

# 2024 Final Biological Monitoring and Mitigation Compliance Report

Chevron Long Wharf Maintenance and Efficiency Project

Chevron Products Company

September 2024

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## Acronyms and Abbreviations

°F	degrees Fahrenheit
B1	Berth 1
BO	Biological Opinion
CDFW	California Department of Fish and Wildlife
dB	decibels
HAPO	Harbor porpoise
HASE	Pacific harbor seal
IHA	Incidental Harassment Authorization
ITP	Incidental Take Permit
m	meters
MMO	marine mammal observer
NMFS	National Marine Fisheries Service
Project	Chevron Long Wharf Maintenance and Efficiency Project
RMS	root mean square
SEL	sound exposure level

# 1. Introduction

This 2024 Biological Monitoring and Mitigation Annual Compliance Report is being submitted to the National Marine Fisheries Service (NMFS) in accordance with the Incidental Harassment Authorization (IHA) valid from June 1, 2024, through May 31, 2025 and Project Biological Opinion (BO) issued April 4, 2017 (WCR-2015-1997), and to the California Department of Fish and Wildlife (CDFW) in accordance with Condition #6.8 in the Project Incidental Take Permit (ITP) No. 2081-2016-056-07.

The IHA covers all marine mammal species potentially occurring in the vicinity of the Long Wharf, however, the most common marine mammals in San Francisco Bay are harbor seals and California sea lions. Fish species included in the ITP and BO (i.e. the Covered Species) include Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*), Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha*), longfin smelt (*Spirinchus thaleichthys*), and green sturgeon (*Acipenser medirostris*).

The Chevron Long Wharf Maintenance and Efficiency Project (Project) includes multiple construction components within and above the water to bring the Long Wharf (Berths 1 through 4) into compliance with Marine Oil Terminal Engineering and Maintenance Standards and to improve the overall operational efficiency. Monitored Project in-water construction activities (Covered Activities) for the 2024 monitoring year were limited to vibratory pile extraction and occurred between June 11, 2024, and June 13, 2024, at Berth 1 (Table 1).

**Table 1 Summary of 2024 Monitored Covered Activities**

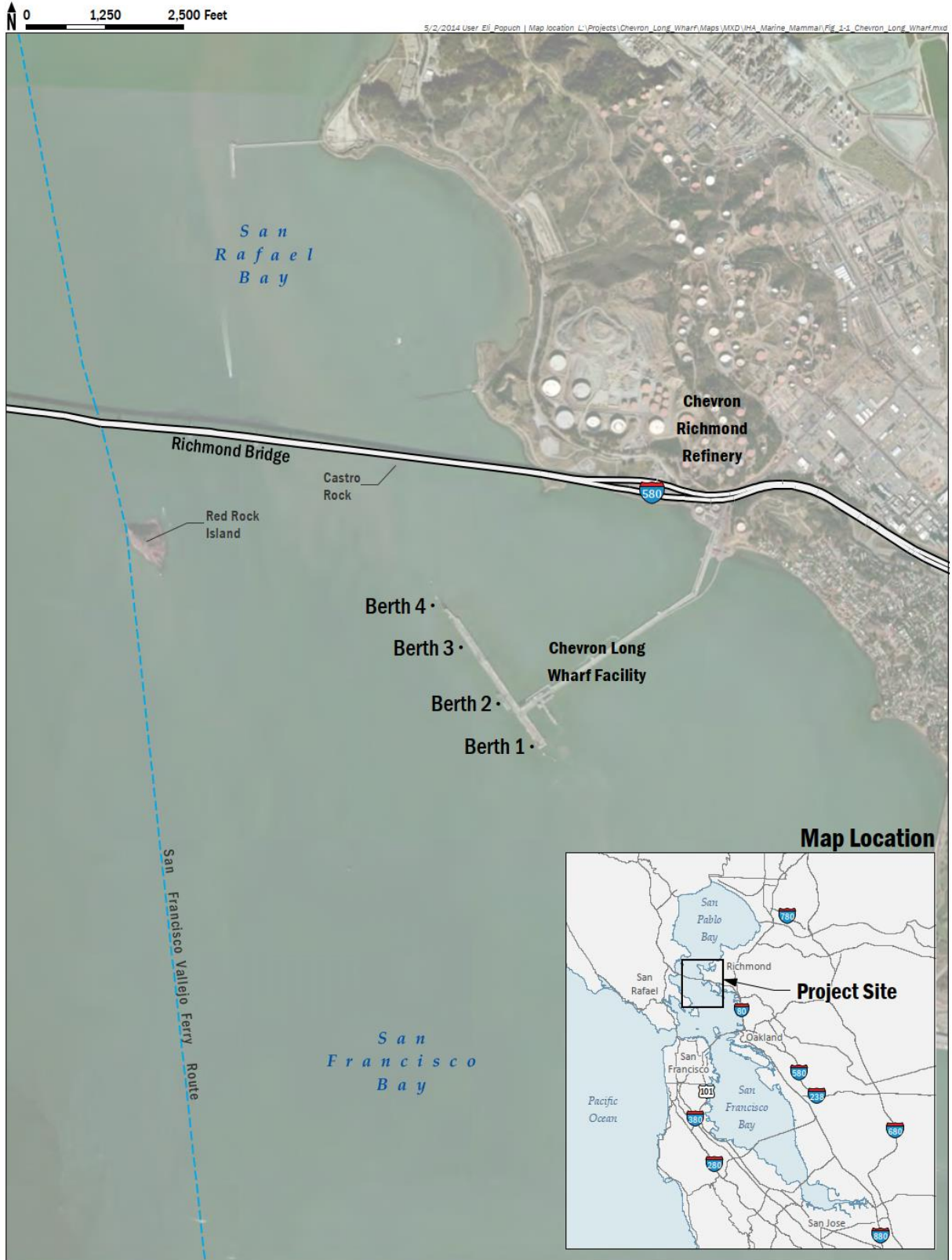
Date	Covered Activities <sup>1</sup>
6/11/2024	A total of two 36' temporary steel piles were removed with a vibratory hammer. The total driving time was approximately 56 minutes.
6/12/2024	A total of seven 36' temporary steel piles were vibrated, of which six were removed with a vibratory hammer; the remaining pile was left in place for removal the following day. The total driving time was approximately 149 minutes.
6/13/2024	A total of two 36' temporary steel piles were removed with a vibratory hammer. The total driving time was approximately 25 minutes.

<sup>1</sup> Drive time estimates are derived from the daily drive logs. Steel piles installed were 36-inch diameter steel pile piles.

# 2. Project Area

The Project is located at the Chevron Products Company Richmond Refinery Long Wharf in the City of Richmond, Contra Costa County (Table 1). The Project Area is approximately 0.75 mile south of the eastern side of the Richmond-San Rafael Bridge. All construction activities in 2024 occurred at Berth 1.

Sediments around the Long Wharf consist of a layer of very soft, recently deposited Bay mud, approximately 5 to 12 meters in depth, overlying 9 to 18 meters of soft to medium stiff clay (Young Bay Mud), then older stiff clays to bedrock. Depth to bedrock in the area is generally 30 meters or more. The sediments are relatively uniform in the area surrounding the Wharf at locations where piles are being driven, so the description of the sediment stratigraphy would apply to all piles driven.



**Chevron**  
Chevron Long Wharf  
MAINTENANCE AND EFFICIENCY PROGRAM

**FIGURE 1**  
Chevron Richmond Long Wharf  
Project Location

**Figure 1 Project Location**

## 3. Methods

Marine mammal and fish monitoring efforts consisted of pre-Project baseline surveys, a worker education program, and visual monitoring during all work activities including impact and vibratory pile driving and extraction. In 2024, in-water work consisted of removing 10 temporary piles, installed in 2023, that were used to support a construction template. Table 1 provides a summary of all pile extraction conducted in 2024, all of which was monitored.

### 3.1 Pre-Project Baseline Biological Survey

#### 3.1.1 Pre-Construction Nesting Bird Survey

A pre-construction nesting bird survey was conducted on June 10, 2024, in accordance with CDFW ITP No. 2081-2016-056-07 as well as a mitigation measure imposed in the Initial Study/Mitigated Negative Declaration that was prepared by the California State Lands Commission for the Project to comply with the California Environmental Quality Act. There was a high level of bird activity on and around the Long Wharf, however, no active nests were observed during this survey. Bird species incidentally observed during the baseline surveys included double-crested cormorant (*Phalacrocorax auritus*), pelagic cormorant (*Phalacrocorax pelagicus*), American crow (*Corvus brachyrhynchos*), rock pigeon (*Columba livia*), western gull (*Larus occidentalis*), California gull (*Larus californicus*), brown pelican (*Pelecanus occidentalis*), osprey (*Pandion haliaetus*), and California least tern (*Sterna antillarum browni*).

#### 3.1.2 Marine Mammal Baseline Observations

The use of vibratory hammers occurred first in June 2024. A baseline marine mammal survey was initially conducted in June, before the start of in-water work.

The pre-Project baseline biological survey was conducted by two Project biologists on June 10, 2024, one day prior to the start of work at Berth 1 on June 11, 2024. The baseline survey was conducted in accordance with the IHA, and consisted of a baseline marine mammal observation survey of the waters surrounding the Long Wharf, including but not limited to the Berth 1 area. This survey was conducted on foot from the Long Wharf, from 10:32 a.m. to 13:59 p.m. with a tide of -0.24 feet at 10:32 a.m. Weather conditions began with clear blue skies and a temperature of 62 degrees Fahrenheit (°F) at the start that transitioned to a temperature of 67°F. The Beaufort scale report remained a 2 with a light gentle breeze and small wavelets on the surface of the water. The survey area had ships positioned at Berth 1 which obstructed some of the view along the west side of the Long Wharf. Observers walked along the entire length of Berth 1 and portions of Berth 2. Observers could see different angles around the width of the ship. Beyond the width of a ship (approximately 30 meters wide), the view of the water was not obstructed to the west. Views to Red Rock and Castro Rocks to the north were obstructed from Berth 1, which is at the south end of the Long Wharf, approximately one mile from these locations (Figure 1). Surrounding work activity at the neighboring berths and Long Wharf in general was minimal.

No marine mammals were observed in the water near the Long Wharf during the baseline survey.

## 3.2 Worker Education Program

In accordance with Permit conditions, an education program was given on May 29, 2024, before performing any work, to all persons employed or that otherwise would be working in the Project Area. Materials were prepared by the Designated Biologist describing the biology and general behavior of the Covered Species, the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, Covered Species legal protection, recovery efforts, and penalties for violations were provided to all site workers. All trained site workers signed a form stating they completed the training and understand all protection measures. The signature forms and training materials can be found in Appendices A and B.

