

# Sand Island Pile Dike Repairs

IHA request to increase Level B Take Humpback Whales

*Megaptera novaeangliae*

# Introduction

Sightings of Humpback whales (*Megaptera novaeangliae*) have increased in the work area from previous years. As the project works westward the Level B take zone is located at the Mouth of the Columbia River. The project has had 2 Level B takes of this species in 10 days of pile driving and USACE is concerned that the Level B take limit will be reached prior to the end of the IWW window. USACE requests an increase in the allowable Level B take of the species to complete the project .

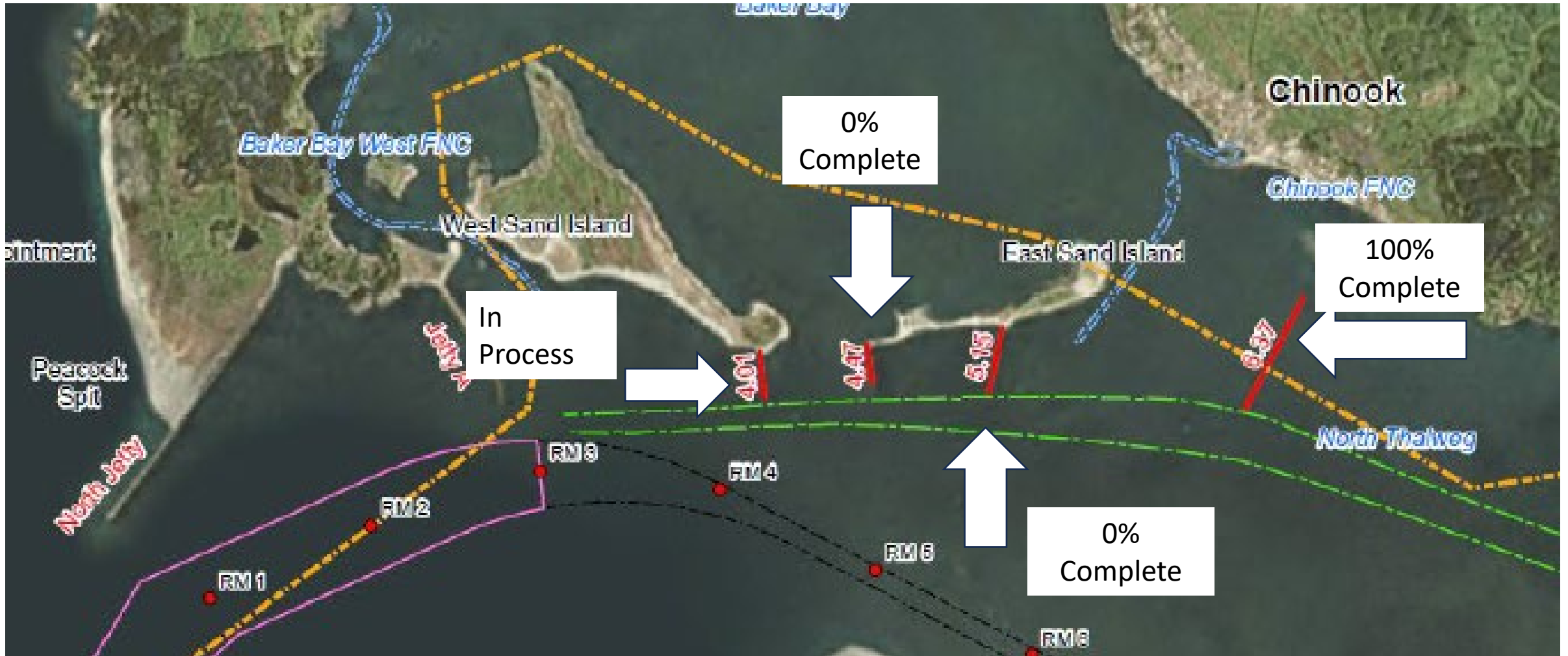
Species utilization of the project area:

Humpback whale feeding groups have begun utilizing the MCR as foraging ground, arriving in the lower Columbia estuary as early as mid-June, and have been observed as late as mid-November with a peak of abundance coinciding with the peak abundance of forage fish in mid-summer. Humpback whale were observed in the immediate vicinity of West and East Sand Islands in late summer and fall of 2015 and 2016. They were also observed in the area in 2017 and 2019, but their presence was not documented there in 2018. Most recently they were again seen earlier in the season than ever, at the beginning of April in 2020 . Based on this information, USACE deduced it was “possible that humpback whales may pass through and may forage intermittently in the immediate project vicinity.”

