bay Area Air Quality Management District  
 6 (BAAQMD) is the regional agency with jurisdiction over the nine-county SFBAAB, which  
 7 includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and  
 8 Napa counties, the southern portion of Sonoma County and the southwestern portion of  
 9 Solano County.

10 The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB  
 11 within federal and State air quality standards, as established by the federal Clean Air  
 12 Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the  
 13 BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the  
 14 SFBAAB and to develop and implement strategies to attain the applicable federal and  
 15 State standards. The CAA and the CCAA require plans to be developed for areas that  
 16 do not meet air quality standards, generally. The most recent air quality plan, the 2010  
 17 Clean Air Plan, was adopted by the BAAQMD on September 15, 2010 (BAAQMD  
 18 2010a). The 2010 Clean Air Plan updates the Bay Area 2005 Ozone Strategy in

1 accordance with the requirements of the CCAA to implement all feasible measures to  
2 reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics,  
3 and greenhouse gases (GHGs) in a single, integrated plan; and establish emission-  
4 control measures to be adopted or implemented. The 2010 Clean Air Plan contains the  
5 following primary goals:

- 6 • Attain air quality standards;
- 7 • Reduce population exposure and protect public health in the SFBAAB; and
- 8 • Reduce GHG emissions and protect the climate.

9 The 2010 Clean Air Plan represents the most current applicable air quality plan for the  
10 SFBAAB. Consistency with this plan is the basis for determining whether the Project  
11 would conflict with or obstruct implementation of air quality plans.

### 12 *Criteria Air Pollutants*

13 In accordance with the State and federal CAAs, air pollutant standards are identified for  
14 the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter  
15 (PM), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). These air pollutants  
16 are termed criteria air pollutants because they are regulated by developing specific  
17 public health- and welfare-based criteria as the basis for setting permissible levels. In  
18 general, the SFBAAB experiences low concentrations of most pollutants when  
19 compared to federal or State standards. The SFBAAB is designated as either in  
20 attainment or unclassified for most criteria pollutants with the exception of ozone,  
21 particulate matter less than 2.5 micrometers (PM<sub>2.5</sub>), and particulate matter less than 10  
22 micrometers (PM<sub>10</sub>), for which these pollutants are designated as non-attainment for  
23 either the State or federal standards. National and California ambient air quality  
24 standards and attainment status designations for the project area are provided in Table  
25 3.3-1: National and California Ambient Air Quality Standards and Attainment Status.

26 By its very nature, regional air pollution is largely a cumulative impact in that no single  
27 project is sufficient in size to, by itself, result in non-attainment of air quality standards.  
28 Instead, a project's individual emissions contribute to existing cumulative air quality  
29 impacts. If a project's contribution to cumulative air quality impacts is considerable, then  
30 the project's impact on air quality would be considered significant.

31 Land use projects may contribute to regional criteria air pollutants during the  
32 construction and operational phases of a project. Table 3.3-2: Criteria Air Pollutant  
33 Significance Thresholds identifies air quality significance thresholds followed by a  
34 discussion of each threshold. Projects that would result in criteria air pollutant emissions  
35 below these significance thresholds would not violate an air quality standard, contribute  
36 substantially to an air quality violation, or result in a cumulatively considerable net  
37 increase in criteria air pollutants within the SFBAAB.

1 **Table 3.3-1: National and California Ambient Air Quality Standards and**  
 2 **Attainment Status**

Pollutant	Averaging Time	California Standards <sup>1</sup>		National Standards <sup>2</sup>	
		Concentration	Attainment Status	Primary	Attainment Status
Ozone	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	Nonattainment	—	—
	8 hours	0.070 ppm (137 µg/m <sup>3</sup> )	Nonattainment	0.075 ppm (147 µg/m <sup>3</sup> )	Nonattainment
Respirable particulate matter (PM <sub>10</sub> )	24 hours	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Nonattainment
	Annual arithmetic mean	20 µg/m <sup>3</sup>	Nonattainment	—	—
Fine particulate matter (PM <sub>2.5</sub> )	24 hours	—	—	35 µg/m <sup>3</sup> <sup>13</sup>	Attainment
	Annual arithmetic mean	12 µg/m <sup>3</sup>	Nonattainment	12.0 µg/m <sup>3</sup> <sup>6</sup>	Nonattainment <sup>13</sup>
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> )	Attainment
	1 hour	20 ppm (23 mg/m <sup>3</sup> )	Attainment	35 ppm (40 mg/m <sup>3</sup> )	Attainment
Nitrogen dioxide (NO <sub>2</sub> ) <sup>7</sup>	Annual arithmetic mean	0.030 ppm (57 µg/m <sup>3</sup> )	Attainment	0.053 ppm (100 µg/m <sup>3</sup> )	Attainment
	1 hour	0.18 ppm (339 µg/m <sup>3</sup> )	Attainment	0.100 ppb (188 µg/m <sup>3</sup> )	Unclassified
Sulfur dioxide (SO <sub>2</sub> ) <sup>8</sup>	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )	Attainment	—	—
	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )	Attainment	0.075 ppm (196 µg/m <sup>3</sup> )	Attainment
Lead <sup>9,10</sup>	30-day average	1.5 µg/m <sup>3</sup>	Attainment	—	—
	Rolling 3-month average	—	—	0.15 µg/m <sup>3</sup>	—
Visibility-reducing particles <sup>11</sup>	8 hours	See footnote <sup>12</sup>	Unclassified	No national standards	
Sulfates	24 hours	25 µg/m <sup>3</sup>	Attainment		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m <sup>3</sup> )	Unclassified		
Vinyl chloride <sup>12</sup>	24 hours	0.01 ppm (26 µg/m <sup>3</sup> )	No information available		
Notes: mg/m <sup>3</sup> = milligrams per cubic meter PM <sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less PM <sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less ppb = parts per billion ppm = parts per million µg/m <sup>3</sup> = micrograms per cubic meter					

Pollutant	Averaging Time	California Standards <sup>1</sup>		National Standards <sup>2</sup>	
		Concentration	Attainment Status	Primary	Attainment Status
<p><sup>1</sup> California standards for ozone, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in California Code of Regulations, Title 17, section 70200.</p> <p><sup>2</sup> National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standards.</p> <p><sup>3</sup> Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; parts per million in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</p> <p><sup>4</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.</p> <p><sup>6</sup> On January 15, 2013, EPA revised the national annual PM<sub>2.5</sub> standard to 12.0 µg/m<sup>3</sup> to provide increased protection against health risks.</p> <p><sup>7</sup> To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</p> <p><sup>8</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</p> <p><sup>9</sup> The California Air Resources Board (CARB) has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p><sup>10</sup> The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.</p> <p><sup>11</sup> In 1989, CARB converted the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and the “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.</p> <p><sup>12</sup> No information is available to designate the region for vinyl chloride.</p> <p><sup>13</sup> EPA lowered the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup> in 2006. The EPA designated the BAAQMD as nonattainment of the PM<sub>2.5</sub> standard on October 8, 2009. The effective date of the designation is December 14, 2009, and the BAAQMD had 5 years to develop an implementation plan that demonstrates how the region will achieve the revised standard by December 14, 2014. On January 9, 2013, the EPA issued a final rule to determine that the SFBAAB has attained the 24-hour PM<sub>2.5</sub> NAAQS. This action suspended federal State Implementation Policy planning requirements for the Bay Area, but BAAQMD still needs to submit a redesignation request.</p>					

**Table 3.3-2: Criteria Air Pollutant Significance Thresholds**

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (exhaust)	82	15
PM <sub>2.5</sub>	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Notes: ROG = reactive organic gases NO <sub>x</sub> = oxides of nitrogen PM <sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns PM <sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns			

1 *Ozone Precursors*

2 The SFBAAB is currently designated as non-attainment for ozone and PM. Ozone is a  
 3 secondary air pollutant produced in the atmosphere through a complex series of  
 4 photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen  
 5 (NO<sub>x</sub>). The potential for a project to result in a cumulatively considerable net increase in  
 6 criteria air pollutants, which may contribute to an existing or projected air quality  
 7 violation, are based on the CCAA and federal CAA emissions limits for stationary  
 8 sources. To ensure that new stationary sources do not cause or contribute to a violation  
 9 of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source  
 10 that emits criteria air pollutants above a specified emissions limit must offset those  
 11 emissions. For ozone precursors ROG and NO<sub>x</sub>, the offset emissions level is an annual  
 12 average of 10 tons per year (or 54 pounds per day). These levels represent emissions  
 13 by which new sources are not anticipated to contribute to an air quality violation or result  
 14 in a considerable net increase in criteria air pollutants.

15 *Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and Fugitive Dust*

16 The federal New Source Review (NSR) program was created by the federal CAA to  
 17 ensure that stationary sources of air pollution are constructed in a manner that is  
 18 consistent with attainment of federal health-based ambient air quality standards. For  
 19 PM<sub>10</sub> and PM<sub>2.5</sub>, the emissions limit under NSR is 15 tons per year (82 pounds per day)  
 20 and 10 tons per year (54 pounds per day), respectively. These emissions limits  
 21 represent levels at which a source is not expected to have an impact on air quality.  
 22 Although the regulations specified above apply to new or modified stationary sources,  
 23 land use development projects result in ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions as a  
 24 result of increases in vehicle trips, architectural coating, and construction activities.  
 25 Therefore, the above thresholds can be applied to the construction and operational

1 phases of land use projects and those projects that result in emissions below these  
2 thresholds would not be considered to contribute to an existing or projected air quality  
3 violation or result in a considerable net increase in ozone precursors or particulate  
4 matter. Due to the temporary nature of the Project removal activities, only the average  
5 daily thresholds are applicable to construction-phase emissions.

6 Fugitive dust emissions are typically generated during construction phases. Studies  
7 have shown that the application of best management practices (BMPs) at construction  
8 sites significantly control fugitive dust. Individual measures have been shown to reduce  
9 fugitive dust by anywhere from 10 to 98 percent (WRAP 2006). The BAAQMD has  
10 identified a number of BMPs to control fugitive dust emissions from construction  
11 activities. The City's Construction Dust Control Ordinance (Ordinance 176-08, effective  
12 July 30, 2008) requires a number of fugitive dust-control measures to ensure that  
13 construction projects do not result in visible dust. The BMPs employed in compliance  
14 with the City's Construction Dust Control Ordinance is an effective strategy for  
15 controlling construction-related fugitive dust.

## 16 **Local Health Risks and Hazards**

17 In addition to criteria air pollutants, individual projects may emit toxic air contaminants  
18 (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of  
19 causing chronic (i.e., of long duration) and acute (i.e., severe but of short-term) adverse  
20 effects to human health, including carcinogenic effects. Human health effects of TACs  
21 include birth defects, neurological damage, cancer, and mortality. There are hundreds  
22 of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly  
23 in the health risk they present; at a given level of exposure, one TAC may pose a  
24 hazard that is many times greater than another.

25 Unlike criteria air pollutants, TACs do not have ambient air quality standards but are  
26 regulated by the BAAQMD using a risk-based approach to determine which sources  
27 and pollutants to control as well as the degree of control. A health risk assessment is an  
28 analysis in which human health exposure to toxic substances is estimated, and  
29 considered together with information regarding the toxic potency of the substances, to  
30 provide quantitative estimates of health risks.

31 Air pollution does not affect every individual in the population in the same way, and  
32 some groups are more sensitive to adverse health effects than others. Land uses such  
33 as residences, schools, children's day care centers, hospitals, and nursing and  
34 convalescent homes are considered to be the most sensitive to poor air quality because  
35 the population groups associated with these uses have increased susceptibility to  
36 respiratory distress or, as in the case of residential receptors, their exposure time is  
37 greater than for other land uses. Therefore, these groups are referred to as sensitive  
38 receptors. Exposure assessment guidance typically assumes that residences would be

1 exposed to air pollution 24 hours per day, 350 days per year, for 70 years. Therefore,  
2 assessments of air pollutant exposure to residents typically result in the greatest  
3 adverse health outcomes of all population groups.

4 Exposures to PM<sub>2.5</sub> are strongly associated with mortality, respiratory diseases, and  
5 lung development in children, and other endpoints such as hospitalization for  
6 cardiopulmonary disease. In addition to PM<sub>2.5</sub>, diesel particulate matter (DPM) is also of  
7 concern. The California Air Resources Board (CARB) identified DPM as a TAC in 1998,  
8 primarily based on evidence demonstrating cancer effects in humans (CARB 1998). The  
9 estimated cancer risk from exposure to diesel exhaust is much higher than the risk  
10 associated with any other TAC routinely measured in the region.

11 In an effort to identify areas of San Francisco most adversely affected by sources of  
12 TACs, San Francisco partnered with the BAAQMD to inventory and assess air pollution  
13 and exposures from mobile, stationary, and area sources within San Francisco. Areas  
14 with poor air quality, termed the “Air Pollutant Exposure Zone,” were identified based on  
15 two health-protective criteria: (1) excess cancer risk from the contribution of emissions  
16 from all modeled sources greater than 100 per one million population, and/or (2)  
17 cumulative PM<sub>2.5</sub> concentrations greater than 10 micrograms per cubic meter (µg/m<sup>3</sup>).

#### 18 *Excess Cancer Risk*

19 The above 100 per one million persons (100 excess cancer risk) criteria is based on  
20 U.S. Environmental Protection Agency (USEPA) guidance for conducting air toxic  
21 analyses and making risk management decisions at the facility- and community-scale  
22 level. As described by the BAAQMD, the USEPA considers a cancer risk of 100 per  
23 million to be within the “acceptable” range of cancer risk. Furthermore, in the 1989  
24 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants  
25 rulemaking, the USEPA states that it “...strives to provide maximum feasible protection  
26 against risks to health from hazardous air pollutants by (1) protecting the greatest  
27 number of persons possible to an individual lifetime risk level no higher than  
28 approximately one in one million and (2) limiting to no higher than approximately one in  
29 10,000 [100 in one million] the estimated risk that a person living near a plant would  
30 have if he or she were exposed to the maximum pollutant concentrations for 70 years.”  
31 The 100 per one million excess cancer cases is also consistent with the ambient cancer  
32 risk in the most pristine portions of the San Francisco Bay Area based on BAAQMD  
33 regional modeling.

#### 34 *Fine Particulate Matter*

35 In April 2011, the USEPA published *Policy Assessment for the Particulate Matter*  
36 *Review of the National Ambient Air Quality Standards*, “Particulate Matter Policy  
37 Assessment.” In this document, USEPA staff concludes that the current federal annual



1 PM<sub>2.5</sub> standard of 15 µg/m<sup>3</sup> should be revised to a level within the range of 13 to 11  
2 µg/m<sup>3</sup>, with evidence strongly supporting a standard within the range of 12 to 11 µg/m<sup>3</sup>.  
3 The Air Pollutant Exposure Zone for San Francisco is based on the health-protective  
4 PM<sub>2.5</sub> standard of 11 µg/m<sup>3</sup>, as supported by the USEPA’s Particulate Matter Policy  
5 Assessment, although lowered to 10 µg/m<sup>3</sup> to account for uncertainty in accurately  
6 predicting air pollutant concentrations using emissions modeling programs.

7 Land use projects within the Air Pollutant Exposure Zone require special consideration  
8 to determine whether the project’s activities would expose sensitive receptors to  
9 substantial air pollutant concentrations or add emissions to areas already adversely  
10 affected by poor air quality.

### 11 **Topography, Meteorology, and Climate**

12 The SFBAAB covers approximately 5,540 square miles of complex terrain, made up of  
13 coastal mountain ranges, inland valleys, and the San Francisco Bay. The SFBAAB is  
14 generally bordered on the west by the Pacific Ocean, on the north by the Coast Ranges,  
15 and on the east and south by the Diablo Range. The Project area is located in the  
16 westernmost portion of the SFBAAB.

17 Meteorological conditions in the SFBAAB are warm and mainly dry in summers, and  
18 mild and moderately wet in winters. Marine air has a moderating effect on the climate  
19 throughout much of the year. Winds flow through the Golden Gate from the Pacific  
20 Ocean, but direct flow into eastern Alameda County is impeded by the East Bay hills.  
21 Marine air mostly is blocked from the area until late afternoons or on days when deep  
22 marine inversions develop with strong onshore flows.

23 Winds from the west-southwest are most prevalent during spring and summer  
24 afternoons. These are the breezes that travel from the Pacific Ocean through gaps in  
25 the East Bay hills. When the ocean breeze is weak, winds become light and variable  
26 and nighttime drainage flows typically develop. On clear nights with light winds,  
27 inversions develop in the coastal valleys, separating the surface wind flow from winds  
28 aloft. The drainage flow is usually light and stable, flowing toward the Carquinez Strait.

### 29 **Local Air Quality Conditions**

30 The determination of whether a region’s air quality is healthful or unhealthful is made by  
31 comparing contaminant levels in ambient air samples to the California Ambient Air  
32 Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS).  
33 Both the CARB and USEPA ambient air concentrations are monitored at various  
34 regions throughout the SFBAAB to designate an area’s attainment status with respect to  
35 the CAAQS and NAAQS, respectively, for criteria air pollutants. The purpose of these  
36 designations is to identify areas with air quality problems and thereby initiate planning

1 efforts for improvement. The three basic designation categories are “nonattainment,”  
 2 “attainment,” and “unclassified.” The “unclassified” designation is used in an area that  
 3 cannot be classified on the basis of available information as meeting or not meeting the  
 4 standards. The most recent attainment designations with respect to the SFBAAB are  
 5 shown in Table 3.3-1 above. With respect to the CAAQS, the SFBAAB is designated as  
 6 a nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, and as an attainment or unclassified  
 7 area for all other pollutants. With respect to the NAAQS, the SFBAAB is designated as  
 8 a marginal nonattainment area for ozone and as an attainment or unclassified area for  
 9 all other pollutants.

10 **3.3.2 Regulatory Setting**

11 **Federal and State**

12 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 13 Project are identified in Table 3.3-3.

**Table 3.3-3 Laws, Regulations, and Policies (Air Quality)**

<b>U.S.</b>	Federal Clean Air Act (FCAA) (42 USC 7401 et seq.)	<p>The FCAA requires the USEPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. National standards are established for ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO<sub>2</sub>) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions. Pursuant to the 1990 FCAA Amendments, USEPA classifies air basins (or portions thereof) as in “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the NAAQS are achieved. The classification is determined by comparing monitoring data with State and Federal standards.</p> <ul style="list-style-type: none"> <li>• An area is classified as in “attainment” for a pollutant if the pollutant concentration is lower than the standard.</li> <li>• An area is classified as in “nonattainment” for a pollutant if the pollutant concentration exceeds the standard.</li> <li>• An area is designated “unclassified” for a pollutant if there are not enough data available for comparisons.</li> </ul>
<b>CA</b>	California Clean Air Act of 1988 (CCAA) (Assembly Bill [AB] 2595)	<p>The CCAA requires all air districts in the State to endeavor to achieve and maintain State ambient air quality standards for O<sub>3</sub>, CO, SO<sub>2</sub>, NO<sub>2</sub>, and PM; attainment plans for areas that did not demonstrate attainment of State standards until after 1997 must specify emission reduction strategies and meet milestones to implement emission controls and achieve more healthful air quality. The 1992 CCAA Amendments divide O<sub>3</sub> nonattainment areas into four categories of pollutant levels (moderate, serious, severe, and extreme) to which progressively more stringent requirements apply. State ambient air standards are generally stricter than national standards for the same pollutants; California also has standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.</p>
<b>CA</b>	Other	<ul style="list-style-type: none"> <li>• Under California’s Diesel Fuel Regulations, diesel fuel used in motor vehicles, except harbor craft, has been limited to 500 parts per million (ppm) sulfur since 1993. The sulfur limit was reduced to 15 ppm beginning September 1, 2006, and harbor craft were included starting in 2009.</li> <li>• CARB’s Heavy Duty Diesel Truck Idling Rule (Cal. Code Regs., tit. 13, § 2485) prohibits heavy-duty diesel trucks from idling for longer than 5 minutes at a</li> </ul>

**Table 3.3-3 Laws, Regulations, and Policies (Air Quality)**

		<p>time (except while queuing, provided the queue is located beyond 100 feet from any homes or schools).</p> <ul style="list-style-type: none"> <li>• The Statewide Portable Equipment Registration Program (PERP) regulates portable engines/engine-driven equipment units. Once registered in the PERP, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts.</li> </ul>
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1 **Local**

2 The Conservation Element of the Contra Costa County General Plan 2005-2020  
 3 includes goals and policies that aim to improve local and regional air quality throughout  
 4 the County. The following air resources policies may be applicable to the Project:

- 5 • Policy 8-103 - When there is a finding that a proposed project might significantly  
 6 affect air quality, appropriate mitigation measures shall be imposed.
- 7 • Policy 8-104 - Proposed projects shall be reviewed for their potential to generate  
 8 hazardous air pollutants

9 **3.3.3 Impact Analysis**

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

11 **No Impact.** The Bay Area 2010 Clean Air Plan was adopted on September 15, 2010,  
 12 and is the most recent applicable air quality plan within the BAAQMD. The 2010 Clean  
 13 Air Plan provides a comprehensive plan to improve San Francisco Bay Area air quality  
 14 and protect public health. Although the legal impetus for the 2010 Clean Air Plan was to  
 15 update the prior ozone plan, the 2010 Clean Air Plan serves as a multi-pollutant plan  
 16 addressing ozone precursors (ROGs and NO<sub>x</sub>), PM, air toxics, and GHGs. The 2010  
 17 Clean Air Plan control strategy has 55 specific control measures in six categories,  
 18 including stationary sources, mobile sources, transportation control, land use/local  
 19 impact, and energy/climate.

20 The BAAQMD recommends ensuring compliance with the 2010 Clean Air Plan by  
 21 asking three project-related questions:

22 **1. Does the project support the primary goals of the 2010 Clean Air Plan?**

- 23 a. Attain air quality standards (see ***Impact b)*** discussion below)
- 24 b. Reduce population exposure and protect public health in the San Francisco  
 25 Bay Area (see ***Impact d)*** discussion below)
- 26 c. Reduce GHG and protect the climate (see GHG impact analysis in Section  
 27 3.7)

1       **2. Does the project include applicable control measures for the 2010 Clean Air**  
2       **Plan?**

3       a. The Project will implement BMPs consistent with the applicable 2010 Clean  
4       Air Plan control measures for construction activity.

5       **3. Does the project disrupt or hinder implementation of any 2010 Clean Air**  
6       **Plan control measure?**

7       a. This Project does not involve any new long-term operational emissions in the  
8       BAAQMD. The short-term removal activity emissions would be temporary and  
9       minor. The temporary removal activities will be managed consistent with  
10      applicable 2010 Clean Air Plan control measures. Therefore, the Project  
11      would not disrupt or hinder implementation of any 2010 Clean Air Plan control  
12      measure.

13      ***b) Violate any air quality standard or contribute substantially to an existing or***  
14      ***projected air quality violation?***

15      **Less than Significant** Project removal activity emissions are considered short-term  
16      and temporary in nature; however, they have the potential to substantially affect air  
17      quality. During removal activities, various types of equipment and vehicles would  
18      temporarily operate on the Project site. Exhaust emissions would be generated from a  
19      variety of sources: removal equipment, commercial marine equipment, personnel  
20      commuting, and material hauling. These activities would involve the use of diesel- and  
21      gasoline-powered equipment that would generate emissions of criteria pollutants.  
22      Generation of these emissions varies as a function of vehicle trips per day associated  
23      with removal of the outfall, worker commute trips, types and number of construction  
24      equipment used, and intensity and frequency of equipment operation.

25      Removal activities would generate fugitive dust emissions, which can also lead to  
26      adverse health effects and nuisance concerns such as reduced visibility and soiling of  
27      exposed surfaces. Project fugitive dust emissions can vary greatly, depending on the  
28      level of activity, the specific operations taking place, number and types of equipment  
29      operated, and vessel speeds.

30      Temporary and short-term Project-generated emissions of criteria air pollutants and  
31      ozone precursors were assessed in accordance with methods recommended by the  
32      BAAQMD. Project-related emissions were quantified using the California Emission  
33      Estimator Model Version 2013.2.2 (SCAQMD 2011). Project-related marine harbor craft  
34      emissions were estimated using the CARB *Emissions Estimation Methodology for*  
35      *Commercial Harbor Craft Operating in California* (2007). Specific Project information,  
36      such as schedule, duration of activities, types of equipment used, was provided by GWF  
37      Power Systems, L.P (GWF or Applicant). Where Project-specific information was not

1 available, conservative assumptions and/or default assumptions contained in were used  
 2 to quantify emissions.

3 As indicated in Table 3.3-4, the Project’s emissions would be well below the BAAQMD’s  
 4 thresholds of significance. The Project would be consistent with the BAAQMD’s  
 5 requirements and would not conflict with the applicable air quality plan, therefore the  
 6 Project’s impact would be less than significant.

**Table 3.3-4 Project Removal Activity Equipment Emissions**

<i>Pollutant</i>	<i>Removal Equipment Emissions Totals (lbs/day)</i>	<i><sup>1</sup>Marine Equipment Emissions Totals (lbs/day)</i>	<i>Project Average Daily Emissions (lbs/day)</i>	<i>BAAQMD Significance Thresholds (lbs/day)</i>
ROG	0.9	1.3	2.2	54
NO <sub>x</sub>	8.4	7.6	16.0	54
Exhaust PM <sub>10</sub>	0.4	0.2	0.6	82
Exhaust PM <sub>2.5</sub>	0.3	0.2	0.6	54

Notes:  
 ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; PM<sub>10</sub> = particulate matter with aerodynamic diameter less than 10 microns; PM<sub>2.5</sub> = particulate matter with aerodynamic diameter less than 2.5 microns; tons/yr = tons per year; lbs/day = pounds per day  
<sup>1</sup>Particulate emissions from the marine equipment were not speciated into PM<sub>10</sub> and PM<sub>2.5</sub>, therefore it was conservatively assumed the PM emissions could either be all PM<sub>2.5</sub> or PM<sub>10</sub>.

7 **c) Result in a cumulatively considerable net increase of any criteria pollutant for**  
 8 **which the proposed project region is non-attainment under an applicable federal**  
 9 **or State ambient air quality standard (including releasing emissions which**  
 10 **exceed quantitative thresholds for ozone precursors)?**

11 **Less than Significant.** Project impacts on air quality that are potentially significant on  
 12 an individual level also may cause a cumulatively considerable contribution. Thus, it is  
 13 reasonable to consider projects that do not have potentially significant impacts on air  
 14 quality on an individual level will not have the potential to cause a cumulatively  
 15 considerable contribution to air quality impacts. The BAAQMD also currently  
 16 recommends that for projects not having potentially significant impacts on air quality on  
 17 an individual level, the potential cumulative impacts also should be evaluated for  
 18 consistency with the local general plan. The Project is not a typical land use project that  
 19 can be compared with or evaluated against land use designations or zoning from a  
 20 general plan; therefore, the second criteria is not applicable to the Project. Thus, the  
 21 first criterion of whether the Project’s individual or “project-level” emissions are  
 22 potentially significant has been used to determine its potential cumulative impact.

23 Emissions would be temporary and short-term which would ensure that the Project  
 24 would not generate a cumulatively considerable contribution to regional air quality

1 pollutants in the Project area that are nonattainment under a State or Federal ambient  
2 air quality standard. Therefore, the Project would not result in a cumulatively  
3 considerable incremental contribution to a significant cumulative impact on air quality,  
4 and this impact would be considered less than significant.

5 ***d) The proposed project would not expose sensitive receptors to substantial***  
6 ***pollutant concentrations.***

7 **Less than Significant.** Removal activities would generate DPM exhaust emissions as  
8 estimated in Table 3.3-4. DPM has been classified as a TAC by the CARB, and even  
9 acute exposure may result in health impacts. Removal activities for the Project are  
10 minimal and short-term, with removal activities anticipated to occur over a duration of  
11 approximately 2 weeks. In addition, removal activity emissions would occur  
12 intermittently throughout Project removal activities (i.e., removal equipment would not  
13 operate continuously for eight hours each day).

14 According to the Office of Environmental Health Hazard Assessment, health risk  
15 assessments that determine the health risks associated with exposure of residential  
16 receptors to TAC emissions should be based on a 70-year exposure period, and health  
17 risk assessments that address the health risk associated with exposure of children to  
18 TAC emissions should be based on a 9-year exposure period (Salinas 2004). TAC  
19 exposure to children is of special concern because children typically metabolize more  
20 air per unit of body weight in comparison to adults and can be more sensitive to toxics  
21 during development. However, health risk assessments should be limited to the  
22 period/duration of activities associated with the emissions activity (OEHHA 2003).