## 3.3 Monitoring during Pile-Driving Activities

### 3.3.1 Marine Mammal Monitoring

Monitoring was conducted in accordance with the Project's Marine Mammal Monitoring Plan<sup>1</sup>. Monitoring during each pile-driving event started at least 30 minutes prior to pile extraction initiation and ended 30 minutes after such work was completed for the day, or when there was a pause in the work of 2 hours or more.

Two qualified, NMFS-approved marine mammal observers (MMOs) were on-site daily during in-water work, for a total of 3 days in 2024. Work took place at Berth 1 exclusively for all covered work activities.

The MMOs were stationed at monitoring locations that afforded the best view of the Project Area and adjacent waters and adjusted these locations during barge positioning to ensure the most unobstructed views. These locations are noted on the figures below. Cell phones were used to communicate among the MMOs and construction team. MMOs used binoculars to continuously scan the monitoring zone for marine mammals. Field data sheets summarizing environmental conditions, pile-driving activities, and observations of marine mammals were prepared daily by both MMOs (Appendix C).

Work at Berth 1 included removing a total of 10 steel piles (36-inch) piles via a vibratory hammer with a 10 meter shutdown zone for all species (Figure 2).

### 3.3.2 Monitoring for Listed Fish Species

Fish monitoring was conducted by the two MMOs present during all pile driving. Monitoring was conducted for the following Covered Species subject to take authorization: Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon, longfin smelt, and green sturgeon. Monitoring consists of visual observations during pile driving activities to note any distressed or injured fish. Listed fish species covered under the CDFW ITP observed during the 2024 monitoring activities are discussed in Section 4.3.

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<sup>1</sup> AECOM (2023). Marine Mammal Monitoring Plan, Chevron Richmond Refinery Long Wharf Maintenance and Efficiency Project. April 2023. 40 pp.





Figure 2 Berth 1 Shutdown Zones for 24-inch Concrete Pile Installation (top) and 36-inch Steel Pile Installation and Extraction (bottom)

## 4. Monitoring Results

### 4.1 Marine Mammal Monitoring

#### 4.1.1 Monitoring Conditions and Monitored Activities

Conditions during observation periods were generally favorable for marine mammal observations. MMOs were reliably able to observe the waters within 400–500 meters of all active pile driving activities. Details of daily weather and sea conditions are provided in Appendix C. For a summary of the daily work activities monitored, see Table 1.

Monitoring was conducted for removal of 10 steel pipe template piles (36-inch), which were removed with a vibratory driver at the Berth 1 Inner Breasting Point and Inner Breasting Dolphin. Movement and repositioning of barges throughout Project activities would sometimes partially and temporarily obstruct small portions of the Project Area. MMOs moved along the Berth 1 dolphin walkways, staircases, and used elevated platforms to optimize views. MMOs also used cell phones to communicate blind spots and to confirm that at least one MMO could see around obstructions. Continuous communication and movement around Berth 1 ensured that MMOs observations could continue reliably.

#### 4.1.2 Marine Mammal Observations and Take

The marine mammal Monitoring Period during construction activities was defined as 30 minutes prior to pile-driving (or removal) initiation and ended 30 minutes after such work was completed for the day, or when there was a pause in the work of 2 hours or more. Data sheets with routine observations are included in Appendix C. Harbor seals (*Phoca vitulina*) were the only marine mammal species commonly observed during the construction period.

Across all monitoring dates, most of the harbor seals observed at Berth 1 were observed on the open Bay side of the wharf (west side) surrounding the crane and materials barges, approximately 40 to 300 meters from the Long Wharf. Seals were rarely seen on the inland side, east of the Wharf.

No other species of marine mammals were observed during the construction season.

Each individual animal observed within the estimated Level B zones (as reported in the IHA) during active vibratory hammer operation was treated as a take event. Multiple sightings of an individual animal were recorded as one observation, provided the animal could be tracked or otherwise individually identified. Table 2 provides a summary of the estimated distances of Level B threshold, as presented in the IHA.

**Table 2 Predicted Underwater Pile Driving Noise Levels and Distances of Threshold Exceedance**

Pile Type	Source Levels at 10 meters (dB)		Distance to Threshold 160/120 dB RMS (Level B)* meters
	Peak	RMS/SEL	
<b>Vibratory Extraction</b>			
36-inch steel pipe pile	196	173	2,727

Notes:

\* 160 dB RMS applied to impulse noise such as impact driving and 120 dB RMS applies for continuous noise such as vibratory driving.

dB = decibels

RMS = root mean square

SEL = sound exposure level

For all pile extraction, Level B takes were recorded for animals observed only during active vibratory hammer operation or when the animal was likely to be present in the Level B zone prior to the cessation of the pile extraction. A summary of take recorded by the MMOs during the monitoring period is provided in Table 3. There were no indicators of marine mammal injuries observed during the monitoring period.

**Table 3 In-Water Marine Mammal Observations and Level B Take**

Date/Time	Species	Distance from Pile (meters)	Bearing from MMO	Behavior	Level B Take <sup>1</sup>	Notes on Observation
6/11/2024	HASE	50 m	180 °	(1542) Stationary, then slowly moving, and then disappeared	—	Outside of active drive time
6/11/2024	HASE	120 m	145 °	(1548) Surfaced, then immediately dove	—	Outside of active drive time
6/11/2024	HASE	100 m	142 °	(1606) Surfaced, then immediately dove	—	Outside of active drive time
6/11/2024	HASE	60 m	0 °	(1806) Surfaced, spun in a few circles, then dove	—	Outside of active drive time
6/12/2024	HASE	120 m	4 °	(0740) Surfaced, swam at surface for 10 seconds, and then dove	—	Outside of active drive time
<b>Total Level B Takes: none</b>						

Notes:

<sup>1</sup> Recorded for animals observed only during active pile driving or when the animal was likely to be present in the Level B zone prior to the cessation of the pile driving

HASE = Pacific harbor seal

m = meters

MMO = marine mammal observer

No marine mammal Level B harassment in the observable portion of the Level B zone occurred during vibratory work. As summarized in Table 3, all marine mammal observations occurred outside of the active pile extraction periods. The number of observed take (zero) remains less than the number of authorized takes, as summarized in Table 3. Table 3 lists the instances when marine mammals were observed in the water surrounding the Project Area.

### 4.1.3 Pile-Driving Shutdowns

During the 2024 monitoring period, there were no instances where vibratory hammer shutdown was required, as no marine mammals entered a shutdown zone during active driving, and no marine mammals entered the minimum safety zone of 10m during active construction.

## 4.2 Listed Fish Observations and Take

During Covered Activities, monitoring for fish was conducted for the following Covered Species subject to take authorization: Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*), Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha*), longfin smelt (*Spirinchus thaleichthys*), and green sturgeon (*Acipenser medirostris*). During all construction activities in 2024, no Covered Species of fishes covered under the CDFW ITP or NMFS BO were observed, and no distressed or injured fish of any species were observed during the 2024 construction season.

## 5. Discussion

As presented in the IHA application, harbor seals are the most likely species to occur in the vicinity of the Long Wharf and were the most common species observed during all pile extraction and work activities in 2024. No Level A take of marine mammal species occurred in 2024.

No incapacitated or injured fish were observed within the monitoring area during any Covered Activities. Hydroacoustic monitoring conducted in prior years found that the distances over which underwater noise levels were exceeded were consistently lower than the modeled results for fish presented in the Biological Assessment provided to NMFS and in accordance with the ITP.

The current avoidance and minimization measures, as required in permit conditions, have been demonstrated to effectively minimize take of marine mammals and fish.

# Appendix A Worker Environmental Awareness Training Program

# Environmental Awareness Training



## **WMEP and Long Wharf Deck Removal Projects 2024**

**May 29, 2024**

# Safety Moment



# Regulatory Permits and Approvals



- **U.S. Army Corps of Engineers:** Letter of Permission (LOP)
- **National Marine Fisheries Service (NMFS):**
  - Letter of Concurrence (listed fish species)
  - Incidental Harassment Authorization
- **California Regional Water Quality Control Board (RWQCB):** Water Quality Certification
- **California Department of Fish and Wildlife (CDFW):** Incidental Take Permit (ITP) for Longfin Smelt
- **S.F. Bay Conservation & Development Commission (BCDC):** Chevron existing wharf maintenance permit.

***Copies of the permits must be kept on-site.***





- **Federal Endangered Species Act (ESA)**
  - Prohibits the “take” of any listed species. “Take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”
- **California Endangered Species Act (CESA)**
- **Marine Mammal Protection Act** – protects all marine mammals.
  - Prohibits the “take” (injury or harassment) of marine mammals unless under incidental harassment permit.
  - Illegal to intentionally harass marine mammals
- **California Fish and Game Code §3511** – prohibits take of fully protected birds.

***Violation of federal and/or state environmental laws  
may result in fines and/or jail.***

# Biological Resources



- Biological resources training is required for all persons working in the Project Area before performing work.



- Acoustic Sensitivity
  - Marine mammals and fish are sensitive to underwater sounds
    - Pile driving
      - ▶ Vibratory hammer (continuous noise)
      - ▶ Impact hammer (impulse noise, high peaks)
  - Sound produced during work can
    - Confuse and disorient animals
    - Cause physical harm – damage to fish tissues and hearing loss in mammals
    - Discourage natural behaviors like feeding and resting
  - Work window between June 1 and November 30 when fewer species are present

# Covered Species: Fish



- Chinook salmon



- Longfin smelt



- Green sturgeon



# Covered Species: Marine Mammals - Pinnipeds



- Pacific harbor seal and California sea lion
  - Sensitive to underwater noise
  - Exclusions zones will be monitored before and during driving



**Harbor  
Seal**



**CA Sea  
Lion**



# Covered Species: Marine Mammals - Cetaceans



- Harbor porpoise and gray whale
  - Very sensitive to underwater noise
  - Larger exclusion zones than seals and sea lions
  - Less likely to be seen in the vicinity of the Long Wharf



Harbor Porpoise



Gray Whale



## ■ Marine Mammal Protection Act

- Illegal to intentionally harass marine mammals
- NOAA recommends remaining at least 50 yards away from dolphins, porpoises, seals, and sea lions.
- When encountering marine mammals, slow down, operate at no-wake speed.
- If a harbor seal or seal lion enters the immediate work area, stop work, particularly if it appears the animal could be injured by the work.
  - contact project compliance specialist.

