

## Notice of Determination

## Appendix D

**To:**  
 Office of Planning and Research  
**U.S. Mail:** **Street Address:**  
P.O. Box 3044 1400 Tenth St., Rm 113  
Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk  
County of: Humboldt  
Address: 825 5th Street Fifth Floor  
Eureka, CA 95501

**From:**  
Public Agency: Humboldt Bay Harbor District  
Address: 601 Startare Drive  
Eureka, CA 95502  
Contact: George Williamson, District Planner  
Phone: (707) 825-8260

Lead Agency (if different from above):  
Address:  
Contact:  
Phone:

**SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.**

State Clearinghouse Number (if submitted to State Clearinghouse): 2016052046

Project Title: Chevron Eureka Terminal Dock Seismic Retrofit

Project Applicant: Chevron, Attn: Mark Langholz, 3400 Christie Street, Eureka, CA 95501

Project Location (include county): 3400 Christie Street, Eureka, CA 95501, Humboldt County

**Project Description:**

The Chevron Eureka Terminal Dock seismic retrofit is a compliance driven project as required by the CA State Lands Commission (CSLC) per CBC Chapter 31F, Marine Oil Terminals. Retrofitting the structure consists of isolating the pipeway from the timber dock structure by installing a new steel support system along the trestle and a new unloading platform on the wharf. The remainder of the existing dock will remain in place and is not part of this project. Four 24" steel pipe piles will be installed to support the new unloading platform and twenty 16" steel pipe piles will be installed along the trestle to support the pipeway. It is estimated a total of 71 existing treated timber piles will be removed.

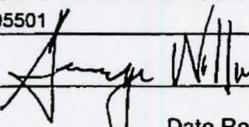
This is to advise that the Humboldt Bay Harbor, Recreation and Conservation District has approved the above  
( Lead Agency or  Responsible Agency)

described project on June 23, 2016 and has made the following determinations regarding the above  
(date)  
described project.

1. The project [ will  will not] have a significant effect on the environment.
2.  An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.  
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [ were  were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [ was  was not] adopted for this project.
5. A statement of Overriding Considerations [ was  was not] adopted for this project.
6. Findings [ were  were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

601 Startare Drive, Eureka, CA 95501

Signature (Public Agency):  Title: District Planner

Date: June 23, 2014 Date Received for filing at OPR: \_\_\_\_\_



# Mitigation Monitoring / Reporting Program

(MMRP)

## HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

This Mitigation Monitoring/Reporting Program (MMRP) has been prepared for the project described below in conformance with Section 21081.6 of the California Environmental Quality Act (CEQA) and Section 15097 of the CEQA Guidelines and was adopted by the Humboldt Bay Harbor, Recreation and Conservation District Board of Commissioners [TENTATIVELY] June 23 2016.

**PROJECT TITLE:** *Chevron Eureka Terminal Dock Seismic Retrofit*

**STATE CLEARINGHOUSE NUMBER:** **2016052046**

**LEAD AGENCY:** Humboldt Bay Harbor, Recreation and Conservation District (HBHRCD), 601 Startare Drive, Eureka, CA 95501

**PROJECT LOCATION:** 3400 Christie Street, Eureka, CA

**GENERAL PLAN LAND USE DESIGNATION/ZONING:** APN 007-071-013- WD – Development Water & APN 007-071-013 MC – Coastal Dependent Industrial/ CDI – Coastal Dependent Industrial

**PROJECT DESCRIPTION:** The Chevron Eureka Terminal Dock seismic retrofit is a compliance driven project as required by the California State Lands Commission (CSLC) per CBC Chapter 31F, Marine Oil Terminals. Retrofitting the structure consists of isolating the pipeway from the timber dock structure by installing a new steel support system along the trestle and a new unloading platform on the wharf. The remainder of the existing dock will remain in place and is not part of this project. Four 24" steel pipe piles will be installed to support the new unloading platform and twenty 16" steel pipe piles will be installed along the trestle to support the pipeway. It is estimated a total of 71 existing treated timber piles will be removed.

**CONTACT PERSON:** George Williamson, AICP, District Planner; *phone:* (707) 825-8260; *fax:* (707) 825-9181; *e-mail:* [districtplanner@humboldtbay.org](mailto:districtplanner@humboldtbay.org)

**INTRODUCTION:** The purpose of this MMRP is to ensure that the mitigation measures adopted in connection with project approval are effectively implemented. This MMRP establishes the framework that HBHRCD and others will use to implement the adopted mitigation measures and the monitoring and/or reporting of such implementation.

**ENFORCEMENT:** In accordance with CEQA, the primary responsibility for making a determination with respect to potential environmental effects rests with HBHRCD rather than the monitor or preparer of the CEQA documents. As such, HBHRCD is identified as the primary enforcement agency for this MMRP. The District shall ensure that language assuring compliance shall be incorporated into design and contract documents prepared for the project.

**PROGRAM MODIFICATION:** After adoption of this MMRP, minor changes to this MMRP are permitted but can only be made by HBHRCD. The Harbor District Planner, after consultation with affected Departments or Agencies, may make minor modifications to this MMRP. If, for any reason, any mitigation measure specified in this MMRP cannot be implemented due to factors beyond the control of HBHRCD, at a noticed public hearing before the HBHRCD Board of Commissioners substitution of another mitigation measure may be approved. In no case shall deviations from this MMRP be permitted unless this MMRP continues to satisfy the requirements of Section 21081.6 of CEQA, as determined by HBHRCD.

Mitigation Measure	Responsibility for Implementation	Timing of Implementation	Responsibility for Confirming Completion
<b>Mitigation Measure BIO-1:</b> In-water work will be limited to the work window of July 1 <sup>st</sup> – October 15 <sup>th</sup> for each year (2016 and 2017), when salmonid species are less likely to be present in the Bay.	Chevron/Pacific Affiliates	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure BIO-2:</b> All impact pile driving activities will incorporate a “soft start” approach whereby the piles are lightly tapped before the full hammer strength is applied. The first few taps of the hammer on the pile should cause fish to swim away from the piles before full impact hammer strength is applied, thereby reducing the potential for fish to be exposed to harmful sound levels.	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure BIO-3:</b> A cushion pad, typically wood, nylon or polymer material, will be placed between the pile and the impact hammer to reduce sound levels (see also MM-NOI-1).	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure BIO-4:</b> The use of a bubble curtain with the impact hammer will act as a sound barrier and reduce the radiation of the sound from the pile to the water. Bubble curtain shall consist of a “stacked” series of bubble extruder rings to surround the piling with bubbles. The use of bubble curtains will be limited to periods when current speeds do not prevent their use as an effective attenuation measure. The hydroacoustic monitor will visually confirm that the bubble curtain is operating effectively during impact pile driving.	hydroacoustic monitor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure BIO-5:</b> Hydroacoustic monitoring will be required with impact hammer use. The number of strikes per day will be limited by peak noise threshold and the cumulative SEL threshold for fish $\geq 2g$ (MND Table 6). If hydroacoustic monitoring detects underwater sound levels greater than or equal to 180 dB re: 1 $\mu$ Pa, a marine mammal shut-down zone will be established for each each pile being driven. A qualified biological monitor will visually scan the project site and surrounding waters for marine mammal presence at least 30 minutes before and continuously throughout periods of impact pile driving. If any marine mammal is sighted in the shutdown zone before pile driving begins, the contractor (or other authorized individual) will delay pile-driving activities until the animal has moved outside the shutdown zone or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If any marine mammal is about to enter or is observed in the shutdown zone during pile driving, the pile-driving activities will be shut down until the animal has moved outside the shutdown zone, or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans.	qualified biological monitor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure BIO-6:</b> Mitigation involves the removal of forty 14" diameter (1.1 sf) treated timber piles from the south side of trestle during construction. Creosote treated piles make up majority of those to be removed, though some are preservative treated. Removal of these piles will remove point sources for contamination of the bay water and increase the quality of the bay.	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD

Mitigation Measure	Responsibility for Implementation	Timing of Implementation	Responsibility for Confirming Completion																																								
<p>Of the 40 piles (42.7 sf) to be removed, 25 (26.7 sf) are located in eelgrass habitat. The remaining 15 piles (16.0 sf) are located in deeper water to the west. Approximately 31 additional timber piles (33.1 sf) will be removed from the wharf area, though these will be removed as part of construction, so will not count toward mitigation. Four 24" diameter steel piles (12.6 sf) will be installed at the wharf and twenty 16" steel piles (27.9 sf) will be installed along the trestle. Of the 20 piles installed along the trestle, 15 (20.9 sf) will be in eelgrass habitat and five (7.0 sf) will be in deeper water to the west. Table 7 below summarizes the change in fill area caused by pile placement and removal.</p> <p><i>Table 7. Permanent fill areas due to pile placement and removal</i></p> <table border="1"> <thead> <tr> <th>Piles to be removed</th><th>No. of Piles</th><th>Diameter (in)</th><th>Area (sf)</th></tr> </thead> <tbody> <tr> <td>Wharf [not mitigation]</td><td>31</td><td>14</td><td>33.1</td></tr> <tr> <td>Trestle (out of eelgrass habitat) [mitigation]</td><td>15</td><td>14</td><td>16.0</td></tr> <tr> <td>Trestle (in eelgrass habitat) [mitigation]</td><td>25</td><td>14</td><td>26.7</td></tr> <tr> <td>Total</td><td>71</td><td>--</td><td>75.9</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Piles to be installed</th><th>No. of Piles</th><th>Diameter (in)</th><th>Area (sf)</th></tr> </thead> <tbody> <tr> <td>Wharf</td><td>4</td><td>24</td><td>12.6</td></tr> <tr> <td>Trestle (out of eelgrass habitat)</td><td>5</td><td>16</td><td>7.0</td></tr> <tr> <td>Trestle (in eelgrass habitat)</td><td>15</td><td>16</td><td>20.9</td></tr> <tr> <td>Total</td><td>24</td><td>--</td><td>40.5</td></tr> </tbody> </table> <p>The total change in area due to pile placement and removal results in 35.4 sf of area gained. The removal of forty treated timber piles as mitigation for potential impacts to fish &lt;2g will remove at total of 42.7 sf of existing fill.</p>	Piles to be removed	No. of Piles	Diameter (in)	Area (sf)	Wharf [not mitigation]	31	14	33.1	Trestle (out of eelgrass habitat) [mitigation]	15	14	16.0	Trestle (in eelgrass habitat) [mitigation]	25	14	26.7	Total	71	--	75.9	Piles to be installed	No. of Piles	Diameter (in)	Area (sf)	Wharf	4	24	12.6	Trestle (out of eelgrass habitat)	5	16	7.0	Trestle (in eelgrass habitat)	15	16	20.9	Total	24	--	40.5			
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<p><b>Mitigation Measure BIO-7:</b> Permanent impacts to the eelgrass will be offset by removal of 40 piles from the trestle. Twenty five (25) 14" diameter timber piles (26.7 sf) will be removed from eelgrass habitat and another fifteen (15) 14" diameter timber piles (16.0 sf) will be removed from non-eelgrass habitat areas. With the anticipated mitigation ratios being 1:1 for piles removed from eelgrass habitat during the project (26.7 sf) and 2:1 for piles removed from non-eelgrass habitat (16.0 sf / 2 = 8.0 sf), the factored mitigation area credit for pile removal is expected to be 34.7 sf. With the total area of permanent impacts from installation of fifteen 16" diameter piles in eelgrass habitat being 20.9 sf, the net change will result in 13.8 sf of mitigation credit. Table 8 below summarizes the mitigation areas.</p>	Marine Contractor	July 1-October 15 2016 - 2017	HBHRC																																								

Mitigation Measure	Responsibility for Implementation	Timing of Implementation	Responsibility for Confirming Completion
<i>Table 8. Mitigation areas for permanent impacts to eelgrass habitat</i>			
<b>Mitigation Ratios</b>			
During project in eelgrass habitat 1:1			
Out of eelgrass habitat 2:1			
<b>Piles to be removed</b>	<b>No. of Piles</b>	<b>Diameter (in)</b>	<b>Area (sf)</b>
Trestle (out of eelgrass habitat)	15	14	16.0
Trestle (in eelgrass habitat)	25	14	26.7
<b>Total</b>	<b>40</b>	<b>--</b>	<b>42.7</b>
<b>Piles to be installed</b>	<b>No. of Piles</b>	<b>Diameter (in)</b>	<b>Area (sf)</b>
Trestle (in eelgrass habitat)	15	16	20.9
<b>Mitigation areas</b>			<b>Factored Area (sf)</b>
Credit (factored area of trestle piles removed)			34.7
Impact area			20.9
<b>Total</b>			<b>-13.8</b>
Temporary impacts to eelgrass habitat will be caused primarily by barge spud pile placements. As described above, it is expected ten new bents will be installed and fourteen existing bents will be demolished with the barge positioned in eelgrass habitat. Each new bent will required one barge trip for installation of the pile and a second barge trip for installation of the cantilever support beam. It is estimated two bents will be demolished per barge trip. The estimated number of barge trips into eelgrass habitat is 27. With two spud placements per barge trip, this results in a potential impact area of 230.9 sf. See Table 9 below for a summary of this calculation.			
<i>Table 9. Mitigation areas for potential temporary impacts to eelgrass habitat</i>			
<b>Potential temporary impacts to eelgrass</b>			
<b>Barge placements</b>			
Spud pile diameter (in)		28	
Spud pile area (sf)		4.3	
No. spuds per placement		2	

Mitigation Measure	Responsibility for Implementation	Timing of Implementation	Responsibility for Confirming Completion
<b>Pile and beam installation</b>			
Barge placements for pile and beam installation (each)	10		
Spud area disturbed during pile installation (sf)	85.5		
Spud area disturbed during beam installation (sf)	85.5		
<b>Demolition</b>			
Barge placements for demolition	7		
Spud area disturbed during demolition (sf)	59.9		
Potential temporary impacts (sf)	230.9		
<p>If Barge grounding occurs, areas temporarily impacted will be noted by the monitor on site. These areas will be inspected within a few weeks post-construction (dependent on tides and weather) to make a preliminary observation of the impacted areas. Further observation and a survey of the area will take place during the one year post-construction eelgrass inspection to be completed in May or June. Results of the post-construction survey will be compared to the pre-construction survey (including the survey of a nearby reference area) to determine if any permanent impacts were caused by construction activities.</p> <p>Should temporary impacts on eelgrass be determined to be permanent after the one year post-construction eelgrass survey, the mitigation credits from pile removal shall be used for compensation. If the impacted area is determined to be greater than the credited area (13.8 sf), additional compensatory mitigation shall be performed. Prior to performing any mitigation, the activity shall be approved by CCC and DFW. At this time, mitigation ratios will be determined, but are expected to be 1.2:1 or greater for mitigation completed one-year post-construction. Potential mitigation opportunities include removal of derelict piles and a dolphin on the north side of the Chevron Dock (<math>\pm 135</math> sf), removal of piles on the property north of Chevron (&gt;100 piles) and removal of debris (nine shopping carts, various timbers, bricks, tires, pipes and concrete) along the shoreline.</p>			
<p><b>Mitigation Measure Cul-1:</b> Should an archaeological resource be inadvertently discovered during ground-disturbing activities, the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe Tribal Historic Preservation Officers (THPO) shall be immediately notified and a qualified archaeologist with local experience retained to consult with the Harbor District, the THPOs, the Permittee and other applicable regulatory agencies to employ best practices for assessing the significance of find, developing and implementing a mitigation plan if avoidance is not feasible, and reporting in accordance with Harbor District's Standard Operating Procedures (SOP).</p>	qualified archaeologist	July 1-October 15 2016 - 2017	HBHRCD