23 As discussed above, removal activities would occur over approximately 2 weeks, after  
24 which all removal equipment emissions would cease. Therefore, the total exposure time  
25 would be less than 0.5 percent of the minimum exposure time for a child-based health  
26 risk assessment (i.e., 9 years) and less than 0.06 percent of a typical residential health  
27 risk assessment (i.e., 70 years). Removal activities would not be within 500 feet of  
28 residential receptors, with the closest receptor located at the corner of Port Chicago  
29 Highway and Wharf Drive approximately 1 mile southeast of the site. Use of off-road  
30 removal equipment would be short-term and temporary in nature (i.e., approximately 2  
31 weeks), have a low exposure period (i.e., less than 0.5 percent of a typical residential  
32 health risk assessment), and low level of emissions (i.e., less than 1 pound of DPM per  
33 day). Removal activities would not result in the exposure of sensitive receptors to any  
34 substantial levels of air pollutants which would result in a health hazard or exceed  
35 applicable standards, therefore the Project's impact would be less than significant.

36 ***e) The proposed project would not create objectionable odors affecting a***  
37 ***substantial number of people.***

1 **Less than Significant.** The occurrence and severity of odor impacts depends on  
2 numerous factors, including the nature, frequency, and intensity of the source; wind  
3 speed and direction; and the sensitivity of the receptors. Although offensive odors rarely  
4 cause any physical harm, they can be very unpleasant, leading to considerable distress  
5 among the public and cause citizens to submit complaints to local governments and  
6 regulatory agencies. Projects with the potential to frequently expose individuals to  
7 objectionable odors are deemed to have a significant impact. Typical facilities that  
8 generate odors include wastewater treatment facilities, sanitary landfills, composting  
9 facilities, petroleum refineries, chemical manufacturing plants, and food processing  
10 facilities.

11 Removal activities involving heavy-duty trucks and off-road construction equipment  
12 would generate DPM exhaust, which can be considered offensive by some individuals.  
13 As described above, Project removal activity sites would be located approximately 1  
14 mile from residences. This setback distance will prevent any potential for objectionable  
15 odors from reaching the nearest receptor. In addition the removal activities are not  
16 intensive, are occurring for a very short duration, and will cease at night. The  
17 intermittent and temporary removal activities are not expected to cause a significant  
18 odor impact on a substantial number of sensitive receptors, nor would the Project's  
19 removal activities expose a substantial number of receptors to odor emissions, therefore  
20 the Project's impact would be less than significant.

### 21 **3.3.4 Mitigation Summary**

22 The Project would not result in significant impacts to Air Quality; therefore, no mitigation  
23 is required.

1 **3.4 BIOLOGICAL RESOURCES**

<b>BIOLOGICAL RESOURCES</b> – Would the Project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.4.1 Environmental Setting**

3 The Project site is located near Bay Point along the shoreline of Suisun Bay in  
 4 unincorporated Contra Costa County. The Project site is located primarily offshore, with  
 5 the only onshore portion being an existing levee road that may provide onshore access  
 6 for emergency services, and the contractor’s shore base at McAvoy Yacht Harbor in  
 7 Bay Point. The onshore access portion is within an area classified as “muted tidal  
 8 marsh” (California Department of Fish and Wildlife [CDFW] 2014a) whereas the near  
 9 shore work will be located within soft mud habitat. Water depths directly above the  
 10 outfall alignment vary during high tidal times from 17 feet of water at approximately  
 11 275 feet out from the shoreline to 4 feet of water at 150 feet out from the shoreline.



1 In addition to the CEQA analysis presented below, an *Essential Fish Habitat*  
2 *Assessment and Fisheries Biological Assessment* and a *Biological Habitat Assessment*  
3 of the onshore habitats are provided as Appendix A and Appendix B, respectively.

#### 4 **Habitats**

5 Aquatic habitat at the Project site consists of soft sediment along both sides of the pipe  
6 and soft sediment and graded rock over the pipe. Two blades of eelgrass (*Zostera* sp.)  
7 were identified approximately 25 feet east of the pipe centerline approximately 150 feet  
8 from shore (Belcher 2014). The eelgrass was identified approximately 25 feet from the  
9 pipe and will not be affected by pipe removal activities.

10 The onshore portions of the site provide virtually 100 percent vegetative cover in the  
11 marshland adjacent to the GWF outfall pipe along its length on the west side and north  
12 of the Alum Pond (Figure 3-1). The area was comprised of approximately 3.2 acres of  
13 unvegetated alum pond, 5.2 acres of disturbed low-quality marsh and access roads,  
14 and 11.9 acres of tidal salt marsh.

15 The marshlands west of the outfall pipe and north of the Alum Pond are dominated by  
16 emergent halophytes, including pickleweed (*Sarcocornia pacifica*), rushes (*Juncus*  
17 *spp.*), common reed (*Phragmites australis*), and patches of ruderal vegetation, primarily  
18 common pepperweed (*Lepidium densiflorum*). The plant associations observed at the  
19 site are typical of middle tidal salt marsh at elevations near and above Mean High Water  
20 (MHW) within the Estuary (Goals Project 1999; Avocet Research 2014).

21 The parcel of low elevation marsh northeast of the access road and the Alum Pond is  
22 disturbed, low-quality marshland with *Juncus*, pickleweed, cattail (*Typha* spp.), bulrush  
23 (*Schoenoplectus* spp.), ruderal vegetation, and gumplant (*Grindelia stricta*) (Avocet  
24 Research 2014).

#### 25 *Suisun Bay*

26 Suisun Bay is unique because of the varying salinities among seasons and years, and  
27 this creates a dynamic fish assemblage. During normal hydrologic years, Suisun Bay  
28 generally support a mesohaline community (National Marine Fisheries Service [NMFS]  
29 2007). Species typical of mesohaline/oligohaline waters with soft sediment substrate in  
30 the San Francisco Bay include white sturgeon (*Acipenser transmontanus*), green  
31 sturgeon (*Acipenser medirostris*), Sacramento splittail (*Pogonichthys macrolepidotus*),  
32 longfin smelt (*Spirinchus thaleichthys*), and starry flounder (*Platichthys stellatus*). Many  
33 species of fish including striped bass (*Morone saxatilis*), Chinook salmon  
34 (*Oncorhynchus tshawytscha*), steelhead trout (*Oncorhynchus mykiss*) and northern  
35 anchovy (*Engraulis mordax*) migrate through the Carquinez Strait and adjacent waters.



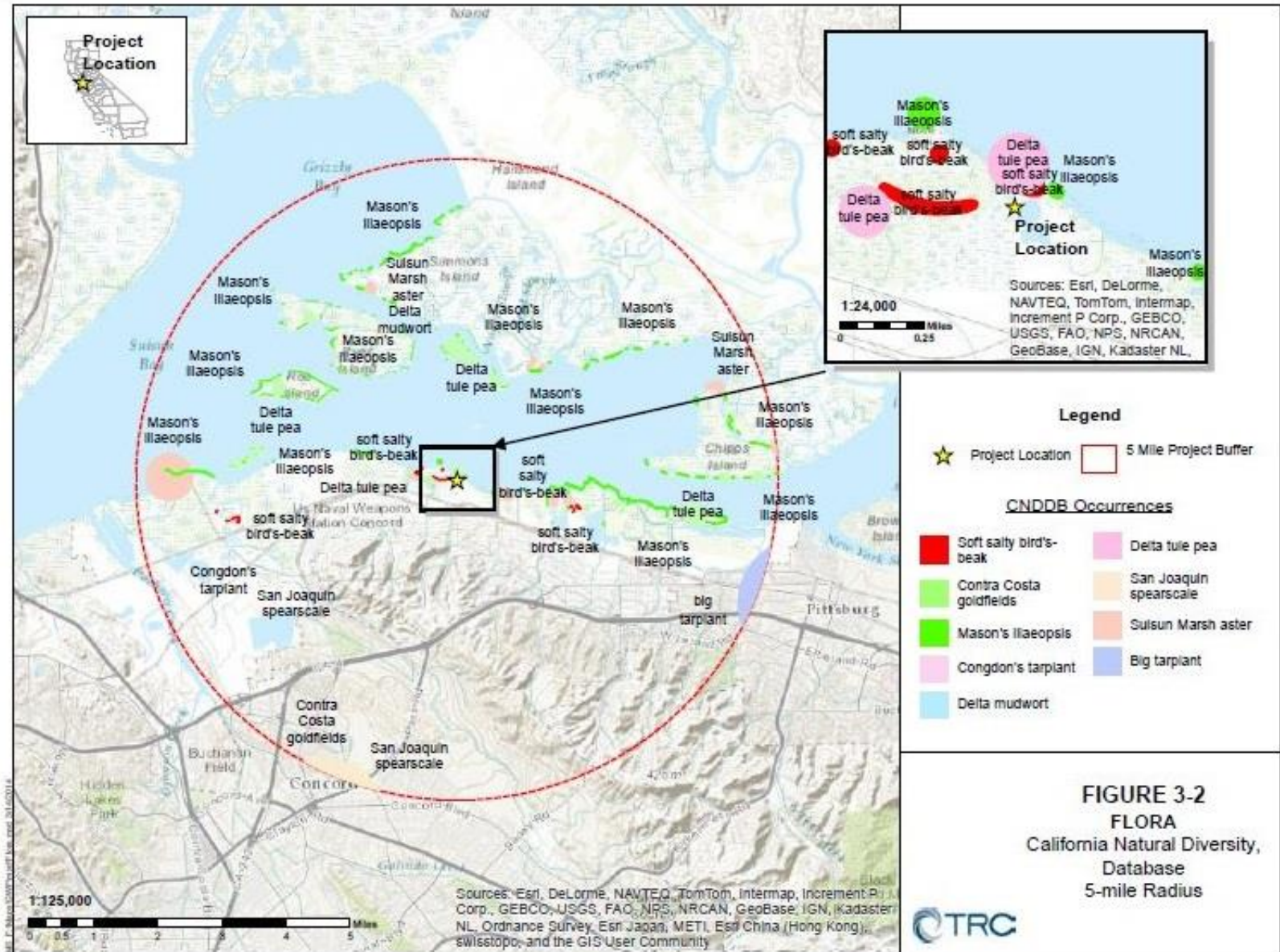
1 **Special-Status Species: Terrestrial**

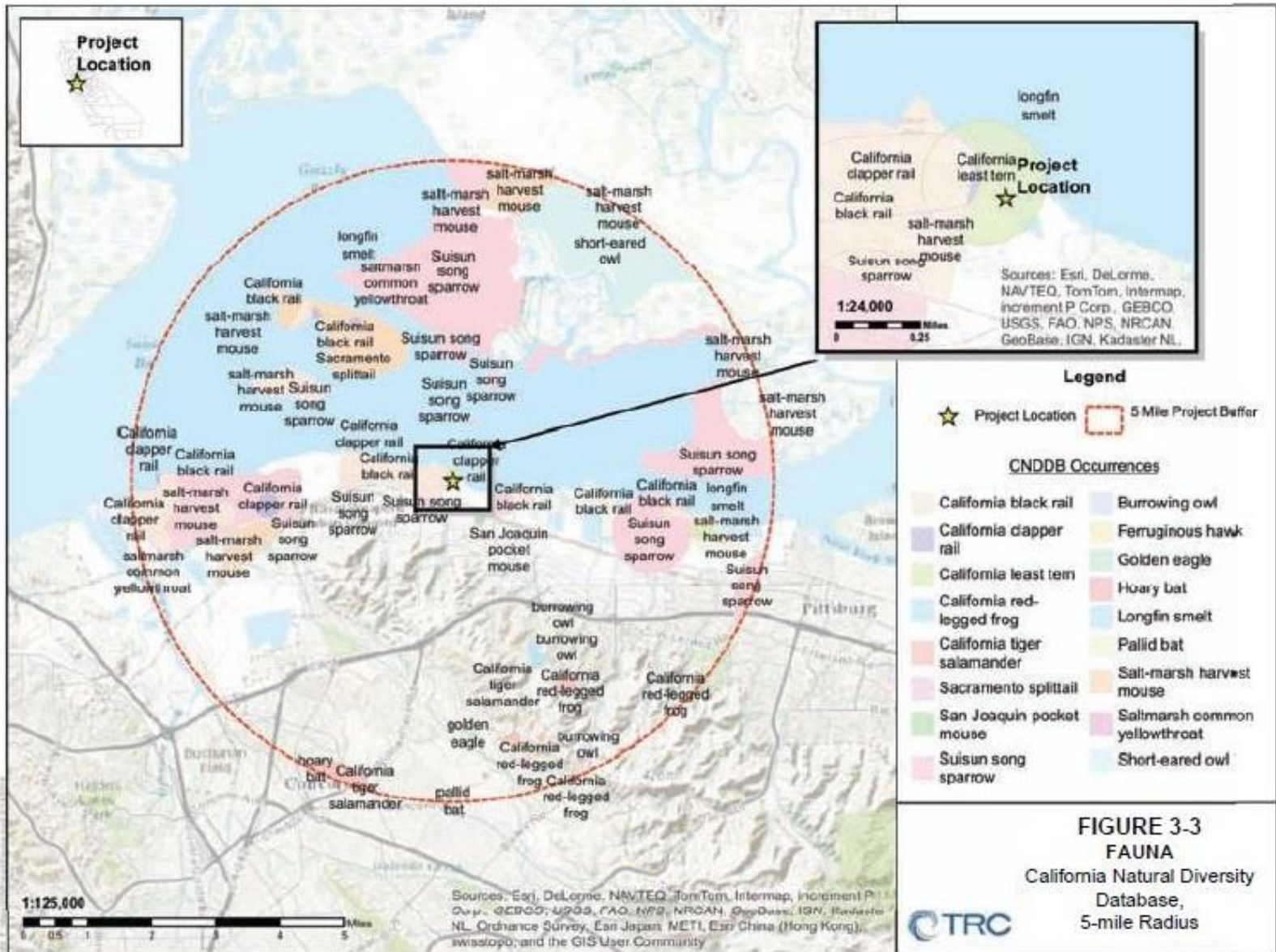
2 Several special-status terrestrial plant and wildlife species have the potential to occur in  
 3 the Project vicinity (Table 3.4-1: Special Status Terrestrial Plant and Wildlife Species).  
 4 Special-status aquatic species (i.e., marine mammals, fish) are discussed separately  
 5 below. For the purposes of this report, special-status species include those listed as  
 6 endangered or threatened under the Endangered Species Act (ESA) or California  
 7 Endangered Species Act (CESA), candidate species and species proposed for listing  
 8 under the ESA or CESA, and species otherwise protected by the State of California and  
 9 included in the CDFW’s California Natural Diversity Database (CNDDDB). A CNDDDB  
 10 search was conducted to obtain recorded occurrences of special-status plant and  
 11 animal species in the Project vicinity. The search included the U.S. Geological Survey  
 12 7.5-minute quadrangle that the Project occurs in, and the eight surrounding  
 13 quadrangles. Spatial distribution of CNDDDB records within 5 miles of the Project is  
 14 shown in Figure 3-2 (flora) and Figure 3-3 (fauna) (CDFW 2014b).

**Table 3.4-1: Special Status Terrestrial Plant and Wildlife Species**

Taxon		Status
Flora	Mason’s lilaeopsis ( <i>Lilaeopsis masonii</i> )	CNPS 1B.1
	Delta tule pea ( <i>Lathyrus jepsonii</i> var. <i>jepsonii</i> )	CNPS 1B.2
	Soft bird’s beak ( <i>Cordylanthus mollis</i> ssp. <i>mollis</i> )	FE, SR
Fauna	California least tern ( <i>Sterna antillarum browni</i> )	FE, SE, FP
	Northern harrier ( <i>Circus cyaneus</i> )	BSSC (3)
	California clapper rail ( <i>Rallus longirostris obsoletus</i> )	FE, SE, FP
	California black rail ( <i>Laterallus jamaicensis cortuniculus</i> )	ST, FP
	San Francisco common yellowthroat ( <i>Geothlypis trichas sinuosa</i> )	BSSC (3)
	Suisun song sparrow ( <i>Melospiza melodia maxillaries</i> )	BSSC (3)
	Salt marsh harvest mouse ( <i>Reithrodontomys raviventris halicostus</i> )	FE, SE, FP
	“California” Red-Legged Frog ( <i>Rana draytonii</i> )	FT
“California” Tiger Salamander ( <i>Ambystoma californiense</i> )	FE, FT, ST	
Status codes BSSC (3): California Bird Species of Special Concern, priority 3. CNPS 1B: “rare, threatened or endangered in CA and elsewhere.” FE: Federally Endangered FP: California Department of Fish and Wildlife “fully protected.” FT: Federally threatened SE: State endangered ST: State threatened SR: State rare SSC: California Species of Special Concern (CDFW)		









1 The Project is not expected to result in adverse impacts to special-status reptiles,  
2 amphibians, invertebrates, or plants, which are unlikely to occur in the Project vicinity.  
3 California black rail (*Laterallus jamaicensis cortuniculus*) and salt marsh harvest mouse  
4 (*Reithrodontomys raviventris halicostus*) are present within salt marsh habitat adjacent  
5 to the work areas, and various sensitive fish species occur within Suisun Bay. On March  
6 10, 2014, an Avocet Research biologist conducted a reconnaissance-level site survey of  
7 the Project site to identify the presence of onshore sensitive habitats or special-status  
8 species. Results of the surveys and other research are described below.

#### 9 *Birds*

##### 10 California Least Tern

11 The site does not support nesting sites for California least tern. Proximate nesting is  
12 known from the Pacific Gas and Electric Pittsburg Power Plant (near Mallard Island),  
13 3.6 miles east of the Project site. Terns forage in bay waters along the shoreline  
14 adjacent to the tidal marsh from April through August (Avocet Research 2014).

##### 15 Northern Harrier

16 The ground-nesting northern harrier nests and forages in tidal marsh habitat along the  
17 Contra Costa County shoreline. One individual was observed on site on March 10,  
18 2014. Local nesting in the adjacent marshlands is highly probable. The nesting season  
19 extends from March through August (Avocet Research 2014).

##### 20 California Clapper Rail

21 California clapper rails have been reported from the south shoreline of Suisun Bay in  
22 the past, however population declines have been noted over the last decade and  
23 reports in recent years in the Suisun system have been few and sporadic. One of the  
24 habitat requirements of the California clapper rail is a well-developed system of tidal  
25 channels, a habitat element not present in the immediate Project area. However, some  
26 potential habitat occurs at Balloma Slough, 1.7 miles (2.7 kilometers [km]) west of the  
27 site and within the Bay Point Regional Shoreline, 0.6 mile (1.0 km) east of the site,  
28 therefore it is possible that California clapper rails could occur along the shoreline of the  
29 study site foraging or commuting between more viable habitat patches (Avocet  
30 Research 2014). Such movement is not likely during the nesting season.

##### 31 California Black Rail

32 The tidal marsh habitat along the Contra Costa County shoreline is well-documented  
33 California black rail habitat. Evens and Nur (2002) estimated that Suisun marshes  
34 support 0.28 to 1.1 California black rail territories per acre (0.7 to 2.6 hectare [ha]).

1 Using these values, the 11.9 acres of marsh assessed for the Project may support as  
2 many as 12 pair of California black rail. A study at nearby Concord Naval Weapons  
3 Station found moderate (0.24-0.85 rails/acre [0.6-2.1 rails/hectare]) to high (>0.85  
4 rails/acre [>2.1 rails/hectare]) densities of California black rail in tidal marsh habitat  
5 similar to that found at this study site (Spear et al. 1999; Evens and Nur 2002). In a  
6 wide-ranging study of the Estuary, Mallard Island, 0.6 mile (1 km) to the east, supported  
7 the highest density of California black rail in the Suisun system (Evens et al. 1989). Four  
8 individuals were detected on site on March 10, 2014, and it is a year-round resident in  
9 the pickleweed-dominated marsh plain on site, which is prime habitat for this bird. High  
10 tide refugial habitat, a critical component of its habitat requirements, is present on site  
11 (Avocet Research 2014).

12 San Francisco Common Yellowthroat

13 In brackish and saline marshes around San Francisco Bay, San Francisco common  
14 yellowthroat abundance is positively correlated with a high percentage cover of rushes  
15 (*Schoenoplectus* or *Scirpus* spp.), peppergrass (*Lepidium latifolium*), and *Juncus*. The  
16 habitat characteristics of the site likely support this species, both nesting and wintering.  
17 The nesting season extends from mid-March into late-July (Avocet Research 2014).

18 Suisun Song Sparrow

19 The Suisun song sparrow occurs as a year-round resident in virtually every tidal marsh  
20 in Suisun Bay. Suisun song sparrows are associated primarily with tidal channels. The  
21 nesting season is protracted, extending from mid-march into mid-August (Avocet  
22 Research 2014). Measures that protect the California black rail are assumed to protect  
23 the Suisun song sparrow because the two species habitat affinities and breeding  
24 season are similar (Avocet Research 2014).

25 Although not observed during the site visit, additional “special animals” likely to occur on  
26 the site, either regularly or sporadically, given the habitat characteristics include those  
27 listed below (CDFG 2011). In addition, the adjacent salt marsh habitat likely provides  
28 foraging and nesting opportunities for various other migratory bird species.

- 29 • Great Blue Heron (*Ardea herodias*) [CDFW:SSC]
- 30 • Great Egret (*Ardea alba*) [CDFW:SSC]
- 31 • Snowy Egret (*Egretta thula*) [CDFW:SSC]
- 32 • Black-crowned Night-Heron (*Nycticorax nycticorax*) [CDFW:SSC]
- 33 • White-tailed Kite (*Elanus leucurus*) [CDFW:FP]
- 34 • Yellow Rail (*Coturnicops noveboracensis*) [BSSC-priority 2]
- 35 • Snowy Plover (*Charadrius nivosus*) [FT]
- 36 • Burrowing Owl (*Athene cunicularia*) [BSSC-priority 2]
- 37 • Short-eared Owl (*Asio flammeus*) [BSSC-priority 3]

- 1 • Loggerhead Shrike (*Lanius ludovicianus*) [BSSC-priority 2]
- 2 • “Bryant’s” Savannah Sparrow (*Passerculus sandwichensis alaudinus*) [BSSC-3]
- 3 • Saltmarsh Wandering Shrew (*Sorex vagrans halicoetes*) [CDFW:SSC]

#### 4 *Mammals*

5 The south shoreline of Suisun Bay is included in the distributional range of the salt  
6 marsh harvest mouse, federally endangered and CDFW fully protected. The proportion  
7 of the site dominated by pickleweed (*Sarcocornia*) has the habitat characteristics  
8 preferred by salt marsh harvest mouse. Given the habitat qualities, presence is  
9 assumed (Avocet Research 2014).

#### 10 *Amphibians*

11 As shown in Figure 3-3, above, occurrences of California red-legged frog and California  
12 tiger salamander are well away from the Project location, and the tidal marsh uplands  
13 adjacent to the Project, including the levee road, are not known to support individuals of  
14 these species. Therefore, the Project will have no impact on the California red-legged  
15 frog or California tiger salamander.

#### 16 *Plants*

17 Three species of special status tidal marsh plants have been reported from the tidal  
18 marshlands associated with the Project site (Table 3.4-1). None were observed during  
19 the field visit. These plants are classified as California Rare Plant Rank 1B, meeting the  
20 definition in State CEQA Guidelines section 15380 for purposes of this analysis.

### 21 **Special-Status Species: Aquatic**

#### 22 *Mammals*

23 Marine mammals are rarely observed in Suisun Bay; however, California sea lions  
24 (*Zalophus californianus*) and humpback whales (*Megaptera novaeangliae*) have been  
25 seen upstream from Carquinez Strait. These species are protected under the Federal  
26 Marine Mammal Protection Act (MMPA).

#### 27 *Fish*

28 Because CNDDDB is limited to recorded observations, additional information on fish  
29 species that may occur in the Project vicinity was obtained from NMFS (2001-2011).

30 The following special-status fish species are known to occur in Suisun Bay:

- 31 • Delta smelt (*Hypomesus transpacificus*), Federal and State Threatened



- 1 • Longfin smelt (*Spirinchus thaleichthys*), State Threatened
- 2 • Green sturgeon (*Acipenser medirostris*), southern Distinct Population Segment
- 3 (DPS), Federal Threatened, Species of Special Concern
- 4 • Chinook salmon (*Oncorhynchus tshawytscha*), Central Valley fall/late fall-run
- 5 Evolutionarily Significant Unit (ESU), Species of Special Concern; Central Valley
- 6 spring-run ESU, Federal and State Threatened; and Sacramento River winter-run
- 7 ESU, Federal and State Endangered
- 8 • Steelhead trout (*Oncorhynchus mykiss irideus*), California Central Valley and
- 9 Central California Coast DPS, Federal Threatened
- 10 • River lamprey (*Lampetra ayresii*), Species of Special Concern
- 11 • Sacramento splittail (*Pogonichthys macrolepidotus*), Species of Special Concern

12 Suisun Bay is federally designated critical habitat for the delta smelt and green  
13 sturgeon. Steelhead critical habitat includes the nearby ship channel but does not  
14 extend to the Project area.

#### 15 Delta Smelt

16 Delta smelt is a small, annual species endemic to the Estuary. Delta smelt spend much  
17 of their lives in the brackish waters of the Estuary. They are weakly anadromous; after  
18 the first high-winter flow, mature smelt migrate upstream in pulses between December  
19 and April to spawn in fresh water. Most delta smelt die after spawning. By the beginning  
20 of June, most larvae have entered a post-larvae state (0.6 inch to 1 inch ) in which they  
21 have developed a swim bladder and drifted passively downstream to rear in the  
22 brackish waters of the Estuary. By the end of June, most smelt that will survive the  
23 winter are in the Estuary and have entered the juvenile stage (0.8 inch to 1.6 inches).  
24 June through August represents the delta smelt's primary growing season. Delta smelt  
25 attain maturity between November and January when they are 2 to 3 inches in length  
26 (Bennet 2005).

27 In the Estuary, delta smelt are distributed within turbid waters over large shoals (depth  
28 < 23 feet) at the freshwater edge of the "entrapment zone," where they feed on small  
29 crustaceans such as copepods and amphipods in the trophically rich waters  
30 (Bennet 2005). The entrapment zone is an area where suspended materials  
31 concentrate as a result of mixing by the outgoing freshwater flow from the Delta above  
32 the heavier saltwater flow from the bay. The entrapment zone contains concentrations  
33 of suspended materials such as nutrients, plankton, and fine sediments that are often  
34 many times higher than in areas upstream or downstream of the entrapment zone  
35 (Levine-Fricke 2004).

36 "X2" is another important term that aids in understanding the habitat and distribution of  
37 fish species in the Estuary. X2 measures the distance in kilometers from the Golden

1 Gate Bridge to the location in the estuary where fresh and salt water first mix so that  
 2 salinity near the bottom of the water column is 2 parts per thousand (ppt; about 6  
 3 percent as salty as seawater). X2 corresponds to the central axis of open water estuary  
 4 habitat, or brackish water. When X2 is located within Suisun Bay, the brackish water  
 5 habitat is widely distributed throughout the slow, shallow waters and marshes of the  
 6 bay; as X2 moves upstream in the channels of the Sacramento and San Joaquin  
 7 Rivers, the total surface area of brackish water is reduced, the water channel is deeper,  
 8 and the currents faster. X2 fluctuates over space and time depending on inflow levels of  
 9 freshwater from the Delta rivers. Delta smelt distribution is highly correlated with the  
 10 location of X2, which in turn depends on the volume of freshwater flow from the Central  
 11 Valley Project and State Water Project, two of the world’s largest water-diversion  
 12 projects. Water flows into the Delta are partially dependent on the previous water year’s  
 13 water index. Water years are measured from October of the previous year through  
 14 September of the current year. The water index for the water year is estimated by the  
 15 California Department of Water Resources (DWR) starting in December; the final water  
 16 index is available May 1.

17 During the summer, X2 and the entrapment zone are typically located in Suisun Bay.  
 18 Under the provisions of the U.S. Fish and Wildlife Service (USFWS) Biological Opinion  
 19 issued in relation to the Central Valley Project and State Water Project operations (as  
 20 modified in *San Luis v Jewell*, Ninth Circuit, United States Court of Appeals, March  
 21 2014), in the fall following wet years in the Sacramento Basin, freshwater flows are  
 22 expected to be sufficient to create an average X2 of 74 km (55 miles) in September and  
 23 October. This maintains the central axis of delta smelt distribution in Suisun Bay (DWR  
 24 2011; USFWS 2008). Following the fall of above-normal water years, fall X2 will be  
 25 maintained at 81 km (50 miles), at the confluence of the Sacramento and San Joaquin  
 26 rivers. No additional releases are triggered following water years with a below normal or  
 27 dry water index. Table 3.4-2 shows the average catch off New York Point from 1996 to  
 28 2006.