# General Protective Measures (WMEP)



- Time Restrictions: For pile driving/extraction activities:
  - Only during daylight hours
  - In-water work between June 1 and November 30
- Sound pressure levels should not exceed any of the calculated distances to the peak pressure or accumulated sound exposure level.
- All piles shall be removed by direct pull or by vibratory methods. Should a pile break or cannot be removed, the pile shall be cut off, at a minimum, 2 feet below the mudline.
- Use of Ramp Up/ Soft Start not required



# Measures to Protect Marine Mammals (WMEP)



- Establishment of Shutdown Zones:
  - *Pile driving/extraction activities* - NMFS specifies shutdown zones for marine mammals. Monitors will observe zones for 30 min prior to the start of driving and will give the all-clear to start. If animals approach too close, a temporary hammer shutdown may be needed.
  - *Vessel operations* - If a marine mammal comes within 10 meters, vessel operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.
- Visual marine mammal monitoring, observation, data collection, and reporting.
- Past monitoring efforts: abundant harbor seal observations nearby.

# General Protective Measures (Deck Removal)



- **Time Restrictions**

- In-water work between June 1 and November 30.

- **Treated Wood Pile Extraction**

- All piles shall be removed by direct pull or shears. Should a pile break or cannot be removed, the pile shall be cut off, at a minimum, 2 feet below the mudline. No hydraulic jetting.
- Move piles directly to lined barge after pulling. Piles will not be washed, shaken, or otherwise be allowed to drain over Bay waters to remove sediment prior to placement on the debris barge. Do not wash barge decks in a manner that would allow wastewater to enter the Bay.
- Accumulated sediment from pile removal is assumed to contain creosote and will be collected, tested and properly disposed.

# General Protective Measures (Deck Removal)



## ▪ Debris and Waste Management

- During demolition activities, install floating debris booms to capture floating surface debris to contain releases if they were to occur.
- When cutting materials above water, any debris generated will be contained and prevented from entering the Bay by using nets other devices below the work area to catch debris before it enters the Bay.
- Demolition waste will be collected and transported to an authorized upland disposal or recycle site by a properly licensed transporter (in accordance with the California Code of Regulations, Title 22, Division 4.5)

# General Protective Measures (Deck Removal)



## ▪ Spill Prevention and Control.

- Maintain spill cleanup material at the work site and follow the approved spill plan (SPCC).
- Store all hazardous materials (fuels, oils, grease, solvents, coolants) according to the SPCC.
- Fuel equipment in accordance with Best Management Practices in the SPCC. Immediately clean up any spills.
- Inspect equipment regularly for leaks or spills; repair leaking equipment promptly.
- Containment booms will be deployed around areas of creosote treated pile removal to contain creosote oil sheen.
- In case of emergency, use contact tree in SPCC

# General Protective Measures (Deck Removal)



## ▪ **Boat and Barge Movement.**

- Mark the barge work corridor along the Long Wharf with large floats on self-centering anchors to reduce potential encroachment on the nearby eelgrass beds to the minimum needed.
- Keep all vessels within the marked work area to avoid damage to eelgrass outside of the permitted disturbance area. Avoid excessive vessel thrust to minimize eelgrass damage.
- Conduct vessel operation and movements at slack high tides or during neap tide exchanges to reduce the need for excessive thrust to maneuver the barges near the eelgrass bed.
- Follow barge and boat movement corridors.



# Nesting Birds



- Nesting bird survey is required prior to the start of the nesting season April 1 – August 31. Will be completed before start of work.
- Workers should be observant of possible nests throughout the year and during all construction activities
- Nests must be removed by a qualified biologist

**Western gull**



**California least tern  
(Endangered)**

**Brown pelican (CFGC  
Fully Protected)**



**Double-crested  
cormorant**

# Responsibilities



- All workers should always keep an eye open for these species.
- If dead or injured fish or marine mammals are observed, immediately notify the Project Compliance Specialist
- If a bird nest is observed, notify the Project Compliance Specialist
- Remember: it is illegal to intentionally harm or harass marine mammals





# Questions?



Environmental Contact	Phone number
Matthew Bettelheim (Designated Biologist)	925-451-1719
Bill Martin (Chevron Compliance Specialist)	510-963-2518
Maureen Dunn (Chevron HSE Water Specialist)	510-210-2483

# Appendix B Training Attendance Record

# **Chevron Richmond Refinery**

## **Long Wharf Maintenance & Efficiency Project**

### **Training and Education Plan**

#### **2024 In-water Work Training Acknowledgement**

#### **1.0 Introduction and Purpose**

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Incidental Take Permit (ITP) condition ITP #5.4 issued by the California Department of Fish and Wildlife (CDFW) specifies that the training and education required for the Refinery Long Wharf Maintenance and Efficiency Project (LWMEP) must be acknowledged by every employee and contract worker involved with the Project. This document specifies how condition ITP #5.4 will be complied with.

#### **2.0 Acknowledgement**

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The persons completing and signing the Training and Education Session Sign-in Sheet acknowledge that they have attended and successfully completed the required training session and understand all protection measures imposed by the LWMEP regulatory conditions of approval and mitigation measures required by the ITP issued by CDFW.

#### **3.0 Employee and Contractor Worker Information and Certification**

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*"By signing the Education and Training Meeting Sign-in Sheet, I hereby acknowledge that I have attended the training and education program session that has been developed for the Chevron Richmond Refinery Long Wharf Maintenance and Efficiency Project, and that I understand all protective measures required by the ITP issued by CDFW."*

**Refinery Long Wharf Maintenance & Efficiency  
Project Education and Training Meeting  
Attendee Sign-In Sheet**

**Date: May 29, 2024**

The person completing and signing this Sign-in Sheet acknowledges that they have attend and successfully completed the required training session and understand all protection measures imposed by the LWMEP regulatory conditions of approval and mitigation measures required by the ITP issued by CDFW.

Name	Date	Company	Email
Kristi Tuemmler	5/29	PEC	<del>X</del>
Tony Castillo	5/29	PEC	<del>X</del>
Diego Rodriguez	5/29	PEC	<del>X</del>
Joe Apodaca	5/29	PEC	<del>X</del>
Cristian Pimentel	5/29	PEC	<del>X</del>
Omar Vega	5/29	PEC	<del>X</del>
Vicente Corral	5/29	PEC	<del>X</del>
Jose Luis Corval	5-29	PEC	<del>X</del>
Rodrigo Ruiz	5-29	PEC	<del>X</del>
Jonathan Starling	5-29	PEC	<del>X</del>
David A Benton	5-29	PEC	<del>X</del>
Andrew Burke	5-29	PEC	<del>X</del>
Eloy Valle	5-29	PEC	<del>X</del>
Julio Catrill	5-29	PEC	<del>X</del>

**Refinery Long Wharf Maintenance & Efficiency Project  
Education and Training Meeting  
Attendee Sign-In Sheet**

**Date: May 29, 2024**

The person completing and signing this Sign-in Sheet acknowledges that they have attend and successfully completed the required training session and understand all protection measures imposed by the LWMEP regulatory conditions of approval and mitigation measures required by the ITP issued by CDFW.

Name	Company	Phone	Email
Allen Deaver	PEC	α	α
Kenny Krauffero	PEC		
Joel Silver	PEC		
RUSSELL CADDEL	PEC		
Nick MacLean	PEC		
		↓	↓

**Refinery Long Wharf Maintenance & Efficiency Project  
Education and Training Meeting  
Attendee Sign-In Sheet**

**Date: May 29, 2024**

The person completing and signing this Sign-in Sheet acknowledges that they have attend and successfully completed the required training session and understand all protection measures imposed by the LWMEP regulatory conditions of approval and mitigation measures required by the ITP issued by CDFW.

Name	Date	Company	Email
Cedric Lee	5/29	PEC	X
Robert Trzaskowski	5/29	PEC	rt@powerengconstruction.com
Stephen Proctor	5/29	PEC	X
Daniel Carrillo	5/29	PEC	X
Jake Fappiano	5/29	P.E.C	JFappiano@powerengconstruction.com
Steph Boyd	5/29	PEC	X
Daniel Stocumb	5/29	PEC	
Richard Foster	5/29	PEC	
Arturo Ramirez	5/29	PEC	
Bennett Clegg	5/29	PEC	
Camila Ortiz	5/29	PEC	X
ALBERT APODACA	5/29	PEC	X

# Appendix C Marine Mammal Monitoring Daily Field Datasheets

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name:

MATTHEW BETTELHEIM

Weather/Visibility and Sea State - use Beaufort Scale on next page:

Clear blue skies, 62°F, 8-13 MPH SSW, Beaufort Scale = #2

Clear blue skies, 67°F, 11-18 MPH SSW, Beaufort Scale = #2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

START = -0.24 ft @ 10:32 AM END 3.12 ft @ 13:58 PM

MID = 2.01 ft @ 12:59 PM

General Human Activity in the Area:

NAVIGB PROMISE @ Berth #1, APOLLO VOYAGER @ Berth #3 (or #?)

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

see diagram

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4:

Berth Number: Berth #1

Pile Type - include size and material:

BASELINE SURVEY

Total Pile Count for the Day:

Equipment: Impact Vibratory

Total Minutes of Pile Driving - enter total time here<sup>1</sup>:

<sup>1</sup> Note the start and end times for each individual pile on page 7.