Mitigation Measure	Responsibility for Implementation	Timing of Implementation	Responsibility for Confirming Completion
<b>Mitigation Measure Cul-2:</b> Should human remains be inadvertently discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, the Harbor District and County Coroner contacted, and the Harbor District's SOP shall be followed, consistent with state law.	Harbor District and County Coroner	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure Haz-1:</b> Contractor will have spill kits maintained on the barge and dock equipped with enough material to provide preliminary containment for a volume of material that can reasonably be expected to spill. Spill containment trays shall be placed around all equipment on the barge deck. The Chevron Terminal has a Facility Response Plan (FRP) and will activate the Incident Command System (ISC) in the event of a spill on the water. They will also consult their Coast Guard Dock Operation Manual for applicable procedures. .	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure Hyd-1:</b> Marine Contractor to use best management practices to prevent construction debris from entering the water, including but not limited to the following: floating booms; maintain a clean work area; routine equipment inspections, keep crane hydraulics over barge when possible; use of netting, wood platforms and/or scaffolding; prefabricate unloading platform off-site to reduce exposure to concrete castings and welding slag. Marine contractor to utilize alternative vegetable-oil based hydraulic fluids and biodiesel in equipment when feasible to reduce toxicity in the event of an equipment spill or leak.	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD
<b>Mitigation Measure NOI-1:</b> In event an impact hammer is required during pile driving to meet the target tip depth (Section 7.6, Table 10), a cushion pad is to be used which will reduce noise levels by approximately 5-10 decibels.	Marine Contractor	July 1-October 15 2016 - 2017	HBHRCD

# **CEQA INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION**

FOR:

## **CHEVRON EUREKA TERMINAL MOTEMS COMPLIANCE SEISMIC RETROFIT**

3400 CHRISTIE STREET  
EUREKA, CA 95501  
(707) 444-7850



### **LEAD AGENCY:**

HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT  
P.O. Box 1030  
EUREKA, CA 95502



PREPARED BY:



**PACIFIC AFFILIATES, INC.**  
A CONSULTING ENGINEERING GROUP  
990 WEST WATERFRONT DRIVE  
EUREKA, CA 95501  
(707) 445-3001



**MAY 16, 2016**

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## 1. CEQA INITIAL STUDY GUIDELINES

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The purpose of the Initial Study per California Environmental Quality Act (CEQA) §15063 (c), is to:

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

The content of an Initial Study are as follows per CEQA §15063 (d):

1. A description of the project including the location of the project;
2. An identification of the environmental setting;
3. An identification of the environmental effects by use of a checklist, matrix or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries.
4. A discussion of the ways to mitigate the significant effects identified, if any;
5. An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;
6. The name of the person or persons who prepared or participated in the Initial Study.

## 2. PROJECT INFORMATION

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### 2.1 PROJECT TITLE

Chevron Eureka Terminal Dock Seismic Retrofit

### 2.2 LEAD AGENCY

Humboldt Bay Harbor, Recreation, and Conservation District  
P.O. Box 1030  
Eureka, CA 95502  
Phone: 707-443-0801

Contact Person:

Jack Crider, Executive Director, Harbor District

### 2.3 PROJECT APPLICANT AND OPERATOR

Chevron  
Attn: Mark Langholz  
3400 Christie Street  
Eureka, CA 95501  
Phone: 707-444-7850  
MXMC@Chevron.com

### 2.4 FACILITY INFORMATION

The Chevron Eureka Marine Terminal located in Humboldt Bay, provides the majority of the fuel consumed by the Eureka-Arcata areas. Approximately every two weeks a fuel barge berths at the terminal's wharf unloading platform and fuel is transferred via pipelines along the dock trestle. The trestle is outfitted with shut-off valves at both ends, a fire water line and electrical conduit.

### 2.5 PROJECT LOCATION

The Chevron Eureka Terminal Facility (Lat. 40° 46.652, Lon. -124° 11.655) is located in Eureka, California, approximately 270 miles north of San Francisco. The Chevron Eureka Terminal occupies two parcels (APN 007-071-008 an inland parcel and APN 007-071-013 an adjacent tideland parcel) west of Highway 101 in southwestern Eureka, California. The terminal's single pier and dock extends into Humboldt Bay, approximately 645 feet from the U.S. Bulkhead line, reaching nearly the U.S. Pier head line. The dock is approximately 0.4 miles north of the mouth of Elk River, and roughly two miles northeast of the mouth of the Bay. See Appendix, Figures 1 & 2 for vicinity map and aerial imagery.

### 2.6 PROPERTY OWNER(S)

APN 007-071-013 (Tideland Parcel): City of Eureka, 531 K Street, Eureka, CA 95501 (Leased by Chevron)  
APN 007-071-008 (Upland Parcel): Chevron USA Inc.

### 2.7 ZONING

APN 007-071-013 (Tideland Parcel):  
Zoning: WD – Development Water  
General Plan Designation: WD – Development Water

APN 007-071-008 (Upland Parcel):  
Zoning: CDI – Coastal Dependent Industrial  
General Plan Designation: MC – Coastal Dependent Industrial

### 3. ENVIRONMENTAL SETTING

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The purpose of this section is to briefly describe the baseline existing environmental setting in the vicinity of the project site. Additional information relating to specific environmental factors is included in the discussion of the Environmental Checklist (Section 5).

#### 3.1 REGIONAL SETTING

The Chevron Eureka Terminal Dock is located in the tidelands of Humboldt Bay, off the coast of the Pacific Ocean in Northern California (Appendix, Figures 1 and 2). Highway 101 provides regional access to the facility, approximately 270 miles north of San Francisco.

#### 3.2 LOCAL SETTING

The project site is situated on the tidelands of the eastern shore of Humboldt Bay, between the Entrance Channel and the Arcata Bay. The dock structure is approximately one third of a mile north of the mouth of the Elk River, and 2 miles north of the mouth of the Bay. Eelgrass inhabited mudflats lie north and south of the dock, and open water to the west. Chevron USA owns and operates the adjoining upland parcel to the east. Humboldt Bay is the second largest natural bay in California and has many beneficial uses including, natural and cultural resources, commercial, recreation and conservation.

#### 3.3 BIOLOGICAL SETTING

Diverse habitats within the bay support up to 120 species of fish, 251 species of marine birds, 550 marine invertebrates, 80 species of algae and numerous resident and visiting marine mammals, including 35 managed species of fish (HD, 2016). A Biological Assessment (BA) (Stillwater Sciences 2016a) and California Department of Fish and Wildlife (CDFW) Incidental Take Permit (ITP) application (Stillwater Sciences 2016b) have been prepared by Stillwater Sciences in concurrence with this Initial Study. The BA and ITP identified the following species listed under the state and federal Endangered Species Acts (ESA) with potentially suitable habitat within the vicinity of the proposed project site:

##### 3.3.1 Green sturgeon (*Acipenser medirostris*)

The National Marine Fisheries Service (NMFS) listed the southern DPS green sturgeon as “threatened” in 2006 (71 FR 17757) and designated Humboldt Bay as critical habitat effective November 9, 2009 (74 FR 52300). Green sturgeons migrate to coastal ocean waters, estuaries and bays after two to three years of rearing, where it is believed they spend the majority of their lives (National Oceanic and Atmospheric Administration [NOAA] 2016). With a life span of 60-70 years, the green sturgeon will reach reproductive maturity at around 17 years, and reproduce every two to four years thereafter. The typical spawning migration season for the adult green sturgeon occurs between March-July, with peak activity from April-June (Stillwater 2016a) when they enter large rivers. The southern DPS green sturgeon spawn primarily in the Sacramento River. Sub-adults and adults may forage in the project area during summer and fall months.

##### 3.3.2 Salmonids

The Humboldt Bay watershed supports three species of salmonids listed as threatened under the Federal Endangered Species Act: Coho salmon, Chinook salmon and steelhead. NMFS designated critical habitat in northern California for each of the three salmonid species in February of 2000 (65 FR 42422 42481), (Federal Register 2000).

### 3.3.3 Coho salmon (*Onchorhynchus kisutch*)

Southern Oregon/Northern California Coast (SONCC) coho salmon were listed under the federal Endangered Species Act (ESA) as threatened on June 18, 1997 (62 FR 33038) and under the California Endangered Species Act (CESA) in 2005. Coho salmon are a semelparous species with a typical lifespan of three years. Upstream migration of adult coho typically occurs from October through late December and out migration of juvenile coho typically occurs between February to late June, with peak juvenile migration observed in April and May (Stillwater 2016a). It is estimated that coho spend an average of 15-22 days in the bay or estuary before migrating to the Pacific Ocean, and typically utilize deeper channels (Stillwater 2016a).

### 3.3.4 Chinook salmon (*O. tshawytscha*)

Chinook Salmon in the California Coastal ESU occur in the project area and were listed as a threatened species under the Federal Endangered Species Act on September 16, 1999 (64 FR 50393). Chinook salmon spend their juvenile lives in freshwater, migrating to estuarine areas as smolts, and the Pacific Ocean as adults. Chinook salmon are also semelparous, and have a typical lifespan of four to six years. Peak upstream migration occurs from October to November and peak out migration occurs from February to March extending to late June – essentially the same as the coho salmon.

### 3.3.5 Steelhead (*O. mykiss*)

The Northern California (NC) DPS steelhead were listed under the ESA as threatened in 2006 (71 FR 834). Steelhead in the Northern California Distinct Population Segment occur in the project area and were listed as a threatened species under the Federal Endangered Species Act on January 5, 2006 (50 FR). Steelhead live in freshwater streams for the first one to three years of their lives before out-migrating to the ocean. The steelhead will spend one to four years growing in the ocean before migrating back to freshwater to spawn. Unlike the salmon species, steelhead can spawn multiple times, resulting in multiple migrations during over a lifetime. Juvenile steelhead migrate to the Pacific Ocean through Humboldt Bay from various freshwater sources, typically utilizing the deeper channels. Typical migration timing for adult steelhead returning to freshwater is between December-April (FWS 2016).

### 3.3.6 Southern eulachon DPS (*Thaleichthys pacificus*)

The Pacific eulachon is a small anadromous fish from the eastern Pacific Ocean (National Marine Fisheries Service [NMFS] 2011). In March 2010, NMFS listed the Southern DPS as threatened under the ESA; the DPS includes populations in Washington, Oregon, and California. Critical habitat was designated in October 2011; in California, critical habitat includes the Mad River (NMFS 2011).

Eulachon spend 3–5 years at sea before returning to freshwater to spawn, from late winter to mid-spring. Eggs are fertilized in the water column, where they then sink and adhere to the river bottom of coarse sand and gravel. Most adults die after spawning. Eggs hatch in 20–40 days, and larvae are carried downstream and “are dispersed by estuarine and ocean currents shortly after hatching” (NMFS 2011).

Eulachon have been documented in Humboldt Bay and nearby coastal rivers such as Redwood Creek and the Mad River. In 1996, the Yurok tribe supported a eulachon sampling effort on the Klamath River of over 110 surveying hours, from early February to early May. No eulachon were observed. Considering the low abundance for over 20 years, California Department of Fish and Wildlife (CDFW) considers the fish to be “nearly extirpated from California” (California Department of Fish and Game [CDFG] 2010).

### 3.3.7 Longfin smelt (*Spirinchus thaleichthys*)

The state of California listed the longfin smelt as threatened under the California ESA in 2009. Adult and juvenile longfin smelt can be found in the open waters of estuaries, mostly in the middle or at the bottom of the water column. Spawning occurs in fresh water during the winter to early spring (February through April) over sandy or gravel substrate. Most smelt die after spawning, but a few (mostly females) may live another year. It takes almost three months for longfin smelt to reach the juvenile stage. Longfin smelt were historically very common in Humboldt Bay, but have experienced a significant decrease in population since the 1970s. The reasons for the decline in Humboldt Bay are unknown. Longfin smelt larvae would not be present in the area during the late summer and fall. Juvenile and adult longfin smelt would have a moderate likelihood of presence during operations. An ITP application has been developed and submitted to CDFW for this species.

### 3.3.8 Western snowy plover (*Charadrius alexandrinus nivosus*)

The western snowy plover nests along the Pacific Coast from Damon Point, Washington to Bahia Magdalena, Baja California, Mexico (U.S. Fish and Wildlife Service [USFWS] 2007). Degradation and use of habitat for human activities has been largely responsible for the decline in snowy plover breeding population; other important threats to the snowy plover are mammalian and avian predators, and human disturbance (Page et al. 1995). In the Humboldt Bay region, western snowy plovers primarily breed and winter in ocean-fronting beaches (Brindock and Colwell 2011) although small numbers of plovers have been documented nesting in gravel bars of the Eel River (Colwell et al. 2011). Nonbreeding western snowy plovers occasionally occur on the interior of Humboldt Bay (Colwell 1994), but they are expected to occur mainly in the southern portion of the bay on sandier substrates rather than on softer substrates associated with mudflats in the northern portion of the bay. Snowy plovers are expected to occur in the Project area rarely as occasional foragers.

### 3.3.9 Marbled murrelet (*Brachyramphus marmoratus*)

The marbled murrelet occurs along the Pacific coast from Alaska to California, foraging nearshore in marine subtidal and pelagic habitats for small fish and invertebrates (USFWS 2011). Breeding occurs in mature, coastal coniferous forest with nests built in tall trees. In California, breeding occurs primarily in Del Norte and Humboldt counties. The loss of old-growth forest is a primary reason for this species' decline (USFWS 1992). In California, marbled murrelets nest in redwoods that are older than 200 years (Nelson 1997). They are also vulnerable to oil spills along the coast. Marbled murrelets can occur in Humboldt Bay as foragers, and are expected to primarily occur in the entrance portion of the bay.

### 3.3.10 California sea lion (*Zalophus californianus*)

California sea lions are restricted to middle latitudes of the eastern North Pacific. There are three recognized management stocks: (1) the U.S. stock from Canada to Mexico, (2) the western Baja California stock, and (3) the Gulf of California stock (Lowry et al. 2008; Carretta et al. 2009). Breeding colonies only occur on islands off southern California, along the western side of Baja California, and in the Gulf of California (Heath and Perrin 2008). California sea lions feed on fish and cephalopods, some of which are commercially important species such as salmonids, Pacific sardines (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), Pacific mackerel (*Scomber japonicus*), Pacific whiting (*Merluccius productus*), rockfish, and market squid (*Loligo opalescens*) (Lowry et al. 1991; Lowry and Carretta 1999; Weise 2000; Lowry and Forney 2005). California sea lions do not breed along the Humboldt County coast; however non-breeding or migrating individuals may occur in Humboldt Bay.

### 3.3.11 Harbor seal (*Phoca vitulina*)

Harbor seals are widely distributed throughout the northern Atlantic and Pacific Oceans along coastal waters, river mouths, and bays (Burns 2008; Lowry et al. 2008). Harbor seals consume a variety of prey, but small fishes predominate in their diet (Tallman and Sullivan 2004). In Northern California, pupping peaks in June and lasts about two weeks; pups are weaned in four weeks (Burns 2008). Foraging occurs in a variety of habitats, from streams to bays to the open ocean, and harbor seals can dive to depths of almost 500 meters (m) (Eguchi and Harvey 2005). Harbor seals breed along the Humboldt County coast and inhabit the area throughout the year (Sullivan 1980). Harbor seals use Humboldt Bay as a pupping and haul-out area; other nearby haul-out sites are located in Trinidad Bay and the mouths of the Mad and Eel Rivers.

### 3.3.12 Harbor porpoise (*Phocaena phocaena*)

Harbor porpoises are distributed throughout the coastal waters of the North Atlantic and North Pacific Oceans, and the Black Sea. In the North Pacific, they range from Point Conception, California, to as far north as Barrow, Alaska, and west to Russia and Japan (Gaskin 1984; Angliss and Allen 2009; Carretta et al. 2009). Harbor porpoises from California to the inland waters of Washington have been divided into six stocks (Carretta et al. 2009), with three additional stocks occurring in Alaskan waters (Angliss and Allen 2009). Porpoises from Humboldt County are included in the SO/NCC stock that extends from Point Arena to Lincoln City, Oregon (Carretta et al. 2009). Harbor porpoises have been observed throughout the year at the entrance to and within Humboldt Bay, usually as single individuals but sometimes in groups, with a maximum size of 12 animals (Goetz 1983). Abundance peaks between May and October, and porpoises are most abundant in Humboldt Bay during the flooding tide.