**Table 3.4-2: Average Delta Smelt Catch off New York Point 1996-2006**

Month	Average Number of Delta Smelt Caught	Average Forklength (inches)
September	72	2.00
October	1	2.35
November	2	2.48
December	9	2.23

Source: California Department of Fish and Game (CDFG) 2008

1 Longfin Smelt

2 The longfin smelt is a small, pelagic fish distributed along the Pacific Coast of North  
 3 America. San Francisco Bay supports the most southerly distributed and largest  
 4 population in California. Longfin smelt mature at two to three years of age. They are  
 5 partially anadromous, with at least some portion of the population of first-year smelt  
 6 migrating in spring into coastal waters beyond the Golden Gate Bridge. Little is known  
 7 about their movements in coastal waters, but they return to the Bay in their second  
 8 winter just before spawning season (Rosenfield and Baxter 2007). Mature fish gradually  
 9 migrate upstream December through February to spawn in fresh water. Longfin  
 10 spawning occurs in fresh water over sandy-gravel substrates, rocks, and aquatic plants;  
 11 the downstream extent of spawning is near the City of Pittsburg (LTMS 2009). Larvae  
 12 develop a swim bladder and move downstream into the Estuary January through March.

13 Longfin smelt juveniles and adults feed on small copepods, though adults will also  
 14 consume mysid shrimp when available. Longfin smelt can be found in the Bay  
 15 throughout the year. Juveniles and adults aggregate in cooler waters in deep-water  
 16 habitats and are thought to be intolerant of higher temperatures (>71.6 degrees  
 17 Fahrenheit [°F]), thus, between approximately June and September, they are most  
 18 abundant in the Central Bay (Rosenfield and Baxter 2007). Longfin smelt prefer deep  
 19 channel areas (> 75 feet) over shallower shoals (< 75 feet). Data from the CDFW’s Fall  
 20 Midwinter Trawl Surveys, which surveys September through December, show longfin  
 21 smelt are found in the ship channel near Pittsburg throughout the fall, with numbers  
 22 rising through November and average forklength generally rising through December as  
 23 mature longfin smelt migrate upstream (see Table 3.4-3). Like the delta smelt, longfin  
 24 smelt distribution is correlated with the inland intrusion of saline waters, and they are  
 25 relatively abundant in the Lower Estuarine River in all seasons of drought years (CDFG  
 26 2008; Wang 1991).

27 **Table 3.4-3: Average Longfin Smelt Catch off New York Point 1996-2006**

Month	Average Number of Longfin Caught	Average Forklength (inches)
September	17	2.26
October	120	2.35
November	261	2.37
December	14	2.63

Source: CDFG 2008

28 Green Sturgeon

29 The green sturgeon Southern DPS is a long-lived anadromous species found in marine  
 30 and estuarine waters of the North Pacific. The Southern DPS consists of the population

1 segment of green sturgeon that uses the Sacramento River and tributaries for  
2 spawning. Green sturgeon spend most of their life in marine and estuarine  
3 environments. In winter, they aggregate in estuaries and migrate north along the North  
4 Pacific coastal shelf. They overwinter in waters north of Vancouver Island and return  
5 south in spring. Not all green sturgeon are migratory, however. They may be found in  
6 San Francisco Bay throughout the year, though numbers increase in summer with the  
7 return of migrants moving into the Estuary for feeding, holding, and spawning (Lindley et  
8 al. 2011). Green sturgeon reach maturity between 10 and 15 years. Mature green  
9 sturgeon are thought to spawn every two to four years. Mature fish enter and migrate  
10 rapidly up the Sacramento River in March and April, where they spawn and then either  
11 return to the Estuary or over-summer and migrate out of the river with the first fall flow  
12 event (Heublein et al. 2009). Juveniles move from their natal river into the Estuary at  
13 two years and may remain in the Estuary from one to four years before migrating to the  
14 Pacific Ocean. In the Estuary, green sturgeon are associated with turbid water, where  
15 they prey on benthic organisms such as clams and crabs. Green sturgeon live from 40  
16 to 60 years and exhibit cohesive social behavior in overlapping age cohorts (Israel and  
17 Kimley 2008).

#### 18 Chinook Salmon

19 The Chinook salmon is the only coastal pelagic species covered under the Salmon  
20 Fishery Management Plan (FMP) that has potential to occur in the vicinity of the Project.  
21 Juvenile and adult Chinook salmon are potentially present in Suisun Bay. The Chinook  
22 salmon occurring within the Estuary include three ESUs: the Central Valley fall/late fall-  
23 run ESU; the Central Valley spring-run ESU; and the Sacramento River winter-run ESU.  
24 Freshwater streams and estuaries provide important habitat for Chinook salmon. They  
25 feed on terrestrial and aquatic insects, amphipods, and other crustaceans while young,  
26 and primarily on other fish when older. Estuaries and associated wetlands provide  
27 nursery areas for the Chinook prior to its departure to the open ocean (TRC 2014).

#### 28 Steelhead

29 Central Valley steelhead mature between two and three years of age. They are mainly  
30 “winter” run, though a small summer-run population exists. The small summer-run  
31 population migrates into the Sacramento River starting in July. The majority of  
32 steelhead begin migration in the fall. Spawning migration peaks in September and  
33 October and may continue through February or March. Unlike the Chinook salmon, not  
34 all steelhead die after spawning. Some may return to the ocean and return to spawn  
35 several times. Most juvenile steelhead spend one to two years in fresh water before  
36 migrating toward the ocean in the winter and spring, with an outmigration peak in mid-  
37 March (Moyle et al. 2008). USFWS trawl data from Chipps Island, indicate that juvenile  
38 steelhead are present in Suisun Bay from at least October through July, with hatchery  
39 fish (clipped adipose fin) emigration peaking between January and March, and wild

1 juvenile outmigration more evenly spread out over 6 months or more (USFWS 2008).  
2 The difference in emigration peak is a reflection of the timing of hatchery releases of  
3 juvenile steelhead. Fish salvage data from the Delta pumps indicate that most steelhead  
4 move through the Delta from November to June, with the peak numbers occurring in  
5 February through April (USFWS 2008).

#### 6 River Lamprey

7 Adult river lampreys spawn in gravel bottomed streams, at the upstream end of riffle  
8 habitat. Adults typically die after the eggs are deposited and fertilized. After the eggs  
9 hatch, young ammocoetes (larva) drift downstream to areas of low velocity and silt or  
10 sand substrate. They remain burrowed in the stream bottom, living as filter feeders on  
11 algae and detritus for two to seven years. Metamorphosis from the ammocoete to  
12 macrophthalmia (juvenile) life stage occurs between July and April. At this time,  
13 macrophthalmia are thought to live deep in the river channel. As adults, their oral disc  
14 develops just before they enter the ocean between May and July. During the  
15 approximately 10 weeks they are at sea in the parasitic phase, they remain close to  
16 shore, feeding primarily on smelt and herring near the surface. After the adult feeding  
17 phase, river lamprey migrate to spawning areas and cease feeding. Riffle and side  
18 channel habitats are important for spawning and for ammocoete rearing. Because  
19 lamprey ammocoetes colonize areas and are relatively immobile in the stream  
20 substrates, good water quality is essential for rearing. Adults feed in nearshore marine  
21 and estuarine habitat. (USFWS 2014).

#### 22 Sacramento Splittail

23 The Sacramento splittail is an endemic inhabitant of brackish waters of the San  
24 Francisco Bay. Its distribution is limited to the Estuary and estuarine environments of  
25 large streams, including lower Walnut-San Ramon Creek, where it inhabits small,  
26 shallow, turbid sloughs lined with emergent vegetation (Leidy 2007). Mature splittail  
27 migrate into freshwater floodplains for the winter to forage and hold until spring  
28 spawning. Spawning occurs from late February to July, with peak spawning in March  
29 and April. Adults return to the Estuary after spawning. Young-of-year Splittail move into  
30 the Estuary between April and August where they inhabit broad shoals or channels of  
31 intertidal habitat at the mouths of estuarine streams (Feyrer et al. 2005). Splittail are  
32 benthic feeders of macroinvertebrates and detritus. Feeding activity is greatest in the  
33 morning and early afternoon and peak growth is between May and September (Daniels  
34 and Moyle 1983).

#### 35 **Essential Fish Habitat**

36 According to the Magnuson-Stevens Fishery Conservation and Management Act, as  
37 amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), essential fish

1 habitat (EFH) for species regulated under a Federal FMP must be identified, conserved,  
2 and enhanced.

3 The Project location overlaps with EFHs for three FMPs (National Oceanic and  
4 Atmospheric Administration [NOAA] 2014).

5 1. **Pacific Groundfish Fishery.** Over 90 groundfish species (e.g., flatfish, rockfish,  
6 sharks) are included in the Pacific Groundfish FMP. The groundfish EFH includes  
7 seamounts, water depths less than 1,1483 feet, and the upriver extent of  
8 saltwater intrusion. In the San Francisco Bay Delta, this definition encompasses  
9 all of the Bay and the Delta, and upriver toward the cities of Sacramento and  
10 Stockton.

11 2. **Pacific Salmon Fishery.** In California, Chinook and Coho salmon are included in  
12 this FMP. This EFH includes all streams and other waterbodies occupied or  
13 historically accessible to salmon in specified hydrologic units in the San  
14 Francisco Bay Delta Region.

15 3. **Coastal Pelagic Species Fishery.** This fishery includes four finfish and one  
16 invertebrate; however, only the northern anchovy is found regularly in the San  
17 Francisco Bay. The geographic extent of this EFH includes all marine and  
18 estuarine waters from the shoreline to the limits of the U.S. Exclusive Economic  
19 Zone (EEZ); within the water column, it is limited to the water column between  
20 the thermoclines where temperatures range from 50°F to 78.8°F.

21 The outfall pipe is further located within the Estuary Habitat Area of Particular Concern  
22 incorporating the Estuary from the Pacific Ocean to the west bank of Broad Slough.

23 Suisun Bay has been identified as EFH for several species of fish as shown in Table  
24 3.4-4.

**Table 3.4-4 Species with EFH Designated in the Suisun Bay**

Species	FMP <sup>1</sup>	Life Stage Present <sup>2</sup>
English sole ( <i>Parophrys vetulus</i> )	GF	J, A
Starry flounder ( <i>Platichthys stellatus</i> )	GF	J, A
Brown rockfish ( <i>Sebastes auriculatus</i> )	GF	J
Northern anchovy ( <i>Engraulis mordax</i> )	CP	L, J, A
Chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	PS	J, A
Notes: 1 - Fisheries Management Plans: GF – Pacific Coast Groundfish FMP CP – Coastal Pelagics FMP PS – Pacific Salmon FMP 2 - Life Stages: L - Larvae J – Juvenile Source: NMFS 2001 – 2011		

**1 Invasive Species**

2 The Estuary has been described as one of the most invaded ecosystems in North  
 3 America (Cohen and Carlton 1995). Invasive nonindigenous aquatic species dominate  
 4 many parts of the San Francisco Bay, to the extent that in some locations only  
 5 introduced species can be found. In 2010, the CDFW collected 497 species from the  
 6 Estuary, of which 98 species were classified as introduced, including three newly  
 7 detected species to the Estuary that had likely been spread from other locations in  
 8 California (CDFG & Office of Spill Prevention and Response [OSPR] 2011). Non-native  
 9 species have been introduced to the Bay via many vectors, including the deliberate  
 10 introduction of species for recreational or commercial purposes. Transoceanic vessel  
 11 traffic has been identified as a major vector of non-native species, and hull fouling and  
 12 ballast water are the single largest contributor of non-native species to the Bay.

13 Though some non-native species are benign or beneficial, others have the potential to  
 14 become invasive. Invasive species may compete directly with native species for food or  
 15 space or prey upon native species. Invasive species can also change the food chain or  
 16 physical environment to the detriment of native species. Approximately 42 percent of  
 17 the species on the federal Threatened or Endangered species list are at risk primarily  
 18 because of predation, parasitism, and competition from nonindigenous invasive species  
 19 (CDFG & OSPR 2011). The most important invasive species in the Project vicinity is the  
 20 overbite clam, *Corbula amurensis*. Thought to have been introduced in the bay by  
 21 ballast water exchange from a cargo ship, this phytoplankton eater species is now so  
 22 abundant that the current population is capable of filtering the Estuary’s water column  
 23 several times a day and has caused a crash in the abundance of phytoplankton in the  
 24 Bay (San Francisco Estuary Project [SFEP] 2004).

**25 3.4.2 Regulatory Setting**

**26 Federal and State**

27 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 28 Project are identified in Table 3.4-5.

**Table 3.4-5 Laws, Regulations, and Policies (Biological Resources)**

<b>U.S.</b>	Endangered Species Act (ESA) (7 USC 136, 16 USC 1531 et seq.)	The ESA, which is administered in California by the USFWS and National Marine Fisheries Service (NMFS), provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. Section 9 prohibits the “take” of any member of a listed species. <ul style="list-style-type: none"> <li>• Take is defined as “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”</li> <li>• Harass is “an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering.”</li> </ul>
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**Table 3.4-5 Laws, Regulations, and Policies (Biological Resources)**

		<ul style="list-style-type: none"> <li>Harm is defined as "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering."</li> </ul> <p>When applicants are proposing projects with a Federal nexus that "may affect" a federally listed or proposed species, the Federal agency is required to consult with the USFWS or NMFS, as appropriate, under Section 7, which provides that each Federal agency must ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat.</p>
U.S.	Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 USC 1801 et seq.)	The MSA is the primary law governing marine fisheries management in U.S. Federal waters. The MSA was first enacted in 1976 and amended in 1996. Amendments to the 1996 MSA require the identification of Essential Fish Habitat (EFH) for federally managed species and the implementation of measures to conserve and enhance this habitat. Any project requiring Federal authorization, such as a U.S. Army Corps of Engineers (USACE) permit, is required to complete and submit an EFH Assessment with the application and either show that no significant impacts to the essential habitat of managed species are expected or identify mitigations to reduce those impacts. Under the MSA, Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 USC 1802(10)). The EFH provisions of the MSA offer resource managers a means to heighten consideration of fish habitat in resource management. Pursuant to section 305(b)(2), Federal agencies shall consult with the NMFS regarding any action they authorize, fund, or undertake that might adversely affect EFH.
U.S.	Marine Mammal Protection Act (MMPA) (16 USC 1361 et seq.)	The MMPA is designed to protect and conserve marine mammals and their habitats. It prohibits takes of all marine mammals in the U.S. with few exceptions. The NMFS may issue a take permit under section 104 if the activities are consistent with the purposes of the MMPA and applicable regulations at 50 CFR, Part 216. The NMFS must also find that the manner of taking is "humane" as defined in the MMPA. If lethal taking of a marine mammal is requested, the applicant must demonstrate that using a non-lethal method is not feasible.
U.S.	Migratory Bird Treaty Act (MBTA) (16 USC 703-712)	The MBTA was enacted to ensure the protection of shared migratory bird resources. The MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit. The responsibilities of Federal agencies to protect migratory birds are set forth in EO 13186. The USFWS is the lead agency for migratory birds. The USFWS issues permits for takes of migratory birds for activities such as scientific research, education, and depredation control, but does not issue permits for incidental take of migratory birds.
U.S.	Other	<ul style="list-style-type: none"> <li>The Bald and Golden Eagle Protection Act makes it illegal to import, export, take (including molest or disturb), sell, purchase or barter any bald eagle or golden eagle or parts thereof.</li> <li>Clean Water Act (33 USC 1251 et seq.) and Rivers and Harbors Act (33 USC 401) (see Section 3.9, Hydrology and Water Quality).</li> <li>CZMA (see Table 1-2).</li> <li>Executive Order 13112 requires Federal agencies to use authorities to prevent introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and provide for restoration of native species and habitat conditions in invaded ecosystems.</li> <li>Executive Order 13158 requires Federal agencies to identify actions that affect natural or cultural resources within a Marine Protected Area (MPA) and, in taking such actions, to avoid harm to the natural and cultural resources that</li> </ul>

**Table 3.4-5 Laws, Regulations, and Policies (Biological Resources)**

		are protected by a MPA.
<b>CA</b>	California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.)	The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFW, and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish & G. Code, § 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. The CESA also requires a permit to take a State-listed or candidate species through incidental or otherwise lawful activities (§ 2081, subd. (b)).
<b>CA</b>	Other relevant Fish and Game Code sections	<ul style="list-style-type: none"> <li>• The California Native Plant Protection Act (Fish &amp; G. Code, § 1900 et seq.) is intended to preserve, protect, and enhance endangered or rare native plants in California. This Act includes provisions that prohibit the taking of listed rare or endangered plants from the wild and a salvage requirement for landowners. The Act directs the CDFW to establish criteria for determining what native plants are rare or endangered. Under section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered.</li> <li>• The California Species Preservation Act (Fish &amp; G. Code §§ 900-903) provides for the protection and enhancement of the amphibians, birds, fish, mammals, and reptiles of California.</li> <li>• Fish and Game Code sections 3503 &amp; 3503.5 prohibit the taking and possession of native birds' nests and eggs from all forms of needless take. These regulations also provide that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nests or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.</li> <li>• Fish and Game Code sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), &amp; 5515 (fish) designate certain species as "fully protected." Fully protected species, or parts thereof, may not be taken or possessed at any time without permission by the CDFW.</li> <li>• Fish and Game Code section 3513 does not include statutory or regulatory mechanism for obtaining an incidental take permit for the loss of non-game, migratory birds.</li> </ul>

**1 Local**

2 The Conservation Element of the Contra Costa County General Plan 2005-2020  
 3 includes goals and policies that aim to preserve and protect biological resources  
 4 throughout the County. The following biological resources goals and policies were  
 5 considered in the analysis of the Project:

- 1       • Goal 8-E - To protect rare, threatened and endangered species of fish, wildlife  
2       and plants, significant plant communities, and other resources which stand out as  
3       unique because of their scarcity, scientific value, aesthetic quality or cultural  
4       significance. Attempt to achieve a significant net increase in wetland values and  
5       functions within the County over the life of the General Plan. The definition of  
6       rare, threatened and endangered includes those definitions provided by the  
7       Federal Endangered Species Act, the California Endangered Species Act, the  
8       California Native Plant Protection Act and the California Environmental Quality  
9       Act.
- 10       • Goal 8-F - To encourage the preservation and restoration of the natural  
11       characteristics of the San Francisco Bay/Delta estuary and adjacent lands, and  
12       recognize the role of Bay vegetation and water area in maintaining favorable  
13       climate, air and water quality, fisheries and migratory waterfowl.
- 14       • Policy 8-6 - Significant trees, natural vegetation, and wildlife populations  
15       generally shall be preserved.
- 16       • Policy 8-7 - Important wildlife habitats which would be disturbed by major  
17       development shall be preserved, and corridors for wildlife migration between  
18       undeveloped lands shall be retained.
- 19       • Policy 8-13 - The critical ecological and scenic characteristics of rangelands,  
20       woodlands, and wildlands shall be recognized and protected.
- 21       • Policy 8-15 - Existing vegetation, both native and non-native, and wildlife habitat  
22       areas shall be retained in the major open space areas sufficient for the  
23       maintenance of a healthy balance of wildlife populations.
- 24       • Policy 8-17 - The ecological value of wetland areas, especially the salt marshes  
25       and tidelands of the bay and delta, shall be recognized. Existing wetlands in the  
26       County shall be identified and regulated. Restoration of degraded wetland areas  
27       shall be encouraged and supported whenever possible.
- 28       • Policy 8-24 - The County shall strive to identify and conserve remaining upland  
29       habitat areas which are adjacent to wetlands and are critical to the survival and  
30       nesting of wetland species.
- 31       • Policy 8-25 - The County shall protect marshes, wetlands, and riparian corridors  
32       from the effects of potential industrial spills.

### 33   **3.4.3   Impact Analysis**

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

1 **Less than Significant with Mitigation.** Because Project activities will be carried out  
2 below MHW, and terrestrial activity will be limited to the potential use of the levee road,  
3 the majority of potential impacts would occur to special-status and federally managed  
4 aquatic species. Although various special-status avian species may occur within  
5 adjacent terrestrial habitats, they are not expected to be adversely affected by Project  
6 activities due to (1) the seasonal timing and short duration of the Project, and (2)  
7 limitation of vehicle use to the levee road. The Project proposes to lift the pipe from  
8 within its buried position beneath graded rock and mud while taking steps to minimize  
9 disturbance and sediment resuspension. These activities could potentially result in the  
10 following short-term effects on special-status and federally managed fish species:  
11 physical displacement, loss of foraging area and prey species, and physical injury  
12 caused by equipment. Because of the short-term and temporary nature of the work, the  
13 schedule of work planned between September 1 and October 31, the small work area  
14 that is involved, and procedures proposed for minimizing resuspension of sediment, the  
15 Project is not expected to result in a substantial adverse effect to the marine  
16 environment.

17 As described above, the Project area (Suisun Bay) has been identified as EFH for  
18 several species of fish: English sole, starry flounder, brown rockfish, northern anchovy,  
19 and Chinook salmon, (which includes two ESUs that are federally and state listed as  
20 threatened or endangered). These fish species may use this area during a portion of  
21 their life cycles. The Estuary is typically used as a forage area for juveniles and adults  
22 and as a nursery area for larvae and juveniles. These species would not use the Project  
23 area for spawning.

24 Juvenile or adult fish species in the area would be expected to move out of the area  
25 during the pipe removal activities. Because of the temporary nature of the effects on  
26 benthic invertebrates (the disturbed area will be recolonized), the cumulative effects of  
27 this Project on EFH are negligible.

28 In addition to Chinook salmon, these other federal and state listed species have the  
29 potential to occur in the Project area: green sturgeon, longfin smelt, delta smelt, and  
30 Central Valley steelhead. Like the species listed above, these species may also use the  
31 area during a portion of their life cycles. There is no point during the year in which all  
32 special-status species are expected to be absent from the Project area; however, as  
33 summarized in Table 3.4-6 and discussed in detail below, the Project timing has been  
34 scheduled for the September through October season in order to reduce potential  
35 impacts on special-status fish to the extent feasible. Generally, juvenile or adult fish  
36 species in the area would be expected to move out of the area during the pipe removal  
37 activities, and eggs/larval fish would not be present. Additionally, because of the  
38 temporary nature of the effects on benthic invertebrates (the disturbed area will be  
39 recolonized), the cumulative effects of this Project on threatened or endangered fish  
40 species are negligible.

**Table 3.4-6: Special-status Species and Timing in the Lower Estuarine River**

Species	Status		Month											
	Federal	State	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Delta Smelt (water < 10 feet)	FT	SE	P	P	P	P	P	R	R	R	R	R	R	M <sub>s</sub>
Delta Smelt (water > 10 feet)*	FT	SE	P	P	P	P	P	R	R					M <sub>s</sub>
Longfin Smelt	None	ST	S	S	S	S	R	R	R	R	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	S
Sacramento Splittail	None	SSC					M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>			M <sub>s</sub>	M <sub>s</sub>
Green Sturgeon (adult)	FT	SSC	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>					M <sub>o</sub>
Green Sturgeon (juv. and subadult)	FT	SSC	R	R	R	R	R	R	R	R	R	R	R	R
<b>Central Valley Chinook Salmon (adult)</b>														
Fall/Late Fall-run	FSC	SSC	M <sub>s</sub>									M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>
Winter-run	FE	SE	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>							
Spring-run	FT	ST		M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>						
<b>Central Valley Chinook Salmon (juvenile)</b>														
Fall/Late Fall-run	FSC	SSC	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>
Winter-run	FE	SE	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>							
Spring-run	FT	ST	M <sub>o</sub>	M <sub>o</sub>								M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>
Central Valley Steelhead (adult)	FT	None	M <sub>s</sub>	M <sub>s</sub>					M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>	M <sub>s</sub>
Central Valley Steelhead (juvenile)	FT	None	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>				M <sub>o</sub>	M <sub>o</sub>	M <sub>o</sub>
Notes: M <sub>s</sub> = spawning migration; M <sub>o</sub> = outmigration; R = rearing; S = spawning; P = Present														
Sources: Bennett, 2005; CDFG, 2011; Israel and Klimley, 2008; Levine-Fricke, 2004; LTMS, 2009; Moyle, 2002; Moyle et al, 2008; USFWS, 2008														

1 **Delta Smelt**

2 Delta smelt have the potential to occur in the vicinity of the Project throughout the  
3 proposed term of removal activities. Beginning in December, delta smelt are expected  
4 to begin to migrate upstream. As discussed in Section 3.4.1 – Environmental Setting,  
5 the fall abundance of delta smelt in the area depends in large part on the water index of  
6 the previous year. However, under any scenario, the Project is located within the low-  
7 salinity zone, so there is potential for delta smelt to use nearby areas for rearing and  
8 foraging while pipe removal is underway. Given the small area of disturbance and  
9 abundant surrounding areas for dispersal, along with implementation of **Mitigation**  
10 **Measures (MMs) BIO-1, BIO-2, BIO-3, and BIO-4** listed below, impacts to delta smelt  
11 would be reduced to a less than significant level.

12 **Longfin Smelt**

13 Longfin smelt are expected to occur in the Project area year-round, but water conditions  
14 that exist in the Project vicinity August 1 to September 31 (shallow [ $<20$  feet] and warm  
15 [ $\geq 71.6^{\circ}\text{F}$ ]) are not ideal for longfin smelt. Longfin smelt are more likely to be abundant  
16 in the ship channel north of the pipe removal area, and less likely in the shallow water  
17 area of the Project. The furthest downstream extent of spawning occurs near the city of  
18 Pittsburg. These factors, along with implementation of **MMs BIO-1, BIO-2, BIO-3, and**  
19 **BIO-4** listed below, would reduce impacts to longfin smelt to a less than significant level.

20 **Chinook Salmon**

21 Adult chinook salmon could potentially migrate past the Project area during most  
22 months of the year, but are not likely to be directly in the Project area. In-water work that  
23 occurs July 1 to November 31 is unlikely to impact adults of the threatened or  
24 endangered winter-run and spring-run chinook salmon. Juvenile chinook salmon from  
25 the fall-run and late fall-run pass through Suisun Bay during all months of the year.  
26 Smolt of the threatened or endangered winter-run and spring-run pass through the area  
27 October 1 to April 30. Winter-run smolts enter the Delta January through April. Spring-  
28 run smolts enter the Lower Estuarine River starting October 1, with peak numbers in  
29 November and December. These life-history factors, along with implementation of **MMs**  
30 **BIO-1, BIO-2, BIO-3, and BIO-4** listed below, would reduce impacts to Chinook salmon  
31 to a less than significant level. In particular, the timing of the Project (**MM BIO-2**) will be  
32 effective in reducing impacts to smolts/juveniles of the threatened or endangered winter-  
33 run and spring-run Chinook salmon.

34 **Steelhead Trout**

35 While some adult steelhead move upstream through the Delta beginning in July, the  
36 spawning migration through this area peaks in September and October and continues

1 into the winter. Most juvenile steelhead emigrate through the Delta from November  
2 through June, with the peak numbers occurring in February through April. Relatively  
3 small numbers of adult or juvenile steelhead are present in the Project area during the  
4 summer months. Impacts to steelhead could include temporary interference with  
5 migration, degradation or water quality, loss or degradation of habitat and interference  
6 with foraging or food resources. Implementation of **MMs BIO-1, BIO-2, BIO-3, and**  
7 **BIO-4** listed below, would reduce impacts to steelhead trout to a less than significant  
8 level. In particular, the timing of the Project (**MM BIO-2**) will be effective in reducing  
9 impacts to juveniles as relatively small numbers of juveniles are present during  
10 September 1 through October 31.

### 11 **Green Sturgeon**

12 Adult green sturgeon could potentially be present in the Lower Estuarine River from  
13 December through May, and juvenile and subadults of this species rear in Suisun Bay  
14 all months of the year. Impacts could include interference with migration, temporary  
15 degradation of water quality, temporary loss or degradation of habitat and interference  
16 with foraging or food resources. However, green sturgeon are wide ranging throughout  
17 the bay and it can be assumed that if individuals find the area obnoxious, they can  
18 move elsewhere in the bay without adverse effect to their health or survival. This  
19 avoidance behavior, and implementation of **MMs BIO-1, BIO-2, BIO-3, and BIO-4** listed  
20 below, would reduce impacts to green sturgeon to a less than significant level.