Date: June 19, 2008Monitor Initials: AEPage 2 of 7The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, Crests not breaking	Small twigs in constant motion, Light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray, Waves 4-6 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, Larger waves 8-13 ft high	Large branches move, Difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees, Difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll Spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted Structural damage
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Widespread damage
12	63	73	Hurricane	Air filled with foam, visibility reduced White sea, waves over 45ft high	Widespread damage, rare

1) June 2014

Page 0

Monitor Initials: (MAB)

3/7

**Daily Marine Mammal Monitoring Data Sheet - Point Orient Wharf Removal and Eelgrass Restoration Project**

Time of Observation	Observer Initials	Work Activity <sup>1</sup>	Species <sup>2</sup>	Observation Number <sup>3</sup>	Age Class <sup>4</sup>	Identifying Marks	Distance from Pile (meters) <sup>5</sup>	Direction of Travel	Bearing	Behavior <sup>6</sup>	
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
First Last											
<sup>1</sup> Activity: Indicate if observation is within the 30-minute period before pile-driving (B), during active pile-driving (D), or within the 30-minute period after pile driving (A)		<sup>2</sup> Species Abbreviations: California Sea Lion = CASL Pacific Harbor Seal = HASE Northern Elephant Seal = NOES Harbor Porpoise = HAPO	<sup>3</sup> Examples: HASE 1, HASE 2 Use these numbers for reference on page 6 diagram	<sup>4</sup> Species Age Classes: CASL = juvenile, subadult male, adult male HASE = juvenile, adult HAPO = calf, adult	<sup>5</sup> Distance: Provide an approximate distance from location of pile	<sup>6</sup> Behavior examples: Stationary at surface, swimming (slow or fast), traveling, foraging, resting, looking around. Note if mammal appears to be attentive to project activities or displays any behavior changes related to project activities, and describe the project activity. Note any human-caused disturbances such as recreational boating or helicopters.  Add a reference number if comments are provided on a separate sheet					



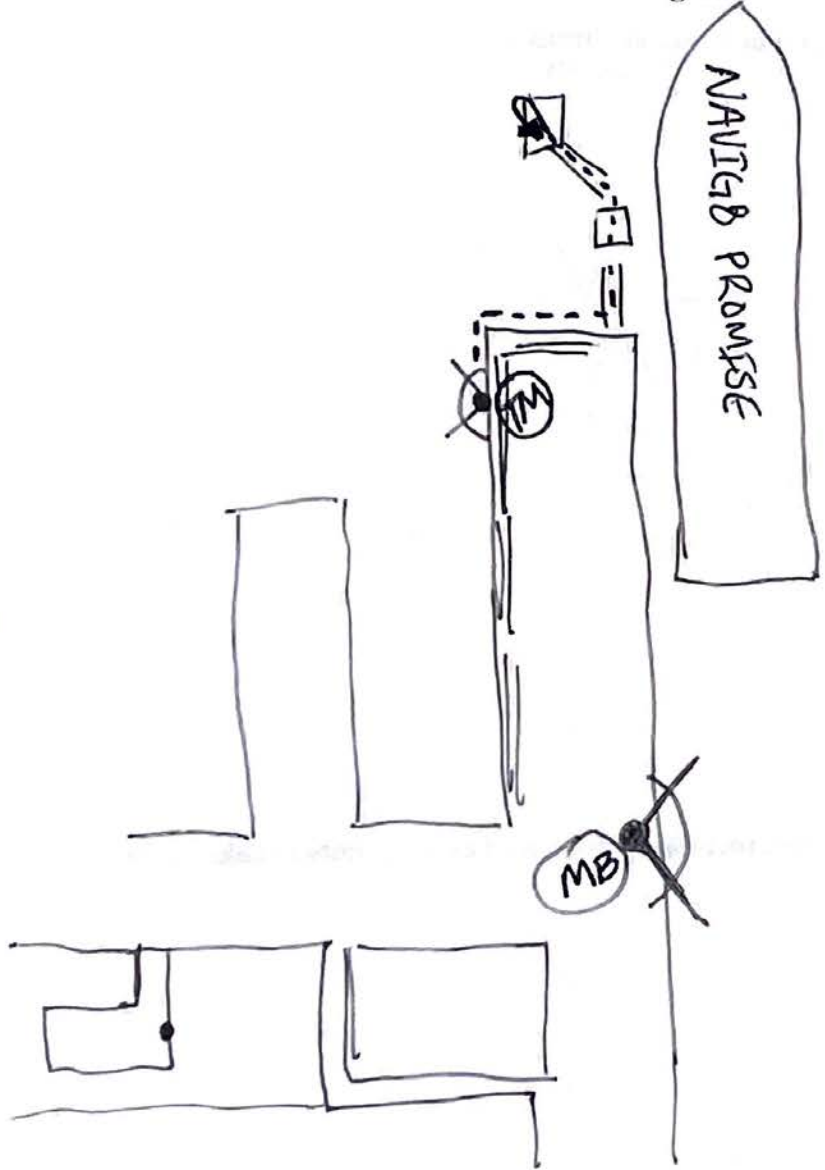
Date: June 10, 2024

Page 5 of 7

Monitor Initials: MB

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

Diagram



Biological Monitor: MATTHEW BETTELHEIM

Signature: Matthew Bettelheim

Date: June 10/2024

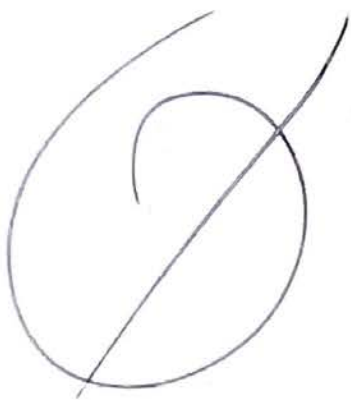
Page 6 of 7

Monitor Initials: (MB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

**1. Vibratory hammer start and stop times (include breaks):**  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)



**2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**

(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes) on that pile. Strike counts and times are included in a separate report.

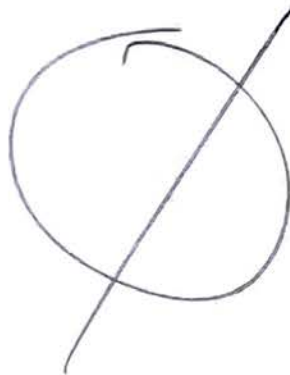
Date: June 10, 2024

Page 7 of 7

Monitor Initials: (MB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Additional Notes**





Date: 6-10-2024

Page 1 of 7

10:30 - 11:30 AM 11:30 - 12:00  
1:00 - 2:00 PM BNS

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name: TIM Milliken

Weather/Visibility and Sea State - use Beaufort Scale on next page:

clear sky - 62°F 8-13 mph Beaufort 2  
clear " 67°F 11-18 mph " 2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

Start - 0.27 ft @ 10:32 AM  
End - 3.12 ft @ 1:58 PM

General Human Activity in the Area:

~~Ship~~ moved at B1

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

B1 TM  LABORATOR NBS

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4: no

Berth Number: B1

Pile Type - include size and material:

NONE

Total Pile Count for the Day: N/A Equipment: Impact Vibratory

Total Minutes of Pile Driving - enter total time here!: N/A

<sup>1</sup> Note the start and end times for each individual pile on page 7



Date: 6-10-2027Page 2 of 7Monitor Initials: ZinThe Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Small twigs in constant motion, light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised, small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray, Waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, Larger waves 8-13 ft high	Large branches move, difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spray	Twigs break off trees, difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll Spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Structural damage
12	63	73	Hurricane	Air filled with foam, visibility reduced White sea, waves over 45ft high	Widespread damage, rare





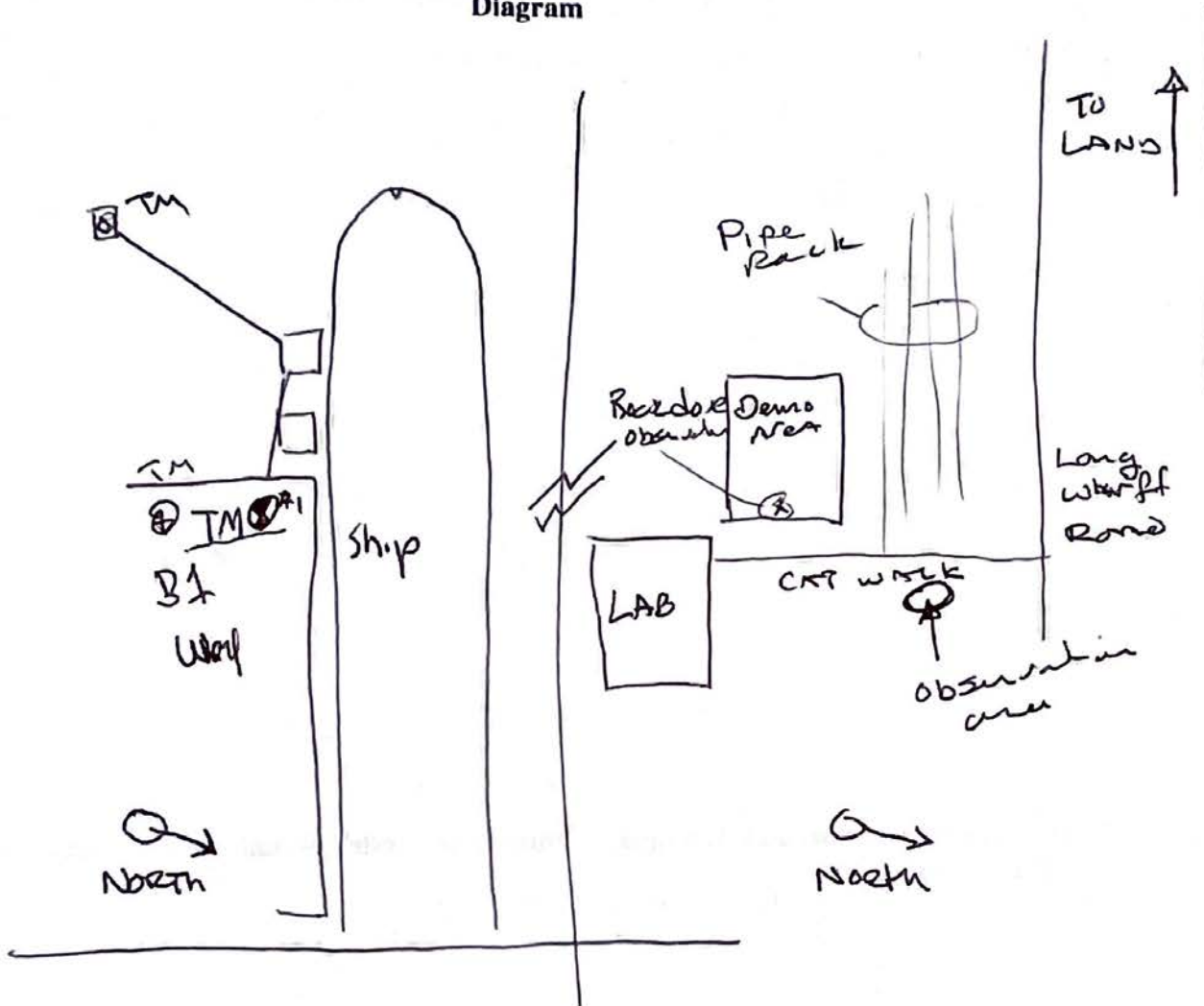
Date: 6-10-2024

Page 5 of 7

Monitor Initials: TM

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

Diagram



Biological Monitor: Tim M. Miller TM

Signature: *Tim M. Miller*

Date: 6-10-2024

Page 6 of 7

Monitor Initials: TM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

- 1. Vibratory hammer start and stop times (include breaks):**  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055, stop 1101)

N/A

- 2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**  
(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)

N/A

<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes on that pile. Strike counts and times are included in a separate report.

Date: 6-10-2024

6-10-2024

Monitor Initials: TM

Page 7 of 7

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

Additional Notes

B1 Pre-construction monitoring  
for marine mammals & nesting bird  
~~begin~~ survey.