## 3.4 HABITAT

Humboldt Bay supports multiple habitats including riparian forest, freshwater marsh, agricultural wetlands, brackish marsh, saltmarsh, intertidal mudflats and eelgrass beds. Eelgrass beds are located within the action area of the project, north and south of the dock.

### 3.4.1 Eelgrass (*Zostera marina*)

Eelgrass was designated as Essential Fish Habitat (EFH) under the Federal Endangered Species Act Magnuson-Stevens Fishery Conservation and Management Act in 1996 (NOAA 2014). Eelgrass is present predominantly in the tidelands of Humboldt Bay, providing foraging and spawning areas, food, reducing coastal erosion and improving water quality. The California Eelgrass Mitigation Policy (CEMP) recommends a “no net loss” policy. Humboldt Bay has a very healthy eelgrass population and supports the third largest eelgrass population along the west coast (CDFG 2010).

## 3.5 CULTURAL

Humboldt Bay and surroundings are located within the original Wiyot territory, which extended from Trinidad to Scotia, and east to Berry Summit and Chalk Mountain. Wiyot people occupied the land for thousands of years until the gold rush of 1849 when white settlers arrived. Indian (Gunther) Island, located within Humboldt Bay, approximately 2.3 miles north of the project site, is the traditional “center of the world” for the Wiyot people. Two archaeological village sites, Tuluwat and Etpidol wotperol, are present on the island. Approximately 45 formally recorded cultural resources sites have been identified in the vicinity of Humboldt Bay, and there is a high probability that additional undiscovered sites exist.

## 4. PROJECT DESCRIPTION

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### 4.1 PROJECT PURPOSE AND NEED

The *purpose* of this project is to retrofit the Chevron Eureka Terminal Dock to bring the fuel pipeway support structure into compliance with California Building Code (CBC) Chapter 31F. Moffatt and Nichol (M&N), the structural engineering consultant on the project, has performed comprehensive evaluations of the existing structures response per CBC Chapter 31F. The existing timber structure, while suitable under normal operating conditions, was shown to experience catastrophic failure during the considered seismic events due to strong shaking and induced lateral soil movement. The timber piles do not have the strength to withstand this lateral loading. Furthermore, the typical connection between the pile and pile cap consists of a simple steel pin, which is also likely to fail resulting in loss of support for the pipeway. Failure of the pipeway support system would not only have a significant economic impact on the greater Eureka area, but more importantly could have severe environmental consequences. Due to the nature of the structure (fuel conveyance), the seismic potential of the area, and state regulatory requirements, there is a *need* to bring the pipeway facility up to code in order to prevent product spills and to protect public safety, health and the environment.

### 4.2 PROJECT DESCRIPTION

The Chevron Eureka Terminal Dock seismic retrofit is a compliance driven project as required by the California State Lands Commission (CSLC) per CBC Chapter 31F, Marine Oil Terminals. It has been determined that the existing timber structure is inadequate to support the pipeway during the considered seismic events. Retrofitting the structure consists of isolating the pipeway from the timber dock structure by installing a new steel support system along the trestle and a new unloading platform on the wharf. The remainder of the existing dock will remain in place and is not part of this project. Four 24" steel pipe piles will be installed to support the new unloading platform and twenty 16" steel pipe piles will be installed along the trestle to support the pipeway. It is estimated a total of 71 existing treated timber piles will be removed.

#### 4.2.1 Construction Methods

Construction means and methods will vary depending on the marine contractor selected for the project. Construction information and sequences described below are a general outline of the anticipated means and methods, but are subject to change.

Construction will be performed primarily from a floating barge equipped with two spud piles. The spuds are on the order of two to three feet in diameter and use gravity to drive themselves into the ground to anchor the barge. The barge will be maneuvered with a small tug boat and occasionally a small skiff will be used as a bow thruster. The barge will move positions frequently during construction, but will only work from the west and south sides of the dock.

For work in intertidal areas (eelgrass habitat), out to approximately Bent 24, the contractor will float the barge in with the incoming tide, let the spuds down to anchor in position, then float out with the outgoing tide. Contact between the barge and mudflat is not expected to occur and the contractor will have a person designated to monitor water levels. Spuds will be placed in and may have an impact on eelgrass habitat, see Section 4.2.7 below. Work on the easternmost bents will be performed by positioning the crane on land at the foot of the dock. Piles will be able to be installed and removed from this position,

thus reducing the potential impact to eelgrass habitat. Work on the easternmost bents will be completed at a lower tide when there is no water to minimize impacts to aquatic organisms. On the western end of the trestle, the barge will be oriented parallel with the dock to allow the spuds to be set down outside of the eelgrass area while the barge floats above eelgrass. The amount of work performed in this manner and from the landside will be dependent on the contractor's equipment. A crane will be used extensively during all phases of construction. It will mostly be positioned on the barge, but will also be used from land for work on the eastern end of the trestle. Pile driving will be performed by vibratory hammer until refusal or tip elevation is reached. An impact hammer may be used if early refusal occurs for the vibratory hammer. Hammer equipment, size, and duration of vibration will be determined by the contractor based on their means and methods. Estimated hammer sizes are 7,000 in-lbs for vibratory and 40 kip-ft for diesel impact hammer and 20 kip-ft for hydraulic impact hammer.

#### **4.2.2 Best Management Practices**

All hazardous materials shall be stored in a secured and contained area (such as a conex or sealed job box) in such a manner that material will not spill due to vessel movement. Alternatives to petroleum based oils and fuels include vegetable-oil based hydraulic fluid and biodiesel. These environmentally friendly products are biodegradable and break down more rapidly in the environment than petroleum products, thus reducing the contamination of soil, groundwater, and surface water in the event of fluid and fuel spills. The marine contractor will use alternative vegetable-oil based hydraulic fluids and biodiesel in equipment when feasible. Not all equipment is compatible (filters, seals, exhaust systems, injectors, etc.) with these environmentally friendly alternatives and it may be prohibitive to modify equipment (i.e. flush systems, change seals, filters, gaskets, etc.) to be compatible.

All equipment shall be inspected and serviced prior to commencing work on the project. Leaks shall be repaired immediately when discovered. Equipment maintenance shall be performed in a confined area specifically designed to control runoff located more than 100 feet away from the mean high tide line. Spill kits equipped with enough material to provide preliminary containment for a volume of material that can reasonably be expected to spill shall be maintained on the barge and the dock. Spill containment trays shall be placed around all equipment on the barge deck. When handling fluids and/or equipment on the barge, there should be a minimum of ten feet to the edge of the barge deck, booms/spill kits shall be in the immediate vicinity and ready for deployment and spill trays shall be placed under the area to catch small spills.

Best management practices will be employed to prevent construction debris from entering the water. Floating booms will be placed around construction areas. During work such as cutting and welding, some sort of platform or tarp will be used to catch small debris. The barge deck will be swept as often as necessary to control the spread of debris that may result in foreign object damage potential to water, vehicles, and vessels. Debris placed on the barge shall be contained to avoid any material entering the bay. During high winds and/or precipitation, debris shall be covered with plastic sheeting. Construction spoils will be delivered via barge to the laydown area, placed on a liner, cut to size and placed into covered dumpsters.

#### **4.2.3 Staging, Laydown and Storage Areas**

There is no room at the Chevron facility to store materials or equipment due to the extensive fuel storage infrastructure. As such, the contractor will utilize a nearby facility for staging and laydown yards. Schneider Dock and Intermodal Facility (SDI) located 1.4 miles north of the Chevron Dock at 990 West

Waterfront Drive, Eureka, will be the primary yard. An alternative facility, Humboldt Bay Forest Products Dock, located 3.4 miles south of Chevron at 50 C Street, Fields Landing, may also be used.

The contractor will periodically make trips with the barge to the staging facility to deliver debris and/or pick up equipment and materials. Covered dumpsters will be provided by a waste handling company contracted by Chevron. All debris will be disposed of at an appropriately permitted facility.

#### 4.2.4 Project Phasing

The proposed project is divided into two phases scheduled to take place over the course of two years. In-water work (pile driving and removal) must be completed between July 1<sup>st</sup> and October 15<sup>th</sup> in order to minimize impacts to salmonids, which are listed under the State and/or Federal Endangered Species Acts. If in-water work must be performed outside of this timeframe, approval from permitting agencies and compensatory mitigation will be required. All out of water work can be performed outside of this timeframe. Due to the nature of the structure (fuel conveyance), it is imperative Phase I of the project be completed in 2016 and Phase II completed in 2017.

##### 4.2.4.1 Phase I

2016: Phase I includes retrofit of the wharf unloading platform and replacement of the two westernmost trestle bays. The wharf retrofit will involve replacing the existing unloading platform at bents 118 to 120 (approximately 1,300 square feet) with a 31.5' x 37.5' prefabricated concrete platform structure including three access ramps to the existing structure. Approximately 31 existing timber piles will be removed during Phase I and four 24" steel piles will be installed to support the new unloading platform. In order to install the new unloading platform, Chevron will have to remove a portion of the pipelines, demolish the existing unloading platform and deck, remove the existing piles, then install the new unloading platform. It is anticipated the unloading platform will be fabricated offsite and delivered on a barge, which will float it into place at high tide, then lower the platform on to the new piles with the outgoing tide. The extensive demolition will require the facility to shut down (i.e. not take any barge calls) for a two to three week window. Prior to disassembling the pipelines, Chevron will clear the lines of any residual product and isolate each pipe.

Phase I also involves the installation of the two westernmost pipeway support piles and underpinning systems (see Section 4.2.4.2, Phase II for description of pipeway support). Approximately six timber piles will be removed from bent 32 to 34 as part of this work. Pile driving will be completed within the designated in-water work window; pile removal may occur in Phase I if the schedule permits it, but may also be put off until Phase II. No work will be performed in the eelgrass area during Phase I. The estimated construction staging sequence for Phase I is as follows (M&N, 2016):

###### Phase I (Pre-Shut Down):

- Relocate affected utilities
- Install temporary containment berm as necessary
- Open portions of deck at new pile locations, remove planks and stringers as required and add framing to transfer loads
- Install temporary decking/barriers at openings
- Drive four 24" steel pipe piles [in-water work]
- Cut new piles to elevation

- Install pile cap plate
- Survey pile cap plate for horizontal and vertical control. Provide locations to platform fabricator to incorporate into the off-site prefabricated construction.
- [OPTIONAL] Remove existing non load bearing batter treated timber piles and treated timber fender piles within the footprint of the final deck removal (Bents 117-121). [in-water work] Remove associated blocking

Phase I (Shut-down): The following work will be performed during a two to three week shut-down work window between berthing vessels.

- Empty and isolate fuel pipes, then remove piping westward of existing flanges at Bent 34 of the trestle. Store piping for later reinstallation
- Remove existing rainwater catch basin pump system, if intending re-use, save all components
- Remove containment, decking, stringers, pile caps
- Remove treated timber piles. [in-water work]
- Install prefabricated unloading platform and weld to pile cap plates. Installation will likely be performed by floating the platform superstructure into position on a barge at high tide and then allowing the tide to fall and the superstructure to land in place. Additional jacking may also be provided to aid in alignment and maintaining elevation
- Install access ramps
- Reinstall oil product piping and primary containment basin at flanges
- Install temporary fire lines and utility lines as necessary

Phase I (Post Return to Operations): The remaining work to complete phase I can be completed after the shut-down period.

- Install permanent fire lines
- Install vehicle barriers
- Install cabling to pipeway retrofit bents
- Install permanent guard rails along cut edge of existing wharf
- Install blocking at exposed edges of stringers along cut edge of existing wharf
- Reroute utilities to permanent locations (at completion of Phase II)

Phase I (Trestle Work): Contractor will schedule work along trestle as it fits with the unloading platform work. Only two easternmost trestle piles will be installed during Phase I

- Drive new 16" diameter steel pipe piles [in-water work]
- Cut new piles to elevation and place pile cone cap
- Weld on new pipeway beam cantilever brace support
- Install support beam and brace
- Install new pipe seats after which the piping is supported by the new retrofit pipeway supports
- Remove existing timber pilecaps below the pipeway
- [MITIGATION] Remove six existing treated timber piles below the pipeway [in-water work]

- Install cabling to pipeway retrofit bents

#### 4.2.4.2 Phase II

2017: Phase II is the trestle pipeway retrofit. The existing support system for the 597 ft trestle consists of 34 timber bents spaced at approximately 20 ft that support a ten foot roadway and nine foot pipeway with six pipelines. The retrofit consists of underpinning the pipeway with a new steel support system, then isolating the pipeway from the roadway. Twenty 16" diameter steel pipe piles (two of which will be installed during Phase I) will be driven along the south side of the trestle every 30 ft. A steel beam extending from the pile will underpin the pipeway. A diagonal brace anchored to the pile will support the free end of the beam. Teflon sliding plates or saddles will be inserted to support the piping and allow it to move longitudinally and be restrained transversely with tab plates on the beam. An aramid cable system will be installed along the pipeway to provide continuity between the new piles. Once the pipeway has been underpinned, the existing timber pile caps and ±35 timber piles along the pipeway will be removed to isolate the pipeway from the timber structure.

Because the trestle retrofit is an underpinning installation and will not require the removal of existing piping, Phase II will not require a facility shut-down period. During fuel transfers (approximately every two weeks) construction will be shut down. The pipes will be out of service at the time of construction. The estimated construction staging sequence for Phase II is as follows (M&N, 2015):

- Drive new 16" diameter steel pipe piles [in-water work]
- Cut new piles to elevation and place pile cone cap
- Weld on new pipeway beam cantilever brace support
- Install support beam and brace
- Install new pipe seats after which the piping is supported by the new retrofit pipeway supports
- Remove existing timber pilecaps below the pipeway
- [MITIGATION] Remove 36 existing treated timber piles below the pipeway [in-water work]
- Install cabling to pipeway retrofit bents
- Reroute utilities to permanent locations

#### 4.2.5 Pile Driving and Removal

The steel pipe piles are hollow ended which will enable the marine contractor to use a vibratory pile driving hammer for the majority, if not all, of the work. A design tip elevation has been established for each pile, so if this depth can be reached with the vibratory hammer, no impact blows will be required to set the pile. If refusal is met, an impact hammer will be used to finish driving the pile. It is the estimation of EMI, the geotechnical consultant, that a vibratory hammer will be able to be used exclusively.

Existing piles consist primarily of creosote treated timber piles from 14" to 16" in diameter. Numerous repairs have been made to the structure over the years, so there are some pressure treated piles and 24 polyurea coated timber piles were installed from 2014 to 2015. Removal of piles will be by one of three methods: use a vibratory hammer to vibrate the piles out (preferred); place a choker around the pile and pull out with the crane; or, cut or break the pile one foot below the mudline. An effort will be made to remove the piles in their entirety, but this is not always possible. Piles at the wharf will likely be vibrated out. The vibratory action helps to break the skin friction between the pile and sediment to facilitate

removal. In some cases, the old timber piles have deteriorated to a point where the vibratory hammer will crush the wood when clamping on to it. In this case, a choker will be used to attempt to pull the pile. If the pile breaks or can't be pulled out, a diver will excavate the bottom of the pile and cut it one foot below the existing mudline.

Along the trestle, the timber piles to be removed must be cut one foot below the mudline for removal. Fuel pipelines are located directly above the piles, so the risk of damaging a pipe would be too great to pull these piles. A diver will be used to cut the pile off one foot below the mudline. Alternatively, during low tides when the area is dry, the contractor can dig out around the base of the pile to be removed and make a cut through the pile. Method of pile removal will be determined by the contractor, but an effort to keep it from contacting the mudflat will be made.