### 21 **Sacramento Splittail and River Lamprey**

22 Sacramento splittail outmigrate through the Lower Estuarine River and juveniles gather  
23 in the channels and at the mouths of streams during the summer months. They would  
24 not be expected to occur in the Project area. River lamprey adults could feed in the  
25 Project area but would likely disperse during Project activities. Although impacts could  
26 include temporary degradation of water quality and interference with foraging, this  
27 avoidance behavior, and implementation of **MMs BIO-1, BIO-2, BIO-3, and BIO-4** listed  
28 below, would reduce impacts to Sacramento splittail and river lamprey to a less than  
29 significant level. In particular, the timing of the Project (**MM BIO-2**) will be effective in  
30 reducing impacts to splittails because they are not expected to occur in the Project area  
31 during September 1 through October 31.

### 32 **Birds**

33 Special status bird species (California clapper rail, northern harrier, California black rail,  
34 San Francisco common yellowthroat, and Suisun song sparrow) occur in adjacent tidal  
35 marsh habitats, and California least terns forage over bay waters. Project activities  
36 would primarily occur offshore. The onshore levee road would be used by a light utility  
37 work vehicle. The vehicle would remain on the levee road and would not disturb salt

1 marsh habitat. With implementation of **MMs BIO-1, BIO-2, and BIO-5**, impacts to  
2 California least tern, California clapper rail, northern harrier, California black rail, San  
3 Francisco common yellowthroat, and Suisun song sparrow would be less than  
4 significant.

5 To reduce potentially significant Project impacts to sensitive wildlife and their habitats  
6 the Applicant will implement the following MMs.

7 **MM BIO-1. Worker Environmental Awareness Program (WEAP).** A qualified  
8 biologist shall conduct pre-Project training (WEAP) for work crew members prior  
9 to any Project site activities. The training shall include a discussion of sensitive  
10 biological resources within the Project area and the potential presence of special-  
11 status species, special-status species' habitats, and protection measures to  
12 ensure species are not impacted by Project activities and Project boundaries.  
13 The WEAP shall also include daily trash containment/removal requirements, and  
14 prohibit workers from bringing domestic animals (i.e., dogs) and firearms to the  
15 Project site, in order to ensure the protection of native wildlife.

16 **MM BIO-2. Work Windows.** All Project activities shall be conducted between  
17 September 1 and October 31.

18 **MM BIO-3. In Water Turbidity Protections.** A turbidity curtain shall be installed  
19 to protect fish from potential water quality/turbidity effects. The curtain (100 linear  
20 feet) shall be installed and maintained around the shoreline terminus flange of  
21 the pipe to contain muddy water and sediment materials that escape from the  
22 6-inch-diameter outfall pipe during pipe removal. Sawdust generated during  
23 cutting and removal of timber pilings will also be contained in this curtain and/or  
24 skimmed and removed if floating in water (and disposed of in plastic bags). No  
25 activities that would entrain or impinge fish shall be used.

26 **MM BIO-4. Protection from Release of Toxic Substances.** The Applicant shall  
27 implement the following measures to prevent the release of toxic substances.

- 28 • All engine-powered equipment used and operated upon and from the deck of  
29 the barge shall incorporate the use of drip-pans or other means to retain fluids  
30 beneath the equipment.
- 31 • Only approved and certified fuel cans with “no-spill” spring loaded lids shall be  
32 used when fueling up diesel or gas engines. Engines will be turned OFF and  
33 fueling will not be done over the water. A spill kit with absorbent diapers shall  
34 be readily available next to each filling area.
- 35 • A continuous floating oil-absorbent sock shall be deployed and maintained  
36 around the entire barge to contain any accidental leakage of fuel or hydraulic  
37 fluids.



1           **MM BIO-5. Confine Vehicle Use to Established Roadway.** Project-related  
2 vehicle use and any other terrestrial activity shall be confined to the established  
3 levee road. No staging, driving, walking, or any other human activity shall occur  
4 in the salt marsh habitat. Vehicles shall not exceed 20 miles per hour in order to  
5 ensure birds/wildlife that may be on or crossing the road have an opportunity to  
6 move out of harm's way.

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

#### 10 **Potential Disturbance of Eelgrass**

11 **Less than Significant.** Results from the dive survey found eelgrass approximately  
12 25 feet from the centerline of the pipe to be removed. The dive survey only identified  
13 two blades of the grass at the outside edge of their survey corridor so the extent of the  
14 eelgrass bed is not known. Eelgrass beds are important for sediment deposition and  
15 substrate stabilization, as substrate for epiphytic algae and micro-invertebrates, and as  
16 nursery grounds for many species of economically important fish and shellfish. The  
17 species of eelgrass was not confirmed during the dive survey. Pacific eelgrass, *Zostera*  
18 *marina*, is native to the California coast and beneficial to the ecosystem. Dwarf  
19 eelgrass, *Zostera japonica*, is native to Asia and threatens to upset the natural balance  
20 of California's wetlands. The eelgrass was observed approximately 150 feet from shore  
21 and 25 feet from the centerline of the discharge pipe, and although it is not expected to  
22 be disturbed by pipe removal activities, the implementation of **MM BIO-1**, instructing  
23 how to recognize and avoid potential eelgrass beds, provides an abundance of caution  
24 to ensure that the Project will result in less than significant impact.

#### 25 **Potential Spread of Aquatic Invasive Species**

26 **Less than Significant.** Aquatic invasive species could be introduced to the Project area  
27 by vessels involved in pipe removal. Vectors for invasive species may include ballast  
28 water and biofouling (i.e., the accumulation of aquatic organisms) on vessel hulls or  
29 accessory structures. Introduced species have the potential to affect indigenous species  
30 through competition, predation, parasitism, genetic dilution, introduction of pathogens,  
31 and smothering and loss of habitat.

32 Vessels contracted for the Project will originate from local ports, thus avoiding the  
33 possibility of introducing invasive species from outside the local area. Therefore,  
34 impacts due to invasive species would be less than significant and no mitigation is  
35 required.

1 ***c) Have a substantial adverse effect on federally protected wetlands as defined by***  
2 ***section 404 of the Clean Water Act (including, but not limited to, marsh, vernal***  
3 ***pool, coastal, etc.) through direct removal, filling, hydrological interruption, or***  
4 ***other means?***

5 **Less than Significant Impact with Mitigation.** Suisun Bay is subject to the Clean  
6 Water Act (CWA) Section 404 and is regulated by the San Francisco Regional Water  
7 Quality Control Board (SFBRWQCB) and CDFW. Any impacts, such as degraded water  
8 quality due to pipe removal activities, would be short-term and less than significant. The  
9 adjacent shoreland consists of tidal marsh, which is habitat for federally- and state-listed  
10 wildlife species. Onshore access to the Project will be restricted to use of the existing  
11 levee road. There would be no alterations to the shoreline and no removal, filling, or  
12 hydrological interruption of any wetlands would occur as a result of the Project. To avoid  
13 potential disruption of vulnerable life stages of sensitive onshore species whose habitat  
14 is tidal marsh, the Applicant will implement **MM BIO-2**, listed above, which will avoid  
15 activities in the nesting season for sensitive marsh birds.

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

19 **Less than Significant Impact with Mitigation.** Pipe removal activities, such as vessel  
20 movements and barge grounding would occur in Suisun Bay, which is a migratory  
21 corridor for several special-status and federally managed fish species. Physical  
22 disturbance and noise could impact the migration movement of these species. If there is  
23 an adjacent eelgrass bed, fish using it as a nursery could also be affected. This would  
24 be a less than significant impact due to the short duration of the work and timing  
25 between September 1 and October 31 and implementation of **MM BIO-2** and **MM**  
26 **BIO-4.**

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

29 **No Impact.** The Project is not inconsistent with the goals and policies of the Contra  
30 Costa County General Plan.

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

34 **No Impact.** There are currently no Habitat Conservation Plans or Natural Community  
35 Conservation Plans in or near the Project site.

1 **3.4.4 Mitigation Summary**

2 Implementation of the following mitigation measures would reduce Project-related  
3 impacts to biological resources to less than significant.

- 4 • MM BIO-1. Worker Environmental Awareness Program
- 5 • MM BIO-2. Work Windows
- 6 • MM BIO-3. In Water Turbidity Protections
- 7 • MM BIO-4. Protection from Release of Toxic Substances
- 8 • MM BIO-5. Confine Vehicle Use to Established Roadway

1 **3.5 CULTURAL AND PALEONTOLOGICAL**

CULTURAL AND PALEONTOLOGICAL - 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 as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.5.1 Environmental Setting**

3 **Project Setting**

4 The Project area is at the southern border of the Suisun Bay/Sacramento River Delta in  
 5 unincorporated Contra Costa County, within the larger San Francisco Bay Area. It is  
 6 situated approximately 0.6 mile to the east of the Concord Naval Weapons Station,  
 7 Military Ocean Terminal; 0.8 mile to the south of Middle Ground Island in Suisun Bay;  
 8 approximately 1.9 miles to the west of McAvoy Yacht Harbor in Bay Point and further  
 9 (about 3 miles total along the shoreline) to the west of the mouth of the Sacramento  
 10 River; and 0.9 mile to the north of Port Chicago Highway.

11 The Project site is located primarily offshore, with the only onshore portion being an  
 12 existing levee road that may provide onshore access for emergency services, and the  
 13 contractor’s shore base at McAvoy Yacht Harbor in Bay Point.

14 **Records Search**

15 The California Historic Resources Information System maintains regional offices that  
 16 manage site records for known cultural resource locations and related technical studies.  
 17 The regional office for Contra Costa County is the Northwest Information Center at  
 18 Sonoma State University in Rohnert Park. Information regarding cultural resource  
 19 studies and archaeological sites was requested using a 1-mile radius around the Project  
 20 area. Sources reviewed included all known and recorded archaeological and historic  
 21 sites and cultural resource reports. Additional resources consulted for relevant  
 22 information included California Points of Historical Interest, California Historical  
 23 Landmarks, and historic maps.

1 The archaeological record search for the Project was requested on March 13, 2014, and  
2 was completed on April 16, 2014. The search found one resource within the Project  
3 boundaries. This is 07-000806 and is the Atchison, Topeka & Santa Fe Railroad. There  
4 are 59 historic resources within the 1-mile radius; these are predominantly located  
5 within the Naval Weapons Station. No known archaeological resources are located  
6 within the 1-mile radius. There have been 33 studies conducted within the 1-mile radius.  
7 Several of these cover portions of the Project area.

8 There are no sites currently listed in the National Register, or the list of California  
9 Historical Landmarks within the Project area. About 2 miles west of the Project area is  
10 the site of the Port Chicago Naval Magazine National Memorial commemorating the 320  
11 lives lost on July 17, 1944, in the explosion of the Liberty ship SS *E.A. Bryan* and the  
12 Victory ship SS *Quinault Victory* during munitions loading.

13 The title to all abandoned shipwrecks, archaeological sites, and historical or cultural  
14 resources on or in the tideland submerged lands of California is vested in the State and  
15 under the jurisdiction of the CSLC. The CSLC online database for shipwrecks (CSLC  
16 2014) was checked on March 17, 2014. The database lists shipwrecks by county and is  
17 based primarily on historical accounts of these incidents. The database was searched  
18 by County and then using those shipwrecks searched further by latitude and longitude.  
19 No known shipwrecks appear within the Project footprint or within 0.5 mile of the  
20 Project; however, the locations of many shipwrecks remain unknown.

## 21 **Prehistoric Background**

22 This section describes the cultural changes in the San Francisco Bay Area. No  
23 discussion of the Clovis time (11,500 to 8000 calibrated Before Present [cal. B.P.]) is  
24 provided, as there has been no evidence related to this time found in the area,  
25 presumably because it has been submerged or buried (Milliken et al. 2007). The  
26 sequence used here is very broad and includes the Lower, Middle, and Late Archaic  
27 periods, and the Emergent Occupation.

### 28 *Lower Archaic (8000 To 3500 cal. B.P.)*

29 A generalized mobile forager pattern among prehistoric groups is characterized by  
30 portable milling stones, milling slabs (metates) and handstones (manos), as well as  
31 wide-stemmed projectile points. Archaeobotanical remains suggest an economy  
32 focused on acorns.

### 33 *Middle Archaic (3500 to 500 cal. B.P.)*

34 During the Middle Archaic there appears to be an increase in regional trade and  
35 possibly signs of sedentism. The first cut shell beads appear in mortuaries. Mortars and

1 pestles are documented shortly after 4000 cal. B.P. Net sinkers are a typical marker for  
2 this time. The burial complexes with ornamental grave associations seem to represent a  
3 movement from forager to semi-sedentary land use (Milliken et al. 2007).

4 *Upper Archaic (500 cal. B.P. to cal. Anno Domini [A.D.] 1050)*

5 The Upper Archaic period shows continued specialization and an increase in the  
6 complexity of technology. Acorns and fish are the predominant food sources. New bone  
7 tools and ornaments appear, including whistles and barbless fish spears. Beads  
8 become very prominent with several types. Mortars and pestles continue to be the sole  
9 grinding tools. Net sinkers disappear at most sites. Mortuary practices change from a  
10 flexed position to an extended position.

11 *Emergent (cal. A.D. 1050 to Historic)*

12 Many archaeologists believe that craft specialization, political complexity, and social  
13 ranking were highly developed. New bead types and multi-perforated and bar-scored  
14 ornaments appear. The bow and arrow replace the dart and atlatl as the favored hunting  
15 tools (Moratto 1984). Cultural traditions seem to be very similar to those witnessed at  
16 the time of European contact.

17 **Ethnographic Background**

18 The Project lies within the territory occupied by the Native American group known to the  
19 Spanish as the Costanoan (Levy 1978). The contemporary descendants of this group  
20 are members of the Ohlone Indian Tribe. The Costanoan group occupied the coast of  
21 California from San Francisco to Monterey and inland to include the coastal mountains  
22 from the southern side of the Carquinez Strait to the eastern side of the Salinas River  
23 south of the Chalone Creek.

24 Costanoan is a linguistic term for a family of eight related languages. Each language  
25 was spoken by a distinct group of people within a recognized geographic area. In the  
26 Martinez area the spoken language was Karkin. This language was spoken only in a  
27 very small area and probably all the speakers were related. Political units within each  
28 ethnic group were called tribelets and each tribelet contained between 50 to 500 people.  
29 Each tribelet had one or more permanent villages and probably several temporary  
30 camps within its territory.

31 The Costanoans were hunter gatherers, with acorns being the most important plant  
32 food. Various roots, nuts, berries and seeds were important. The Costanoan group's  
33 practices included managed burning of chaparral to encourage sprouting of seed plants  
34 and improve browsing for deer and elk. The favored animals for hunting were deer and  
35 rabbit. Whales and sea lions were eaten when found stranded on the beach. Waterfowl

1 were captured in nets using decoys. Important fish were steelhead, salmon, and  
 2 sturgeon, and mussels and abalone were the preferred shellfish. Dome thatched  
 3 houses with rectangular doorways and a central hearth were the standard dwellings.  
 4 Technology included tule balsa canoes, bows and arrows, and baskets.

5 *Historical Background*

6 A number of Spanish expeditions passed through the area between 1769 and 1776,  
 7 including those led by Portola, Fages, Anza, and Rivera. Although the exact routes of  
 8 the early explorers cannot be determined, no explorers are thought to have traveled  
 9 near the Project area (Beck and Haase 1974; Milliken 1995). The Spanish government  
 10 founded missions and secular towns with the land itself being held by the government.  
 11 The Mexican government closed the missions in the early 1830s and former mission  
 12 lands were given to individuals as land grants.

13 *Historical Significance of the Structures*

14 The outlet pipe and the two timber pilings were built in 1989 as part of the original power  
 15 plant. The power plant itself was demolished in 2013. The outlet pipe and two timber  
 16 pilings do not meet the criteria for significance for a historical resource because they are  
 17 less than 50 years old and do not meet any of the significance criteria for either the  
 18 California Register of Historical Resources or the National Register of Historic Places.

19 **3.5.2 Regulatory Setting**

20 **Federal and State**

21 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 22 Project are identified in Table 3.5-1.

**Table 3.5-1 Laws, Regulations, and Policies (Cultural Resources)**

<b>U.S.</b>	Archaeological and Historic Preservation Act (AHPA)	The AHPA provides for the preservation of historical and archaeological data that might be irreparably lost or destroyed as a result of (1) flooding, the building of access roads, the erection of workmen’s communities, the relocation of railroads and highways, and other alterations of terrain caused by the construction of a dam by an agency of the U.S. or by any private person or corporation holding a license issued by any such agency; or (2) any alteration of the terrain caused as a result of a Federal construction project or federally licensed project, activity, or program. This Act requires Federal agencies to notify the Secretary of the Interior when they find that any federally permitted activity or program may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. The AHPA built upon the national policy, set out in the Historic Sites Act of 1935, "...to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance...."
<b>U.S.</b>	Archaeological	The ARPA states that archaeological resources on public or Indian lands are an

**Table 3.5-1 Laws, Regulations, and Policies (Cultural Resources)**

	Resources Protection Act (ARPA)	<p>accessible and irreplaceable part of the nation’s heritage and:</p> <ul style="list-style-type: none"> <li>• Establishes protection for archaeological resources to prevent loss and destruction due to uncontrolled excavations and pillaging;</li> <li>• Encourages increased cooperation and exchange of information between government authorities, the professional archaeological community, and private individuals having collections of archaeological resources prior to the enactment of this Act;</li> <li>• Establishes permit procedures to permit excavation or removal of archaeological resources (and associated activities) located on public or Indian land; and</li> <li>• Defines excavation, removal, damage, or other alteration or defacing of archaeological resources as a “prohibited act” and provides for criminal and monetary rewards to be paid to individuals furnishing information leading to the finding of a civil violation or conviction of a criminal violator.</li> </ul> <p>ARPA has both enforcement and permitting components. The enforcement provision provides for the imposition of both criminal and civil penalties against violators of the Act. The ARPA’s permitting component allows for recovery of certain artifacts consistent with the standards and requirements of the National Park Service (NPS) Federal Archeology Program.</p>
U.S.	National Historic Preservation Act (NHPA) (16 USC 470 et seq.)	<p>This applies only to Federal undertakings. Archaeological resources are protected through the NHPA, as amended, and its implementing regulation, Protection of Historic Properties (36 CFR 800), the AHPA, and the ARPA. This Act presents a general policy of supporting and encouraging the preservation of prehistoric and historic resources for present and future generations by directing Federal agencies to assume responsibility for considering the historic resources in their activities. The State implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), within the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level and advises Federal agencies regarding potential effects on historic properties. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the State’s jurisdictions, including commenting on Federal undertakings.</p>
U.S.	Other	<ul style="list-style-type: none"> <li>• Executive Order 13158 requires Federal agencies to (1) identify actions that affect natural or cultural resources that are within a MPA; and (2) in taking such actions, to avoid harm to the natural and cultural resources that are protected by a MPA.</li> <li>• NPS Abandoned Shipwreck Act of 1987 (43 USC 2101–2106). Under this Act, states have the responsibility for management of living and nonliving resources in State waters and submerged lands, including certain abandoned shipwrecks. The NPS has issued guidelines that are intended to: maximize the enhancement of cultural resources; foster a partnership among sport divers, fishermen, archeologists, sailors, and other interests to manage shipwreck resources of the states and the U.S.; facilitate access and utilization by recreational interests; and recognize the interests of individuals and groups engaged in shipwreck discovery and salvage. Specific provisions of the Act’s guidelines include procedures for locating and identifying shipwrecks, methods for determining which shipwrecks are historic, and preservation and long-term management of historic shipwrecks.</li> </ul>
CA	CEQA (Pub. Resources Code, § 21000 et seq.)	<p>As the CEQA lead agency, the CSLC is responsible for complying with all provisions of the CEQA and State CEQA Guidelines that relate to “historical resources.” A historical resource includes: (1) a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR); (2) a resource</p>



**Table 3.5-1 Laws, Regulations, and Policies (Cultural Resources)**

		included in a local register of historical resources or identified as significant in an historical resource survey; and (3) any resource that a lead agency determines to be historically significant for the purposes of CEQA, when supported by substantial evidence in light of the whole record. The CRHR was created to identify resources deemed worthy of preservation on a State level and was modeled closely after the National Register. The criteria, which are nearly identical to those of the National Register but focus on resources of statewide significance (see State CEQA Guidelines § 15064.5, subd. (a)(3)), are defined as any resource that meets any of the following criteria: (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; (2) Is associated with lives of persons important in our past; (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (4) Has yielded, or may be likely to yield, information important in prehistory or history. Properties listed, or formally designated as eligible for listing, on the National Register are automatically listed on the CRHR, as are certain State Landmarks and Points of Interest. A lead agency is not precluded from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1, subdivision (j), or 5024.1 (State CEQA Guidelines § 15064.5, subd. (a)(4)).
CA	Health and Safety Code § 7050.5	This code states that if human remains are exposed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code section 5097.998. The Coroner has 24 hours to notify the Native American Heritage Commission (NAHC) if the remains are determined to be of Native American descent. The NAHC will contact most likely descendants, who may recommend how to proceed.

1 **Local**

2 Contra Costa County General Plan Open Space Element, Historic and Cultural  
3 Resource Goals include the following.

- 4 • 9-31 To identify and preserve important archaeological and historic resources  
5 within the County.
- 6 • 9-32 Areas which have identifiable and important archaeological or historic  
7 significance shall be preserved for such uses, preferably in public ownership

8 **3.5.3 Impact Analysis**

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

11 **No Impact.** As described above, a records search was conducted for the Project vicinity  
12 that found one resource (07-000806) within the Project boundaries, and a number of  
13 others within the search radius. None of these identified historic resources would be  
14 affected by Project activities. Additionally, the outfall pipe and piers are both less than

1 50 years old and do not qualify as significant historical resources. Therefore, there  
2 would be no change in the significance of a historical resource.

3 ***b) Cause a substantial adverse change in the significance of a unique***  
4 ***archaeological resource pursuant to §15064.5?***

5 **No Impact.** Project activities will occur predominantly in the waters of the Suisun Bay, in  
6 areas that have been previously disturbed by the placement of the pipe. There are no  
7 known archaeological sites within a 1-mile radius of the Project. The historic maps  
8 indicate that the area has been marsh since at least 1894, which would reduce the  
9 likelihood of unique archaeological resources. Therefore, there would be no change in  
10 the significance of a unique archaeological resource.

11 ***c) Directly or indirectly destroy a unique paleontological resource or site or***  
12 ***unique geologic feature?***

13 **No Impact.** The only ground disturbance during Project activities would occur in the  
14 upper layers of sediment within the Bay during the removal of the pipeline and the  
15 marker pilings; this area was previously disturbed by pipeline installation activities in the  
16 relatively recent past. In addition, the geologic map indicates that this area is underlain  
17 by mud flats from the late Holocene. Therefore, there would be no chance that the  
18 Project would directly or indirectly destroy a unique paleontological resource, site, or  
19 geologic feature.

20 ***d) Disturb any human remains, including those interred outside of formal***  
21 ***cemeteries?***

22 **No Impact.** Project activities are largely confined to work within waters of the Suisun  
23 Bay, with no or limited shoreline activities. There are no known existing cemeteries,  
24 previously recorded Native American or other human remains within or directly adjacent  
25 to the Project. The Project work would also occur in areas already disturbed by the  
26 pipeline and piling installation activities, during which no human remains were found.  
27 Therefore, the potential for the inadvertent discovery of Native American or other human  
28 remains during subsurface activity associated with the Project is considered extremely  
29 low.

30 **3.5.4 Mitigation Summary**

31 The Project would not result in significant impacts to cultural resources; no mitigation is  
32 required.

1 **3.6 GEOLOGY AND SOILS**

<b>GEOLOGY AND SOILS – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Expose people or structures to 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.6.1 Environmental Setting**

3 **Regional Setting**

4 The Project area lies within the Coast Range Geomorphic Province of California, a  
 5 region with independent and discontinuous northwest-trending mountain ranges, ridges,  
 6 and intervening valleys (California Geological Survey [CGS] 2002). The Coast Range  
 7 province is the largest of the state’s geomorphic provinces and rises abruptly from the  
 8 shore in northern Humboldt County extending 400 miles south to the Santa Ynez River  
 9 in Santa Barbara County. In general, the Coast Range province is composed of marine  
 10 sedimentary bedrock, occasional volcanic rocks, and alluvial deposits (CGS 2002).  
 11 Historically active faults in the region include the Concord, Hayward, Greenville-Marsh

1 Creek-Clayton, Calaveras, and San Andreas Faults. Of the major fault zones, the San  
2 Andreas Fault is capable of generating the largest maximum credible earthquake  
3 (MCE), estimated at a magnitude of 8.3 on the Richter scale (Borcherdt et al. 1975).  
4 The Hayward and Calaveras Faults can generate an MCE of magnitude 7.5, the  
5 Greenville-Marsh Creek-Clayton Fault can generate an MCE of magnitude 7.2, and the  
6 Concord Fault can generate an MCE of magnitude 7.0 (Borcherdt et al. 1975; Hart and  
7 Byrant 1997). Earthquakes of this magnitude are sufficient to create severe ground  
8 accelerations in bedrock and unconsolidated deposits that could potentially cause major  
9 damage to structures and foundations (Greensfelder 1974).

## 10 **Project Setting**

### 11 *Geology*

12 The Project site is located in northern Contra Costa County along the southern shore of  
13 the Suisun Bay near the town of Bay Point. The outfall pipe to be removed terminates in  
14 the waters of the Suisun Bay. The onshore portion of the Project area is composed of a  
15 soil that is referred to as Joice Muck. Joice Muck is characterized as black, acidic muck  
16 mixed with silt and clay. The lower levels of Joice Muck are black, clayey, and can be  
17 strongly acidic when oxidized. Due to its proximity to salt water, Joice Muck is also very  
18 saline. Joice Muck is unique to the Suisun Bay.

### 19 *Faults and Seismicity*

20 Seismic hazards include ground shaking, liquefaction, land sliding, lateral spreading,  
21 differential settlement, and inundation by encroaching waves. The region around the  
22 Project area is home to the Concord Fault and Greenville-Marsh Creek-Clayton Fault,  
23 which are active faults. Faults zoned as active by the CGS are those that have  
24 undergone seismic activity within the past 11,000 years (Holocene epoch). The Concord  
25 Fault lies approximately 5 miles to the west of the Project area. The Greenville-Marsh  
26 Creek-Clayton Fault is located approximately 5.5 miles to the southeast. Though the  
27 Project is in relative close proximity to these active faults, a search of the Alquist-Priolo  
28 Earthquake Fault Zone Maps indicates that the Project does not lie within an Alquist-  
29 Priolo Earthquake zone. No known active faults cross the Project site; therefore, fault  
30 rupture is not considered a potential geologic hazard that could affect the Project.

### 31 *Liquefaction*

32 Liquefaction is a phenomenon in which saturated granular sediments temporarily lose  
33 their shear strength during periods of earthquake-induced, strong ground shaking. The  
34 susceptibility of a site to liquefaction is a function of the depth, density, and water  
35 content of the granular sediments and the magnitude of earthquakes likely to affect the  
36 site. Saturated, unconsolidated silts, sands, silty sands, and gravels within 50 feet of the

1 ground surface are most susceptible to liquefaction. The primary liquefaction-related  
 2 phenomena include vertical settlement and lateral spreading. Based on the Association  
 3 of Bay Area Governments (ABAG) Liquefaction Susceptibility Map, the onshore portions  
 4 of the Project have a moderate risk of liquefaction (ABAG 2013). The mapping program  
 5 does not include the submerged areas of the Suisun Bay.

6 *Landslides and Soil Erosion*

7 The Project site is within waters of the Suisun Bay. According to Contra Costa County,  
 8 the Project area has a low risk for landslide. The nearest significant elevation change is  
 9 the hills over a mile to the south. It is very unlikely that a landslide or soil erosion could  
 10 occur at the Project site.

11 **3.6.2 Regulatory Setting**

12 **Federal and State**

13 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 14 Project are identified in Table 3.6-1.