Start	end	No
10:30	11:30	marine MAMMALS
1:00	2:00	observed

Laboratory nesting bird survey

A Rock Dove appeared to be tending a nest. This species is not protected under NAMBT. Continued observation saw the bird leave the area and not return, indicating this is not a nest.

*[Faint, illegible text visible through the paper]*

*[Handwritten signature or scribble]*

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name:

MATTHEW BETTELHEIM

Weather/Visibility and Sea State - use Beaufort Scale on next page:

clear blue skies, 75°F, 9-17MPH SSW, Beaufort Scale #2

clear blue skies, 71°F, 7-12MPH S, Beaufort Scale #2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov)):

START: 2.96ft @ 14:23PM

END: 4.67ft @ 19:25PM

General Human Activity in the Area:

KARDJANI @ Berth #2

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

see diagram

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4:

Berth Number:

Berth #1

Pile Type - include size and material:

temp piles

Total Pile Count for the Day:

2

Equipment: Impact

Vibratory

Total Minutes of Pile Driving - enter total time here<sup>1</sup>:

56 MIN

<sup>1</sup> Note the start and end times for each individual pile on page 7



Date: JUNE 17, 2024

Monitor Initials: MS

The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Small twigs in constant motion, light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps, waves 1-4ft high	Dust, leaves and loose paper raised. Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray, waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, larger waves 8-13 ft high	Large branches move, difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees, difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Structural damage
12	63	73	Hurricane	Air filled with foam, visibility reduced white sea, waves over 45ft high	Widespread damage



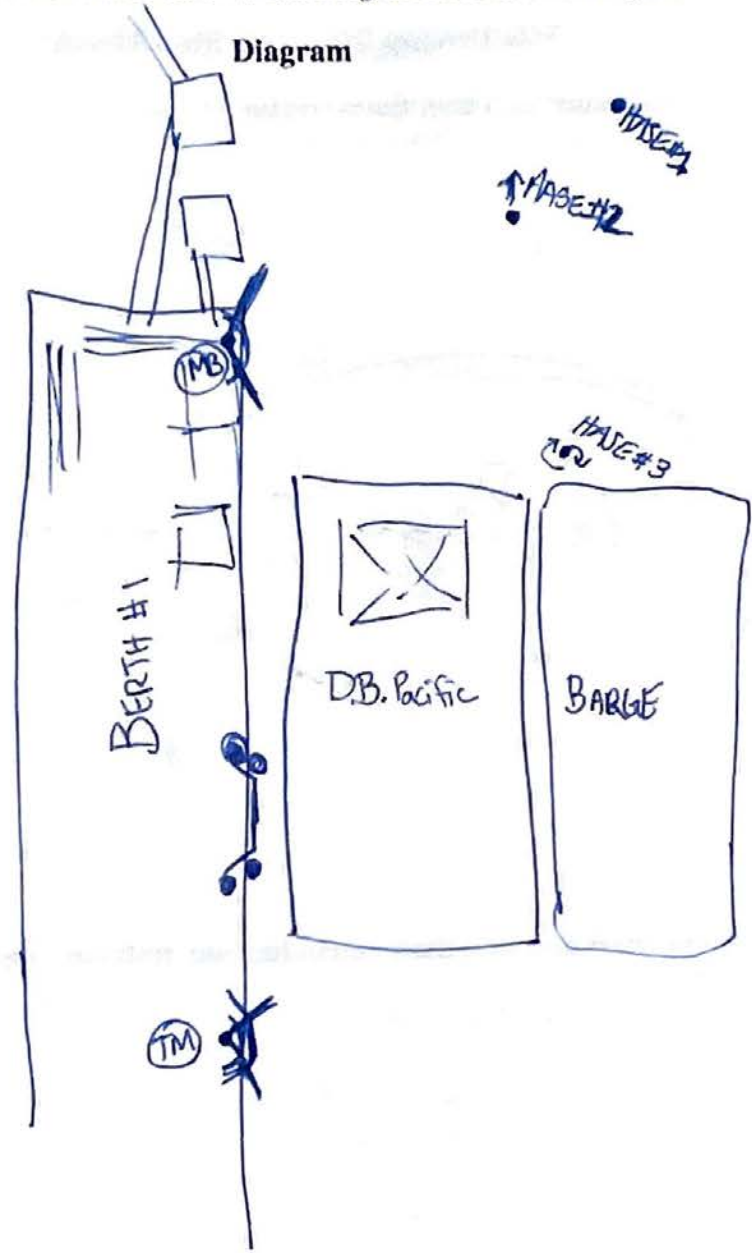


Date: JUNE 11, 2024

Page 5 of 7

Monitor Initials: (MB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**



Biological Monitor: MATTHEW BETTELHEIM

Signature: *Matthew B*

Date: JUNE 11, 2024

Page 6 of 7

Monitor Initials: MB

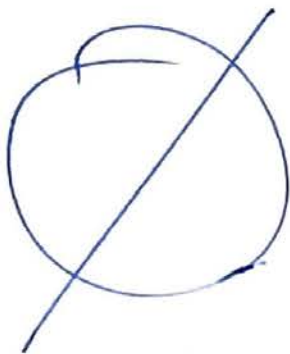
**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

- 1. Vibratory hammer start and stop times (include breaks):**  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)

See Page 7 →

- 2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**  
(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes on that pile. Strike counts and times are included in a separate report.

Date: JUNE 11, 2024

Page 7 of 7

Monitor Initials: MB

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

Additional Notes

Vibratory Hammer

<u>FILE #1</u>	<u>START</u>	<u>STOP</u>	<u>= TIME</u>
	1704	→ 1715	11 MIN
	1716	→ 1724	8 min
	1735	→ 1744	9 min

} = 28 MIN

<u>File #2</u>	<u>START</u>	<u>STOP</u>	<u>= TIME</u>
	1810	→ 1818	8 MIN
	1820	→ 1829	9 MIN
	1846	→ 1855	
		↘ 1857	11 MIN

} = 28 MIN

SECRET

CONFIDENTIAL

Item	Description	Quantity	Unit
1	...	...	...
2	...	...	...
3	...	...	...
4	...	...	...
5	...	...	...
6	...	...	...
7	...	...	...
8	...	...	...
9	...	...	...
10	...	...	...

...

SECRET

Date: 6-11-2024

Page 1 of 7

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name:

TIM Milliken

Weather/Visibility and Sea State - use Beaufort Scale on next page:

Start clear 75°F 9-17 mph + SSW, B2 #2  
End clear 71° 7-12 mph S W #2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

Start 2.96ft @ 14:23 PM  
End 4.67ft @ 19:25 PM

General Human Activity in the Area:

Over Engineering Barge 3 crew @ B1

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

TM (X) North side of work area

Are Castro Rocks visible (yes/no) If yes, fill out page A-4: \_\_\_\_\_

Berth Number: 1

Pile Type - include size and material:

36" Steel

Total Pile Count for the Day: 2 Equipment: Impact Vibratory

Total Minutes of Pile Driving - enter total time here<sup>1</sup>: 33 min 53 min

<sup>1</sup> Note the start and end times for each individual pile on page 7



Date: 6-11-2024Monitor Initials: TMPage 2 of 7The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Small twigs in constant motion, light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray, Waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, Larger waves 8-13 ft high	Large branches move, Difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks; waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spray	Twigs break off trees, Difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll Spray reduce visibility; 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Structural damage Widespread damage
12	63	73	Hurricane	Air filled with foam, visibility reduced White sea, waves over 45ft high	Widespread damage, rare





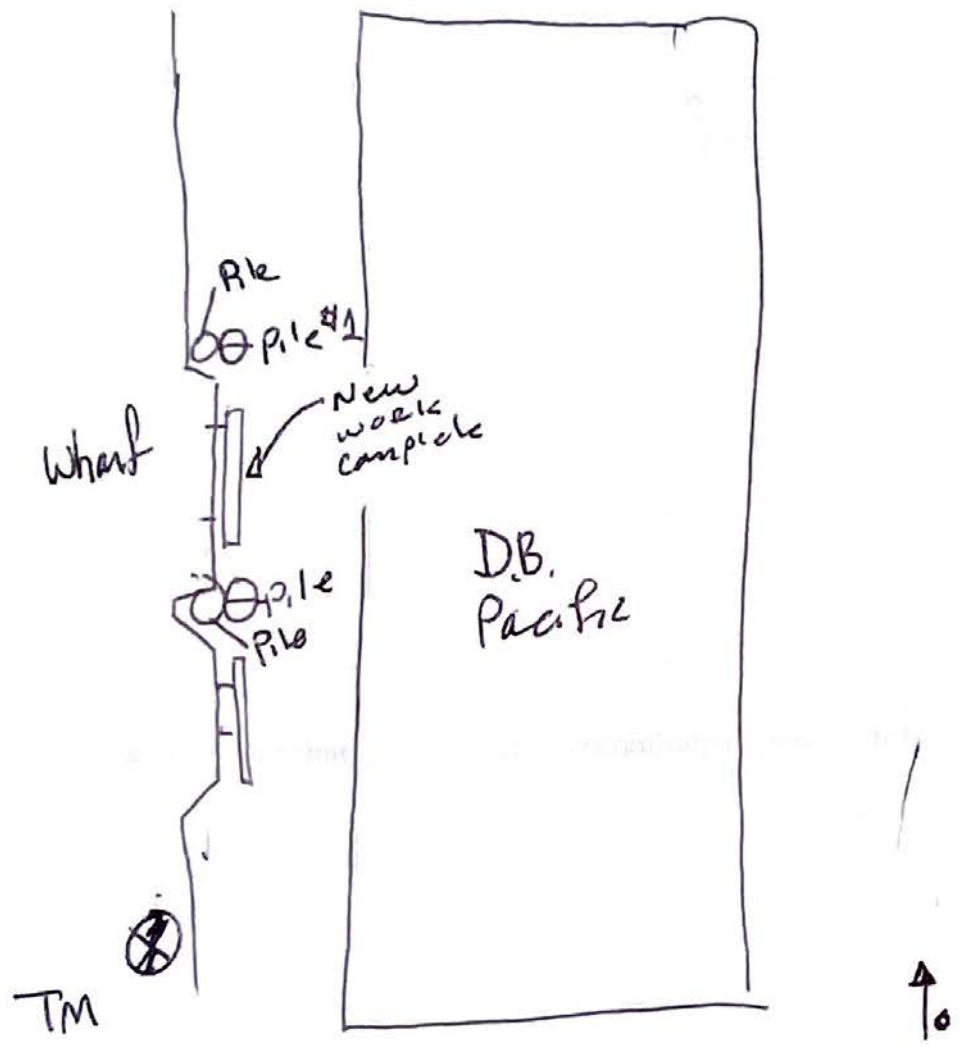
Date: 6/11/2024

Page 5 of 7

Monitor Initials: TM

### Daily Marine Mammal Monitoring Data Sheet Point Orient Wharf Removal and Eelgrass Restoration Project

#### Diagram



Biological Monitor: TM Milkman

Signature: [Handwritten Signature]