Once the pile has been removed, it will be contained on the barge until transferred to the onshore laydown area where it will be cut down to size and placed in covered dumpsters. Treated timbers (pile caps, beams, decking, bracing, etc.) removed from the dock during the project will be handled in a similar fashion as the piles. Chevron will contract a certified waste hauler to provide the dumpsters and to transport the treated wood to a permitted landfill. All treated wood will be protected from contact with precipitation by covering with plastic sheeting when necessary.

#### 4.2.6 Hydroacoustics

It is anticipated that a vibratory hammer will have the ability to drive the hollow ended steel pipe piles to design depth. The vibratory hammer does not create noise levels that approach the project's acoustic thresholds (Tables 1 and 2), so no acoustic monitoring will be required. In the event a pile refuses with the vibratory hammer, the contractor will finish setting the pile with an impact pile driving hammer. Peak and cumulative sound thresholds would likely be exceeded during unattenuated impact driving of steel piles. Table 1 below contains the thresholds for peak and cumulative sound exposure level (cSEL) thresholds for fish.

*Table 1. Underwater sound threshold levels for disturbance/injury to fish (FHWG 2008)*

Interim Criteria for Injury	Underwater Noise Threshold
Peak	206 dB re: 1µPa (for all size of fish)
Cumulative SEL	187 dB re: 1µPa2-sec – for fish ≥ 2 grams 183 dB re: 1µPa2-sec – for fish <2 grams

Table 2 depicts underwater sound thresholds identified by NMFS (2012) related to potential disturbance or injury to marine mammals based on peak sound generation during pile driving.

*Table 2. Underwater sound threshold levels for disturbance/injury to marine mammals (NMFS 2012)*

Species	Underwater Noise Threshold (dB re: 1μPa)		
	Vibratory Pile	Impact Pile Driving	Injury Threshold
	Driving Disturbance Threshold	Disturbance Threshold	
Pinnipeds and sea otters	120 dB <sub>RMS</sub>	160 dB <sub>RMS</sub>	190 dB <sub>RMS</sub>
Cetaceans	120 dB <sub>RMS</sub>	160 dB <sub>RMS</sub>	180 dB <sub>RMS</sub>

Because this is a compliance driven project with a strict in-water work window (July 1-October 15), an exceedance of the allowable sound threshold for fish <2g (183 dB re: 1μPa2-sec) is being proposed to facilitate completion of the in-water work (pile driving and removal) before October 15<sup>th</sup>. The cSEL threshold for fish ≥2g (187 dB re: 1μPa2-sec) will be observed during all impact pile driving. The amount of impact pile driving required for the project is unknown. Worst case scenario is all piles meet refusal with the vibratory hammer several feet from design depth. Without the proposed 183 dB threshold exceedance and attenuation measures, the contractor could be limited to less than 50 blows before being shut down for a minimum of 12 hours. Pile resistance (blows/foot) is unknown, but for a pile installation to be approved by the engineer without reaching the design tip elevation, it must achieve 30 blows/foot (approximated based on estimated hammer size, subject to change) and the minimum embedment depth. If there is a significant amount of impact pile driving required, and the contractor is limited to a small daily blow count, the project will be stretched out and not all work will be completed by October 15<sup>th</sup>.

The threshold exceedance will be implemented to maintain the project schedule (i.e. complete all in-water work before October 15<sup>th</sup>). For Phase I, the piles must be driven to their final location, surveyed and final fabrication done on the unloading platform (pile connection points based on pile location) by early October so the contractor has time to complete the demolition of the existing unloading platform (pile removal, which is in-water work) before October 15<sup>th</sup>. Pile removal must be delayed until the unloading platform is ready to install because Chevron must shut the facility down to perform the demolition and install the platform. A barge will float the platform into place at high tide, then lower it on to the new piles as the tide recedes. During shutdown, there can be no fuel barge deliveries, so the shutdown time must be minimized (estimated at two to three weeks). For Phase II work, the piles must be driven to depth with enough time left in the schedule for the contractor to install the pipeway underpinning system (cantilever support beam, brace, sliding plates and cable system) and complete the demolition of the existing structure (pile removal, which is in-water work) to isolate the pipeway before the October 15<sup>th</sup> deadline.

An Incidental Take Permit (ITP) will be applied for and obtained from CDFW for the potential take of juvenile longfin smelt as a result of the increased cSEL threshold. As mitigation for the potential take, 40 treated timber piles will be removed from the trestle. An additional 31 timber piles will be removed from the wharf, but these will be removed as part of the project, not for mitigation. Creosote treated piles make up the majority of those that will be removed, though some are preservative treated. Creosote and preservative chemicals (i.e. zinc, copper, arsenic) have the potential to leach into the water. Removal of these piles will remove point sources for contamination of the bay water. Additionally, the minimization measures described below will be employed to reduce the potential impacts.

In an effort to minimize noise effects from impact pile driving the contractor will implement the use of a bubble curtain around the piling. The air within bubble curtain “absorbs” some of the noise generated from pile driving, which reduces the potential impact area. A rapidly incoming or outgoing tide reduces bubble curtain effectiveness, since bubbles get carried away from the piling. Therefore, the contractor will use a “stacked” series of bubble extruder rings to surround the piling with bubbles. In addition, to improve the effectiveness of the bubble curtain, the contractor will make an effort to finish driving a pile with an impact hammer in the period that extends from one hour before and one hour after slack tide, which would avoid rapid tidal velocities and dispersal of the bubbles. (Stillwater 2016a)

A second noise impact minimization measure that will be employed during any impact hammer pile driving will be the use of cushioning blocks between the hammer and top of piling. The caps are typically one to three inches thick and made with wood, nylon, or a polymer material. The caps are used to absorb and dissipate heat and can protect the top of the pile from damage. (Stillwater 2016a)

During impact pile driving, personnel will be onsite to monitor sound levels in real time to ensure the established thresholds are not exceeded. It is expected the peak noise thresholds will not be approached. The cumulative SEL (187 dB) threshold will be reached during extending impact pile driving sessions. A hydrophone will be placed at the mid-point of the water column, 10 meters away from the pile being driven. Peak and cumulative SEL thresholds will be monitored and when a threshold is approached, the monitor will signal the equipment operator to stop the pile driving.

To insure injury does not occur to marine mammals, hydroacoustic monitoring will be conducted during impact pile driving to determine the distance from the pile at which underwater sound levels reach 180 dB re: 1 $\mu$ Pa occurs (assuming it does). If this sound level is reached, then a shut-down zone equal to that distance will be established around each pile being driven. A qualified biological monitor will visually scan the project site and surrounding waters for the presence of marine mammals at least 30 minutes before and continuously throughout periods of impact pile driving. If any marine mammal is sighted in the shutdown zone before pile driving begins, the contractor (or other authorized individual) will delay pile-driving activities until the animal has moved outside the shutdown zone or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If any marine mammal is about to enter or is observed in the shutdown zone during pile driving, the pile-driving activities will be shut down until the animal has moved outside the shutdown zone, or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If 180 dB re: 1 $\mu$ Pa is not reached, a biological monitor will not be required to be present for the remainder of the project.

The hydroacoustic monitoring and thresholds described above are subject to change based on input from CCC, NMFS and CDFW during their review of hydroacoustic monitoring plan for the project.

#### 4.2.7 Eelgrass Habitat

Eelgrass habitat occurs on the mudflats adjacent to the dock from the shoreline out approximately 400 ft (between bents 23 and 24). Eelgrass has been identified as Essential Fish Habitat by NMFS, a “Habitat Area of Particular Concern” under the Magnuson-Stevens Fishery Conservation and Management Act and a “species of special biological significance” pursuant to the California Coastal Act. Eelgrass serves as rearing habitat for estuarine species. Construction along the trestle has potential to impact eelgrass by placement of piles and barge spuds and prop wash from barge assist vessels. The number of barge trips

into the eelgrass area can only be estimated and will be dependent on how much work can be completed during each high tide window.

A comprehensive Eelgrass Mitigation and Monitoring Plan has been prepared for the project by H.T. Harvey & Associates (H.T. Harvey and Associates [HTH] 2016). This plan discusses potential impacts to eelgrass habitat, monitoring of eelgrass (within the project area and at a nearby reference area), and mitigation measures. For Phase II construction, monitoring surveys will occur pre-construction in May or June 2017 (during the active eelgrass growing season), as soon as feasible following construction (depending on tides and other factors), and again in May or June 2018. Eelgrass beds will be mapped and eelgrass parameters will be sampled. Post-construction results from the project and reference areas will be compared to pre-construction results to determine the projects impact on the eelgrass habitat. The amount of mitigation required will be determined based on evidence of visible scarring and/or detectable losses in eelgrass areal extent, percent cover, or turion density that are determined to be attributable to project actions.

Chevron performed eelgrass mitigation in 2015 as part of a multi-year maintenance and repair project at the dock. A total of 315 s.f. of structures were removed as part of the mitigation effort. The area credited for mitigation is subject to reduction due to mitigation ratios and must be approved by the governing agencies. The credited area will be used to mitigate for impacts caused by the maintenance and repair construction completed in 2015. Any credited area remaining will be held in a “mitigation bank” for future work by Chevron at the dock. Other mitigation options include removing derelict piles and a dolphin on the north side of the dock, removal of piles on the property north of Chevron and removal of debris along the shoreline.

#### 4.3 APPROVAL AUTHORITY

Approval from the following agencies is required for this project (Table 3):

*Table 3: Project permitting agencies and status of required permits*

Agency	Requirement	Submission Date	Approval Date	Permit Number
Humboldt Bay Harbor, Recreation and Conservations District	Harbor District Permit	01/08/16	Pending	TBD
City of Eureka Community Development	Consolidation of Coastal Development Permit	01/11/16	Pending	TBD
City of Eureka Building Department	Building permit	01/11/16	Pending	B16-0028
California Coastal Commission	Coastal Development Permit	01/08/16	Pending	CDP 1-16-0049
U.S. Army Corps	Nationwide Permit	01/08/16	Pending	TBD
California State Water Resources Control Board	401 Water Quality Certification	01/08/16	Pending	TBD
National Marine Fisheries Service	Consultation for Army Corps permit		Pending	N/A
California Department of Fish and Wildlife	CEQA Trustee Agency, Incidental Take Permit		Pending	N/A

Chevron Eureka Terminal Dock Seismic Retrofit

U.S. Fish and Wildlife Service	Consultation for Army Corps permit		Pending	N/A
Humboldt Bay Fire	Approval modified fire suppression system		Pending	N/A
North Coast Unified Air Quality Management District	None – inspection performed, no permit required	01/08/16	01/08/16	N/A

## 5. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

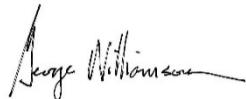
<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture & Forestry Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards & Hazardous Materials	<input type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation / Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

## 6. DETERMINATION

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On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



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Signature

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May 16, 2016

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Date

## 7. EVALUATION OF ENVIRONMENTAL IMPACTS

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Seventeen environmental factors were analyzed per the checklist provided in Appendix G of the CEQA Guidelines:

### 7.1 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Have a substantial adverse effect on a scenic vista?			X	
Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

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

**Finding: Less Than Significant Impact.** The project site is visible from parts of the Eureka Hikshari' Trail located immediately south of the site, and Eureka PALCO Marsh Interpretive Trail. The proposed project will not result in any additional square footage or alter the overall appearance of the dock from any vantage point, however, during temporary construction activities, construction equipment including a barge and heavy equipment will likely be visible from portions of the public trails. The project area is already characterized by industrial activities, similar in visual appearance to the proposed project. Additionally, construction activities are divided into two phases which will minimize the work window per year. Maintaining clean work areas will reduce adverse impacts to the scenic vista during construction activities. All these facts lead to a finding of a less than significant impact.

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

**Finding: No Impact.** No scenic resource will be damaged in any way.

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

**Finding: Less than Significant Impact.** The retrofit will not negatively impact the character or quality of the site or its surroundings. The retrofit will not increase the size or general appearance of the existing structure.

During the construction phases, barge(s), tugboat(s) and other construction equipment will be present at the site, and may be visible from the surrounding parcels. Construction activities associated with the retrofit are divided into two phases, which will reduce the length of construction activity per year. Additionally, the site is already characterized by industrial activity that is similar to the proposed project. Impacts will be less than significant.

d) *Create new source of glare.*

**Finding: No Impact.** No additional light sources are proposed for this project. The majority of construction activity will take place during daylight hours to eliminate the need for additional light sources during construction.

## 7.2 AGRICULTURE AND FOREST RESOURCES

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

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

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

**Finding: No Impact.** The project will not convert Prime, Unique Farmland or Farmland of Statewide Importance to a non-agricultural use. No important farmland data was identified for the County of Humboldt in the State of California Department of Conservation's Farmland Finder (California Department of Conservation [CA DOC] 2016).

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

**Finding: No Impact.** The subject property is not zoned for agricultural use, nor is there a Williamson Act contract associated with the property.

c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g))?*

**Finding: No Impact.** The project area does not consist of any forest or timberland. The tidal parcel is zoned WD-Development Water, and the adjacent upland parcel is zoned MC-Coastal Dependent Industrial. The project will not cause conflict with or rezoning of forest land, timberland or timberland production.

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

**Finding: No Impact.** The project area does not consist of any forest or timberland. No forest land will be lost or converted as a result of this project. The wharf and pipeway retrofit will not increase the footprint of the existing structure. The existing loading/unloading dock will be upgraded to a prefabricated concrete structure.

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?*

**Finding: No Impact.** This project will not impact farmland or forest land.

### 7.3 AIR QUALITY

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:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
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)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

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

**Finding: No Impact.** Construction activities will generate temporary emissions of engine combustion products primarily from heavy equipment and trucks used to haul waste material. Impacts to air quality are not expected to be significant and will not require mitigation.

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

**Finding: Less Than Significant Impact.** Humboldt County lies within the North Coast Air Basin, which also includes the counties of Del Norte and Trinity. According to the North Coast Unified Air Quality Management District (NCUAQMD), the North Coast Air Basin is in attainment of all state and federal ambient air quality standards with the exception of the State 24-hour PM<sub>10</sub> standard in Humboldt County only. Elevated levels of PM<sub>10</sub> in the area are attributed to on and off-road vehicles, open burning, residential wood stoves and stationary industrial sources. In the most recent Air Monitoring Report published in January of 2016 for the month of October, 2015 no exceedances were observed (NCUAQMD, 2016). The California and Federal ambient air quality standards for particulate matter (PM) are summarized in Table 4:

Table 4: Ambient Air Quality Standards (AAQS)

Averaging Time	PM 10	PM 2.5
<b>California AAQS</b>		
Annual*	20 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
24 Hour	50 µg/m <sup>3</sup>	See Below**
<b>Federal AAQS</b>		
24 Hour	150 µg/m <sup>3</sup> ***	35 µg/m <sup>3</sup>

\*Annual Arithmetic Mean  
\*\*There is no separate 24-hour PM 2.5 standard in California  
\*\*\*Not to be exceeded more than once per year on average over three years

Short term construction activities are not expected to significantly impact the current Humboldt County PM<sub>10</sub> levels. Due to the nature of the project (in-water), primary sources of PM such as dust from construction and demolition activities entering the air is expected to be less than that of a typical construction project. The proposed project will not require permitting from NCUAQMD as it was determined that it will not trigger the Federal Asbestos NESHAP (NCUAQMD, 2016).