**Table 3.6-1 Laws, Regulations, and Policies (Geology and Soils)**

CA	Alquist-Priolo Earthquake Fault Zoning Act (Pub. Resources Code, §§ 2621-2630)	This Act requires that "sufficiently active" and "well-defined" earthquake fault zones be delineated by the State Geologist and prohibits locating structures for human occupancy across the trace of an active fault.
	California Building Code (CBC) (Cal. Code Regs., tit. 23)	The CBC contains requirements related to excavation, grading, and construction of pipelines alongside existing structures. A grading permit is required if more than 50 cubic yards of soil are moved. Sections 3301.2 and 3301.3 contain provisions requiring protection of adjacent properties during excavations and require a 10-day written notice and access agreements with adjacent property owners.
	California Seismic Hazards Mapping Act (Pub. Resources Code, § 2690 and following as Division 2, Chapter 7.8)	This Act and the Seismic Hazards Mapping Regulations (Cal. Code Regs., tit. 14, Div. 2, Ch. 8, Art. 10) are designed to protect the public from the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. The Act requires that site-specific geotechnical investigations be conducted identifying the hazard and formulating mitigation measures prior to permitting most developments designed for human occupancy. Special Publication 117, <i>Guidelines for Evaluating and Mitigating Seismic Hazards in California</i> (California Geological Survey 2008), constitutes guidelines for evaluating seismic hazards other than surface fault rupture and for recommending mitigation measures (as required by § 2695, subd. (a)).

15 **Local**

16 The Safety Element of the Contra Costa County General Plan includes goals and  
 17 policies to address seismic hazards within the County. No seismic hazard goals or  
 18 policies are applicable to the Project site.

1 **3.6.3 Impact Analysis**

2 **a) Expose people or structures to potential substantial adverse effects, including**  
3 **the risk of loss, injury, or death involving:**

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

8 **(ii) Strong seismic ground shaking?**

9 **No Impact.** Though the Project area is in close proximity to active faults, risk of loss of  
10 life or property in a seismic event due to the completion of this Project will be  
11 nonexistent. The Project involves the removal of an outfall pipe and does not include the  
12 construction of any buildings or structures that could potentially be damaged or cause  
13 injury or death. The Project involves removing material that could potentially be injurious  
14 in an earthquake. Work would be conducted from a barge adjacent to the structures to  
15 be removed. The Project site is not crossed by active faults and does not lie within or  
16 near an Alquist-Priolo Earthquake Zone. There is the potential for workers to be  
17 subjected to ground shaking in the event of a significant earthquake within the region,  
18 but the likelihood of this occurring during the relatively short Project schedule (2 weeks)  
19 is relatively remote. Therefore, this Project is not likely to expose people or structures to  
20 potential substantial adverse effects due to rupture of a fault or seismic ground shaking.

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

22 **Less than Significant.** The mapping compiled by ABAG shows that the onshore areas  
23 adjacent to the Project site have a moderate risk of liquefaction. However, once the  
24 Project is completed, the threat of damage or loss from liquefaction will be minimal,  
25 since the structures on-site will be removed. Also, risk of liquefaction during Project  
26 operations will be low since the Project is expected to last 2 weeks. Therefore, the  
27 threat of exposing people or structures to potential substantial adverse effects due to  
28 seismic-related ground failure including liquefaction is less than significant.

29 **(iv) Landslides?**

30 **No Impact.** The onshore portion of the Project is in a relatively flat shoreline area, and  
31 is unlikely to be susceptible to landslides. There is also a temporary staging area within  
32 the confines of an existing yard of the selected contractor, which would be located in a  
33 relatively flat industrially-developed area. Therefore, this Project is not likely to expose  
34 people or structures to potential substantial adverse effects due to landslides.

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

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

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

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

9 **No Impact.** The onshore portion of the Project is in a relatively flat shoreline area, and  
10 is unlikely to be susceptible to soil erosion. There is also a temporary staging area  
11 within the confines of an existing yard of the selected contractor, which would be  
12 located in a relatively flat industrially-developed area. Therefore, this Project is not likely  
13 to result in substantial soil erosion or the loss of topsoil. The site is not located on a  
14 geologic unit or soil that is unstable or expansive. Project activities would not require  
15 sewers, septic tanks, or alternative wastewater storage or disposal systems.

#### 16 **3.6.4 Mitigation Summary**

17 The Project would not result in significant impacts to geology and soils; therefore, no  
18 mitigation is required.

1 **3.7 GREENHOUSE GAS EMISSIONS**

<b>GREENHOUSE GAS EMISSIONS –Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **3.7.1 Environmental Setting**

3 The Project area is located in Contra Costa County, which is part of the SFBAAB. The  
 4 BAAQMD is the regional agency with jurisdiction over the nine-county SFBAAB, which  
 5 includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and  
 6 Napa counties and portions of Sonoma and Solano counties. The BAAQMD is  
 7 responsible for attaining and maintaining air quality in the SFBAAB within federal and  
 8 State air quality standards, as established by the federal CAA and the CCAA,  
 9 respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air  
 10 pollutant levels throughout the SFBAAB and to develop and implement strategies to  
 11 attain the applicable federal and State standards. The BAAQMD (2010a) adopted the  
 12 most recent air quality plan, the *2010 Clean Air Plan*, on September 15, 2010. The *2010*  
 13 *Clean Air Plan* updates the *Bay Area 2005 Ozone Strategy* in accordance with the  
 14 requirements of the CCAA to implement all feasible measures to reduce ozone; provide  
 15 a control strategy to reduce ozone, particulate matter, air toxics, and GHGs in a single,  
 16 integrated plan; and establish emission-control measures to be adopted or  
 17 implemented. The *2010 Clean Air Plan* includes the following primary goal: reduce GHG  
 18 emissions and protect the climate. Consistency with the *2010 Clean Air Plan* is the  
 19 basis for determining whether the Project would conflict with or obstruct implementation  
 20 of air quality plans.

21 Certain gases in the Earth’s atmosphere, classified as GHGs, play a critical role in  
 22 determining the Earth’s surface temperature. When high-frequency solar radiation (e.g.,  
 23 visible light) enters the Earth’s atmosphere from space (i.e., the sun), a portion of the  
 24 radiation is absorbed by the Earth’s surface, and a smaller portion of this radiation is  
 25 reflected back toward space. However, the re-radiated energy by the Earth is not the  
 26 same high-frequency solar radiation that was received, but is lower-frequency infrared  
 27 radiation (i.e., thermal energy). The frequencies at which bodies emit radiation are  
 28 proportional to temperature. Therefore, having a much lower temperature than the sun,  
 29 the Earth will emit lower frequency (longer wavelength) radiation (i.e., infrared  
 30 radiation). When infrared radiation comes into contact with GHGs in the atmosphere, a



1 portion of that thermal energy can be absorbed by the GHG molecule and/or re-radiated  
 2 back toward the Earth’s surface. Both outcomes result in a “trapping” of heat within the  
 3 Earth’s atmosphere. This phenomenon, known as the “greenhouse effect,” is  
 4 responsible for maintaining a habitable climate on Earth. Without the greenhouse effect,  
 5 Earth would not be able to support life as we know it.

6 Aside from naturally occurring atmospheric water vapor, prominent GHGs contributing  
 7 to the Earth’s greenhouse effect are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide  
 8 (N<sub>2</sub>O), and high global warming potential (GWP) GHGs. Although high-GWP gases  
 9 typically are emitted at lower rates than CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, they still can make a  
 10 significant contribution to climate change because they are more effective at absorbing  
 11 outgoing infrared radiation than CO<sub>2</sub>. The concept of carbon dioxide equivalents (CO<sub>2</sub>e)  
 12 is used to account for the different potentials of GHGs to absorb infrared radiation. This  
 13 potential (the GWP) is dependent on the lifetime or persistence of the gas molecule in  
 14 the atmosphere, its ability to absorb/trap infrared radiation, and the spectrum of light  
 15 energy (i.e., range of wavelengths and frequencies) absorbed by the gas molecule.  
 16 Every GHG’s GWP is measured relative to CO<sub>2</sub>, which has a GWP of 1. Anthropogenic  
 17 (i.e., caused by humans) emissions of these GHGs leading to atmospheric levels of  
 18 GHGs in excess of natural ambient concentrations are responsible for intensifying the  
 19 greenhouse effect and have led to a trend of unnatural warming of the Earth’s  
 20 atmosphere and oceans, with corresponding effects on global circulation patterns and  
 21 climate. CO<sub>2</sub> emissions associated with fossil fuel combustion for energy-related  
 22 activities are the primary contributors to human-induced climate change (IPCC 2007).

23 **3.7.2 Regulatory Setting**

24 **Federal and State**

25 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 26 Project are identified in Table 3.7.1.

**Table 3.7-1 Laws, Regulations, and Policies (GHGs)**

<b>U.S.</b>	Federal Clean Air Act (FCAA) (42 USC 7401 et seq.)	In 2007, the U.S. Supreme Court ruled that CO <sub>2</sub> is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions.
<b>CA</b>	California Global Warming Solutions Act of 2006 (AB 32)	Under AB 32, CARB is responsible for monitoring and reducing GHG emissions in the State and for establishing a statewide GHG emissions cap for 2020 that is based on 1990 emissions levels. CARB (2009) has adopted the AB 32 Climate Change Scoping Plan (Scoping Plan), which contains the main strategies for California to implement to reduce CO <sub>2</sub> e emissions by 169 million metric tons (MMT) from the State’s projected 2020 emissions level of 596 MMT CO <sub>2</sub> e under a business-as-usual scenario. The Scoping Plan breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the State’s GHG inventory, but does not directly discuss GHG emissions

**Table 3.7-1 Laws, Regulations, and Policies (GHGs)**

		generated by construction activities.
<b>CA</b>	Senate Bills (SB) 97 and 375	<ul style="list-style-type: none"> <li>• Pursuant to SB 97, the State Office of Planning and Research prepared and the Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Effective as of March 2010, the revisions to the CEQA Environmental Checklist Form (Appendix G) and the Energy Conservation Appendix (Appendix F) provide a framework to address global climate change impacts in the CEQA process; State CEQA Guidelines section 15064.4 was also added to provide an approach to assessing impacts from GHGs.</li> <li>• SB 375 (effective January 1, 2009) requires CARB to develop regional reduction targets for GHG emissions, and prompted the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the State. The targets apply to the regions covered by California’s 18 metropolitan planning organizations (MPOs). The 18 MPOs must develop regional land use and transportation plans and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.</li> </ul>
<b>CA</b>	Executive Orders (EOs)	<p>Under EO S-01-07, which set forth a low carbon fuel standard for California, the carbon intensity of California’s transportations fuels is to be reduced by at least 10 percent by 2020.</p> <p>EO S-3-05 established statewide GHG emission targets of reducing emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below the 1990 level by 2050.</p>

**1 Local**

2 The BAAQMD has developed CEQA Guidelines to assist local jurisdictions and lead  
 3 agencies in complying with the requirements of CEQA regarding potentially adverse  
 4 impacts to air quality, including GHGs. The BAAQMD CEQA Guidelines were updated  
 5 in June 2010 (BAAQMD 2010b) to include reference to thresholds of significance  
 6 adopted by the Air District Board on June 2, 2010, and were set aside on March 5,  
 7 2012, by the Alameda County Superior Court (BAAQMD 2012). BAAQMD has appealed  
 8 the decision, and an appeal is pending.

9 While the appeal is pending, BAAQMD is no longer recommending that the 2010  
 10 Thresholds be used as a generally applicable measure of a project’s significant air  
 11 quality and GHG impacts. BAAMQD indicates that lead agencies may continue to rely  
 12 on the BAAQMD’s 1999 Thresholds of Significance (BAAQMD 1999).

13 The San Francisco Bay Area as a whole does not have a Climate Action Plan.  
 14 BAAQMD adopted a resolution in 2005 establishing a Climate Protection Program and  
 15 acknowledging the link between climate protection and programs to reduce air pollution  
 16 in the Bay Area, and formed a standing committee on climate protection to provide  
 17 direction on BAAQMD’s climate protection activities. The BAAQMD’s focus is to  
 18 integrate climate protection activities into existing BAAQMD programs (BAAQMD 2013).

1 **3.7.3 Impact Analysis**

2 With the exception of very large projects, GHG from individual projects are typically less  
 3 than significant at the project scale; however, GHG emissions cumulatively have a  
 4 substantial environmental impact. The revisions to the State CEQA Guidelines adopted  
 5 December 30, 2009 (§ 15064, subd. (h)(3)) provide the basis for assessing cumulative  
 6 impacts of GHG emissions. Section 15064 indicates that a

7 *...lead agency may determine that a project’s incremental contribution to a*  
 8 *cumulative effect is not cumulatively considerable if the project will comply with the*  
 9 *requirements in a previously approved plan or mitigation program (including, but not*  
 10 *limited to, water quality control plan, air quality attainment or maintenance plan,*  
 11 *integrated waste management plan, habitat conservation plan, natural community*  
 12 *conservation plan, plans or regulations for the reduction of greenhouse gas*  
 13 *emissions) that provides specific requirements that will avoid or substantially lessen*  
 14 *the cumulative problem within the geographic area in which the project is located.*

15 The guidance also encourages lead agencies to quantify GHG emissions where  
 16 possible.

17 **a) Generate GHG emissions, either directly or indirectly, that may have a**  
 18 **significant impact on the environment?**

19 **Less than Significant.** The Project would generate GHG emissions, but not in levels  
 20 that would result in a significant cumulative impact on the environment. The Project  
 21 involves 2 weeks of construction activity; no GHGs would be emitted from the Project  
 22 following removal of the outfall and piles. During Project activities, GHG emissions  
 23 would be generated from a variety of sources such as worker vehicles, material haul  
 24 trucks, removal equipment, and marine harbor-craft. As shown in Table 3.7-2, the  
 25 Project would generate an estimated 12.1 MTCO<sub>2e</sub>/year (see Appendix C, Air Quality  
 26 and Greenhouse Gas Emissions Estimates).

**Table 3.7-2 Project GHG Emissions**

Pollutant	Construction Equipment Emissions Totals (lbs/day)	Marine Equipment Emissions Totals (lbs/day)	Total Daily Emissions (lbs/day)	Total Project GHG Impacts (MTCO <sub>2e</sub> /year)	BAAQMD 2010 GHG Inventory Total (MTCO <sub>2e</sub> /year)
CO <sub>2e</sub>	1336.5	878.1	2214.6	12.1	95,800,000

27 Project construction emissions will be short term and the contribution to the BAAQMD’s  
 28 overall GHG emissions will be diminutive considering there were 95.8 million million  
 29 tons of CO<sub>2e</sub> (MTCO<sub>2e</sub>) released within the Bay Area in 2007 (BAAQMD 2010a).

1 Therefore, the Project would not interfere with the AB 32 reduction goals (see Table 3.7-  
2 1). As a result, the Project’s GHG related impacts are less than significant.

3 ***b) Conflict with any applicable plan, policy, or regulation of an agency adopted***  
4 ***for the purpose of reducing the emissions of GHG emissions?***

5 **Less than Significant.** The CARB Climate Change Scoping Plan (2008) establishes  
6 GHG reduction strategies and goals for California’s future. The plan primarily aims to  
7 deal with large contributors to California’s GHG emissions such as power generation  
8 and transportation. This is in large part due to the global nature of climate change where  
9 significant contributors are on a much larger scale than the Project. The scale of this  
10 Project’s minimal temporary and short-term removal activity is insignificant relative to  
11 the goals of the scoping plan and climate change. The Project would not conflict with  
12 any applicable plan, policy or regulation of an agency adopted for the purpose of  
13 reducing the emissions of GHGs, therefore the impact from the Project is less than  
14 significant.

#### 15 **3.7.4 Mitigation Summary**

16 The Project would not result in significant impacts from GHG emissions; therefore, no  
17 mitigation is required.

1 **3.8 HAZARDS AND HAZARDOUS MATERIALS**

<b>HAZARDS AND HAZARDOUS MATERIALS – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.8.1 Environmental Setting**

3 The presence of hazardous materials or other safety hazards at the Project site,  
 4 including accidental releases such as spills or emissions during removal activities, is  
 5 unlikely, but could affect residents, workers, and visitors within and adjacent to the  
 6 Project site.

1 The Project is located in the Suisun Bay, in northern unincorporated Contra Costa  
 2 County. Primary Project needs include the ability to recycle or dispose of non-  
 3 hazardous solid waste associated with the removal of the outfall pipe, including treated  
 4 wood, and other solid piping.

5 Hazardous materials that could exist within the outfall pipe and associated remnants  
 6 include: creosote-treated timber pilings, petroleum based residues, and hydraulic fluids.  
 7 Additionally, hazardous materials will be used and generated during removal activities.  
 8 All associated hazardous materials will be removed from the Project site for proper  
 9 disposal.

### 10 3.8.2 Regulatory Setting

#### 11 Federal and State

12 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 13 Project are identified in Table 3.8-1.

**Table 3.8-1 Laws, Regulations, and Policies (Hazards and Hazardous Materials)**

<b>U.S.</b>	Clean Water Act (CWA) (33 USC 1251 et seq.)	The CWA is comprehensive legislation (it generally includes reference to the Federal Water Pollution Control Act of 1972, its supplementation by the CWA of 1977, and amendments in 1981, 1987, and 1993) that seeks to protect the nation’s water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the U.S. <i>(see below and in Section 3.9, Hydrology and Water Quality).</i>
<b>U.S.</b>	California Toxics Rule (40 CFR 131)	In 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to waters in the State of California. USEPA promulgated this rule based on the Administrator’s determination that the numeric criteria are necessary in the State of California to protect human health and the environment. Under CWA section 303(c)(2)(B), the USEPA requires states to adopt numeric water quality criteria for priority toxic pollutants for which the USEPA has issued criteria guidance, and the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses. These Federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries.
<b>U.S.</b>	Hazardous Materials Transportation Act (HMTA) (49 USC 5901)	The HMTA delegates authority to the U.S Department of Transportation to develop and implement regulations pertaining to the transport of hazardous materials and hazardous wastes by all modes of transportation. Additionally, the USEPA’s Hazardous Waste Manifest System is a set of forms, reports, and procedures for tracking hazardous waste from a generator’s site to the disposal site. Applicable Federal regulations are contained primarily in CFR Titles 40 and 49.
<b>U.S.</b>	National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300)	Authorized under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9605, as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99 through 499; and by CWA section 311(d), as amended by the Oil Pollution Act of 1990 (OPA), Pub. L. 101 through 380. The NCP outlines requirements for responding to both oil spills and releases of hazardous substances. It specifies compliance, but does not require the preparation of a written plan. It also provides a comprehensive system for reporting, spill containment, and cleanup. The U.S. Coast Guard

**Table 3.8-1 Laws, Regulations, and Policies (Hazards and Hazardous Materials)**

		(USCG) and USEPA co-chair the National Response Team. In accordance with 40 CFR 300.175, the USCG has responsibility for oversight of regional response for oil spills in “coastal zones,” as described in 40 CFR 300.120.
<b>U.S.</b>	Oil Pollution Act (OPA) (33 USC 2712)	The OPA requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances. The passage of the OPA motivated California to pass a more stringent spill response and recovery regulation and the creation of the Office of Spill Prevention and Response (OSPR) to review and regulate oil spill plans and contracts.
<b>U.S.</b>	Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.)	The RCRA authorizes the USEPA to control hazardous waste from “cradle-to-grave,” which encompasses its generation, transportation, treatment, storage, and disposal. RCRA’s Federal Hazardous and Solid Waste Amendments from 1984 include waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. The Department of Toxic Substances Control is the lead State agency for corrective action associated with RCRA facility investigations and remediation.
<b>U.S.</b>	Toxic Substances Control Act (TSCA) (15 USC 2601–2692)	The TSCA authorizes the USEPA to require reporting, record-keeping, testing requirements, and restrictions related to chemical substances and/or mixtures. It also addresses production, importation, use, and disposal of specific chemicals, such as polychlorinated biphenyls (PCBs), asbestos-containing materials, lead-based paint, and petroleum.
<b>U.S.</b>	Other	<ul style="list-style-type: none"> <li>• Act of 1980 to Prevent Pollution from Ships requires ships in U.S. waters, and U.S. ships wherever located, to comply with International Convention for the Prevention of Pollution from Ships.</li> <li>• Convention on the International Regulations for Preventing Collisions at Sea. These regulations establish “rules of the road” such as rights-of-way, safe speed, actions to avoid collision, and procedures to observe in narrow channels and restricted visibility.</li> <li>• Inspection and Regulation of Vessels (46 USC Subtitle II Part B). Federal regulations for marine vessel shipping are codified in 46 CFR parts 1 through 599 and are implemented by the USCG, Maritime Administration, and Federal Maritime Commission. These regulations provide that all vessels operating offshore, including those under foreign registration, are subject to requirements applicable to vessel construction, condition, and operation. All vessels (including motorboats) operating in commercial service (e.g., passengers for hire, transport of cargoes, hazardous materials, and bulk solids) on specified routes (inland, near coastal, and oceans) are subject to requirements applicable to vessel construction, condition, and operation. These regulations also allow for inspections to verify that vessels comply with applicable international conventions and U.S. laws and regulations.</li> <li>• Navigation and Navigable Waters regulations (33 CFR) include requirements pertaining to prevention and control of releases of materials (including oil spills) from vessels, traffic control, and restricted areas, and general ports and waterways safety.</li> </ul>
<b>CA</b>	Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Gov. Code § 8574.1 et	This Act and its implementing regulations seek to protect State waters from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill. The Act requires vessel and marine facilities to have marine oil spill contingency plans and to demonstrate financial responsibility, and requires immediate cleanup of spills, following the approved contingency plans, and fully mitigating impacts on wildlife. The Act assigns primary authority to the OSPR division within the CDFW to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the State. The

**Table 3.8-1 Laws, Regulations, and Policies (Hazards and Hazardous Materials)**

	seq.; Pub. Resources Code § 8750 et seq.)	CSLC assists OSPR with spill investigations and response.
CA	Other	<ul style="list-style-type: none"> <li>• California Clean Coast Act (SB 771) establishes limitations for shipboard incinerators, and the discharge of hazardous material—including oily bilgewater, graywater, and sewage—into State waters or a marine sanctuary. It also provides direction for submitting information on visiting vessels to the CSLC and reporting of discharges to the State water quality agencies.</li> <li>• California Harbors and Navigation Code specifies a State policy to “promote safety for persons and property in and connected with the use and equipment of vessels,” and includes laws concerning marine navigation that are implemented by local city and county governments. This Code also regulates discharges from vessels within territorial waters of the State of California to prevent adverse impacts on the marine environment. This Code regulates oil discharges and imposes civil penalties and liability for cleanup costs when oil is intentionally or negligently discharged to the State waters.</li> <li>• California Seismic Hazards Mapping Act (Pub. Resources Code, § 2690) and Seismic Hazards Mapping Regulations (Cal. Code Regs., tit. 14, Div. 2, Ch. 8, Art. 10) (See Section 3.6, <i>Geology and Soils</i>).</li> <li>• Hazardous Waste Control Act (Cal. Code Regs., tit. 26) defines requirements for proper management of hazardous materials.</li> <li>• Porter-Cologne Water Quality Control Act (Cal. Water Code, § 13000 et seq.) (See Section 3.9, <i>Hydrology and Water Quality</i>).</li> </ul>

1 **Local**

2 The following goals and policies regarding hazardous materials uses from the Contra  
3 Costa County General Plan (2005) were considered in this analysis:

- 4
- Safety Element
    - 5 ○ Goal 10-I: To provide public protection from hazards associated with use,
    - 6 transport, treatment, and disposal of hazardous substances.
    - 7 ○ Policy 10-61: Hazardous waste releases from both private companies and
    - 8 from public agencies shall be identified and eliminated.
    - 9 ○ Policy 10-68: When an emergency occurs in the transportation of hazardous
    - 10 materials, the County Office of Emergency Services shall be notified as soon
    - 11 as possible.
  - Public Facilities/Services Element – Hazardous Waste Management
    - 12 ○ Goal 7-AM: To eliminate the generation and disposal of hazardous waste
    - 13 materials to the maximum extent feasible by:
    - 14
      - 15 1. Reducing the use of hazardous substances and the generation of
      - 16 hazardous wastes;
      - 17 2. Recovering and recycling the remaining waste for reuse;
      - 18 3. Treating those waste not amenable to source reduction or recycling so
      - 19 that the environment and community health are not threatened by their
      - 20 ultimate disposal;



- 1                   4. Incinerating those wastes amenable to this technology; and
- 2                   5. Properly disposing of residuals in approved residual repositories.
- 3           ○ Policy 7-116: The accelerated clean-up of contaminated sites, including
- 4           containment of the sites as quickly as possible, shall be supported,
- 5           commensurate with minimizing the risk to the environment and to public health.

### 6   **3.8.3 Impact Analysis**

#### 7   ***a) Create a significant hazard to the public or the environment through the routine*** 8   ***transport, use, or disposal of hazardous materials?***

9   **Less than Significant with Mitigation.** The Project includes the routine transport, use,  
10 and disposal of hazardous materials that could create a significant hazard to the public  
11 or environment absent measures to avoid or reduce this potential impact. Specifically,  
12 Project-related removal activities will generate debris from the outfall pipe, pilings, and  
13 associated materials, some of which may be hazardous. Additionally, the outfall pipe  
14 would be removed using a barge and marine construction equipment, which would  
15 require the routine use of hazardous materials including fuel (diesel and gasoline) and  
16 marking paint. There is no indication of the presence of lead-based paint or other  
17 residual materials associated with the outfall pipe.

18 Although the levee road would be used for onshore access via the occasional truck or  
19 pedestrian, all hazardous materials to be used at the Project site and materials slated  
20 for removal will be staged and stored at the shore base contractor’s yard and not on the  
21 levee road. A California Hazardous Materials Business Plan consistent with  
22 requirements of the California Fire Code will be implemented for the contractor’s yard.  
23 All hazardous materials and hazardous wastes to be stored or used at the contractor’s  
24 yard shore base will be identified and a record of the inventory will be kept on site.

25 The routine transport, use, or disposal of hazardous materials described above could  
26 have a potentially significant impact to the public or the environment. However,  
27 implementation of **MM BIO-3** and **MM BIO-4**, including the use of a turbidity curtain,  
28 floating boom, and drip pans to contain any leaks of hazardous materials from the  
29 barge, will reduce impacts to less than significant.

30       **MM BIO-3. In Water Turbidity Protections.** A turbidity curtain shall be installed  
31 to protect fish from potential water quality/turbidity effects. The curtain (100 linear  
32 feet) shall be installed and maintained around the shoreline terminus flange of  
33 the pipe to contain muddy water and sediment materials that escape from the  
34 6-inch-diameter outfall pipe during pipe removal. Sawdust generated during  
35 cutting and removal of timber pilings will also be contained in this curtain and/or  
36 skimmed and removed if floating in water (and disposed of in plastic bags). No  
37 activities that would entrain or impinge fish shall be used.

1           **MM BIO-4. Protection from Release of Toxic Substances.** The Applicant shall  
2 implement the following measures to prevent the release of toxic substances.

- 3           • All engine-powered equipment used and operated upon and from the deck of  
4 the barge shall incorporate the use of drip-pans or other means to retain fluids  
5 beneath the equipment.
- 6           • Only approved and certified fuel cans with “no-spill” spring loaded lids shall be  
7 used when fueling up diesel or gas engines. Engines will be turned OFF and  
8 fueling will not be done over the water. A spill kit with absorbent diapers shall  
9 be readily available next to each filling area.
- 10          • A continuous floating oil-absorbent sock shall be deployed and maintained  
11 around the entire barge to contain any accidental leakage of fuel or hydraulic  
12 fluids.

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

16 **Less than Significant Impact with Mitigation.** The Project’s demolition activities  
17 create the potential for an accidental release of hazardous materials. Fuels, lubricants,  
18 and hydraulic fluid are needed to operate vehicles, equipment and machinery during  
19 demolition activities. Because work is proposed on and near the water, an upset or  
20 accidental release of these hazardous materials has the potential to adversely affect  
21 surface water and nearby ecological receptors. However, implementation of **MM BIO-4**,  
22 above, will reduce impacts to less than significant.

23 ***c) Emit hazardous emissions or handle hazardous or acutely hazardous***  
24 ***materials, substances, or waste within ¼ mile of an existing or proposed school?***

25 **No Impact.** There are no schools within 0.25 mile of the Project site, therefore no  
26 impacts are expected.

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

30 **No Impact.** The California Environmental Protection Agency (Cal EPA) Hazardous  
31 Waste and Substances Site List (Cortese List), which is compiled pursuant to  
32 Government Code section 65962.5, was reviewed, and the property is not listed (Cal  
33 EPA 2014), therefore no impacts are expected.