HASE 1  
342

Monitor Initials: JM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

**1. Vibratory hammer start and stop times (include breaks):**  
 (example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)

Pile	Start	Stop		
1	5:04	<del>5:15</del> - 11	5:23	= 19
	<del>5:27</del>	<del>5:27</del> - 5:36 = 13 min		
	5:36	5:44		<u>8</u>
				<u>27</u>
2	6:10	6:18	8	
	6:20	6:29	9	
	6:47	6:55	8	<u>26</u>
	6:56	6:57	1	

**2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**

(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for ≥30 minutes) on that pile. Strike counts and times are included in a separate report

Date: 6-11-2024

Page 7 of 7

Monitor Initials: TM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Warf Removal and Eelgrass Restoration Project**

**Additional Notes**



CONFIDENTIAL - SECURITY INFORMATION

Page 2 of 2

1. [Illegible]

2. [Illegible]

[Illegible]

[Illegible]

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name: MATTHEW BETELHEIM

Weather/Visibility and Sea State - use Beaufort Scale on next page:

START clear blue skies, 55°F 7-13 MPH wind S, Beaufort Scale #3

STOP light cloud on horizon, 60°F, 17-28 MPH wind SSW, Beaufort Scale #4

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

START: 3.90ft @ 6:30 AM

STOP: 5.20ft @ 6:44 PM

General Human Activity in the Area:

KARDEANE @ Berth #2

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

see figure

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4:

Berth Number: Berth #1

Pile Type - include size and material:

temp piles

Total Pile Count for the Day: 7 Equipment: Impact Vibratory

Total Minutes of Pile Driving - enter total time here<sup>1</sup>: 149 MIN

<sup>1</sup> Note the start and end times for each individual pile on page 7.



Date: JUNE 12, 2024

Monitor Initials: (WAO)

The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face Small twigs in constant motion,
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, como spray, Waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, Largest waves 6-13 ft high	Large branches move, Difficult to use umbrellas
7	28-33	32-38	V. strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees, Difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll Spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V. high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted Structural damage
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Widespread damage
12	63	73	Hurricane	Air filled with foam, visibility reduced White sea, waves over 45ft high	Widespread damage, rare

Monitor Initials: MB

Daily Marine Mammal Monitoring Data Sheet - Point Orient Wharf Removal and Eelgrass Restoration Project

Time of Observation	Observer Initials	Work Activity <sup>1</sup>	Species <sup>2</sup>	Observation Number <sup>3</sup>	Age Class <sup>4</sup>	Identifying Marks	Distance from Pile (meters) <sup>5</sup>	Direction of Travel	Bearing	Behavior <sup>6</sup>
First: 0740 Last: 0740	MB	B	HASE	1	Ad	B	120°	N	4°	Surfaced, swam at surface for 10 sec, then dove
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
First: Last:										
Footnote:	<sup>1</sup> Activity: Indicate if observation is: within the 30-minute period before pile-driving (B); during active pile-driving (D); or within the 30-minute period after pile driving (A)									
Footnote:	<sup>2</sup> Species Abbreviations: California Sea Lion = CASL Pacific Harbor Seal = HASE Northern Elephant Seal = NOES Harbor Porpoise = HAPO									
Footnote:	<sup>3</sup> Examples: HASE 1, HASE 2. Use these numbers for reference on page 6 diagram.									
Footnote:	<sup>4</sup> Species Age Classes: CASL = juvenile, subadult male, adult male HASE = juvenile, adult HAPO = calf, adult									
Footnote:	<sup>5</sup> Distance: Provide an approximate distance from location of pile.									
Footnote:	<sup>6</sup> Behavior examples: Stationary at surface, swimming (slow or fast), transiting, foraging, resting, looking around. Note if mammal appears to be attentive to project activities, or displays any behavior changes related to project activities, and describe the project activity. Note any human-caused disturbances such as recreational boating or helicopters.  Add a reference number if comments are provided on a separate sheet.									

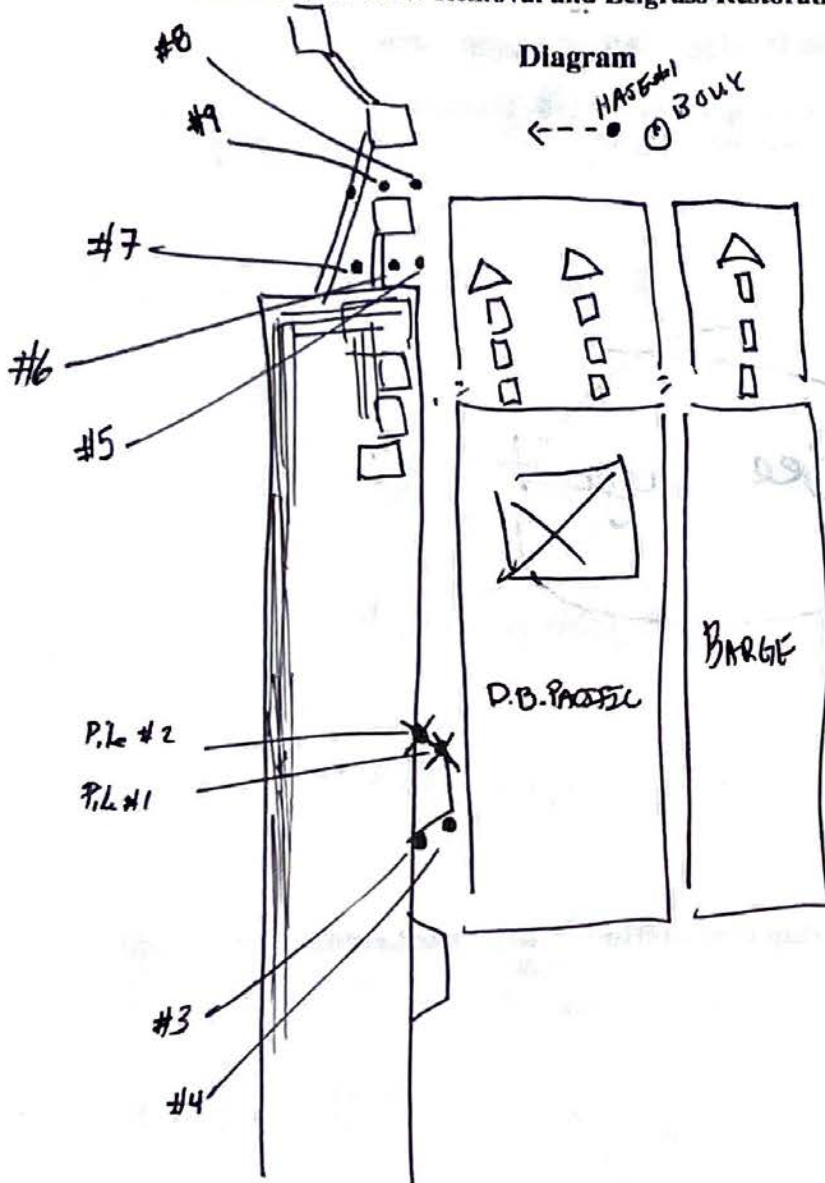


Date: JUNE 12, 2024

Page 5 of 7

Monitor Initials: (MB)

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project



Biological Monitor: MATTHEW BETTELHEIM

Signature: [Handwritten Signature]

Date: JUNE 12, 2024

Page 6 of 7

Monitor Initials: (MB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

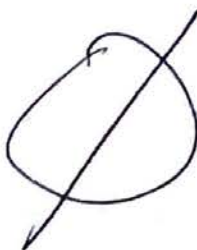
**Pile Driving Start and Stop Times<sup>2</sup>**

- 1. Vibratory hammer start and stop times (include breaks):**  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)

See Page 7

- 2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**

(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes) on that pile. Strike counts and times are included in a separate report.

Date: JUNE 12, 2024

Page 7 of 7

Monitor Initials: MB

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

PILE #	START	STOP	Additional Notes TIME
PILE #3	836	851	15 MEN
PILE #4	906	925	19 MEN
PILE #5	1355	1417	22 MEN
PILE #6	1432	1450	18 MEN
PILE #7	1517	1521	4 MEN
	1528	1538	10 MEN
			14 MEN
PILE #8	1707	1733	36 MEN
PILE #9	1749	1814	25 MEN
PILE #10	Ø		= 149 MEN

*[Faint, illegible header text]*

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Date: 6-12-2024

Page 1 of 7

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name: Tim Miliken

Weather/Visibility and Sea State - use Beaufort Scale on next page:

Start clear 55°F 7-13 mph S, Beaufort #3

Stop slight haze 68°F 17-28 mph SSW, " #4

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

Start 390 ft @ 6:30 AM

Stop 570 ft @ 6:44 PM

General Human Activity in the Area:

Power Engineer Derek Bange Pacific 3 Crew @ B1

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

TM1 Tim Miliken ⊗, TM2 Tim Miliken

Are Castro Rocks visible (yes  no) If yes, fill out page A-4: \_\_\_\_\_

Berth Number: B1

Pile Type - include size and material:

36" steel tube

Total Pile Count for the Day: 7 Equipment: Impact  Vibratory

Total Minutes of Pile Driving - enter total time here!: 150

<sup>1</sup> Note the start and end times for each individual pile on page 7.