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)?*

**Finding: No Impact.** This project is not expected to result in a cumulatively considerable net increase in the state 24-hour PM<sub>10</sub> non-attainment.

d) *Expose sensitive receptors to substantial pollutant concentrations?*

**Finding: No Impact.** The project site is located in an industrial/commercial area of Eureka. No known schools, daycare centers, hospitals, nursing homes or other sensitive receptors exist within a one-half mile

radius of the project site. The nearest sensitive receptors are Alice Birney Elementary School and George C Jacobs Junior High School, located approximately 0.7 miles east of the Chevron Eureka Terminal.

e) *Create objectionable odors affecting a substantial number of people?*

**Finding: No Impact.** Construction activities pose the potential to generate objectionable odors from equipment exhaust. Any fumes generated are expected to be minor, and due to the location of the site combined with the short duration of the construction activities, objectionable odors will not have a significant impact on a substantial number of people.

#### 7.4 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
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 US Fish and Wildlife Service?		X		
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?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

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?*

**Finding: Less Than Significant with Mitigation Incorporated.**

The following special status species could be present within the action area and potentially affected by the proposed project:

Table 5: Special status species potentially affected by the project

Common Name	Scientific Name	Status
Marbled Murrelet	<i>Brachyramphus marmoratus</i>	Federally threatened, State endangered
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	Federally threatened
California Brown Pelican	<i>Pelicanus occidentalis californicus</i>	State fully protected species
Harbor Porpoise	<i>Phocaena phocaena</i>	Protected under the Marine Mammal Protection Act
Harbor Seal	<i>Phoca vitulina</i>	Protected under the MMPA
California Sea Lion	<i>Zalophus californianus</i>	Protected under the MMPA
Southern Eulachon DPS	<i>Thaleichthys pacificus</i>	Federally threatened
Longfin Smelt	<i>Spirinchus thaleichthys</i>	State threatened
Southern Oregon Northern Coastal California (SONCC) Coho Salmon	<i>Oncorhynchus kisutch</i>	Federally threatened, State threatened
California Coastal (CC) Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Federally threatened
Northern California (NC) Steelhead DPS	<i>Oncorhynchus mykiss</i>	Federally threatened
Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	State Species of Special Concern
Green Sturgeon (southern DPS)	<i>Acipenser medirostris</i>	Federally threatened, State Species of Special Concern

There is no critical habitat for the marbled murrelet or western snowy plover in the vicinity of the project site (Stillwater 2016a). The western snowy plover may be present along the shore lines and could be adversely affected by impacts to water quality, including increases to turbidity and potential leaks or spills from equipment. Impacts to the western snowy plover will be less than significant with the mitigation measures in Section 7.9 Hydrology and Water Quality. California brown pelicans may roost on the dock structure, however, it is expected pelicans will avoid the active construction area opting for an alternative location around the bay.

Noise generated during pile driving could impact any harbor porpoise, harbor seal or California sea lion present in the area. Underwater noise levels due to pile driving are likely to exceed the disturbance threshold, see Table 2, Section 4.2.6. It is likely these species will naturally avoid areas of construction. If impact pile driving is required, a “soft start” (Mitigation Measure-BIO-2) is meant to deter any mammals from the project area before full impact occurs. To insure injury does not occur to marine mammals, hydroacoustic monitoring will be conducted to determine the distance from pile driving at which underwater sound levels caused by pile driving reach 180 dB re: 1μPa occurs (assuming it does). If this sound level is reached, then a shut-down zone equal to that distance will be established around each pile being driven. A qualified biological monitor will visually scan the project site and surrounding waters for

the presence of marine mammals at least 30 minutes before and continuously throughout periods of impact pile driving. If any marine mammal is sighted in the shutdown zone before pile driving begins, the contractor (or other authorized individual) will delay pile-driving activities until the animal has moved outside the shutdown zone or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If any marine mammal is about to enter or is observed in the shutdown zone during pile driving, the pile-driving activities will be shut down until the animal has moved outside the shutdown zone, or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. Impacts to these species will be less than significant with mitigation incorporated.

A vibratory hammer will be the primary means to drive steel piles. In the event that the vibratory hammer hits refusal before the target tip depth is reached, an impact hammer will be used to drive the pile(s) to final depth. Elevated in-water sound levels from pile driving can adversely impact marine species, Table 6 presents the underwater sound threshold levels for disturbance/injury to fish.

*Table 6: Underwater sound threshold levels for disturbance/injury to fish (FHWG 2008)*

Interim Criteria for Injury	Underwater Noise Threshold
Peak	206 dB re: 1µPa (for all size of fish)
Cumulative SEL	187 dB re: 1µPa2-sec – for fish $\geq$ 2 grams
	183 dB re: 1µPa2-sec – for fish $<2$ grams

The southern eulachon and longfin smelt could be present near the project site. Noise levels, increased turbidity, suspended sediment and impacts to pH could adversely impact the southern eulachon and longfin smelt in the vicinity of the project action area. Section 7.9 Hydrology and Water Quality discusses water quality impacts and associated mitigation. Impacts to the southern eulachon and longfin smelt resulting from the use of an impact hammer are expected to be less than significant with mitigation measures BIO-1-6.

Juvenile longfin smelt may be impacted by cSEL threshold exceedances during impact pile driving. Because this is a compliance driven project with a strict in-water work window (July 1-October 15), an exceedance of the allowable sound threshold for fish  $<2$ g (183 dB re: 1µPa2-sec) is being proposed to facilitate completion of the in-water work (pile driving and removal) before October 15<sup>th</sup>. The cSEL threshold for fish  $\geq 2$ g (187 dB re: 1µPa2-sec) will be observed during all impact pile driving. The amount of impact pile driving required for the project is unknown. Worst case scenario is all piles meet refusal with the vibratory hammer several feet from design depth. Without the proposed threshold exceedance and attenuation measures, the contractor could be limited to less than 50 blows before being shut down for a minimum of 12 hours. Pile resistance (blows/foot) is unknown, but for a pile installation to be approved by the engineer without reaching the design tip elevation, it must achieve 30 blows/foot (approximated based on estimated hammer size, subject to change) and the minimum embedment depth. If there is a significant amount of impact pile driving required, and the contractor is limited to a small daily blow count, the project will be stretched out and not all work will be completed by October 15<sup>th</sup>.

The threshold exceedance will be implemented to maintain the project schedule (i.e. complete all in-water work before October 15<sup>th</sup>). For Phase I, the piles must be driven to their final location, surveyed and final fabrication done on the unloading platform (pile connection points based on pile location) by

early October so the contractor has time to complete the demolition of the existing unloading platform (pile removal, which is in-water work) before October 15<sup>th</sup>. Pile removal must be delayed until the unloading platform is ready to install because Chevron must shut the facility down to perform the demolition and install the platform. A barge will float the platform into place at high tide, then lower it on to the new piles as the tide recedes. During shutdown, there can be no fuel barge deliveries, so the shutdown time must be minimized (estimated at two to three weeks). For Phase II work, the piles must be driven to depth with enough time left in the schedule for the contractor to install the pipeway underpinning system (cantilever support beam, brace, sliding plates and cable system) and complete the demolition of the existing structure (pile removal, which is in-water work) to isolate the pipeway before the October 15<sup>th</sup> deadline. Mitigation measure BIO-6 will mitigate potential impacts to juvenile longfin smelt resulting from the use of an impact hammer.

Longfin smelt, coho and CC Chinook salmon, NC steelhead, Coastal Cutthroat trout and sturgeon require similar estuarine habitat and water quality standards to thrive. Noise and suspended sediment were determined to be potential risk factors to these species in the BA (Stillwater 2016a). It is estimated that the majority of the marine species will avoid the project area during construction activities. The proposed in water work schedule of July 1<sup>st</sup> – October 15<sup>th</sup> for each year (2016 and 2017), will reduce exposure to construction activities as the salmon and steelhead species will be less likely to be present in the bay due to migration patterns. Should pile driving require the use of an impact hammer to reach the target pile tip depths, the following mitigation measures will apply to reduce the impacts to a level of less than significant:

**Mitigation Measure BIO-1:** In-water work will be limited to the work window of July 1<sup>st</sup> – October 15<sup>th</sup> for each year (2016 and 2017), when salmonid species are less likely to be present in the Bay.

**Mitigation Measure BIO-2:** All impact pile driving activities will incorporate a “soft start” approach whereby the piles are lightly tapped before the full hammer strength is applied. The first few taps of the hammer on the pile should cause fish to swim away from the piles before full impact hammer strength is applied, thereby reducing the potential for fish to be exposed to harmful sound levels.

**Mitigation Measure BIO-3:** A cushion pad, typically wood, nylon or polymer material, will be placed between the pile and the impact hammer to reduce sound levels (see also MM-NOI-1).

**Mitigation Measure BIO-4:** The use of a bubble curtain with the impact hammer will act as a sound barrier and reduce the radiation of the sound from the pile to the water. Bubble curtain shall consist of a “stacked” series of bubble extruder rings to surround the piling with bubbles. The use of bubble curtains will be limited to periods when current speeds do not prevent their use as an effective attenuation measure. The hydroacoustic monitor will visually confirm that the bubble curtain is operating effectively during impact pile driving.

**Mitigation Measure BIO-5:** Hydroacoustic monitoring will be required with the use of the impact hammer. A draft hydroacoustic monitoring plan for the proposed project dated April 29, 2016, has been prepared by HT Harvey and Associates. The number of strikes per day will be limited by the peak noise threshold and the cumulative SEL threshold for fish  $\geq 2g$  (Table 6). If hydroacoustic monitoring detects underwater sound levels greater than or equal to 180 dB re: 1  $\mu$ Pa, a marine mammal shut-down zone will be established for each each pile being driven. A qualified biological monitor will visually scan the project site and surrounding waters for the presence of marine mammals at least 30 minutes before and

continuously throughout periods of impact pile driving. If any marine mammal is sighted in the shutdown zone before pile driving begins, the contractor (or other authorized individual) will delay pile-driving activities until the animal has moved outside the shutdown zone or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If any marine mammal is about to enter or is observed in the shutdown zone during pile driving, the pile-driving activities will be shut down until the animal has moved outside the shutdown zone, or the animal is not resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans.

**Mitigation Measure BIO-6:** Mitigation involves the removal of forty 14" diameter (1.1 sf) treated timber piles from the south side of the trestle during construction. Creosote treated piles make up the majority of those that will be removed, though some are preservative treated. Creosote and preservative chemicals (i.e. zinc, copper, arsenic) have the potential to leach into the water. Removal of these piles will remove point sources for contamination of the bay water and increase the quality of the bay.

Of the 40 piles (42.7 sf) to be removed, 25 (26.7 sf) are located in eelgrass habitat. The remaining 15 piles (16.0 sf) are located in deeper water to the west. Approximately 31 additional timber piles (33.1 sf) will be removed from the wharf area, though these will be removed as part of construction, so will not count toward mitigation. Four 24" diameter steel piles (12.6 sf) will be installed at the wharf and twenty 16" steel piles (27.9 sf) will be installed along the trestle. Of the 20 piles installed along the trestle, 15 (20.9 sf) will be in eelgrass habitat and five (7.0 sf) will be in deeper water to the west. Table 7 below summarizes the change in fill area caused by pile placement and removal.

*Table 7. Permanent fill areas due to pile placement and removal*

Piles to be removed	No. of Piles	Diameter (in)	Area (sf)
Wharf [not mitigation]	31	14	33.1
Trestle (out of eelgrass habitat) [mitigation]	15	14	16.0
Trestle (in eelgrass habitat) [mitigation]	25	14	26.7
Total	71	--	75.9

Piles to be installed	No. of Piles	Diameter (in)	Area (sf)
Wharf	4	24	12.6
Trestle (out of eelgrass habitat)	5	16	7.0
Trestle (in eelgrass habitat)	15	16	20.9
Total	24	--	40.5

The total change in area due to pile placement and removal results in 35.4 sf of area gained. The removal of forty treated timber piles as mitigation for potential impacts to fish <2g will remove at total of 42.7 sf of existing fill.

b-c) *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 US Fish and Wildlife Service? 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?*

**Finding: Less Than Significant with Mitigation Incorporated.** The intertidal portion of the project site is considered wetlands under the Clean Water Act (CWA), Section 404. Eelgrass (*Zostera marina*) is present in the wetlands within the action zone of the proposed project. Eelgrass is considered essential fish habitat (EFH) by USACOE and recognized as an important ecological community by the State and Federal Resource Agencies (NMFS, USFWS and the CDFW). Humboldt Bay supports the third largest eelgrass population along the west coast (CA Fish and Game, 2010). Eelgrass occurs in a narrow depth range along the main channel of Humboldt Bay and provides habitat, protects shorelines from erosion, and filters polluted runoff (NOAA, 2014).

According to NOAA eelgrass mapping provided by H.T. Harvey and Associates, eelgrass beds are not present at the wharf head, however, are located on the north and south sides of the trestle pipeway (Appendix, Figure 3). Based on the eelgrass mapping, no impacts on eelgrass habitat are anticipated to occur during Phase 1 of the project construction: retrofit of the wharf unloading platform and installation of trestle piles at 31.2 and 32.6.

Permanent impacts to eelgrass will consist of twenty five 14" diameter timber piles (26.7 sf) to be removed and fifteen 16" diameter steel piles (20.9 sf) to be installed within eelgrass habitat during Phase II construction. Additional impacts on eelgrass habitat can occur from ground disturbance around piles being removed or installed, barge spud placement and propeller scarring from the assist vessel, though these are generally considered to be temporary impacts. Immediate post-construction observations by HT Harvey completed for the maintenance and repair project in 2015 at the dock did not find any disruption in eelgrass cover or evidence of substrate disturbance in the areas where spud poles were placed and there was no evidence of disturbance to the eelgrass bed from debris pile removal (Eicher 2016). There was reduced eelgrass cover cause by tugboat propeller wash in one area, but it is not believed to have resulted in loss of eelgrass turions (Kalson 2016).

Ground disturbance around piles to be removed is expected to be minor. Piles in eelgrass habitat will be cut one foot below the mudline instead of being pulled. A small amount of sediment will be displaced to make the cut through the pile, but will be immediately placed back where it came from. Piles to be installed are hollow ended pipe piles so they will not displace soil when installed.

Construction will be performed primarily from a floating barge equipped with two spud piles. The spuds are on the order of two to three feet in diameter and use gravity to drive themselves into the ground to anchor the barge. The barge will be maneuvered with a small tug boat and occasionally a small skiff will be used as a bow thruster. The barge will move positions frequently during construction, but will only work from the west and south sides of the dock.

For work in eelgrass habitat, out to approximately Bent 24, the contractor will float the barge in with the incoming tide, let the spuds down to anchor in position, then float out with the outgoing tide. Contact between the barge and mudflat is not expected to occur and the contractor will have a person designated to monitor water levels. Spuds will be placed in and may have an impact on eelgrass habitat. Work on the easternmost bents will be performed by positioning the crane on land at the foot of the dock. It is estimated one new pile will be installed and two bents (bents 2 and 3) will be demolished with the crane positioned on land. This work will be completed at a lower tide when there is no water in an effort to minimize impacts to aquatic organisms. On the western end of the trestle, the barge will be oriented parallel with the dock to allow the spuds to be set down outside of the eelgrass area while the barge floats above eelgrass. It is estimated four new piles will be installed and seven bents (bents 18 to 24) will be

demolished from this position. Piles installed and removed from these positions reduce the potential impact to eelgrass habitat.

The remaining ten trestle piles will be installed with the barge anchored in eelgrass habitat. It is estimated one barge placement will be required for each pile to be installed in eelgrass habitat. A second barge placement will be required at each pile to install the pipeway support beam and its brace. Similar barge positions will be used as during pile installation. Approximately fourteen bents (bent 4 to 17) will be demolished with the barge anchored over eelgrass habitat. It is estimated two bents will be demolished per barge placement, so a total of seven barge placements will be necessary to complete demolition. A barge placement consists of dropping spud piles into sediment to anchor the barge during construction activity. There are two spud piles that will be deployed, each with an estimated diameter of 28" (4.3 ft<sup>2</sup>). The assist vessels, used to position the barge as necessary, will avoid areas of eelgrass when possible and stay in deeper water to minimize propeller scarring of eelgrass beds. See Table 9 in Mitigation Measure BIO-7 for a summary of temporary impacts due to barge placements.