34 ***e) For a project located within an airport land use plan or, where such a plan has***  
35 ***not been adopted, within 2 miles of a public airport or public use airport, would***

1 ***the project result in a safety hazard for people residing or working in the project***  
2 ***area?***

3 **No Impact.** The Project site is not within an airport land use planning area or within  
4 2 miles of a public airport or public use airport, therefore no impacts are expected.

5 ***f) For a project within the vicinity of a private airstrip, would the project result in a***  
6 ***safety hazard for people residing or working in the project area?***

7 **No Impact.** The Project site is not within 2 miles of a private air strip, therefore no  
8 impacts are expected.

9 ***g) Impair implementation of or physically interfere with an adopted emergency***  
10 ***response plan or emergency evacuation plan?***

11 **No Impact.** The Project would not interfere with an emergency response plan because  
12 it would occur entirely within Honeywell property or on Suisun Bay and would not affect  
13 any roads or other facilities that are part of an adopted emergency response plan or  
14 emergency evacuation route. Facility staff stationed at the guard house and in the  
15 administration building would provide access to emergency personnel during the  
16 Project. See Section 3.16 (e) in Transportation/Traffic for a discussion of potential  
17 temporary impacts to marine police services and emergency response.

18 ***h) Expose people or structures to a significant risk of loss, injury or death***  
19 ***involving wildland fires, including where wildlands are adjacent to urbanized***  
20 ***areas or where residences are intermixed with wildlands?***

21 **No Impact.** The Project site is not subject to wildland fires or in an area where  
22 residences are intermixed with wildlands, therefore no impacts are expected.

### 23 **3.8.4 Mitigation Summary**

24 Implementation of the following measure will reduce Project-related impacts associated  
25 with hazards and hazardous materials to less than significant.

- 26       • MM BIO-3 In Water Turbidity Protections  
27       • MM BIO-4 Protection from Release of Toxic Substances

1 3.9 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1 **3.9.1 Environmental Setting**

2 **Surface Water**

3 The Project site lies within the Suisun Bay Basin hydrologic unit of the San Francisco  
4 Bay Area Hydrologic Region. Suisun Bay is a shallow tidal estuary that lies at the  
5 confluence of the Sacramento and San Joaquin Rivers, forming the entrance to the  
6 Sacramento-San Joaquin River Delta. The San Francisco Bay Hydrologic Region  
7 encompasses approximately 4,500 square miles and includes the counties of San  
8 Francisco, Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and  
9 Alameda. The Estuary is the largest estuary on the west coast of the United States and  
10 functions as the drainage outlet for the Central Valley's freshwater systems. The Bay  
11 provides drinking water for more than 70 percent of the California population and  
12 irrigation for approximately 4.5 million acres of farmland. It lies within the fourth largest  
13 metropolitan region of the U.S.

14 The Estuary's dynamic and complex environmental conditions support a high level of  
15 diversity that drives a productive ecosystem. Many plant and animal species' survival  
16 depends on the wide variety of habitats within the Estuary system, which includes  
17 deepwater channels, tidal flats, marshlands, freshwater streams, rivers, and lagoons.  
18 Additionally, the salinities in different portions of the Bay vary among seasons and  
19 years, and this creates a dynamic distribution of fish assemblages, invertebrates, plants,  
20 birds, and animals within them.

21 The rate and timing of the freshwater flows coming from the rivers and streams that flow  
22 into the Estuary system influence its physical, chemical, and biological conditions. Flows  
23 are seasonal, with over 90 percent of the annual runoff occurring between October and  
24 April. However, much of this inflow is trapped upstream by dams, reservoirs, and canals  
25 for water diversion projects, which potentially affects the Bay's characteristics.

26 The SFBRWQCB (2011) identifies several beneficial uses of the Suisun Bay that must  
27 be protected, including: industrial service water supply, commercial and sport fishing,  
28 estuarine habitat, fish migration, preservation of rare and endangered species,  
29 spawning, wildlife habitat, water contact recreation, noncontact water recreation, and  
30 navigation. Pursuant to Section 303(d) of the CWA, states are also required to list  
31 impaired waters based on whether or not they meet state water quality standards. The  
32 SFBRWQCB has listed the entire Bay as an impaired water body. For the Suisun Basin,  
33 pollutants of concern from both point and nonpoint sources that do not meet the State  
34 water quality standards include the following: chlordane; dichlorodiphenyltrichloroethane  
35 (DDT); dieldrin; dioxin compounds, exotic species; furan compounds; mercury; nickel;  
36 polychlorinated biphenyls (PCBs); PCBs – dioxin-like; and selenium (USEPA 2006).

1 **Groundwater**

2 Shallow groundwater aquifers are closely linked to the local surface waters. The San  
 3 Francisco Bay Hydrologic Region has 28 identified groundwater basins comprising  
 4 approximately 1,400 square miles in total, of which five percent is allocated for  
 5 agricultural and urban uses and less than one percent is distributed for groundwater  
 6 uses. The Pittsburg Plain Groundwater Basin is located just to the south and east of the  
 7 Project site. The SFBRWQCB (2011) lists potential beneficial uses in this Groundwater  
 8 Basin as municipal and domestic water supply, industrial service water supply, and  
 9 agricultural water supply.

10 **3.9.2 Regulatory Setting**

11 **Federal and State**

12 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 13 Project are identified in Table 3.9-1.

**Table 3.9-1 Laws, Regulations, and Policies (Hydrology and Water Quality)**

<b>U.S.</b>	Clean Water Act (CWA) (33 USC 1251 et seq.)	<p>The CWA is comprehensive legislation (it generally includes reference to the Federal Water Pollution Control Act of 1972, its supplementation by the CWA of 1977, and amendments in 1981, 1987, and 1993) that seeks to protect the nation’s water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the U.S. These water quality standards are promulgated by the USEPA and enforced in California by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs). CWA sections include:</p> <ul style="list-style-type: none"> <li>• <u>State Water Quality Certification</u>. Section 401 (33 USC 1341) requires certification from the State or interstate water control agencies that a proposed water resources project is in compliance with established effluent limitations and water quality standards. USACE projects, as well as applicants for Federal permits or licenses are required to obtain this certification.</li> <li>• <u>National Pollution Discharge Elimination System (NPDES)</u>. Section 402 (33 USC 1342) establishes conditions and permitting for discharges of pollutants under the NPDES.</li> <li>• <u>Ocean Discharges</u>. Section 403 (33 USC 1343) addresses criteria and permits for discharges into the territorial seas, the contiguous zone, and the oceans.</li> <li>• <u>Permits for Dredged or Fill Material</u>. Section 404 (33 USC 1344) authorizes a separate permit program for disposal of dredged or fill material in U.S. waters.</li> </ul>
<b>U.S.</b>	Oil Pollution Act (OPA) (33 USC 2712)	<p>The OPA requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances. The passage of the OPA motivated California to pass a more stringent spill response and recovery regulation and the creation of the OSPR to review and regulate oil spill plans and contracts.</p>
<b>U.S.</b>	Rivers and Harbors Act (33 USC 401)	<p>This Act governs specified activities (e.g., construction of structures and discharge of fill) in “navigable waters” of the U.S. (waters subject to the ebb and flow of the tide or that are presently used, have been used in the past, or may be susceptible for use to transport interstate or foreign commerce). Under section 10, excavation or fill within navigable waters requires approval from the USACE,</p>

**Table 3.9-1 Laws, Regulations, and Policies (Hydrology and Water Quality)**

		and the building of any wharf, pier, jetty, or other structure is prohibited without Congressional approval.
<b>CA</b>	Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.) (Porter-Cologne)	<p>Porter-Cologne is the principal law governing water quality in California. The Act established the SWRCB and nine RWQCBs who have primary responsibility for protecting State water quality and the beneficial uses of State waters. Porter-Cologne also implements many provisions of the Federal CWA, NPDES permitting program. Pursuant to the CWA § 401, applicants for a Federal license or permit for activities that may result in any discharge to waters of the U. S. must seek a Water Quality Certification (Certification) from the State in which the discharge originates. Such Certification is based on a finding that the discharge will meet water quality standards and other appropriate requirements of State law. In California, RWQCBs issue or deny certification for discharges within their jurisdiction. The SWRCB has this responsibility where projects or activities affect waters in more than one RWQCB's jurisdiction. If the SWRCB or a RWQCB imposes a condition on its Certification, those conditions must be included in the Federal permit or license.</p> <p>Statewide Water Quality Control Plans include: individual RWQCB Basin Plans; the California Ocean Plan; the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta Plan); the Water Quality Control Plan for Enclosed Bays and Estuaries of California; and the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan). These Plans contain enforceable standards for the various waters they address. For example:</p> <ul style="list-style-type: none"> <li>• <u>Basin Plan</u>. Porter-Cologne (§ 13240) requires each RWQCB to formulate and adopt a Basin Plan for all areas within the Region. Each RWQCB establishes water quality objectives to ensure the reasonable protection of beneficial uses and a program of implementation for achieving water quality objectives within the basin plans. 40 CFR 131 requires each State to adopt water quality standards by designating water uses to be protected and adopting water quality criteria that protect the designated uses. In California, the beneficial uses and water quality objectives are the State's water quality standards.</li> <li>• The <u>California Ocean Plan</u> establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's ocean and coastal waters. For example, the Ocean Plan incorporates the State water quality standards that apply to all NPDES permits for discharges to ocean waters.</li> </ul>
<b>CA</b>	San Francisco Bay Plan (see also Table 1-2)	<p>Pursuant to the Bay Plan, BCDC responsibilities include the following:</p> <p>Regulation of all filling and dredging in the Bay:</p> <ul style="list-style-type: none"> <li>• Administration of the Federal Coastal Zone Management Act within the Bay segment of the California coastal zone;</li> <li>• Regulation of new development within the first 100 feet inland from the Bay to ensure public access to the Bay is provided;</li> <li>• Pursuit of an active planning program to implement studies of Bay issues so that BCDC plans and policies are based on the best available current information;</li> <li>• Participation in the region-wide State and Federal program to establish a Long Term Management Strategy for dredging and dredged material disposal to be conducted in an environmentally sound and economically prudent way.</li> </ul>

1 **Local**

2 Contra Costa County General Plan goals and policies relevant to the Project include the  
3 following.

- 4 • Water Resources Goal 8-T: To conserve, enhance, and manage water  
5 resources, protect their quality, and assure an adequate long-term supply of  
6 water for domestic, fishing, industrial, and agricultural use.
- 7 • Water Resources Goal 8-V: To preserve and restore remaining natural  
8 waterways in the county which have been identified as important and  
9 irreplaceable natural resources.
- 10 • General Water Resources Policy 8-75: Preserve and enhance the quality of  
11 surface and groundwater resources.

12 **3.9.3 Impact Analysis**

13 **a) Violate any water quality standards or waste discharge requirements?**

14 **Less than Significant with Mitigation.** The Project has the potential to violate water  
15 quality standards or waste discharge requirements. The Project would temporarily  
16 cause localized turbidity increases within Suisun Bay as the piping is lifted from the Bay  
17 floor. A segment of the piping is buried beneath approximately 6 to 12 inches crushed  
18 rock (2-3-inch-diameter), 12 inches of cover rock (<6 inches), and a range of 3 to 60  
19 inches of mud and soft sediments. Lifting the piping out of the Bay floor would generate  
20 temporary, localized suspension of sediment and rock in the water column. However,  
21 with implementation of **MM BIO-3** and **MM BIO-4**, identified below, potential impacts  
22 would be avoided or reduced to a less than significant level.

23 **MM BIO-3. In Water Turbidity Protections.** A turbidity curtain shall be installed  
24 to protect fish from potential water quality/turbidity effects. The curtain (100 linear  
25 feet) shall be installed and maintained around the shoreline terminus flange of  
26 the pipe to contain muddy water and sediment materials that escape from the  
27 6-inch-diameter outfall pipe during pipe removal. Sawdust generated during  
28 cutting and removal of timber pilings will also be contained in this curtain and/or  
29 skimmed and removed if floating in water (and disposed of in plastic bags). No  
30 activities that would entrain or impinge fish shall be used.

31 **MM BIO-4. Protection from Release of Toxic Substances.** The Applicant shall  
32 implement the following measures to prevent the release of toxic substances.

- 33 • All engine-powered equipment used and operated upon and from the deck of  
34 the barge shall incorporate the use of drip-pans or other means to retain fluids  
35 beneath the equipment.



- 1           • Only approved and certified fuel cans with “no-spill” spring loaded lids shall be  
2           used when fueling up diesel or gas engines. Engines will be turned OFF and  
3           fueling will not be done over the water. A spill kit with absorbent diapers shall  
4           be readily available next to each filling area.  
5           • A continuous floating oil-absorbent sock shall be deployed and maintained  
6           around the entire barge to contain any accidental leakage of fuel or hydraulic  
7           fluids.

8   ***b) Substantially deplete groundwater supplies or interfere substantially with***  
9   ***groundwater recharge such that there would be a net deficit in aquifer volume or***  
10 ***a lowering of the local groundwater table level (e.g., the production rate of pre-***  
11 ***existing nearby wells would drop to a level which would not support existing land***  
12 ***uses or planned uses for which permits have been granted)? Result in a***  
13 ***potentially significant adverse impact on groundwater quality?***

14 **No Impact.** The Project would not use groundwater or create new impermeable  
15 surfaces that would interfere with groundwater recharge.

16 ***c) Substantially alter the existing drainage pattern of the site or area, including***  
17 ***through the alteration of the course of a stream or river, in a manner which would***  
18 ***result in substantial erosion or siltation on- or off-site?***

19 **Less than Significant with Mitigation.** The Project’s outfall pipe no longer carries  
20 process wastewater. Although the pipe’s removal would not alter the existing drainage  
21 pattern of the site or surrounding area, the Project’s removal of two piles could result in  
22 potential erosion, and increased turbidity near the marsh. Implementation of **MM BIO-3**,  
23 above, will ensure that Project activities do not produce substantial erosion or siltation  
24 by requiring the use of a turbidity curtain to contain sediment and prevent increased  
25 turbidity during removal activities. Implementation of **MM BIO-3** will reduce potential  
26 erosion or siltation impacts to less than significant.

27 ***d) Substantially alter the existing drainage pattern of the site or area, including***  
28 ***through the alteration of the course of a stream or river, or substantially increase***  
29 ***the rate or amount of surface runoff in a manner which would result in flooding***  
30 ***on- or off-site, or place structures within a 100-year flood hazard area which***  
31 ***would impede or redirect flood flows?***

32 **No Impact.** Project activities would not alter the drainage pattern of the site, place  
33 structures in the flood plain that might impede or redirect flood waters, or create new  
34 impervious surfaces that might alter the rate of surface runoff. The obsolete outfall pipe  
35 no longer carries process wastewater. The pipe’s removal would not alter the existing  
36 drainage pattern of the site or surrounding area. Site contours would be restored to pre-  
37 Project conditions once the outfall pipe has been removed. Hence the Project would not

1 substantially increase the rate or amount of surface runoff in a manner resulting in  
2 flooding on- or off-site. No impacts are expected.

3 ***e) Create or contribute runoff water which would exceed the capacity of existing***  
4 ***or planned stormwater drainage systems or provide substantial additional***  
5 ***sources of polluted runoff?***

6 **Less than Significant Impact with Mitigation.** Project activities would not create new  
7 discharges of water to a storm water drainage system. However, polluted water could  
8 potentially run off the barge and other marine construction equipment during removal  
9 activities. Implementation of **MM BIO-4**, including the use of a hydrocarbon containment  
10 boom positioned surrounding the barge, and drip pans for equipment on the barge, will  
11 ensure that Project activities do not produce significant additional sources of polluted  
12 runoff during removal activities; therefore, the potential impacts of polluted runoff would  
13 be less than significant.

14 ***f) Otherwise substantially degrade water quality?***

15 **Less than Significant Impact with Mitigation.** As mentioned above, polluted water  
16 could potentially run off the barge and other marine construction equipment during  
17 removal activities. Implementation of **MM BIO-4**, including the use of a hydrocarbon  
18 containment boom positions surrounding the barge, and drip pans for equipment on the  
19 barge will ensure that Project activities do not produce significant sources of polluted  
20 runoff during outfall removal. No other elements of the Project would generate  
21 contaminants that would cause substantial degradation of water quality. Implementation  
22 of **MM BIO-4** will reduce potential impacts to less than significant.

23 ***g) Place housing within a 100-year flood hazard area as mapped on a federal***  
24 ***Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard***  
25 ***delineation map?***

26 **No Impact.** The Project does not include the construction of housing, therefore no  
27 impacts are expected.

28 ***h) Place within a 100-year flood hazard areas structures which would impede or***  
29 ***redirect flood flows?***

30 **No Impact.** The Project does not include the construction of structures within the  
31 100-year flood hazard area. The temporary use of a barge, equipment and materials in  
32 Suisun Bay and within the 100-year flood plain would not impede or redirect flood flows,  
33 therefore no impacts are expected.

34 ***i) Expose people or structures to a significant risk of loss, injury or death***  
35 ***involving flooding, including flooding as a result of the failure of a levee or dam?***

1 **No Impact.** No buildings or other structures would be constructed that would expose  
2 people or structures to a significant risk of loss, injury or death due to flooding, including  
3 flooding as a result of the failure of a levee or dam, therefore no impacts are expected.

4 ***j) Inundation by seiche, tsunami, or mudflow?***

5 **Less than Significant.** The Project site is located within Suisun Bay. Areas that are  
6 susceptible to tsunami inundation tend to be located in low-lying coastal areas and  
7 these waves would be substantially muted as they near Suisun Bay. Due to the large  
8 size of the Estuary, the hazard from seiche waves is low. The flat terrain at the Project  
9 site is not subject to mudflows. Since the Project would occur over a 2-week period, an  
10 impact from a tsunami or seiche is unlikely and impacts would be less than significant.

11 **3.9.4 Mitigation Summary**

12 Implementation of the following mitigation measures would reduce the potential for  
13 Project-related impacts to Hydrology and Water Quality to less than significant:

- 14 • MM BIO-3 In Water Turbidity Protections
- 15 • MM BIO-4 Protection from Release of Toxic Substances

**1 3.10 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**2 3.10.1 Environmental Setting**

3 The Project is located in the Suisun Bay, in northern unincorporated Contra Costa  
 4 County. Predominant land uses in the Project vicinity are open water (Unrestricted) in  
 5 the Suisun Bay, Heavy Industrial, General Agricultural, and a Planned Unit  
 6 Development nearly 1 mile away. A description of current land uses in and adjacent to  
 7 the Project site is included below.

**8 Existing Land Uses – Onshore**

9 Two existing onshore land uses immediately adjacent to the Project site are General  
 10 Agriculture and Heavy Industrial. The General Agriculture area, also designated as  
 11 Open Space in the Contra Costa County General Plan, is controlled mainly by the  
 12 Concord Naval Weapons Station, Military Ocean Terminal, which is located  
 13 approximately 0.5 mile to the west. This is officially Open Space, however, there is  
 14 limited access and no trails that pass through or near the Project site. The Industrial  
 15 area was the site of the dismantled GWF power plant, of which this outfall pipe was a  
 16 part. The McAvoy Harbor marina, which will be used for temporary parking as well as a  
 17 ferry service for the workers, is designated as a recreational area. The Project site is  
 18 located near the Census-designated place of Bay Point, which has a population of  
 19 21,349 people (U.S. Census Bureau 2010). The densest nearby residential area is  
 20 nearly 1 mile southeast of the Project site.

**21 Existing Land Uses – Offshore**

22 Offshore existing land uses adjacent to the Project site include a shipping channel and  
 23 recreational boating area. The Suisun Bay is part of a shipping channel used for  
 24 commercial and military shipping bound for the Port of Sacramento and the Port of

1 Stockton, as well as several local refineries. The nearest island in the Suisun Bay is  
 2 Middle Ground Island, approximately 0.8 mile to the north.

3 **County General Plan and Zoning Ordinance Land Use Designations**

4 The Project area is located in the Suisun Bay, an unrestricted zone of Contra Costa  
 5 County. Its land use designation is Water (Contra Costa County Community  
 6 Development Department 2005).

7 **3.10.2 Regulatory Setting**

8 **Federal and State**

9 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 10 Project are identified in Table 3.10-1.

**Table 3.10-1 Laws, Regulations, and Policies (Land Use and Planning)**

<b>U.S.</b>	CZMA (see Table 1.2).	
<b>CA</b>	San Francisco Bay Plan (see also Table 1-2)	BCDC has jurisdiction over the open water, marshes, and mudflats of the greater San Francisco Bay; the first 100 feet from the shoreline; the portion of the Suisun Marsh below the 10-foot contour line; portions of most creeks, rivers, slough, and other tributaries that flow into the San Francisco Bay; and salt ponds, duck hunting preserves, game refuges, and other managed wetlands that have been diked off from San Francisco Bay. Permits from BCDC are required for most projects proposed along the shoreline, particularly if they include the following: <ul style="list-style-type: none"> <li>• Placing solid material, building or repairing docks or pile-supported or cantilevered structures, disposing of material, or mooring a vessel for a long period in San Francisco Bay or in certain tributaries that flow into the Bay;</li> <li>• Dredging or extracting material from the Bay bottom;</li> <li>• Substantially changing the use of any structure or area;</li> <li>• Constructing, remodeling, or repairing a structure; or</li> <li>• Subdividing property or grading land.</li> </ul>

11 **Local**

12 Regional and local goals, policies, and/or regulations applicable to this issue area are  
 13 listed below.

14 *Association of Bay Area Governments*

15 ABAG is a regional planning agency for the San Francisco Bay region, which consists of  
 16 nine counties and 101 cities and more than 7 million people. ABAG works to address  
 17 regional issues such as housing, transportation, economic development, education, and  
 18 environment through advocacy and collaboration among local governments. As an  
 19 advisory organization, ABAG has limited statutory authority.

1 *San Francisco Bay Area Conservancy Program (California Coastal Conservancy)*

2 The San Francisco Bay Area Conservancy was established in 1997 by the California  
3 State Legislature to protect the unique natural and recreational resources of the San  
4 Francisco Bay area. The Conservancy partners with various public agencies and local  
5 non-profits to implement measures that will preserve or improve these resources. Major  
6 issues the Conservancy tries to address include preserving open space, improving  
7 access to recreational opportunities, restoring wetland habitats, protecting watersheds,  
8 preserving farming and ranching, and providing clean water.

9 *Contra Costa County General Plan*

10 The following goals and policies from the Contra Costa County General Plan (2005)  
11 were considered in this analysis.

12 Land Use Element

- 13 • *Goal 3-C:* To encourage aesthetically and functionally compatible development  
14 which reinforces the physical character and desired images of the County and its  
15 subregions.
- 16 • *Policy 3-16:* Community appearance shall be upgraded by encouraging  
17 redevelopment, where appropriate, to replace inappropriate uses.

18 Conservation Element

- 19 • *Goal 8-A:* To preserve and protect the ecological resources of the County.
- 20 • *Policy 8-3:* Watersheds, natural waterways, and areas important for the  
21 maintenance of natural vegetation and wildlife populations shall be preserved  
22 and enhanced.

23 Open Space Element

- 24 • *Goal 9-A:* To preserve and protect the ecological, scenic and cultural/historic,  
25 and recreational resource lands of the County.
- 26 • *Policy 9-2:* Historic and scenic features, watersheds, natural waterways, and  
27 areas important for the maintenance of natural vegetation and wildlife  
28 populations shall be preserved and enhanced.
- 29 • *Goal 9-12:* To preserve the scenic qualities of the San Francisco Bay/Delta  
30 estuary system and the Sacramento-San Joaquin River/Delta Shoreline.

1 **3.10.3 Impact Analysis**

2 **(a) Physically divide an established community?**

3 **No Impact.** The Project would be located in the Suisun Bay on the shoreline in  
4 unincorporated Contra Costa County, near Concord Naval Weapons Station, Military  
5 Ocean Terminal. The closest established community is Bay Point, on the eastern edge  
6 of the site, which would not be disturbed by the outfall pipe removal. No changes to  
7 access will occur as a result of Project activities.

8 **(b) Conflict with any applicable land use plan, policy, or regulation of an agency**  
9 **with jurisdiction over the project (including, but not limited to the general plan,**  
10 **specific plan, local coastal program, or zoning ordinance) adopted for the**  
11 **purpose of avoiding or mitigating an environmental effect?**

12 **Less than Significant.** The Project would remove the obsolete outfall pipe, a human-  
13 made industrial feature in the Suisun Bay. No long-term change in pattern, scale, or  
14 character of land use onshore will occur. The former effluent outfall pipe has not been in  
15 use since 2012.

16 During removal activities, there will be short-term impacts to land use in the Project  
17 vicinity. Informal access to fishing along the shoreline may be limited and boat use  
18 within the Project site will be restricted during the 2 weeks of removal activities. No  
19 impacts to the onshore adjacent public/semi-public lands or recreation areas are  
20 expected; most removal activities will only occur offshore. Any use of the proposed  
21 staging areas would be minimal, and would only occur on existing parking areas and  
22 roads within the selected local staging area (likely, an existing marina) and the selected  
23 contractor's existing home base. Therefore, the Project will not alter or change current  
24 baseline land use conditions.

25 As discussed above in the Regulatory Setting, the Project would traverse areas  
26 designated in the Contra Costa County General Plan as Water, Open Space, and  
27 Heavy Industry in an area zoned as Unrestricted, Heavy Industrial, and General  
28 Agricultural. Removal of the outfall pipe will be consistent with these land use and  
29 zoning designations. By removing an industrial structure and returning the Project site to  
30 its pre-existing conditions, the Project aligns with goals and policies in the Land Use,  
31 Conservation, and Open Space Elements of the County General Plan. Additionally,  
32 removal of the former outfall pipe will improve aesthetics, reinforcing the physical  
33 character and desired images of Contra Costa County. The Project will preserve the  
34 scenic qualities of the San Francisco Bay/Delta estuary system.

35 Prior to final approval of a lease by the CSLC, GWF must obtain additional required  
36 permits prior to the start of removal activities, including but not limited to the following:

- 1       • *USACE, San Francisco District:* Removal of the outfall pipe requires a  
2       Nationwide #12 Pre-Construction notification under Section 10 of the Rivers and  
3       Harbors Act and Section 404 of the Clean Water Act.
- 4       • *BCDC:* Working in the Suisun Bay will require a Regionwide #1 Permit from  
5       BCDC.
- 6       • *Contra Costa County Building Inspection Division:* A Demolition Permit from the  
7       Contra Costa County Building Inspection Division will be required for the Project.  
8       Prior to issuance of this permit, GWF will have its Debris Recovery Plan  
9       approved, per Contra Costa County Ordinance 2004-16 and Chapter 418-14 of  
10      the County Code.

11      All required permits will be obtained prior to removal activities. There will be no conflicts  
12      with any applicable land use plan, policy, or regulation of any agency having jurisdiction  
13      over the Project. Therefore, this impact is considered less than significant.

14      ***(c) Conflict with any applicable habitat conservation plan or natural community***  
15      ***conservation plan?***

16      **No Impact.** There are no habitat conservation plans or other approved governmental  
17      habitat plans involving lands within the Project site. Thus, the Project will not conflict  
18      with any adopted habitat conservation plans or natural community conservation plans.

19      **3.10.4 Mitigation Summary**

20      No significant impacts to land use will result from the Project; therefore, no mitigation is  
21      required.



1 **3.11 MINERAL RESOURCES**

<b>MINERAL RESOURCES – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.11.1 Environmental Setting**

3 The Project site is located along the southern shore of Suisun Bay near Bay Point,  
 4 Contra Costa County. The Project is located within the waters of the Bay, with no  
 5 onshore component. Mineral resources in the County include rock, sandstone, and clay.  
 6 There are several active quarry mining operations in the County which generate  
 7 essential aggregate and mineral resources. These materials include: (1) diabase rock  
 8 used extensively for roadbase and as rip-rap to prevent streambank erosion; (2)  
 9 domegine sandstone used as a trench backfill and as the primary ingredient in the  
 10 manufacture of heat-resistant glass; and (3) shale aggregate used for brick production.

11 Contra Costa County recognizes the value of its mineral resources as a supply for  
 12 construction materials and for heat-resistant glass, as well as a significant employment  
 13 source within the County. The County has identified significant areas of aggregate  
 14 resources at Mount Zion, Mount Diablo, Port Costa, and in the area of Byron (Contra  
 15 Costa County General Plan 2005-2020).

16 Review of the Mineral Resources section of the County General Plan (Conservation  
 17 Element) indicates that there are no mineral resources located within the Project site.  
 18 The nearest mineral resource is Aggregate Mining in the eastern portion of Suisun  
 19 Channel.