Date: 6-12-2027

Monitor Initials: TM

Page 2 of 7

**Life Rafted scales**

No.	Knots	Mph	Description	Effects at sea	Effects on Land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Small twigs in constant motion, light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised. Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray. Waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere. Larger waves 8-13 ft high	Large branches move, difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees, difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Structural damage Widespread damage
12	63	73	Hurricane	Air filled with foam, visibility reduced White sea waves over 45ft high	Widespread damage, rare





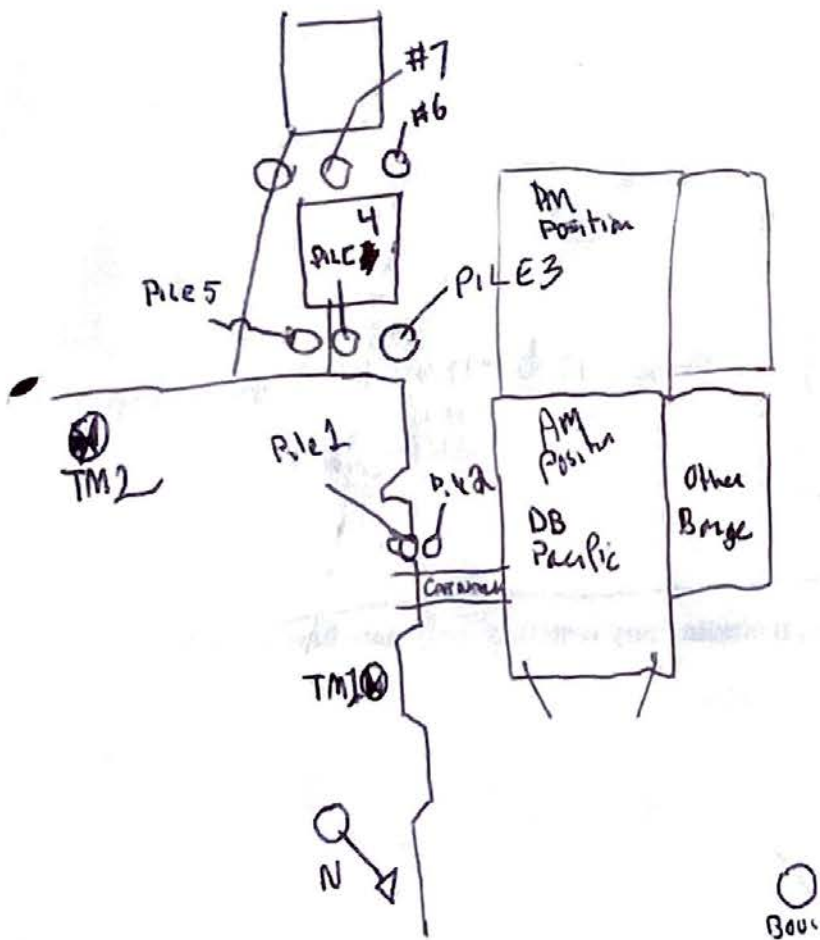
Date: 6-12-2024

Page 5/7 of

Monitor Initials: TM

### Daily Marine Mammal Monitoring Data Sheet Point Orient Wharf Removal and Eelgrass Restoration Project

#### Diagram



Biological Monitor: Tim Milliken

Signature: [Handwritten Signature]

Date: 6-12-2024

Page 6 of 7

Monitor Initials: TM

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

Pile Driving Start and Stop Times<sup>2</sup>

1. Vibratory hammer start and stop times (include breaks):  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)

1450 ... = 1500  
+ 20 = 1520

Pile	Start	Stop	Total	
1	836	850	14	
2	906	925	19	33
3	1355	1417	22	55
4	1432	1450	18	73
5	1518	1521	+3	76
	1628	1548	+20	96
6	17:06	17:55	+29	125
7	17:49	18:14	+25	150
	1844	stop monitor		

Stage 17:35-17:44 min 50 mw err  
1835  
1925 1950  
2000 ↓

2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):

(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for ≥30 minutes on that pile. Strike counts and times are included in a separate report.

Date: 6-12-2024

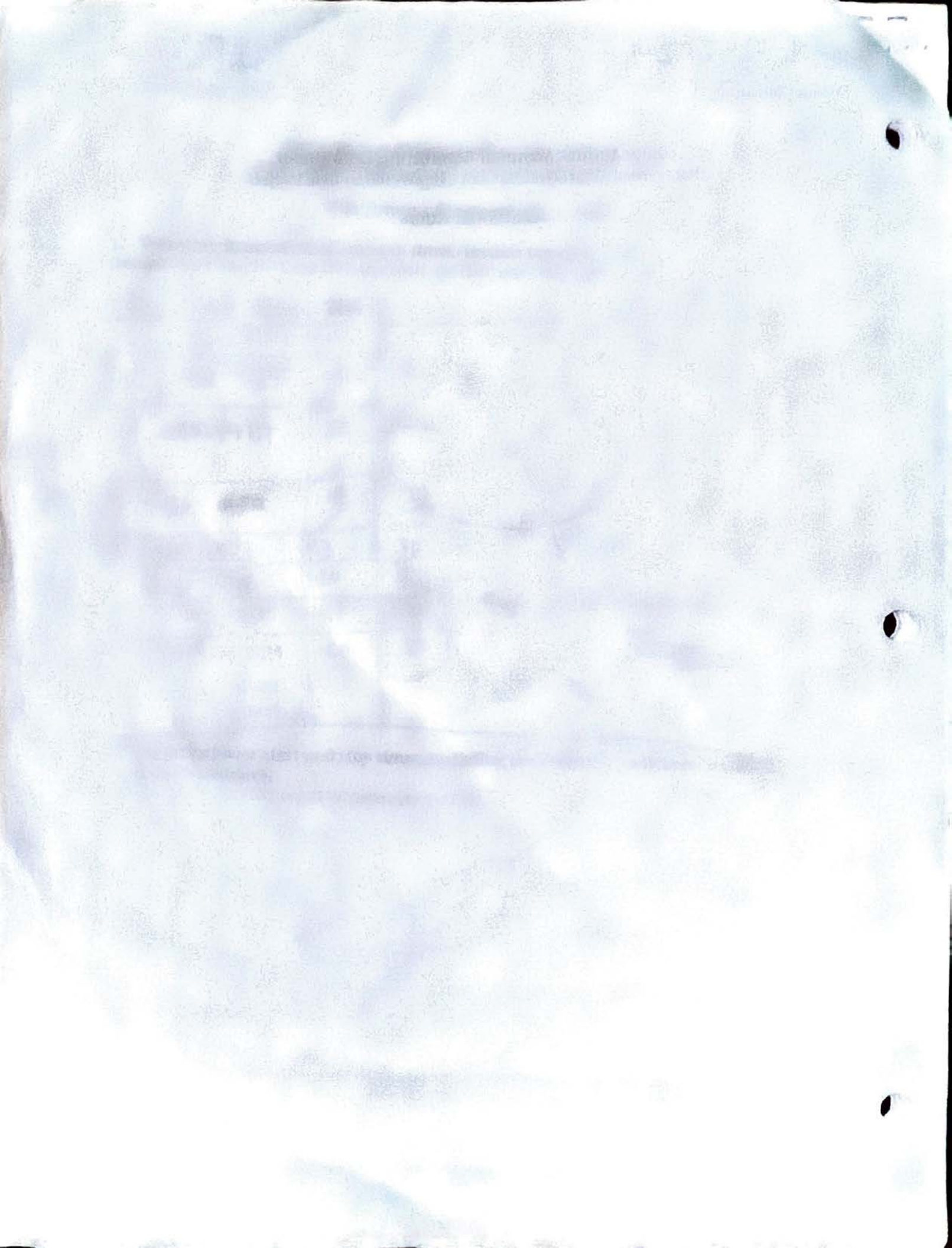
Page 7 of 7

Monitor Initials: TM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Warf Removal and Eelgrass Restoration Project**

**Additional Notes**





Thursday

Date: June 13, 2024

Page 1 of 7

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name:

MATTHEW BERTHEIM

Weather/Visibility and Sea State - use Beaufort Scale on next page:

START: mostly foggy/cloudy, 55°F, 13-20 MPH wind SSW, Beaufort Scale #3

STOP: mostly foggy/cloudy, 58°F, 12-14 MPH wind SSW, Beaufort Scale #2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](https://tidesandcurrents.noaa.gov):

START: 2.64 ft @ 8:30 AM

STOP: 1.07 ft @ 10:38 AM

General Human Activity in the Area:

Navis Gratitude @ Berth #2

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

See figure

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4:  No

Berth Number:

Berth #1

Pile Type - include size and material:

template pile

Total Pile Count for the Day:

1

Equipment: Impact  Vibratory

Total Minutes of Pile Driving - enter total time here!:

25

<sup>1</sup> Note the start and end times for each individual pile on page 7



Date: June 13, 2024

Monitor Initials: (MAD)

The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-6	4-7	Light breeze	Small wavelets	Leaves rustle, wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets, crests not breaking	Small twigs in constant motion, light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps, waves 1-4ft high	Dust, leaves and loose paper raised. Small branches move
5	17-21	19-24	Fresh wind	Many whitecaps, some spray, waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere, larger waves 8-13 ft high	Large branches move, difficult to use umbrellas
7	28-33	32-38	V strong wind	White foam from waves is blown in streaks, waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees, difficult to walk
9	41-47	47-54	Severe gale	High waves, sea begins to roll, spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves, 30-45 ft high	Structural damage
12	63	73	Hurricane	Air filled with foam, visibility reduced	Widespread damage
				White sea, waves over 45ft high	Widespread damage, rare

D June 13, 2024  
 Monitor Initials: (MS)

Page 0  
 3 of 7

**Daily Marine Mammal Monitoring Data Sheet - Point Orient Wharf Removal and Eelgrass Restoration Project**

Time of Observation	Observer Initials	Work Activity <sup>1</sup>	Species <sup>2</sup>	Observation Number <sup>3</sup>	Age Class <sup>4</sup>	Identifying Marks	Distance from Pile (meters) <sup>5</sup>	Direction of Travel	Bearing	Behavior <sup>6</sup>
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
First										
Last										
Footnote 1:	<sup>1</sup> Activity: Indicate if observation is: within the 30-minute period before pile-driving (B); during active pile-driving (D); or within the 30-minute period after pile driving (A)									
Footnote 2:	<sup>2</sup> Species Abbreviations: California Sea Lion = CASL Pacific Harbor Seal = HASE Northern Elephant Seal = NOES Harbor Porpoise = HAPO									
Footnote 3:	<sup>3</sup> Examples: HASE 1. HASE 2. Use these numbers for reference on page 6 diagram									
Footnote 4:	<sup>4</sup> Species Age Classes: CASL = juvenile, subadult male, adult male HASE = juvenile, adult HAPO = calf, adult									
Footnote 5:	<sup>5</sup> Distance: Provide an approximate distance from location of pile.									
Footnote 6:	<sup>6</sup> Behavior examples: Stationary at surface, swimming (slow or fast), transiting, foraging, resting, looking around. Note if mammal appears to be attentive to project activities, or displays any behavior changes related to project activities, and describe the project activity. Note any human-caused disturbances such as recreational boating or helicopters. Add a reference number if comments are provided on a separate sheet.									