Eelgrass is expected to re-establish in areas temporarily impacted during construction. Pre-project, immediate post-construction and one year post-project eelgrass surveys will be conducted to assess the state of the eelgrass beds and determine if the project caused any reduction in eelgrass coverage. In the event that an inadvertent impact on eelgrass occurs, including but not limited to grounding of the barge or a chemical spill, CCC and CDFW are to be notified immediately to assess the damage and determine required compensatory mitigation (if any). Continuous observation of equipment and materials in eelgrass areas will occur during construction as a supplement to the eelgrass surveys. Areas where eelgrass is impacted (temporarily by barge spuds and vessels, or permanently by pile placement and removal) will be noted so these areas can be studied during the surveys. With the addition of mitigation measure BIO-7, impacts on eelgrass habitat will be less than significant.

**Mitigation Measure BIO-7:** Permanent impacts to the eelgrass will be offset by removal of 40 piles from the trestle. Twenty five (25) 14" diameter timber piles (26.7 sf) will be removed from eelgrass habitat and another fifteen (15) 14" diameter timber piles (16.0 sf) will be removed from non-eelgrass habitat areas. With the anticipated mitigation ratios being 1:1 for piles removed from eelgrass habitat during the project (26.7 sf) and 2:1 for piles removed from non-eelgrass habitat (16.0 sf / 2 = 8.0 sf), the factored mitigation area credit for pile removal is expected to be 34.7 sf. With the total area of permanent impacts from installation of fifteen 16" diameter piles in eelgrass habitat being 20.9 sf, the net change will result in 13.8 sf of mitigation credit. Table 8 below summarizes the mitigation areas for impacts to eelgrass.

*Table 8. Mitigation areas for permanent impacts to eelgrass habitat*

Mitigation Ratios				
Piles to be removed	No. of Piles	Diameter (in)	Area (sf)	Factored Area (sf)
During project in eelgrass habitat		1:1		
Out of eelgrass habitat		2:1		
Trestle (out of eelgrass habitat)	15	14	16.0	8.0
Trestle (in eelgrass habitat)	25	14	26.7	26.7
Total	40	--	42.7	34.7

Piles to be installed	No. of Piles	Diameter (in)	Area (sf)
Trestle (in eelgrass habitat)	15	16	20.9
Mitigation areas	Factored Area (sf)		
Credit (factored area of trestle piles removed)	34.7		
Impact area	20.9		
Total	-13.8		

Temporary impacts to eelgrass habitat will be caused primarily by barge spud pile placements. As described above, it is expected ten new bents will be installed and fourteen existing bents will be demolished with the barge positioned in eelgrass habitat. Each new bent will required one barge trip for installation of the pile and a second barge trip for installation of the cantilever support beam. It is estimated two bents will be demolished per barge trip. The estimated number of barge trips into eelgrass habitat is 27. With two spud placements per barge trip, this results in a potential impact area of 230.9 sf. See Table 9 below for a summary of this calculation.

*Table 9. Mitigation areas for potential temporary impacts to eelgrass habitat*

Potential temporary impacts to eelgrass	
Barge placements	
Spud pile diameter (in)	28
Spud pile area (sf)	4.3
No. spuds per placement	2
Pile and beam installation	
Barge placements for pile and beam installation (each)	10
Spud area disturbed during pile installation (sf)	85.5
Spud area disturbed during beam installation (sf)	85.5
Demolition	
Barge placements for demolition	7
Spud area disturbed during demolition (sf)	59.9
Potential temporary impacts (sf)	230.9

Damage to eelgrass due to propeller wash can occur to varying extents. The increased turbulence of the propeller wash can cause minor disturbance such as turbidity and dislodging of weak eelgrass blades or more severe damage such as uprooting of eelgrass turions. An estimated potential impact area is difficult to quantify, but any area the vessel travels could be impacted. The on-site monitor will observe all vessel movements and will note any areas where propeller wash disturbs the sediment.

Barge grounding is unlikely to occur, but if it does, the potential impact area would be equivalent to the bottom area of the barge. The barge used during similar previous projects at the site measured 74 ft by 114 ft, which would result in a potential impact area of 8,436 sf.

These maximum potential impact areas are unlikely to be realized as permanent impacts. All areas temporarily impacted will be noted by the monitor on site. These areas will be inspected within a few weeks post-construction (dependent on tides and weather) to make a preliminary observation of the impacted areas. Further observation and a survey of the area will take place during the one year post-construction eelgrass inspection to be completed in May or June. Results of the post-construction survey will be compared to the pre-construction survey (including the survey of a nearby reference area) to determine if any permanent impacts were caused by construction activities.

Should temporary impacts on eelgrass be determined to be permanent after the one year post-construction eelgrass survey, the mitigation credits from pile removal shall be used for compensation. If the impacted area is determined to be greater than the credited area (13.8 sf), additional compensatory mitigation shall be performed. Prior to performing any mitigation, the activity shall be approved by CCC and DFW. At this time, mitigation ratios will be determined, but are expected to be 1.2:1 or greater for mitigation completed one-year post-construction. Potential mitigation opportunities include removal of derelict piles and a dolphin on the north side of the Chevron Dock ( $\pm 135$  sf), removal of piles on the property north of Chevron (>100 piles) and removal of debris (nine shopping carts, various timbers, bricks, tires, pipes and concrete) along the shoreline.

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?*

**Finding: Less Than Significant with Mitigation Incorporated:** Adult and juvenile salmonids migrate from freshwater sources to the Pacific Ocean, through Humboldt Bay. The project site is located in relatively shallow waters of the Bay and is not likely to impact the migration of adult salmonids who prefer deeper channels. The proposed work window of July 1<sup>st</sup> – October 15<sup>th</sup> will avoid impacts to adult salmonids who migrate into the bay in late October and juvenile salmonids who out-migrate during spring and early summer.

It is anticipated that during construction and pile driving activities green sturgeon will have the ability to avoid the project area. Once out of the annoying range of sound generation, the fish can resume normal behavioral patterns, and will therefore not be impacted. This movement away from the pile driving area would not constitute harassment, which is a form of take. The reason for this is that movement out of the area, especially in Humboldt Bay where there are wide expanses of suitable habitat, does not rise to the level that there is a likelihood of injury due to disruption of normal behavioral patterns. Any individual green sturgeon can resume normal behavioral patterns once it is out of the annoying range of sound generation.

The longfin smelt was listed as threatened under the California Endangered Species Act on June 25, 2009. Adult longfin smelt are expected to avoid construction activities that may temporarily impact their habitat, visibility and food supply in the location of the project site, therefore impacts are expected to be less than significant. Temporary adverse impacts on juvenile longfin smelt may occur during pile driving activities due to cumulative sound exposure levels during impact pile driving, see discussion in Section 7.4(a) above. The project will apply for and obtain an ITP from CDFW prior to the start of in-water operations.

**Mitigation Measure:** See Mitigation Measures BIO-1 to BIO-5.

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

**Finding: No Impact.** The project will not conflict with any local policies or ordinances protecting biological resources.

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?*

**Finding: No Impact.** The project will not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan or other habitat conservation plan.

## 7.5 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

a,b,d) *Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? Disturb any human remains, including those interred outside of formal cemeteries?*

**Finding: Less Than Significant with Mitigation Incorporated.** There is no record of any historical or archaeological resources or human remains discovered on the site during past dredging and pile replacement projects, however, there is no guarantee that they do not exist. Should any historical or archaeological resources, or human remains as defined in CEQA §15064.5 be discovered during construction activities, Mitigation Measure CUL-1 and CUL-2 (below) shall be followed.

**Mitigation Measure Cul-1:** Should an archaeological resource be inadvertently discovered during ground-disturbing activities, the Tribal Historic Preservation Officers (THPO) appointed by the Blue Lake Rancheria, Bear River Band of Rohnerville Rancheria and Wiyot Tribe shall be immediately notified and a qualified archaeologist with local experience retained to consult with the Harbor District, the three THPOs, the Permittee and other applicable regulatory agencies to employ best practices for assessing the significance of the find, developing and implementing a mitigation plan if avoidance is not feasible, and reporting in accordance with the Harbor District's Standard Operating Procedures (SOP, attached).

**Mitigation Measure Cul-2:** Should human remains be inadvertently discovered during ground-disturbing activities, work at the discovery locale shall be halted immediately, the Harbor District and County Coroner contacted, and the Harbor District's SOP shall be followed, consistent with state law.

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

**Finding: No Impact.** The project does not lie in an area where unique paleontological resources or geologic features are known to exist.

## 7.6 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

a.i-iii) *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, ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction?*

**Finding: Less Than Significant Impact.** The sole purpose of the project is to retrofit the facility to be able to withstand a large seismic event. According to local GIS mapping, there are numerous fault zones in the vicinity of the project site, with the nearest being the Little Salmon Fault Zone, located approximately 0.8 miles to the southwest (Humboldt GIS, 2016). The site is susceptible to strong seismic ground shaking and potential ground failure due to earthquakes, and implementation of this project will provide additional

support to the structure to minimize the likelihood of an oil spill during a seismic event. During construction, workers would be exposed to the effects of seismic events, but only for brief periods of time and the exposure is not greater than what occurs regularly throughout Humboldt Bay. The impact is less than significant.

a.iv) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides*

**Finding: No Impact.** The project will not create any additional risk to people or structures due to landslides.

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

**Finding: No Impact.** The project will have no impact on topsoil. All construction debris, including the removed treated timber piles and the existing timber wharf platform will be delivered via barge to a contained laydown area (Schneider or Humboldt Bay Forest Products Dock), where it will be sized as needed to load into covered containers. From the laydown area the debris will be transported to a pre-determined permitted disposal site. Construction debris will be covered as necessary to prevent contact with storm water.

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?*

**Finding: No Impact.** There are potentially unstable soil layers beneath the site, however, the purpose of this project is to provide a more stable foundation system for the pipeway. The upper soil layer is susceptible to lateral movement during seismic shaking. The new steel pile foundation will extend beyond the unstable soils into competent material to provide fixity. The proposed pile schedule is as follows (Table 10):

**Table 10: Pile Schedule (M&N, 2015)**

BENT	PILE Ø (IN)	PILE THICKNESS (IN)	TOP OF PILE (FT MLLW)	APPROXIMATE MUDLINE* (FT MLLW)	TIP OF PILE (FT MLLW)	PILE LENGTH (FT)	ANODE REQUIRED (Y/N)
2.2	16	0.5	13.5	2.0	-36.5	50	N
3.8	16	0.5	13.5	2.0	-36.5	50	N
5.2	16	0.5	13.5	2.0	-36.5	50	N
6.8	16	0.5	13.5	2.0	-36.5	50	N
8.2	16	0.5	13.5	2.0	-36.5	50	N
9.8	16	0.5	13.5	2.0	-36.5	50	N
11.2	16	0.5	13.5	2.0	-46.5	60	N
12.8	16	0.5	13.5	2.0	-46.5	60	N
14.2	16	0.5	13.5	2.0	-46.5	60	N
15.8	16	0.5	13.5	2.0	-46.5	60	N
17.2	16	0.5	13.5	2.0	-46.5	60	N
18.8	16	0.5	13.5	2.0	-46.5	60	N
20.2	16	0.5	13.5	-1.1	-46.5	60	N
21.8	16	0.5	13.5	-1.9	-46.5	60	N
23.2	16	0.5	13.5	-6.3	-51.5	65	Y
24.8	16	0.5	13.5	-10.8	-51.5	65	Y

BENT	PILE Ø (IN)	PILE THICKNESS (IN)	TOP OF PILE (FT MLLW)	APPROXIMATE MUDLINE* (FT MLLW)	TIP OF PILE (FT MLLW)	PILE LENGTH (FT)	ANODE REQUIRED (Y/N)
26.2	16	0.5	13.5	-14.6	-51.5	65	Y
28.2	16	0.5	13.5	-18.6	-51.5	65	Y
31.2	16	0.5	13.5	-19.9	-51.5	65	Y
32.6	16	0.5	13.5	-22.0	-51.5	65	Y
UNLOADING PLATFORM (X4)	24	0.75	8.2	-22.0	-61.8	70.0	Y

\*Contractor to verify

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

**Finding: No Impact.** The project is not known to be located on expansive soils as defined in Table 18-1B of the Uniform Building Code.

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?*

**Finding: No Impact.** The project does not involve and will not result in the construction of septic or alternative waste water disposal systems.

## 7.7 GREENHOUSE GAS EMISSIONS

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

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

**Finding: Less Than Significant Impact.** Greenhouse gases will be generated from construction equipment during the construction phases of the project only. Due to the short duration of construction, greenhouse gas emissions will not be significant.

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

**Finding: No Impact.** The project will not conflict with any plan or regulation regarding greenhouse gas emissions.

## 7.8 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Sections 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
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?				X

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

**Finding: No Impact.** The proposed project involves upgrades to a support system used for the routine conveyance of fuel. No additional capacity or transport of hazardous materials will result from this project.

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?*

**Finding: Less Than Significant with Mitigation Incorporated.** During construction activities, no barges will be at berth and the pipeline will be secured per existing Chevron protocol. When a barge calls the facility, construction will be shut down until the fuel delivery is complete. Piles to be removed from underneath the pipeway will be cut one foot below the mudline instead of attempting to pull them out using the crane.

All hazardous materials shall be stored in a secured and contained area (such as a conex or sealed job box) in such a manner that material will not spill due to vessel movement. Alternatives to petroleum based oils and fuels include vegetable-oil based hydraulic fluid and biodiesel. These environmentally friendly products are biodegradable and break down more rapidly in the environment than petroleum products, thus reducing the contamination of soil, groundwater, and surface water in the event of fluid and fuel spills. The marine contractor will use alternative vegetable-oil based hydraulic fluids and biodiesel in equipment when feasible. Not all equipment is compatible (filters, seals, exhaust systems, injectors, etc.) with these environmentally friendly alternatives and it may be prohibitive to modify equipment (i.e. flush systems, change seals, filters, gaskets, etc.) to be compatible for a single project.

All equipment shall be inspected and serviced prior to commencing work on the project. Leaks shall be repaired immediately when discovered. Equipment maintenance shall be performed in a confined area specifically designed to control runoff located more than 100 feet away from the mean high tide line. Spill kits equipped with enough material to provide preliminary containment for a volume of material that can reasonably be expected to spill shall be maintained on the barge and the dock. Spill containment trays shall be placed around all equipment on the barge deck. When handling fluids and/or equipment on the barge, there should be a minimum of ten feet to the edge of the barge deck, booms/spill kits shall be in the immediate vicinity and ready for deployment and spill trays shall be placed under the area to catch small spills.

Best management practices will be employed to prevent construction debris from entering the water. Floating booms will be placed around construction areas. During work such as cutting and welding, some sort of platform or tarp will be used to catch small debris. The barge deck will be swept as often as necessary to control the spread of debris that may result in foreign object damage potential to water, vehicles, and vessels. Debris placed on the barge shall be contained to avoid any material entering the bay. During high winds and/or precipitation, the debris shall be covered with plastic sheeting. Construction spoils will be delivered via barge to the laydown area, placed on a liner, cut to size and placed into covered dumpsters.

**Mitigation Measure Haz-1:** Contractor will have spill kits maintained on the barge and dock equipped with enough material to provide preliminary containment for a volume of material that can reasonably be expected to spill. Spill containment trays shall be placed around all equipment on the barge deck. The Chevron Terminal has a Facility Response Plan (FRP) and will activate the Incident Command System (ISC) in the event of a spill on the water. They will also consult their Coast Guard Dock Operation Manual for applicable procedures. The facility's Spill Prevention, Control, and Countermeasure (SPCC) Plan identifies procedures for a potential release in water and on land. Per the SPCC plan, routine inspections and maintenance are performed at the facility and employees are trained on spill response procedures.