20 **3.11.2 Regulatory Setting**

21 **Federal and State**

22 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 23 Project are identified in Table 3.11-1.

**Table 3.11-1 Laws, Regulations, and Policies (Mineral Resources)**

<p><b>CA</b></p>	<p>Surface Mining and Reclamation Act (SMARA) (Pub. Resources Code, §§ 2710-2796),</p>	<p>In accordance with SMARA, the California Geological Survey classifies the regional significance of mineral resources and assists in the designation of lands containing significant aggregate resources. Mineral Resource Zones (MRZs) have been designated to indicate the significance of mineral deposits. The MRZ categories are:</p> <ul style="list-style-type: none"> <li>• MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.</li> <li>• MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.</li> <li>• MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data.</li> <li>• MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.</li> </ul>
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1 **Local**

2 The Conservation Element of the Contra Costa County General Plan 1995-2020  
 3 includes goals and policies to assist the County in meeting its defined mineral resource  
 4 conservation and utilization needs. There are no conservation goals or policies that are  
 5 applicable to the Project site.

6 **3.11.3 Impact Analysis**

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

9 **No Impact.** Shallow earth work to remove the timber pile markers and the removal of  
 10 the outfall pipe would not result in the loss of availability of a known mineral resource.

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

14 **No Impact.** The Project site is not delineated on a general plan, specific plan or other  
 15 land use plan as an important mineral resource recovery site.

16 **3.11.4 Mitigation Summary**

17 The Project would not result in significant impacts to mineral resources; no mitigation is  
 18 required.

1 **3.12 NOISE**

<b>NOISE – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.12.1 Environmental Setting**

3 The decibel (dB) is a unit of measurement that indicates the relative intensity of a  
4 sound. Higher intensity sound is perceived as louder. Sound intensity is commonly  
5 measured on a weighted scale (dBA) to correct for the relative frequency response of  
6 the human ear. The “A-weighted” noise level de-emphasizes low and very high  
7 frequencies of sound in a manner similar to the human ear’s de-emphasis of these  
8 frequencies. The zero point on the dBA scale is based on the lowest sound level that  
9 the healthy, unimpaired human ear can detect. Audible increases in noise levels  
10 generally refer to a change of 3 dBA or more, as this level has been found to be barely  
11 perceptible to the human ear in outdoor environments. Sound levels in dB are  
12 calculated on a logarithmic basis. Each 10-dB increase in sound level is perceived as  
13 approximately a doubling of loudness – a 20-dB sound level is perceived as twice as  
14 loud as a 10-dB sound level, a 30-dB sound level is perceived as twice as loud as a  
15 20-dB sound level, and so on.

1 As noise spreads from a source, it loses energy so that as the noise receiver moves  
 2 farther from the noise source, the perceived noise level decreases. Geometric  
 3 spreading causes the sound level to attenuate or decrease generally resulting in a 6 dB  
 4 reduction in the noise level for each doubling of distance between the noise point  
 5 source and receptor. Intervening barriers, such as sound walls, buildings, solid panel  
 6 fences, and topography would further reduce noise levels.

7 The Project is located within unincorporated Contra Costa County. In Contra Costa  
 8 County, traffic along freeways (e.g., State Route 4), and major arterials (e.g., Willow  
 9 Pass Road) are the primary sources of vehicular traffic noise. Rail operations also  
 10 contribute to the noise environment in the County. The BNSF and UPRR railroad  
 11 corridors in the County are primarily freight lines. These lines generate high noise levels  
 12 during passbys and their trains are required to sound their whistles when crossing  
 13 roadways at-grade. Existing air traffic activity also contributes to the noise in Contra  
 14 Costa County. Buchanan Field, near Concord, is the primary source of aircraft noise.  
 15 Other sources of aircraft noise are local emergency airports and military helicopter  
 16 activity. The remaining noise sources are industrial plants such as oil refineries and  
 17 materials processing plants.

18 Existing and future day-night level (DNL) noise contours have been prepared for  
 19 freeways, major arterials, and railways in the County. In the Project vicinity, the nearest  
 20 major noise source is the BNSF and UPRR rail lines, for which the County measured a  
 21 60 dB DNL within approximately 0.5 mile of the Project site (Contra Costa County,  
 22 2005). The County has developed policies for new projects including Policy 11-3, which  
 23 states “If the primary noise source is train passbys, then the standard for outdoor noise  
 24 levels in residential areas is a DNL of 70 dB. The nearest sensitive receptor to the  
 25 Project site is a residential development approximately 1 mile to the southeast, on the  
 26 far side of the BNSF/UPRR rail lines.

27 **3.12.2 Regulatory Setting**

28 **Federal and State**

29 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 30 Project are identified in Table 3.12-1.

**Table 3.12-1 Laws, Regulations, and Policies (Noise)**

<b>U.S.</b>	<ul style="list-style-type: none"> <li>• The <b>Noise Control Act</b> (42 USC 4910) required the USEPA to establish noise emission criteria, as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These criteria generally apply to interstate rail carriers and to some types of construction and transportation equipment. The USEPA published a guideline (USEPA 1974) containing recommendations for acceptable noise level limits affecting residential land use of 55 dBA <math>L_{dn}</math> for outdoors and 45 dBA <math>L_{dn}</math> for indoors.</li> <li>• The <b>Department of Housing and Urban Development Environmental Standards</b> (24 CFR</li> </ul>
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**Table 3.12-1 Laws, Regulations, and Policies (Noise)**

	<p>Part 51) set forth the following exterior noise standards for new home construction (for interior noise levels, a goal of 45 dBA is set forth and attenuation requirements are geared to achieve that goal):</p> <ul style="list-style-type: none"> <li>○ 65 L<sub>dn</sub> or less – Acceptable</li> <li>○ 65 L<sub>dn</sub> and &lt; 75 L<sub>dn</sub> – Normally unacceptable, appropriate sound attenuation measures must be provided</li> <li>○ &gt; 75 L<sub>dn</sub> – Unacceptable</li> </ul> <ul style="list-style-type: none"> <li>● <b>Federal Highway Administration Noise Abatement Procedures</b> (23 CFR Part 772) are procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. It establishes five categories of noise sensitive receptors and prescribes the use of the Hourly L<sub>eq</sub> as the criterion metric for evaluating traffic noise impacts.</li> <li>● <b>Federal Energy Regulatory Commission Guidelines On Noise Emissions From Compressor Stations, Substations, And Transmission Lines</b> (18 CFR 157.206(d)(5)) require that “the noise attributable to any new compressor stations, compression added to an existing station, or any modification, upgrade or update of an existing station, must not exceed a L<sub>dn</sub> of 55 dBA at any pre-existing noise sensitive area (such as schools, hospitals, or residences).”</li> <li>● <b>NTIS 55019-74-004, 1974</b> (“Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety”). In response to a Federal mandate, the USEPA provided guidance in this document, commonly referenced as the, “Levels Document,” that establishes an L<sub>dn</sub> of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses including residences and recreation areas. The USEPA recommendations contain a factor of safety and do not consider technical or economic feasibility (i.e., the document identifies safe levels of environmental noise exposure without consideration for achieving these levels or other potentially relevant considerations), and therefore should not be construed as standards or regulations.</li> </ul>
<b>CA</b>	<p>State regulations for limiting population exposure to physically and/or psychologically significant noise levels include established guidelines and ordinances for roadway and aviation noise under California Department of Transportation as well as the now defunct California Office of Noise Control. The California Office of Noise Control land use compatibility guidelines provided the following:</p> <ul style="list-style-type: none"> <li>● An exterior noise level of 60 to 65 dBA Community Noise Equivalent Level (CNEL) is considered "normally acceptable" for residences.</li> <li>● A noise level of 70 dBA CNEL is considered to be "conditionally acceptable" (i.e., the upper limit of "normally acceptable" noise levels for sensitive uses such as schools, libraries, hospitals, nursing homes, churches, parks, offices, and commercial/professional businesses).</li> <li>● A noise level of greater than 75 dBA CNEL is considered "clearly unacceptable" for residences.</li> </ul>

**1 Local**

2 The following goals and policies from the Contra Costa County General Plan may be  
 3 applicable to the Project (Contra Costa County 2005).

- 4 ● Goal 11-B - To maintain appropriate noise conditions in all areas of the County.
- 5 ● Goal 11-E - To recognize citizen concerns regarding excessive noise levels, and  
 6 to utilize measures through which the concerns can be identified and mitigated.
- 7 ● Policy 11-8 - Construction activities shall be concentrated during the hours of the  
 8 day that are not noise-sensitive for adjacent land uses and should be

1 commissioned to occur during normal work hours of the day to provide relative  
2 quiet during the more sensitive evening and early morning periods.

3 **3.12.3 Impact Analysis**

4 ***a) Exposure of persons to or generation of noise levels in excess of standards***  
5 ***established in the local general plan or noise ordinance, or applicable standards***  
6 ***of other agencies?***

7 **Less than Significant Impact.** The use of equipment that generates noise (e.g.,  
8 excavating) would take place typically between the hours of 7:00 a.m. and 5:00 p.m. on  
9 weekdays in accordance with the Project plans and specifications. This work schedule  
10 would not conflict with the requirements of the County's noise policies that removal  
11 activities be concentrated during daytime hours on weekdays.

12 The nearest receptor for Project-related noise is a residence located approximately 1  
13 mile to the southeast of the Project site in Bay Point, beyond the BNSF/UPRR tracks.  
14 Sound levels produced by removal equipment would vary with engine speed and the  
15 load placed on the equipment – higher speeds and loads produce greater sound levels.  
16 Maximum noise levels created by the type of equipment required for this Project (e.g.,  
17 chain saw, compressor, crane, excavator, generator, pumps, trucks) would be in the  
18 range of 55 to 85 dB at 50 feet. Due to geometric spreading of noise, at 1,000 feet away  
19 from the Project site (0.18 mile, or only one-quarter of the distance to the nearest  
20 residence) the maximum sound levels would be 38 to 58 dBA. The presence of  
21 intervening industrial buildings (ChemTrade and Honeywell) and the railroad tracks  
22 between the work area and the residence would further diminish Project-related noise  
23 levels at the residence, which is also close to State Route 4, another major noise  
24 source. In addition, the 1-hour Leq created by Project removal activities at the nearest  
25 residential receptor would be less than the maximum levels of 38 to 58 dB because the  
26 equipment would not operate continuously at maximum power.

27 ***b) Exposure of persons to or generation of excessive ground-borne vibration or***  
28 ***ground-borne noise levels?***

29 **No Impact.** Impacts from ground-borne vibration occur when intense construction  
30 activities such as pile driving or the movement of large earthmoving equipment occurs  
31 in close proximity to sensitive receptors, either people or structures. No activities that  
32 would generate substantial ground-borne vibration or noise are included as part of the  
33 Project and no sensitive receptors are located in close proximity to Project activities.

34 ***c) A substantial permanent increase in ambient noise levels in the project vicinity***  
35 ***above levels existing without the project?***

1 **No Impact.** The Project would last approximately 2 weeks and would not create a  
2 permanent source of noise.

3 ***d) A substantial temporary or periodic increase in ambient noise levels in the***  
4 ***project vicinity above levels existing without the project?***

5 **Less than Significant Impact.** Temporary Project noise impacts are discussed in **(a)**,  
6 above.

7 ***e) For a project located within an airport land use plan or, where such a plan has***  
8 ***not been adopted, within 2 miles of a public airport or public use airport, would***  
9 ***the project expose people residing or working in the project area to excessive***  
10 ***noise levels?***

11 **No Impact.** The Project site is not within an airport land use planning area or within  
12 2 miles of a public airport or public use airport.

13 ***f) For a project within the vicinity of a private airstrip, would the project expose***  
14 ***people residing or working in the project area to excessive noise levels?***

15 **No Impact.** The Project site is not within 2 miles of a private airstrip.

#### 16 **3.12.4 Mitigation Summary**

17 The Project would not result in significant noise impacts; therefore, no mitigation is  
18 required.

1 **3.13 POPULATION AND HOUSING**

<b>POPULATION AND HOUSING – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.13.1 Environmental Setting**

3 The Project site is located along the southeast shore of the Suisun Bay in  
 4 unincorporated Contra Costa County. The nearest residential community is the  
 5 unincorporated town of Bay Point, approximately 1 mile from the Project site. The  
 6 Project will occur within the waters of the Suisun Bay.

7 **Population**

8 Contra Costa County is one of nine counties in the San Francisco Bay Area and covers  
 9 733 square miles. The County is the Bay Area’s third most populous county, with 14.6  
 10 percent of the Bay Area’s population in 2010 (ABAG 2012). Population estimates of  
 11 1,049,025 in 2010 represented an increase of more than 9.5 percent from the 2000  
 12 County population estimate of 948,816. ABAG estimates that the population of Contra  
 13 Costa County will continue to increase in the next two decades, with projections of an  
 14 estimated 1,157,000 people by 2020 and 1,255,300 people by 2030.

15 In 2010, Bay Point’s population was estimated at 21,349 people, a decrease of less  
 16 than one percent from the 2000 population estimate of 21,534 people (ABAG 2012).

17 Within the Project site, the population is zero.

18 **Housing**

19 As of 2010, there were approximately 400,263 housing units in Contra Costa County, an  
 20 increase of 11.4 percent since 2000. Household size is about the same; it was  
 21 2.72 persons per household in 1990 and 2.77 persons in 2010. The housing vacancy  
 22 rate increased from 2.9 percent in 2000 to 6.2 percent in 2010 (ABAG 2012).



1 Bay Point is estimated to have 6,762 housing units in 2010, up approximately one  
2 percent from 6,716 housing units in 2000 (ABAG 2012; U.S. Census Bureau 2003).

3 There are no residences within the Project site.

#### 4 **3.13.2 Regulatory Setting**

##### 5 **Federal and State**

6 No Federal or State laws relevant to this issue area are applicable to the Project.

##### 7 **Local**

8 The Housing Element of the Contra Costa County General Plan includes goals and  
9 policies to assist the County in meeting its defined housing needs. No housing goals or  
10 policies are applicable to the Project site.

#### 11 **3.13.3 Impact Analysis**

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

15 **No Impact.** The Project is the removal of a former outfall/diffuser pipe and does not  
16 involve the construction of any buildings or infrastructure. The Project would not result in  
17 an increase in housing or population growth in the area. Therefore, no increase in  
18 population growth, either directly or indirectly, would result from the Project.

19 ***b) Displace substantial numbers of existing housing, necessitating the***  
20 ***construction of replacement housing elsewhere?***

21 **No Impact.** The Project would not involve the removal of existing structures or housing  
22 units. Therefore, the Project would not displace existing housing units.

23 ***c) Displace substantial numbers of people, necessitating the construction of***  
24 ***replacement housing elsewhere?***

25 **No Impact.** The Project would not involve the removal of existing structures or housing  
26 units. Therefore, the Project would not result in the displacement of existing people.

#### 27 **3.13.4 Mitigation Summary**

28 The Project would not result in significant impacts to Population and Housing resources;  
29 therefore, no mitigation is required.

1 **3.14 PUBLIC SERVICES**

<b>PUBLIC SERVICES</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.14.1 Environmental Setting**

3 The Project site is located along the southeast shore of the Suisun Bay in Bay Point,  
 4 Contra Costa County. The Project is located within the waters of the Bay with staging  
 5 areas approximately 200 to 300 feet offshore.

6 **Fire Protection**

7 The offshore areas of the Project are in navigable waters served by the Contra Costa  
 8 County Sheriff Marine Unit, and the USCG. The Sheriff Marine Unit responds to fire  
 9 incidents on County waterways with vessels that are equipped with water pumps;  
 10 however, the Sheriff Officers are not trained firefighters. The Marine Unit will also  
 11 transport fire departments to an incident upon request. The Marine Unit patrols the  
 12 waterways along Contra Costa County based out of three stations, one at the former  
 13 Concord Naval Weapons Station, one at the city of Antioch, and one at Discovery Bay.  
 14 The USCG responds to incidents involving injuries, loss of life or damage to vessels on  
 15 the waterways of Contra Costa County. The USCG responds to fire incidents on  
 16 waterways for rescue and lifesaving, but not for the purposes of fire suppression. The  
 17 closest USCG Station to the Project is located at 2 Harbor Way in Vallejo.

18 **Police Protection**

19 Law enforcement services in the Project area would be provided by the Contra Costa  
 20 County Sheriff’s Department. The Office of the Sheriff has a staff of 1,052 (720 sworn

1 personnel and 332 general employees). The Contra Costa County Sheriff’s Department  
 2 serves a community of 7 square miles and over 20,000 people. The closest Sheriff’s  
 3 office to the Project site is the Pittsburg Police Department, located at 65 Civic Avenue.

4 The waterways of Contra Costa County are served by the Contra Costa County Sheriff  
 5 Marine Unit, located at 70 Lauritzen Lane in Oakley. The Marine Unit has five to six  
 6 staff, with additional staff during the boating season. The Marine Services Unit responds  
 7 to crimes that occur within Contra Costa waterways, boating accidents, rescues, and  
 8 missing persons reports (Contra Costa Sheriff’s Office 2014).

9 **Schools**

10 There are no schools located adjacent to or within a mile of the Project site.

11 **Parks**

12 Impacts to park land are discussed in Section 3.15, Recreation. The Project will have no  
 13 impact on parks.

14 **3.14.2 Regulatory Setting**

15 **Federal and State**

16 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 17 Project are identified in Table 3.14-1.

**Table 3.14-1 Laws, Regulations, and Policies (Public Services)**

<b>U.S.</b>	Code of Federal Regulations	<ul style="list-style-type: none"> <li>• Under <b>29 CFR 1910.38</b>, whenever an Occupational Safety and Health Administration standard requires one, an employer must have an Emergency Action Plan that must be in writing, kept in the workplace, and available to employees for review. An employer with 10 or fewer employees may communicate the plan orally to employees. Minimum elements of an emergency action plan are:                         <ul style="list-style-type: none"> <li>○ Procedures for reporting a fire or other emergency;</li> <li>○ Procedures for emergency evacuation, including type of evacuation and exit route assignments;</li> <li>○ Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;</li> <li>○ Procedures to account for all employees after evacuation;</li> <li>○ Procedures to be followed by employees performing rescue or medical duties; and</li> </ul> </li> <li>• The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.</li> <li>• Under <b>29 CFR 1910.39</b>, an employer must have a Fire Prevention Plan (FPP). A FPP must be in writing, be kept in the workplace, and be made available to employees for review; an employer with 10 or fewer employees may communicate the plan orally to employees. Minimum elements of a FPP are:</li> </ul>
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**Table 3.14-1 Laws, Regulations, and Policies (Public Services)**

		<ul style="list-style-type: none"> <li>○ A list of all major fire hazards, proper hazardous material handling and storage procedures, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard;</li> <li>○ Procedures to control accumulations of flammable and combustible waste materials;</li> <li>○ Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials;</li> <li>○ The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires; and</li> <li>○ The name or job title of employees responsible for the control of fuel source hazards.</li> <li>○ An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed and must also review with each employee those parts of the FPP necessary for self-protection.</li> <li>● Under <b>29 CFR 1910.155, Subpart L, Fire Protection</b>, employers are required to place and keep in proper working order fire safety equipment within facilities.</li> </ul>
<b>CA</b>	California Code of Regulations	Under <b>Title 19, Public Safety</b> , the California State Fire Marshal (CSFM) develops regulations relating to fire and life safety. These regulations have been prepared and adopted to establish minimum standards for the prevention of fire and for protection of life and property against fire, explosion, and panic. The CSFM also adopts and administers regulations and standards necessary under the California Health and Safety Code to protect life and property.

1 **Local**

2 The Public Facilities/Services Element of the Contra Costa County General Plan 1995-  
 3 2020 includes goals and policies to assist the County in meeting its defined public  
 4 protection, fire protection, school, and public facility needs. There are no Public  
 5 Services goals or policies that are applicable to the Project Area.

6 **3.14.3 Impact Analysis**

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

- 13 ● ***Fire protection?***
- 14 ● ***Police Protection?***
- 15 ● ***Schools?***
- 16 ● ***Parks?***
- 17 ● ***Other public facilities?***

18 **No Impact.** The Project is the removal of a non-operational outfall/diffuser pipe and  
 19 does not involve the construction of any residences, buildings, or infrastructure. During

1 removal activities, there is the potential for a temporary increase in demand for fire and  
2 emergency response services; however, the Project would not require additional fire,  
3 police, or emergency medical services outside of those services already available.  
4 Therefore, there would be no substantial adverse physical impacts resulting from the  
5 Project that would require new or physically altered governmental facilities associated  
6 with fire protection, police services, schools, parks, or other public services.

7 **3.14.4 Mitigation Summary**

8 The Project would not result in significant impacts to Public Services; therefore, no  
9 mitigation is required.

1 **3.15 RECREATION**

<b>RECREATION</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.15.1 Environmental Setting**

3 The Project site is located along the northeast shore of Suisun Bay in Bay Point, Contra  
 4 Costa County. The Suisun Bay is used for industrial transport access, as well as  
 5 recreational uses including bird watching, boating, and sailing. The Bay also supports  
 6 sport fishing, commercial fishing, and shellfish harvesting.

7 To the south of the Project is ChemTrade – Bay Point Works. The facility occupies  
 8 approximately 26 acres, and is an operating sulfuric acid plant. Access to the property is  
 9 controlled at the gate. Honeywell property is adjacent to the property and is an  
 10 additional industrial use. The federally-controlled Port Chicago Military Ocean Terminal  
 11 (MOT) property is adjacent to the GWF pipe right-of-way.

12 **3.15.2 Regulatory Setting**

13 **Federal and State**

14 There are no Federal or State laws or regulations pertaining to this issue area.

15 **Local**

16 Contra Costa County Measure C, passed in 1990, established a 65/35 Land  
 17 Preservation Standard to limit urban development to no more than 35 percent of the  
 18 land in the county. At least 65 percent of all land in the County is required to be  
 19 preserved for agriculture, open space, wetlands, parks and other non-urban uses. See  
 20 the Land Use Element of the Contra Costa County General Plan 2005-2020 for more  
 21 information.

1 **3.15.3 Impact Analysis**

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

5 **No Impact.** The Project is the removal of a non-operational outfall/diffuser pipe and  
6 would not result in increased use or visitation to existing neighborhood or regional  
7 recreational facilities. Therefore, no substantial physical deterioration of recreational  
8 facilities would occur due to the Project.

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

12 **No Impact.** The Project will occur within the Suisun Bay, which is used for several  
13 recreational uses including bird watching, boating, and sailing. Although the Project will  
14 temporarily occupy approximately 1 acre of the Bay, it would not include recreational  
15 facilities or require the construction or expansion of recreational facilities. There is  
16 ample area within the Bay to accommodate existing recreational uses of the waterway  
17 with little or no conflict between uses.

18 **3.15.4 Mitigation Summary**

19 The project would not result in significant impacts to Recreation; therefore, no mitigation  
20 is required.

1 **3.16 TRANSPORTATION/TRAFFIC**

<b>TRANSPORTATION/TRAFFIC – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.16.1 Environmental Setting**

3 The Project site is located in unincorporated Contra Costa County, near the Concord  
 4 Naval Weapons Station, Military Ocean Terminal, on the southern shore of the Suisun  
 5 Bay. Contra Costa County plus Alameda and San Francisco Counties are integrated in  
 6 a system of bridges, freeways, and roads as well as by ferries and trains. The Project  
 7 site will be accessed by barge; however, a temporary shore base (location to be  
 8 determined once a contractor has been selected) will act as the hub for handling,  
 9 storing, and processing equipment and materials for disposal. An existing levee road,  
 10 inaccessible to the public, will provide access by automobile for Project management  
 11 observation, as well as for emergency evacuation purposes. The connected  
 12 transportation corridors of the San Francisco Bay Area will serve the transport needs of  
 13 the Project.



1 Suisun Bay is an important commercial and recreational waterway in the San Francisco  
2 Bay connecting the Sacramento-San Joaquin-Delta system to Carquinez Strait. The  
3 main 40-foot-deep shipping channel lies approximately 1,200 feet north of the Project  
4 site near the center of the Bay. One marina, McAvoy Harbor, that serves recreational  
5 boaters and fishermen, is located upstream 0.9 mile to the east of the Project site.

6 The major roadways that will potentially serve the Project are described below.

- 7 • **Interstate 80 (I-80)** is a transcontinental Interstate Highway connecting California  
8 and New York City. In the San Francisco Bay Area, I-80 connects downtown San  
9 Francisco to Sacramento. At its closest distance to the Project site (at the State  
10 Route 4 junction), the annual average daily traffic (AADT) is about 170,000  
11 vehicles (Caltrans 2014).
- 12 • **Interstate 680 (I-680)** connects the communities of Benicia, Concord, Walnut  
13 Creek, Danville, Sunol, and San Jose. It is one of the busiest freeways in the  
14 East Bay, with a section between Interstate 580 (I-580) and the Benicia Bridge  
15 having up to 10 lanes. At the junction of I-680 and State Route 4, I-680's AADT is  
16 129,000 vehicles (Caltrans 2014).
- 17 • **State Route 24 (SR-24)** runs west to east from Oakland to Walnut Creek, in  
18 Alameda and Contra Costa Counties. When SR-24 terminates and merges into I-  
19 680, its AADT is 183,000 vehicles (Caltrans 2014).
- 20 • **State Route 4 (SR-4)** extends from I-80 in Contra Costa County to State Route  
21 89 in Alpine County. The route traverses east to west and is a one- to two-lane  
22 road near the Project site. The AADT of SR-4 near the Project area (at Willow  
23 Pass Road) is 148,000 vehicles (Caltrans 2014).

24 These highways and the arterial roads directly linked to them will likely be used for the  
25 duration of the Project by Project personnel as well as for materials transport.  
26 Secondary arterials, collector roads, and private roads may also be used for the  
27 purposes of the Project, though to a lesser extent.

## 28 **Level of Service**

29 Level of Service (LOS) ratings are used as a grading system by traffic engineers to  
30 determine the effectiveness of transportation infrastructure. There are six levels used in  
31 North America, A (best) through F (worst), each indicating traffic flow and corresponding  
32 safe driving conditions of a given roadway. An LOS A indicates a free-flowing roadway  
33 with no delays while LOS F indicates that a roadway has a high level of congestion  
34 where traffic flows exceed design capacity and result in long delays.

35 During peak hours, the LOS for the above-described Interstate and State highways as  
36 well as major arterial roads are likely LOS E to F. All major highways in the San

1 Francisco Bay Area experience congested conditions during peak hours, and these  
 2 conditions spill over to arterial roads. This can cause unacceptable LOS. Secondary  
 3 arterials, collector roads, and private roads likely maintain acceptable operations,  
 4 generally characterized as LOS D or better.

5 I-80, SR-4, and I-680 are the major regional transportation corridors in the vicinity of the  
 6 Project site. Main routes for the Project will consist of Interstates, State highways, local  
 7 county and city maintained roads, as well as the waterway on the Suisun Bay for barge  
 8 transportation. Removal activities will be conducted from barges on the Suisun Bay. The  
 9 contractor will load all equipment onto a light duty pick-up truck in San Francisco, and  
 10 drive it approximately 40 miles to a contractor’s yard within 10 miles by way of I-80, I-  
 11 580, SR-24, I-680, and SR-4. There the equipment will be transferred to a work barge.  
 12 The barge, pushed by a tugboat, will travel less than 10 miles west along the shoreline  
 13 of Suisun Bay to the Project site.

14 The five Project workforce personnel will drive to a local marina within 10 miles of the  
 15 Project site, to access water transport to the Project site. Trucks used for materials  
 16 hauling to various landfills or treatment facilities will use various routes, depending on  
 17 which landfills will be receiving the materials.

18 **3.16.2 Regulatory Setting**

19 **Federal and State**

20 Federal and State laws and regulations pertaining to this issue area and relevant to the  
 21 Project are identified in Table 3.16-1.

**Table 3.16-1 Laws, Regulations, and Policies (Transportation/Traffic)**

<b>U.S.</b>	Ports and Waterways Safety Act	This Act provides the authority for the USCG’s program to increase vessel safety and protect the marine environment in ports, harbors, waterfront areas, and navigable waters, including by authorizing the Vessel Traffic Service, controlling vessel movement, and establishing requirements for vessel operation.
<b>CA</b>	California Vehicle Code	Chapter 2, Article 3 of the Vehicle Code defines the powers and duties of the California Highway Patrol, which has enforcement responsibilities for the vehicle operation and highway use in the State.
<b>CA</b>	Other	The California Department of Transportation is responsible for the design, construction, maintenance, and operation of the California State Highway System and the portion of the Interstate Highway System in California.