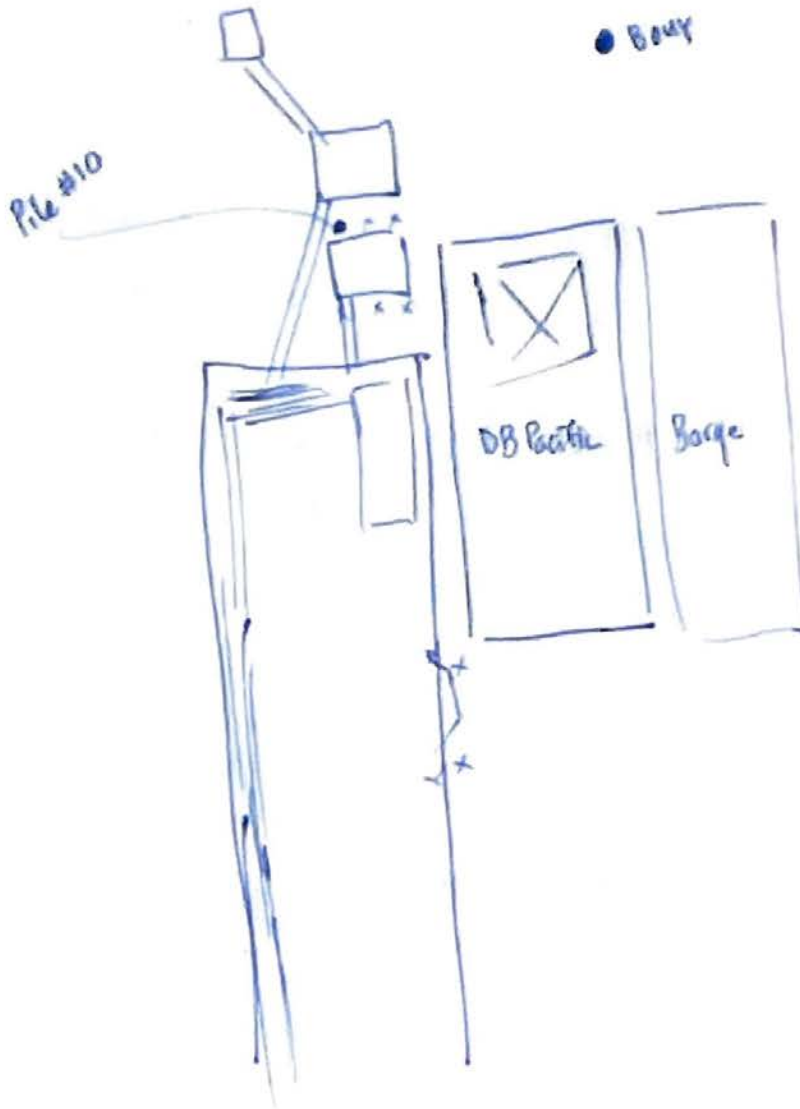
Date: June 13, 2024

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Monitor Initials: MB

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Diagram**



Biological Monitor: MATHEW BEITELHEIM

Signature: [Handwritten Signature]

Date: June 13, 2024

Page 6 of 7

Monitor Initials: (HAB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

**1. Vibratory hammer start and stop times (include breaks):**

(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055, stop 1101)

See Next Page →

**2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**

(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)

<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes on that pile. Strike counts and times are included in a separate report.

Monitor Initials: (MJB)

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Additional Notes**

PILE # 9

<u>START</u>	<u>STOP</u>	<u>TIME</u>
919	→ 919	(less than 1 MIN <sup>*</sup> Total)
920	→ 920	= 1 MIN

PILE # 10

934	→ 957	23 MIN
958	→ 958	→ (less than 2 MIN)
1001	→ 1001	→ <u>= 24 MIN</u>

\* temporarily relocating/shifting a pile that was already removed

1. 1000 (1000) PIP - 100  
2. 1000 (1000) PIP - 100

1000 (1000) PIP - 100  
1000 (1000) PIP - 100

1000 (1000) PIP - 100  
1000 (1000) PIP - 100

Date: 6-13-2014

Page 1 of 7

Daily Marine Mammal Monitoring Summary Log  
Point Orient Wharf Removal and Eelgrass Restoration Project

Monitor Name: Tim Milken

Weather/Visibility and Sea State - use Beaufort Scale on next page:

Start: Foggy/overcast, 55°F, 13-20 mph SSW, Beaufort #3  
End: Overcast, 58°F, 12-19 mph SSW, Beaufort #2

Tidal Level at Start/End of Work - use Tides app or refer to Richmond Harbor at [tidesandcurrents.noaa.gov](http://tidesandcurrents.noaa.gov):

Start 2.64ft @ 8:30 AM  
end 1.07ft @ 10:38 AM

General Human Activity in the Area:

Piper Eng. using DB Pacific and Crew working on B1

Monitoring Location(s) - show on diagram and take panoramic photo of field of view:

TM1

Are Castro Rocks visible (yes/no)? If yes, fill out page A-4: \_\_\_\_\_

Berth Number: B1

Pile Type - include size and material:

36" Steel tapered Pile

Total Pile Count for the Day: 1 Equipment: Impact Vibratory

Total Minutes of Pile Driving - enter total time here!: 25.5

<sup>1</sup> Note the start and end times for each individual pile on page 7



Date: 6-13-2024

Monitor Initials: TM

The Beaufort scale

No.	Knots	Mph	Description	Effects at sea	Effects on land
0	0	0	Calm	Sea like a mirror	Smoke rises vertically
1	1-3	1-3	Light air	Ripples but no foam crests	Smoke drifts in wind
2	4-5	4-7	Light breeze	Small wavelets	Leaves rustle; wind felt on face
3	7-10	8-12	Gentle breeze	Large wavelets; Crests not breaking	Small twigs in constant motion; Light flags extended
4	11-16	13-18	Moderate wind	Numerous whitecaps Waves 1-4ft high	Dust, leaves and loose paper raised. Small branches move.
5	17-21	19-24	Fresh wind	Many whitecaps, some spray; Waves 4-8 ft high	Small trees sway
6	22-27	25-31	Strong wind	Whitecaps everywhere; Larger waves 8-13 ft high	Large branches move; Difficult to use umbrellas
7	28-33	32-38	V. strong wind	White foam from waves is blown in streaks; waves 13-20ft high	Whole trees in motion
8	34-40	39-46	Gale	Edges of wave crests break into spindrift	Twigs break off trees; Difficult to walk
9	41-47	47-54	Severe gale	High waves; sea begins to roll Spray reduce visibility, 20ft waves	Chimney pots and slates removed
10	48-55	55-63	Storm	V. high waves 20-30 ft, blowing foam gives sea white appearance	Trees uprooted
11	56-63	64-72	Severe storm	Exceptionally high waves; 30-45 ft high	Structural damage Widespread damage
12	63	73	Hurricane	Air filled with foam; visibility reduced White sea; waves over 45ft high	Widespread damage; rare

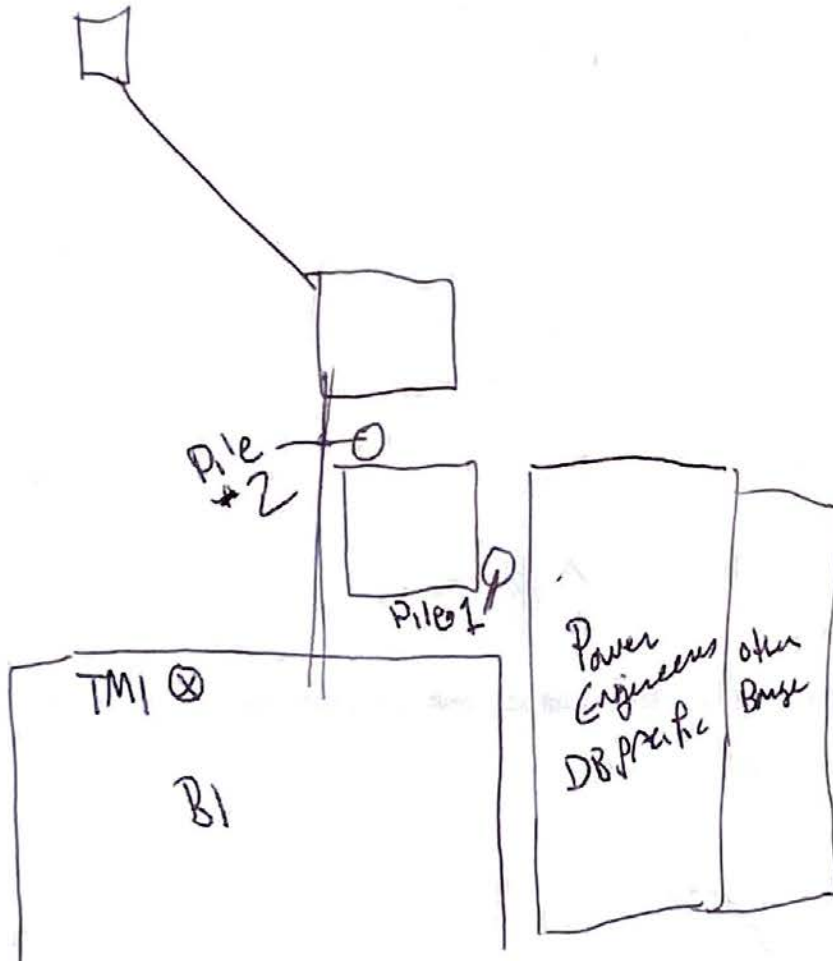




Monitor Initials: TM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Diagram**



Biological Monitor: T.M. Milken

Signature: T.M. Milken

Date: 6-13-2014

Page 6 of 7

Monitor Initials: ZM

**Daily Marine Mammal Monitoring Data Sheet**  
**Point Orient Wharf Removal and Eelgrass Restoration Project**

**Pile Driving Start and Stop Times<sup>2</sup>**

- 1. Vibratory hammer start and stop times (include breaks):**  
(example: Pile 1: start 1030, stop 1035; start 1041, stop 1051; start 1055; stop 1101)

See page 7 & 7

- 2. Impact hammer start and stop times, including any restrikes (only note breaks of 30 minutes or more):**  
(example: Pile 1: start 1030, stop 1130; restrike pile 1: 1355)



<sup>2</sup> For vibratory pile driving, note each time the hammer starts and stops. For impact pile driving, note the start and end time for each pile, unless hammering ceases for  $\geq 30$  minutes) on that pile. Strike counts and times are included in a separate report.

Date: 6-13-2024

Page 7 of 7

Monitor Initials: T.M

Daily Marine Mammal Monitoring Data Sheet  
Point Orient Wharf Removal and Eelgrass Restoration Project

Additional Notes

Pile	Start	Stop	Time	Notes
1	9:19	9:19	:30	Shipped pile that was already removed
	9:20	9:20	:30	

Pile	9:34 - 9:58	24:00 min
2	10:01 - 10:01	:30

25.5 min

8 ÷ 5
2.6