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

**Finding: No Impact.** No existing or proposed schools are located within one-quarter mile of the project site.

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

**Finding: No Impact.** The site was not identified as a hazardous waste facility pursuant to Government Code Section 65962.5 (CalEPA, 2016).

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?*

**Finding: No Impact.** The project is located three quarters of a mile from the Samoa Field Airport, owned and operated by the City of Eureka. The Samoa Field Airport averages 48 aircraft operations per week (Samoa, 2015), and does not service commercial airlines. The reach of the crane will be on the order of ±100 feet and will not pose a hazard to local aviation.

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

**Finding: No Impact.** The project does not lie within the vicinity of a private airstrip.

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

**Finding: No Impact.** This project will not impair or interfere with any emergency response or evacuation plans.

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?*

**Finding: No Impact.** The project is not located in an area at risk from wildland fires.

## 7.9 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
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)?				X

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
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?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
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?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
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?				X
j) Inundation by seiche, tsunami, or mudflow?			X	

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

**Finding: Less Than Significant with Mitigation Incorporated.** Humboldt Bay has been listed as a California section 303d category 5 impaired water body since 2006 for the following constituents: Dioxin Toxic Equivalents and PCBs. According to the North Coast Region Basin Plan, Humboldt Bay has the following existing beneficial uses (North Coast Regional Water Quality Control Board [NCRWQCB] 2011):

- Municipal and Domestic Supply
- Agricultural Supply
- Industrial Service Supply
- Freshwater Replenishment
- Navigation
- Water Contact Recreation
- Non-Contact Water Recreation
- Commercial and Sport Fishing
- Cold Freshwater Habitat
- Wildlife habitat
- Rare, Threatened, or Endangered Species
- Migration of Aquatic Organisms
- Spawning, Reproduction, and/or Early Development
- Shellfish Harvesting
- Estuarine Habitat
- Aquaculture
- Native American Culture

During construction, in-water work such as the removal/installation of piles, and the use of a barge may impact water pH, suspended sediment and turbidity. Pile driving from the landside will occur out of water

during low tide and will have no impacts to water quality. Pile driving from the barge will occur during high tide conditions and is not expected to increase turbidity above the Basin Plan limit of 20% above ambient levels. The bay is naturally turbid and tidal flushing will aide in dispersing suspended sediment. Humboldt State University collects real-time data for multiple water quality parameters including turbidity and dissolved oxygen on the south end of the wharf.

All hazardous materials shall be stored in a secured and contained area in such a manner that material will not spill due to vessel movement. The marine contractor will use alternative vegetable-oil based hydraulic fluids and biodiesel in equipment when feasible. Not all equipment is compatible with these environmentally friendly alternatives and it may be prohibitive to modify equipment to be compatible.

All equipment shall be inspected and serviced prior to commencing work on the project. Leaks shall be repaired immediately when discovered. Equipment maintenance shall be performed in a confined area specifically designed to control runoff located more than 100 feet away from the mean high tide line. Spill kits equipped with enough material to provide preliminary containment for a volume of material that can reasonably be expected to spill shall be maintained on the barge and the dock. Spill containment trays shall be placed around all equipment on the barge deck. When handling fluids and/or equipment on the barge, there should be a minimum of ten feet to the edge of the barge deck, booms/spill kits shall be in the immediate vicinity and ready for deployment and spill trays shall be placed under the area to catch small spills.

Best management practices will be employed to prevent construction debris from entering the water. Floating booms will be placed around construction areas. During work such as cutting and welding, some sort of platform or tarp will be used to catch small debris. The barge deck will be swept as often as necessary to control the spread of debris that may result in foreign object damage potential to water, vehicles, and vessels. Debris placed on the barge shall be contained to avoid any material entering the bay. During high winds and/or precipitation, the debris shall be covered with plastic sheeting. Construction spoils will be delivered via barge to the laydown area, placed on a liner, cut to size and placed into covered dumpsters.

The marine contractor is to ensure the implementation of best management practices to avoid construction debris and any hazardous materials from entering the bay. Impacts to water quality will be less than significant with the implementation of MM-HYD-1.

**Mitigation Measure Hyd-1:** Marine Contractor to use best management practices to prevent construction debris from entering the water, including but not limited to the following: floating booms; maintain a clean work area; routine equipment inspections, keep crane hydraulics over barge when possible; use of netting, wood platforms and/or scaffolding; prefabricate unloading platform off-site to reduce exposure to concrete castings and welding slag. Marine contractor to utilize alternative vegetable-oil based hydraulic fluids and biodiesel in equipment when feasible to reduce toxicity in the event of an equipment spill or leak.

*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)?*

**Finding: No Impact.** The proposed project will not have any impact on groundwater.

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?*

**Finding: No Impact.** The project will have no impacts on the existing drainage pattern of the site or surrounding areas.

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?*

**Finding: No Impact.** The project will have no impacts on the existing drainage pattern of the site or surrounding areas.

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

**Finding: Less Than Significant Impact.** The proposed wharf unloading platform is essentially the same size as the existing structure. The design includes secondary containment in the form of an eight inch tall concrete curb, providing a containment volume of approximately 528 cubic feet. The wharf unloading platform will drain to a 67 cubic foot capacity rainwater catchment basin and ultimately to the existing oil/water separator located on shore. The wharf unloading platform will not exceed the capacity of the existing storm water drainage system.

Construction debris from the removed piles and existing timber wharf platform will be placed on to a barge. From the barge, the debris will be cut to size as necessary at the predetermined laydown location, loaded into covered containers and hauled off-site to a permitted disposal facility. A liner will be used at the laydown location and all waste will be contained and covered as needed to prevent contact with storm water.

f) *Otherwise substantially degrade water quality?*

**Finding: Less Than Significant Impact.** The project will not otherwise substantially degrade water quality.

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?*

**Finding: No Impact.** The proposed project inherently lies within a flood hazard area, however, is located in an area of industrial/commercial development and will not create nor impact housing.

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

**Finding: No Impact.** The footprint of the existing dock will remain the same and no additional structures or development are proposed as part of this project.

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?*

**Finding: No Impact.** The proposed project will not expose people or structures to an increased risk of loss, injury or death involving flooding.

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

**Finding: Less Than Significant Impact.** The location of the project site lends itself vulnerable to inundation by tsunami. The proposed project will not increase or abate the risk of tsunami due to an earthquake.

## 7.10 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
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?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

a) *Physically divide an established community?*

**Finding: No Impact.** The project will have no impact on any established community.

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?*

**Finding: No Impact.** The seismic upgrade will not conflict with any applicable land use plans, policies or regulations.

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

**Finding: No Impact.** The proposed project will not conflict with any habitat conservation plans or natural community conservation plans.

## 7.11 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site				X

delineated on a local general plan, specific plan or other land use plan?				
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a-b) *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? 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?*

**Finding: No Impact.** The project will not result in the loss or availability of any mineral resources or recovery sites.

## 7.12 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?		Pile		X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
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?				X

a) *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?*

**Finding: No Impact.** Noise generated from this project will only occur during the short-term construction phases. Noise from construction will not be in excess of any noise ordinances.

b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

**Finding: No Impact.** Groundbourne noise and vibration may occur during steel pile installation. A total of six (6) piles are proposed to be installed during Phase I in 2016, and eighteen (18) during Phase II in 2017. Piles will be driven primarily using a vibratory hammer; an impact hammer will be used only if refusal is reached prior to reaching the required tip depths. Excessive noise and/or vibration levels are not expected

to occur as acoustic levels will be monitored with hydrophones during impact pile driving and the number of strikes per day will be limited based on established acoustic thresholds (see Section 7.4 Biological Resources).

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

**Finding: No Impact.** This project will not cause a permanent increase in ambient noise levels.

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

**Finding: Less Than Significant with Mitigation Incorporated.** The noise levels in the vicinity of the project site will increase temporarily during construction activities. The noise generated from construction activities will be typical of a construction project, including use of a crane, operation of pile driving hammers, cutting/welding steel and wood. In general, the noise levels are expected to be comparable to the existing noise levels in the primarily industrial/commercial area. In the event that refusal is met during pile driving using the vibratory method, an impact hammer will be used to reach the required tip depths. With the incorporation of mitigation method NOI-1, increases in ambient noise levels resulting from the use of the impact hammer will be reduced to less than significant.

**Mitigation Measure NOI-1:** In the event that an impact hammer is required during pile driving to meet the target tip depth (Section 7.6, Table 10), a cushion pad is to be used which will reduce noise levels by approximately 5-10 decibels.

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?*

**Finding: No Impact.** The Samoa Field Airport is located approximately three quarters of a mile west-southwest of the site, across the Bay. The Samoa Field Airport, FAA identifier 033, is a public use airport, owned and operated by the City of Eureka. The Samoa Field Airport is not a high traffic airport and will not contribute to cause excessive noise levels in the project area.

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?*

**Finding: No Impact.** The project is not in the vicinity of a private airstrip.

## 7.13 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X

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

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)?*

**Finding: No Impact.** The goal of the project is to provide adequate support and stability to the existing pipeway and wharf unloading platform. It will not induce growth but will protect public health, safety and the environment per California Building Code Chapter 31F.

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

**Finding: No Impact.** No existing housing will be impacted as a result of the seismic upgrade of the Eureka Chevron Terminal Dock.

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

**Finding: No Impact.** No persons will be displaced as a result of the proposed project.

#### 7.14 PUBLIC SERVICES

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:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire Protection?				X
b) Police Protection?				X
c) Schools?				X
d) Parks?				X
e) Other Public Facilities?				X

a) *Fire Protection?*

**Finding: No Impact.** The proposed project will not have a negative impact to fire protection. Modifications will be made to the fire suppression system on the dock as part of the project. The fire connections will be relocated onto the new unloading platform so they are protected in the event of a seismic event. Proper safety protocol will be followed prior to the unpinning of the pipeway during the trestle retrofit proposed for 2017. The fuel pipelines will be empty at the time of the unpinning and the pipeline is not to be dis-assembled. No impact to fire protection services is anticipated as a result of this project, but due to the nature of the pipeway (fuel conveyance), the possibility of requiring fire protection services during the construction phase exists.

*b-e) Police Protection? Schools? Parks? Other Public Facilities?*

**Finding: No Impact.** The proposed project will not result in an adverse impact to police protection, schools, parks or any other public facilities. Disposal of construction waste will require transportation from the site to the permitted disposal facility, however, such transportation will be temporary.

## 7.15 RECREATION

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

*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?*

**Finding: No Impact.** The proposed project will not increase the use of any existing neighborhood or regional parks, or any other recreational facilities.

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

**Finding: No Impact.** The proposed project does not include nor require the expansion of any recreational facilities.

## 7.16 TRANSPORTATION/TRAFFIC

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X
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				X

county congestion management agency for designated roads or highways?				
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?				x
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				x
e) Result in inadequate emergency access?				x
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities?				x

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?*

**Finding: No Impact.** By nature, this project will not conflict with the performance of any transportation system.

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?*

**Finding: No Impact.** The project will not conflict with any congestion management programs. Construction debris will be transported from the project site to an off-site permitted disposal facility, which will result in a temporary increase in truck traffic. The temporary truck traffic is not out of character for the area and will not conflict with any congestion management program.

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?*

**Finding: No Impact.** The project will have no bearing on air traffic patterns.

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

**Finding: No Impact.** This project does not have any design features that will alter or impact a road way.

e) *Result in inadequate emergency access?*

**Finding: No Impact.** The project will have no impact on emergency access.

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

**Finding: No Impact.** This project will not conflict with any such policies, plans or programs.

## 7.17 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
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?				X
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?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
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?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

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

**Finding: No Impact.** The proposed project will not exceed wastewater treatment requirements of the North Coast Water Quality Control Board.

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?*

**Finding: No Impact.** The proposed project will not have an impact on the facility's existing production of wastewater.

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?*

**Finding: Less Than Significant Impact.** The Proposed wharf retrofit will be roughly the same size as the existing unloading platform. A rainwater catch basin will collect storm water from the unloading platform and discharge to an existing oily water tank. There will be a less than significant impact to the area of impermeable surface.

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

**Finding: No Impact.** No new or expanded water supply entitlements are needed for this project.

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?*

**Finding: No Impact.** The proposed project will not cause an increase in demand on the existing wastewater treatment provider.

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

**Finding: Less Than Significant Impact.** The proposed project will require the disposal of approximately 71 treated timber piles and the existing wharf unloading platform from bents 118-120 ( $\pm 1,300$  square feet). All construction debris will be hauled off-site to a pre-determined permitted facility with sufficient capacity.

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

**Finding: No Impact.** The project will comply with all federal, state and local statutes and regulations related to solid waste.

## 7.18 MANDATORY FINDINGS OF SIGNIFICANCE

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

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

**Finding: Less Than Significant With Mitigation Incorporated.** The proposed project will not increase the square footage of the existing dock trestle or wharf unloading platform. Seventy one (71) approximately 14" diameter timber piles are to be removed (total area 75.9 sf). Twenty (20) 16" diameter steel pipe piles (total area 27.9 sf) and four (4) 24" diameter steel pipe piles (total area 12.6 sf) are to be added. Therefore the total fill volume change is a reduction of (27.9 sf + 12.6 sf - 75.9 sf =) 35.4 sf.

Construction activities pose the potential to impact fish populations and fish and/or eelgrass habitat in the vicinity of the dock. With biological monitoring and mitigation measures in place, the impacts to fish and wildlife species and habitat will be less than significant. (See MM-BIO-6 and MM-BIO-7)

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

**Finding: Less Than Significant with Mitigation Incorporated.** Chevron currently has permits for in-kind repairs and maintenance of the dock structure. 2016 will mark the third year of the five year permit term which allows Chevron to replace up to 25 timber piles per year. To date 24 total timber piles have been replaced over the course of two years. All in-water work resulting from the existing permit and the proposed project will be performed during the in-water work window of July 1<sup>st</sup> – October 15<sup>th</sup>. Mitigation measures MM-BIO 1-6 will apply. No work under the repair and maintenance permits will be performed during 2016 or 2017. There are no expected cumulative effects from the past and proposed dock repair projects.

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

**Finding: Less Than Significant With Mitigation Incorporated.** The proposed project will provide a seismic upgrade to the existing structure and will not add any additional square footage or capacity to the Chevron Eureka Terminal Dock. Impacts to the following environmental factors: biological resources, cultural resources, Hazards and Hazardous Materials, Hydrology and Water Quality and Noise, can occur from temporary short-term construction activities. Mitigation measures have been developed for each affected environmental factor, reducing potential impacts to less than significant.

## 8. REFERENCES

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Angliss, R. P., and B. M. Allen. 2009. Alaska Marine Mammal Stock Assessments, 2008. U.S. Department of Commerce, Seattle, Washington. NOAA Tech. Memo. NMFS-AFSC-193.

Brindock, K. M., and M. A. Colwell. 2011. Habitat selection by western snowy plovers during the nonbreeding season. *Journal of Wildlife Management* 75:786-793.

Burns, J. J. 2008. Harbor seal and spotted seal *Phoca vitulina* and *P. largha*. In W. F. Perrin, B. Wursig, and J.G.M. Thewissen, Editors. *The encyclopedia of marine mammals*. p 533-542. Academic Press, San Diego, California.

[CA DOC] California Department of Conservation. 2016. Farmland Mapping and Monitoring Program. <http://www.conservation.ca.gov/dlrp/fmmp>

[CDFG] California Department of Fish and Game. 2010. Status of the Fisheries Report: An Update through 2008. Report to the California Fish and Game Commission. Prepared by California Department of Fish and Wildlife, Marine Region.