22 **Local**

23 The Contra Costa Transportation Authority (CCTA) is a public agency formed in 1988  
 24 responsible for County-wide transportation planning. Its mission is to deliver a  
 25 comprehensive transportation system that enhances mobility and accessibility while  
 26 promoting a healthy environment and strong economy. One of the CCTA’s duties is to

1 develop and implement the Congestion Management Plan, which identifies  
2 comprehensive strategies necessary for the development of appropriate responses to  
3 transportation needs. The Congestion Management Plan includes the following:

- 4 • Traffic LOS standards for State highways and principal arterials within the County
- 5 • Multi-modal performance measures to evaluate current and future systems
- 6 • A 7 year capital improvement program to maintain or improve the system or to  
7 mitigate any regional impacts of land use projects
- 8 • A travel demand element that promotes transportation alternatives to the single-  
9 occupant vehicle.

10 There are no traffic or transportation objectives or goals within the Contra Costa County  
11 General Plan (2005) relevant to the Project.

### 12 **3.16.3 Impact Analysis**

13 Traffic impacts associated with the Project will be minimal and short-term. Removal  
14 activities will occur over a 2-week duration. There will be five Project personnel  
15 reporting to the site; however, if this Project did not occur, these workers would likely be  
16 traveling to another project site in the San Francisco Bay Area, so traffic volumes on a  
17 regional basis will not change. Additional trucks and other transport vehicles will cause  
18 a slight, temporary, increase in traffic while transporting waste materials between the  
19 construction yard and the landfills or treatment facilities for the duration of the Project.  
20 Travel to and from the local staging area to be sited at a nearby existing marina could  
21 also cause slight increases in traffic.

22 ***a) Conflict with an applicable plan, ordinance or policy establishing measures of***  
23 ***effectiveness for the performance of the circulation system, taking into account***  
24 ***all modes of transportation including mass transit and non-motorized travel and***  
25 ***relevant components of the circulation system, including but not limited to***  
26 ***intersections, streets, highways and freeways, pedestrian and bicycle paths, and***  
27 ***mass transit?***

28 **Less than Significant.** The Project will cause a minimal increase in traffic. There will be  
29 a temporary increase in the number of vehicle trips during the course of the Project.

30 Although the Project will require five crew members, their vehicle trips will not  
31 substantially increase traffic because if they were not assigned to this Project they  
32 would likely be assigned to a different project in the region. Therefore, they will have  
33 little to no impact on existing traffic load and capacity of the street system.

34 Waterborne trips will be minimal resulting in a temporary minor increase in vessel traffic  
35 in Suisun Bay. The barge will be mobilized to the site in accordance with USCG  
36 regulations, at the beginning of the Project, anchored at the site during the removal

1 activities, and then returned to its home berth at the end of the Project. Shallow draft  
2 work skiffs/utility vessels will transport workers to the site daily over the 2-week Project  
3 duration, and will be able to avoid the shipping channel altogether.

4 Truck trips will be required for hauling equipment and materials to landfill and recycling  
5 locations from the contractor's yard. The number of trips required for disposal should be  
6 minimal. HDPE piping and wood will be hauled on a barge from the Project area to the  
7 construction yard, where this waste will be processed and hauled to appropriate landfills  
8 or recycling centers. There should be no other truck trips, as the majority of the  
9 movement will be done by boat.

10 Primary impacts will potentially include intermittent minor decreases of roadway  
11 capacities during the course of the Project due to slower movements and larger turning  
12 radii of the trucks compared to passenger vehicles. The addition of these vehicles to the  
13 existing roadway system will not result in significant impact.

14 ***b) Conflict with an applicable congestion management program, including, but***  
15 ***not limited to level of service standards and travel demand measures, or other***  
16 ***standards established by the county congestion management agency for***  
17 ***designated roads or highways?***

18 **Less than Significant.** The Project will result in minor effects, either individually or  
19 cumulatively, on a short-term LOS standard established by the CCTA for designated  
20 roads or highways. This would be due to the hauling and delivery vehicle movement  
21 during the course of the Project (discussed above in **a**)).

22 ***c) Result in a change in air traffic patterns, including either an increase in traffic***  
23 ***levels or a change in location that result in substantial safety risks?***

24 **No Impact.** The Project will not result in any changes to air traffic patterns.

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

27 **No Impact.** The Project will not substantially increase hazards due to a design feature  
28 or incompatible uses. No physical changes to existing roadways will occur as a result of  
29 the Project and movement and operation of large equipment, oversized loads, and  
30 hazardous materials will be conducted in compliance with appropriate Federal, State,  
31 and local regulations.

32 ***e) Result in inadequate emergency access?***

33 **No Impact.** The Project will not result in inadequate emergency access. Project  
34 activities will not change or otherwise adversely impact access routes within the Project

1 area. An existing levee access road, not open to the public, will be used should an injury  
2 or other emergency occur.

3 ***g) Conflict with adopted policies, plans or programs regarding public transit,***  
4 ***bicycle, or pedestrian facilities, or otherwise decrease the performance or safety***  
5 ***of such facilities?***

6 **No Impact.** The Project is not expected to conflict with adopted policies, plans, or  
7 programs that support alternative transportation. The Project site and contractor's yard  
8 will be accessed via existing roadways and the Suisun Bay. Project traffic on local roads  
9 will cease following completion of demolition activities, currently estimated to be  
10 completed within 2 weeks. No impact will occur.

#### 11 **3.16.4 Mitigation Summary**

12 The Project would not result in significant impacts to Transportation/Traffic; therefore,  
13 no mitigation is required.

1 **3.17 UTILITIES AND SERVICE SYSTEMS**

<b>UTILITIES AND SERVICE SYSTEMS – Would the Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **3.17.1 Environmental Setting**

3 The outfall is located in the Suisun Bay, in unincorporated Contra Costa County. It is  
 4 situated approximately 0.6 mile to the east of the Concord Naval Weapons Station,  
 5 Military Ocean Terminal; 0.8 mile to the south of Middle Ground Island in Suisun Bay;  
 6 approximately 1.9 miles to the west of McAvoy Yacht Harbor in Bay Point and further  
 7 (about 3 miles total along the shoreline) to the west of the mouth of the Sacramento  
 8 River; and 0.9 mile to the north of Port Chicago Highway.

9 The onshore Project site is located in a relatively isolated and undeveloped area near  
 10 Bay Point and is surrounded by the Suisun Bay, industrial properties, and tidal marsh.

11 With respect to utilities and services, the primary needs of the Project include the ability  
 12 to recycle or dispose of non-hazardous solid waste associated with the removal of the  
 13 outfall pipe, including treated wood, and other solid piping. There may also be

1 hazardous materials and wastes to dispose of including creosote-treated timber pilings,  
2 petroleum based residues, and hydraulic fluids. In addition, hazardous materials will be  
3 used and generated during removal activities. All associated hazardous materials will be  
4 removed from the Project site for proper disposal (see Section 3.8, Hazards and  
5 Hazardous Materials).

6 Several solid waste facilities located in the San Francisco Bay Area can receive non-  
7 hazardous wastes from the pipe removal for recycling and/or disposal. Facilities  
8 specialized for the treatment or disposal of hazardous wastes may lie outside the  
9 immediate Bay Area, but they are accessible via the network of roads and highways  
10 that serve the region. A shore base facility will be needed to handle materials and  
11 transfer them to recycling and/or disposal sites. This location will be provided by the  
12 selected contractor, who has not yet been chosen for the Project.

### 13 **3.17.2 Regulatory Setting**

#### 14 **Federal and State**

15 No Federal or State laws relevant to this issue area are applicable to the Project.

#### 16 **Local**

17 Each County is required to prepare and adopt a Countywide Integrated Waste  
18 Management Plan that must include source reduction and recycling elements. Contra  
19 Costa County has a Construction and Demolition Ordinance that became effective in  
20 2004. It applies to all construction sites that are greater than 5,000 square feet. This  
21 Project will not require a Demolition permit.

### 22 **3.17.3 Impact Analysis**

#### 23 ***a) Exceed wastewater treatment requirements of the applicable Regional Water*** 24 ***Quality Control Board?***

25 **No Impact.** The Project is not expected to conflict with wastewater treatment  
26 requirements of the SFBRWQCB because the Project will not produce wastewater.

#### 27 ***b) Require or result in the construction of new water or wastewater treatment*** 28 ***facilities or expansion of existing facilities, the construction of which could cause*** 29 ***significant environmental effects?***

30 **No Impact.** The Project would not result in the construction of new water or wastewater  
31 treatment facilities or expansion of existing facilities. Water required for cutting the  
32 HDPE piping, wood, and steel materials associated with the outfall structure will be

1 minimal; wastewater treatment providers would not be overloaded as a result of the  
2 Project's projected demand.

3 ***c) Require or result in the construction of new storm water drainage facilities or***  
4 ***expansion of existing facilities, the construction of which could cause significant***  
5 ***environmental effects?***

6 **No Impact.** The Project would not result in the construction of new storm water  
7 drainage facilities or expansion of existing facilities. Removal activities would occur from  
8 barges on the water. Cutting of the wood piles will not impact storm water drainage.

9 ***d) Have sufficient water supplies available to serve the Project from existing***  
10 ***entitlements and resources, or are new or expanded entitlements needed?***

11 **No Impact.** Water use for the Project would be minimal and can be provided from  
12 existing domestic water supplies. Mechanical devices would require a relatively small  
13 amount of water to operate. This Project would not require new or expanded water  
14 supply resources or entitlements.

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

18 **No Impact.** The Project would not result in the construction of new water or wastewater  
19 treatment facilities or expansion of existing facilities. Water required for cutting the  
20 HDPE piping, wood, and steel materials associated with the outfall structure will be  
21 minimal; wastewater treatment providers would not be overloaded as a result of the  
22 Project's projected demand.

23 ***f) Be served by a landfill with sufficient permitted capacity to accommodate the***  
24 ***Project's solid waste disposal needs?***

25 **Less than Significant Impact.** Waste materials will be generated from the safe  
26 removal of HDPE piping, and wood materials associated with the outfall structure.  
27 Several active solid waste landfills with adequate capacity for materials were identified  
28 within the region. They are listed below, with their remaining capacity as reported by the  
29 California Department of Resources Recycling and Recovery (CalRecycle) Solid Waste  
30 Information System database.

- 31 • Keller Canyon Landfill; 901 Bailey Road, Pittsburg, CA 94565; 63 million cubic  
32 yards; permitted by the Contra Costa County Health Services Department  
33 Environmental Health Division



- 1       • Acme Fill Corporation; 950 Waterbird Way, Martinez, CA 94553; 175,000 cubic  
2       yards; permitted by the Contra Costa County Health Services Department  
3       Environmental Health Division
- 4       • Potrero Hills Landfill; 3675 Potrero Hills Lane, Suisun City, CA 94585; 13 million  
5       cubic yards; permitted by the Solano County Department of Resource  
6       Management

7       Each of these sites is able to receive solid waste from construction/demolition projects.  
8       Thus, adequate disposal and recycling capacity exists for all of the nonhazardous scrap  
9       and waste materials associated with the outfall removal. The limited amounts of  
10       hazardous wastes that are generated can be serviced by current recycling or landfill  
11       disposal facilities in California. Any impacts to landfills would be a less than significant.

12       ***g) Comply with federal, state, and local statutes and regulations related to solid***  
13       ***waste?***

14       **No Impact.** Compliance with local statutes and regulations would assure compliance  
15       with State and Federal requirements.

#### 16       **3.17.4 Mitigation Summary**

17       The Project would not result in significant impacts to Utilities and Service Systems;  
18       therefore, no mitigation is required.

1 **3.18 MANDATORY FINDINGS OF SIGNIFICANCE**

2 The lead agency shall find that a project may have a significant effect on the  
 3 environment and thereby require an EIR to be prepared for the project where there is  
 4 substantial evidence, in light of the whole record, that any of the following conditions  
 5 may occur. Where prior to commencement of the environmental analysis a project  
 6 proponent agrees to mitigation measures or project modifications that would avoid any  
 7 significant effect on the environment or would mitigate the significant environmental  
 8 effect, a lead agency need not prepare an EIR solely because without mitigation the  
 9 environmental effects would have been significant (per State CEQA Guidelines §  
 10 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

11 **3.18.1 Impact Analysis**

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

1 **Less than Significant Impact.** The Project could potentially increase suspended  
2 sediments and disturb habitat and thus degrade the quality of the environment within  
3 the Project area. However, these impacts can be avoided or minimized as described in  
4 Sections 2, Project Description, and 3, Environmental Analysis, and would be inherently  
5 limited due to the temporary and short duration (2 weeks) of the Project. The Project  
6 would not be expected to substantially reduce the habitat of a fish or wildlife species,  
7 cause a fish or wildlife population to drop below self-sustaining levels, threaten to  
8 eliminate a plant or animal community, or reduce the number or restrict the range of  
9 rare or endangered plants or animals. The Project would not be expected to impact  
10 major periods of California history or prehistory.

11 ***b) Does the project have impacts that are individually limited, but cumulatively***  
12 ***considerable? (“Cumulatively considerable” means that the incremental effects***  
13 ***of a project are significant when viewed in connection with the effects of past***  
14 ***projects, the effects of other current projects, and the effects of past, present and***  
15 ***probable future projects)?***

16 **Less than Significant Impact.** The Project is the removal of a submerged outfall  
17 pipeline and timber pile markers that would occur during a short (about 2 weeks) and  
18 temporary construction period as described in Section 2, Project Description, and  
19 through the implementation of measures identified in Section 3, Environmental Analysis  
20 that reflect project revisions and measures proposed by the Applicant to protect the  
21 environment. If minor impacts were to occur, they would be limited to a very small area  
22 and would not be potentially significant. The Project does not propose any new  
23 development, and proposed construction activities are very limited in extent; therefore  
24 the project would not lead to cumulative environmental effects when combined with  
25 other development projects in the area.

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

28 **Less than Significant Impact.** The Project would not create substantial adverse effects  
29 on human beings due to its short duration and limited Project area. The Project does not  
30 propose any new permanent structures or operations.

## 4.0 ENVIRONMENTAL JUSTICE

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### 4.1 CSLC ENVIRONMENTAL JUSTICE POLICY

Environmental justice is defined by California law as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.” This definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all of the people. The California State Lands Commission (CSLC) adopted an environmental justice policy in October 2002 to ensure that environmental justice is an essential consideration in the agency’s processes, decisions, and programs. 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.

As part of the CSLC environmental justice policy, the CSLC pledges to continue and enhance its processes, decisions, and programs with environmental justice as an essential consideration by:

- Identifying relevant populations that might be adversely affected by CSLC programs or by projects submitted by outside parties for its consideration.
- Seeking out community groups and leaders to encourage communication and collaboration with the CSLC and its staff.
- Distributing public information as broadly as possible and in multiple languages, as needed, to encourage participation in the CSLC’s public processes.
- Incorporating consultations with affected community groups and leaders while preparing environmental analyses of projects submitted to the CSLC for its consideration.
- Ensuring that public documents and notices relating to human health or environmental issues are concise, understandable, and readily accessible to the public, in multiple languages, as needed.
- Holding public meetings, public hearings, and public workshops at times and in locations that encourage meaningful public involvement by members of the affected communities.
- Educating present and future generations in all walks of life about public access to lands and resources managed by the CSLC.
- Ensuring that a range of reasonable alternatives is identified when siting facilities that may adversely affect relevant populations and identifying, for the CSLC’s consideration, those that would minimize or eliminate environmental impacts affecting such populations.

- 1 • Working in conjunction with federal, State, regional, and local agencies to ensure  
2 consideration of disproportionate impacts on relevant populations, by instant or  
3 cumulative environmental pollution or degradation.
- 4 • Fostering research and data collection to better define cumulative sources of  
5 pollution, exposures, risks, and impacts.
- 6 • Providing appropriate training on environmental justice issues to staff and the  
7 CSLC so that recognition and consideration of such issues are incorporated into  
8 its daily activities.
- 9 • Reporting periodically to the CSLC on how environmental justice is a part of the  
10 programs, processes, and activities conducted by the CSLC and by proposing  
11 modifications as necessary.

#### 12 **4.1.1 Methodology**

13 The CSLC environmental justice policy does not specify a methodology for conducting  
14 programmatic-level analysis of environmental justice issues. Due to the limited extent of  
15 the Project's impacts on the human environment, as established in Section 3 of this  
16 document, this section provides a qualitative consideration of the Project's potential to  
17 disproportionately affect low-income or minority communities.

18 This analysis focuses on whether the Project's impacts would have the potential to  
19 affect areas of high-minority populations and/or low-income communities  
20 disproportionately and thus would create an adverse environmental justice effect. For  
21 the purpose of the environmental analysis, the Project's inconsistency with the CSLC's  
22 Environmental Justice Policy would occur if the Project would:

- 23 • Have the potential to disproportionately affect minority and/or low-income  
24 populations adversely; or
- 25 • Result in a substantial, disproportionate decrease in employment and economic  
26 base of minority and/or low-income populations residing in immediately adjacent  
27 communities.

#### 28 **4.1.2 Project Analysis**

29 The Project's limited impact on the human environment is established in various  
30 sections of this document, including Section 3.1 (Aesthetics), Section 3.3 (Air Quality),  
31 Section 3.7 (Greenhouse Gas Emissions), 3.8 (Hazards and Hazardous Materials), 3.9  
32 (Hydrology and Water Resources), 3.12 (Noise), Section 3.15 (Recreation) and Section  
33 3.16 (Traffic/Transportation). The discussion below considers the Project's potential to  
34 disproportionately affect any low-income or minority communities. The Project is located  
35 adjacent to existing industrial uses in Suisun Bay and the West by property owned by  
36 the federal government for use as a Military Ocean Terminal. Surrounding land uses are

1 largely industrial with extensive tidal marsh designated for open space/conservation as  
2 habitat for sensitive species by Contra Costa County. The closest residences are  
3 located approximately 1 mile to the southeast of the Project site in Bay Point. Due to  
4 this distance between the Project site and the nearest residential neighborhood and the  
5 small-scale and temporary nature of the outfall pipe removal and demolition, there  
6 would be no direct impact on residential communities, regardless of their socioeconomic  
7 makeup.

8 The Project has the potential to temporarily impact boating in the immediate vicinity of  
9 the Project work area on the Bay. However, due to the temporary nature of the outfall  
10 pipe removal activities and the limited surface area of the Bay taken by the removal  
11 activities, the Project would have a less than significant impact on users of the Bay.

12 The Project has no potential to disproportionately affect any low-income or minority  
13 community that may reside in nearby communities or use the surrounding area for  
14 recreation or commerce. Furthermore, the CSLC is complying with its environmental  
15 justice policy by subjecting its decision on this Project to public involvement through the  
16 CEQA process, which will give people of all socioeconomic backgrounds the opportunity  
17 to learn about and comment on the Project.

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## 5.0 MITIGATION MONITORING PROGRAM

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The California State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the GWF Outfall Removal Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementation of mitigation measures (MMs) for the Project to comply with Public Resources Code section 21081.6, subdivision (a) and State CEQA Guidelines sections 15091, subdivision (d) and 15097.

The Project authorizes GWF Power Systems, L.P. (GWF or Applicant) to remove the outfall piping, diffusers and timber pile markers in accordance with the terms and conditions of its existing CSLC Lease No. PRC 7230.1.

### 5.1 PURPOSE

It is important that potentially significant impacts from the Project are mitigated to the maximum extent feasible. The purpose of a MMP is to ensure compliance with and implementation of MMs; this MMP shall be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

### 5.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing this MMP. The Project Applicant is responsible for the successful implementation of and compliance with the MMs identified in this MMP. This includes all field personnel and contractors working for the Applicant.

### 5.3 MONITORING

The CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions, cities, and/or the California Department of Fish and Wildlife (CDFW). The CSLC and/or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. To ensure implementation and success of the MMs, an environmental monitor must be on site during all Project activities that have the potential to create significant environmental impacts or impacts for which mitigation is required. For the Project, a qualified biologist will be the environmental monitor; he/she will conduct the Worker Environmental Awareness Program (WEAP) training and be on-call during the conduct of all Project activities. Among other duties, the qualified biologist shall have the authority to halt work to ensure impacts to species are minimized and/or avoided. If a listed species is detected, the qualified biologist will also notify CSLC and CDFW staff. Along with the CSLC staff, the qualified biologist is responsible for:



- 1 • Ensuring that the Applicant has obtained all applicable agency reviews and  
2 approvals;
- 3 • Coordinating with the Applicant to integrate the mitigation monitoring procedures  
4 during Project implementation (for this Project, many of the monitoring  
5 procedures shall be conducted during the Project implementation phase); and
- 6 • Ensuring that the MMP is followed.

7 The qualified biologist shall immediately report any deviation from the procedures  
8 identified in this MMP to the CSLC staff or its designee. The CSLC staff or its designee  
9 shall approve any deviation and its correction.

10 Workforce Personnel. Implementation of the MMP requires the full cooperation of  
11 Project personnel and supervisors. Many of the MMs require action from the site  
12 supervisor and the crew. The following actions shall be taken to ensure successful  
13 implementation.

- 14 • Relevant mitigation procedures shall be written into contracts between the  
15 Applicant and any contractors.
- 16 • For this Project, a WEAP (under MM BIO-1) shall be implemented and all  
17 personnel will be required to participate.

18 General Reporting Procedures. A monitoring record form shall be submitted to the  
19 Applicant, and once the Project is complete, a compilation of all the logs shall be  
20 submitted to the CSLC staff. The CSLC staff or its designated environmental monitor  
21 shall develop a checklist to track all procedures required for each MM and shall ensure  
22 that the timing specified for the procedures is followed. The environmental monitor shall  
23 note any issues that may occur and take appropriate action to resolve them.

24 Public Access to Records. Records and reports are open to the public and would be  
25 provided upon request.

## 26 **5.4 MITIGATION MONITORING TABLE**

27 This section presents the mitigation monitoring table (Table 5-1) for the following  
28 environmental disciplines: Biological Resources, Hazards and Hazardous Materials, and  
29 Hydrology and Water Quality. All other environmental disciplines were found to have  
30 less than significant or no impacts and are therefore not included below. The table lists  
31 the following information, by column:

- 32 • Impact;
- 33 • Mitigation measure (full text of the measure);
- 34 • Location (where impact occurs and mitigation measure should be applied);

- 1 • Monitoring/reporting action (action to be taken by monitor or Lead Agency);
- 2 • Timing (before, during, or after removal activities; during operation, etc.);
- 3 • Responsible agency; and
- 4 • Effectiveness criteria (how the agency can know if the measure is effective).

**Table 5-1: Mitigation Monitoring Program**

Potential Impact	Mitigation Measure (MM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
<b>Biological Resources</b>						
Disrupt/Disturb Vulnerable Life Stages and Habitat of Fisheries Resources	<b>MM BIO-1 Worker Environmental Awareness Program.</b> A qualified biologist shall conduct pre-Project training (WEAP) for work crew members prior to any Project site activities. The training shall include a discussion of sensitive biological resources within the Project area and the potential presence of special-status species, special-status species' habitats, and protection measures to ensure species are not impacted by Project activities and Project boundaries. The WEAP shall also include daily trash containment/removal requirements, and prohibit workers from bringing domestic animals (e.g., dogs) and firearms to the Project site, in order to ensure the protection of native wildlife.	Not applicable	Include WEAP in final plans for submittal to CSLC; compliance monitoring  Signature sheet completed for workers taking training	Pre- removal activities, and during removal, as appropriate and necessary	GWF	Sensitive species and habitats are avoided
Disrupt/Disturb Vulnerable Life Stages and Habitat of Fisheries Resources	<b>MM BIO-2 Work Windows.</b> All Project activities shall be conducted between September 1 and October 31.	Bay and shoreline work areas	Include protections in final plan documents for submittal to CSLC; compliance monitoring  Submittal of Monitoring Record	Pre- removal activities, and during removal, and demobilization	GWF	In-water work performed between September 1 and October 31
Disrupt/Disturb Vulnerable Life Stages and Habitat of Fisheries Resources	<b>MM BIO-3 In Water Turbidity Protections.</b> A turbidity curtain shall be installed to protect fish from potential water quality/turbidity effects. The curtain (100 linear feet) shall be installed and maintained around the shoreline terminus flange of the pipe to contain muddy water and sediment	Bay and shoreline work areas	Include protections in final plan documents for submittal to CSLC;	Pre- removal activities, and during removal, and demobilization	GWF	Sediment resuspension is minimized

**Table 5-1: Mitigation Monitoring Program**

Potential Impact	Mitigation Measure (MM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
	materials that escape from the 6-inch-diameter outfall pipe during pipe removal. Sawdust generated during cutting and removal of timber pilings will also be contained in this curtain and/or skimmed and removed if floating in water (and disposed of in plastic bags). No activities that would entrain or impinge fish shall be used.		compliance monitoring  Submittal of Monitoring Record			
Exposure of Wildlife and Fisheries Resources to Toxic Substances	<p><b>MM BIO-4. Protection from Release of Toxic Substances.</b> The Applicant shall implement the following measures to prevent the release of toxic substances.</p> <ul style="list-style-type: none"> <li>All engine-powered equipment used and operated upon and from the deck of the barge shall incorporate the use of drip-pans or other means to retain fluids beneath the equipment.</li> <li>Only approved and certified fuel cans with “no-spill” spring loaded lids shall be used when fueling up diesel or gas engines. Engines will be turned OFF and fueling will not be done over the water. A spill kit with absorbent diapers shall be readily available next to each filling area.</li> <li>A continuous floating oil-absorbent sock shall be deployed and maintained around the entire barge to contain any accidental leakage of fuel or hydraulic fluids.</li> </ul>	Bay and shoreline work areas	<p>Include protections in final plan documents for submittal to CSLC; compliance monitoring</p> <p>Submittal of Monitoring Record</p>	Pre- removal activities, and during removal and demobilization, as appropriate and necessary	GWF	Toxic materials exposure is minimized; oil and/or fuel spills are prevented
Disturbance and Disruption of Vulnerable Life Stages (i.e., nesting season) of Special-status Wildlife in	<p><b>MM BIO-1 WEAP</b> (see above)</p> <p><b>MM BIO-2 Work Windows</b> (see above)</p> <p><b>MM BIO-5. Confine Vehicle Use to Established Roadway.</b> Project-related vehicle use and any other terrestrial activity shall be</p>	Bay and shoreline work areas	Include WEAP and protections in final plan documents for submittal to CSLC;	Pre- removal activities, and during removal and demobilization as appropriate and necessary	GWF	Sensitive species and habitats are avoided

**Table 5-1: Mitigation Monitoring Program**

Potential Impact	Mitigation Measure (MM)	Location	Monitoring / Reporting Action	Timing	Responsible Party	Effectiveness Criteria
Adjacent Marsh	confined to the established levee road. No staging, driving, walking, or any other human activity shall occur in the salt marsh habitat. Vehicles shall not exceed 20 miles per hour to ensure birds/wildlife that may be on or crossing the road have an opportunity to move out of harm's way.		compliance monitoring  Signature sheet completed for workers taking training			
<b>Hazards and Hazardous Materials</b>						
Potential Release of Hazardous Substances	<b>MM BIO-3 In Water Turbidity Protections</b> (see above)  <b>MM BIO-4 Protection from Release of Toxic Substances</b> (see above)	Bay and shoreline work areas	Include protections in final plan documents for submittal to CSLC; compliance monitoring  Submittal of Monitoring Record	Pre-removal activities, and during removal and demobilization, as appropriate and necessary	GWF	Sediment resuspension is minimized  Toxic materials exposure is minimized; oil and/or fuel spills are prevented
<b>Hydrology and Water Quality</b>						
Turbidity and Resuspension of Bay Sediments in Water Column	<b>MM BIO-3 In Water Turbidity Protections</b> (see above)  <b>MM BIO-4 Protection from Release of Toxic Substances</b> (see above)	Bay and shoreline work areas	Include protections in final plan documents for submittal to CSLC; compliance monitoring  Submittal of Monitoring Record	Pre-removal activities and during removal and demobilization, as appropriate and necessary	GWF	Sediment resuspension is minimized  Toxic materials exposure is minimized; oil and/or fuel spills are prevented

## 6.0 MND PREPARATION SOURCES AND REFERENCES

This Mitigated Negative Declaration (MND) was prepared by the staff of the California State Lands Commission's (CSLC) Division of Environmental Planning and Management (DEPM). The analysis in the MND is based on information provided on behalf of GWF Power Systems, L.P. (GWF or Applicant). The information and references provided in the MND were independently reviewed by DEPM staff.

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