CalEPA 2016. Cortese List: Section 65962.5(a)  
<http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm>

[CEQA] California Environmental Quality Act. 2016. Statute and Guidelines. AEP, 40747 Baranda Court, Palm Desert, CA 92260.

Carretta, J. V., K. A. Forney, M. S. Lowry, J. Barlow, J. Baker, D. Johnston, B. Hanson, M. M. Muto, D. Lynch, and L. Carswell. 2009. U.S. Pacific Marine Mammal Stock Assessments: 2008. U.S. Department of Commerce. NOAA Tech. Memo. NMFS-SWFSC-434.

CH2M Hill Engineers, Inc. January 2016. Draft Initial Study and Mitigated Negative Declaration for the Fisherman's Channel Dredging and Beneficial Reuse Pilot Project, submitted to Humboldt Bay Harbor, Recreation and Conservation District, prepared for Pacific Gas and Electric Company.

Colwell, M. A. 1994. Shorebirds of Humboldt Bay, California: Abundance estimates and conservation implications. *Western Birds* 25:137-145.

Eguchi, T., and J. T. Harvey. 2005. Diving behavior of the Pacific harbor seal (*Phoca vitulina richardii*) in Monterey Bay, California. *Marine Mammal Science* 21:283-295.

Eicher, Annie. H.T. Harvey & Associates Ecological Consultants. February 11, 2016. Memorandum. Progress Report for Eelgrass Monitoring for the Chevron Eureka Terminal Repairs Project. Project # 3606-03. Prepared for Corey Matson, Pacific Affiliates.

Federal Register. February 16, 2000. Rules and Regulations. 50 CFR Part 226. Designated Critical Habitat: Critical habitat for 19 Evolutionarily Significant Units of Salmon and Steelhead in Washington, Oregon, Idaho, and California. Vol. 65, No. 32.

[FHWG] Fisheries Hydroacoustic Working Group. 2008. June 12, 2008 Memorandum- Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities. NOAA Fisheries, U.S. Fish and Wildlife Service, California/Washington/ Oregon Departments of Transportation, California Department of Fish and Game, U.S. Federal Highway Administration.

Gaskin, D. E. 1984. The harbour porpoise (*Phocoena phocoena* L.): Regional populations, status, and information on direct and indirect catches. Reports of the International Whaling Commission 34:569-586.

Goetz, B. J. 1983. Harbor porpoise (*Phocoena phocoena*, L.) movements in Humboldt Bay, California and adjacent ocean waters. Master's thesis. Humboldt State University, Arcata, California.

Heath, C. B., and W. F. Perrin. 2008. California, Galapagos, and Japanese sea lions, *Zalophus californianus*, *Z. wollebaeki*, and *Z. japonicus*. In W. F. Perrin, B. Wursig, and J. G. M. Thewissen, Editors. The encyclopedia of marine mammals. p 170-176. Academic Press, San Diego, California.

[HTH] H.T. Harvey & Associates Ecological Consultants. April 28, 2016. Draft: Chevron Eureka Terminal Seismic Retrofit Project: Eelgrass Mitigation and Monitoring Plan. Project No. 3606-05.

[HTH] H.T. Harvey & Associates Ecological Consultants. April 29, 2016. Draft: Chevron Eureka Terminal Seismic Retrofit Project Underwater Noise and Marine Mammal Monitoring Plan. Project No. 3606-04. Prepared for Corey Matson, Pacific Affiliates, Eureka CA.

Kalson, Neil. March 2016. HT Harvey & Associates Ecological Consultants. Personal communications.

Lowry, M. S., B. S. Stewart, C. B. Heath, P. K. Yochem, and J. M. Francis. 1991. Seasonal and annual variability in the diet of California sea lions (*Zalophus californianus*) at San Nicolas Island, California, 1981-86. Fishery Bulletin 89:331-336.

Lowry, M. S., and J. V. Carretta. 1999. Market squid (*Loligo opalescens*) in the diet of California sea lions (*Zalophus californianus*) in southern California (1981-1995). California Cooperative Oceanic Fisheries Investigations Reports 40:196-207.

Lowry, M. S., and K. A. Forney. 2005. Abundance and distribution of California sea lions (*Zalophus californianus*) in central and Northern California during 1998 and summer 1999. Fishery Bulletin 103:331-343.

Lowry, M. S., J. V. Carretta, and K. A. Forney. 2008. Pacific harbor seal census in California during May-July 2002 and 2004. California Fish and Game 94:180-193.

[M&N] Moffatt & Nichol. December 31, 2015. Chevron Eureka Terminal Pipeway and Unloading Platform Retrofit Planset, Sheets 1-27. Project Address: 3400 Christie St. Eureka, CA 95503

[M&N] Moffatt & Nichol. April 7, 2016. Memorandum. Chevron Eureka Terminal Information for Environmental Permits, Rev. 2.

[NMFS] National Marine Fisheries Service. 2011. Endangered and threatened species, designation of critical habitat for southern distinct population segment of eulachon. Federal Register 76:515-536.

[NMFS] National Marine Fisheries Service. 2012. Memorandum. "Guidance Document: Sound Propagation Modeling to Characterize Pile Driving Sounds Relevant to Marine Mammals." Date: January 31, 2012.

[NOAA] National Oceanic and Atmospheric Administration. 2010. Humboldt Bay, California Benthic Habitats 2009. U.S. Department of Commerce, NOAA's Ocean Service, Coastal Services Center, Charleston, South Carolina.

[NOAA] National Oceanic and Atmospheric Administration. 2014. California Eelgrass Mitigation Policy and Implementing Guidelines, NOAA Fisheries West Coast Region.

[NOAA] National Oceanic and Atmospheric Administration. 2016. Green Sturgeon (*Acipenser medirostris*) <http://www.fisheries.noaa.gov/pr/species/fish/green-sturgeon.html>

Nelson, K. 1997. Marbled murrelet (*Brachyramphus marmoratus*). In A. Poole and G. Gill, Editors. The birds of North America, No. 276. Academy of Natural Sciences, Philadelphia, Pennsylvania and American Ornithologists' Union, Washington, DC.

[NCRQCB] North Coast Regional Water Quality Control Board. May 2011. Water Quality Control Plan for the North Coast Region. 5550 Skyland Blvd., Suite A, Santa Rosa, CA 95403.

[NCUAQM] North Coast Unified Air Quality Management. 2016. <http://www.ncuaqmd.org>

Page, G. W., L. E. Stenzel, J. C. Warriner, and P. W. C. Paton. 1995. Snowy plover (*Charadrius alexandrinus*). In A. Pool and F. Gill, Editors. The birds of North America. No. 154. Academy of Natural Sciences, Philadelphia, Pennsylvania and American Ornithologists' Union, Washington, DC.

Samoa Field Airport 033, 2015. Eureka, California, USA. Date accessed: 3/28/16, <http://www.airnav.com/airport/O33>

Steer, Al. NCUAQMD. Chevron Dock Seismic Upgrade Presentation. 2016. Email.

Stillwater Sciences (a). April 2016. Draft Report: Chevron Eureka Terminal Seismic Retrofit Biological Assessment. Prepared by Stillwater Sciences, Arcata, California for Chevron and Pacific Affiliates, Eureka, California.

Stillwater Sciences (b). April 2016. Draft Report: California Endangered Species Act Incidental Take Permit Application for the Chevron Eureka Terminal Seismic Retrofit. Prepared by Stillwater Sciences, Arcata, California for Chevron and Pacific Affiliates, Eureka, California.

Sullivan, R. M. 1980. Seasonal occurrence and haul-out use in pinnipeds along Humboldt County, California. *Journal of Mammalogy* 61(4):754-760.

[USFWS] U.S. Fish and Wildlife Service. 1992. Determination of threatened status for the Washington, Oregon, and California population of the marbled murrelet. Final rule. *Federal Register* 57(191):45328-45337.

[USFWS] U.S. Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). U.S. Fish and Wildlife Service. Sacramento, California.

[USFWS] U.S. Fish and Wildlife Service. 2011. Revised critical habitat for marbled murrelet. *Federal Register* 76(193):61599-61621.

## APPENDIX

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Figure 1: Vicinity Map

Figure 2: Aerial Photo

Figure 3: Eelgrass Beds

Figure 4: Chevron Dock plan showing piles to be installed and removed for mitigation

Appendix A - Chevron Eureka Terminal: Pipeway and Unloading Platform Retrofit Plans (Sheets T-1, S-1 to S-13, S-24)

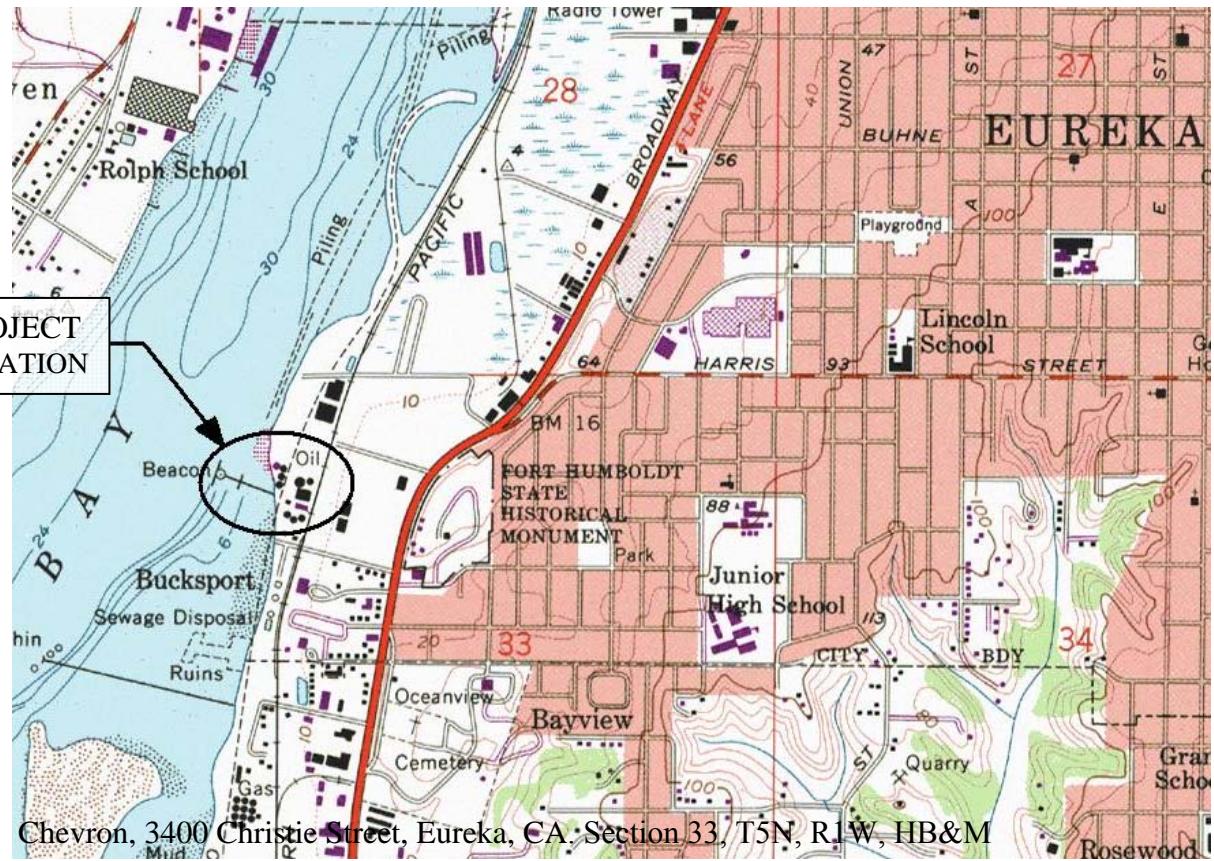


Figure 1 Vicinity Map



Figure 2 Aerial Photo



Figure 3: Eelgrass Beds (>85% cover) in the vicinity of the Project Site, (NOAA 2009, taken from HTH 2015)

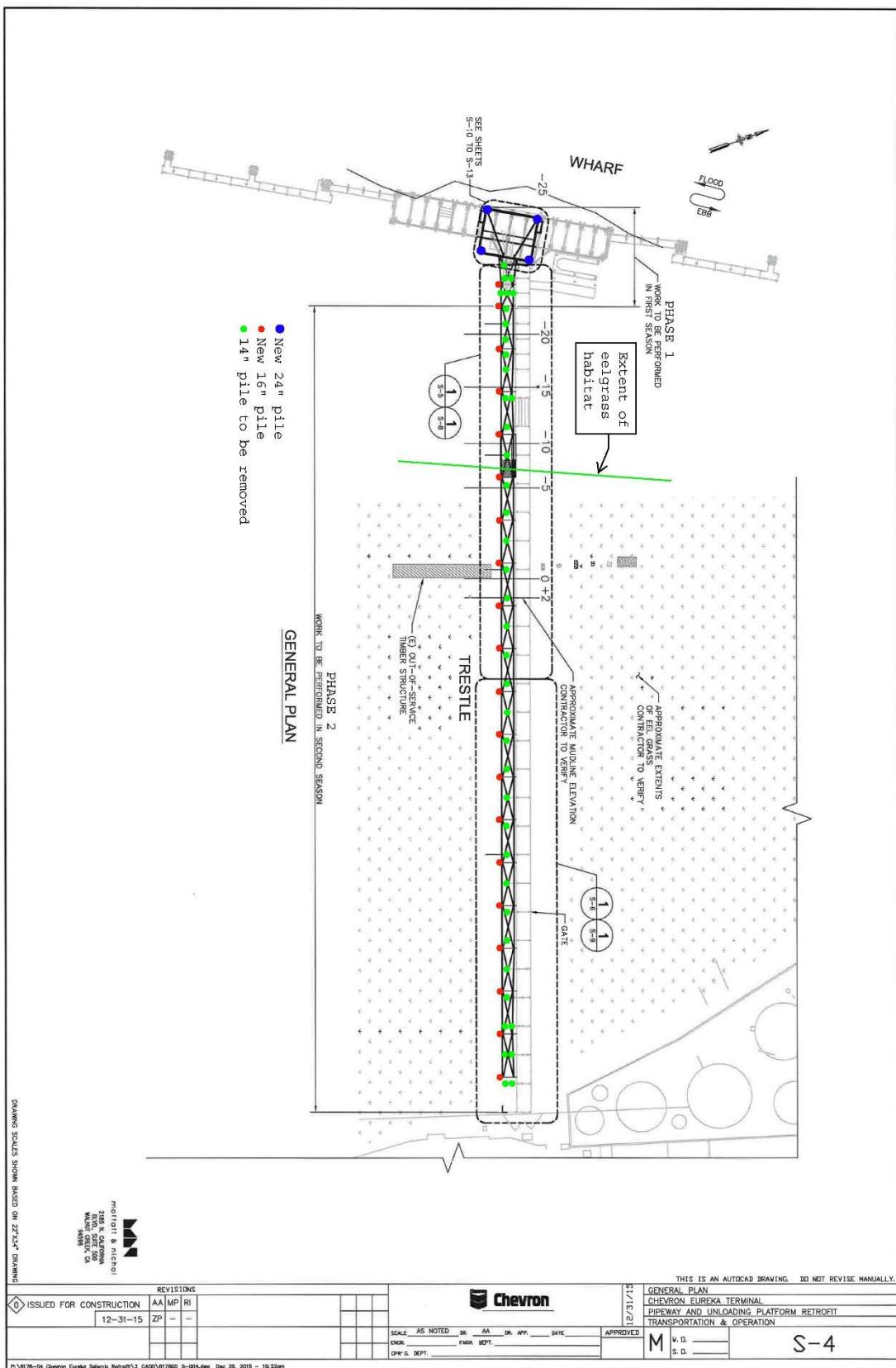


Figure 4: Chevron dock plan showing locations of piles to be installed and removed for mitigation