During similar work in the area (Sand Island Test Piles ) in 2020 observers noted 5 sighting in 15 days with 1 level A Take. In 2023 Sand Island Pile Dikes detected 0 Humpback whales in 34 days of pile driving. 2020 pile driving was in the area where work is currently underway. 2023 work was all at RM 6.3 at RM 6.37. Therefore, USACE believes that 2020 sightings are more typical. In contrast, Marine Mammal Observers utilized by the Contractor have sighted the species 09 times in 14 Days of observation with 2 Level B takes this year. This represents a marked increase from the data utilized to estimate takes for the IHA application.

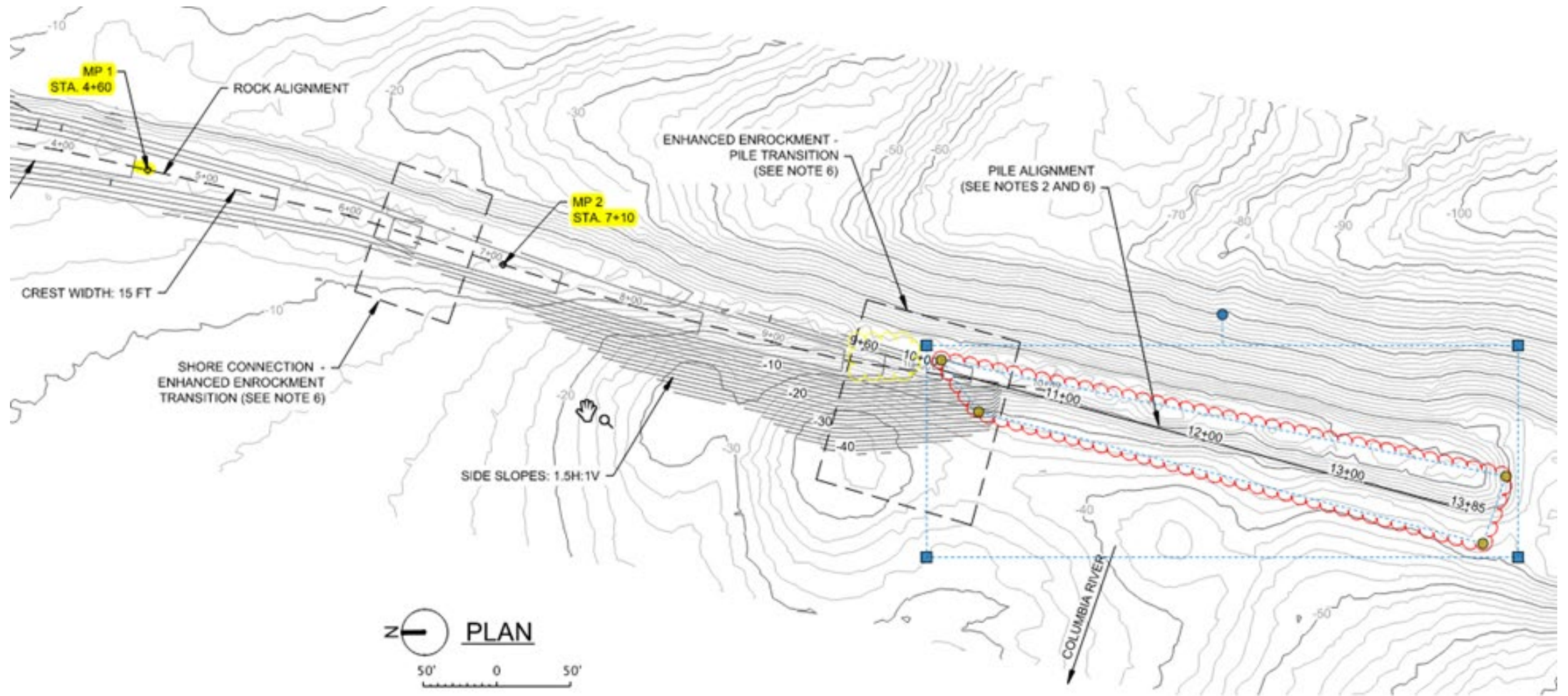
The IHA application stated that pile driving would be performed with vibratory hammers realizing that this method would lead to increase Level B takes because doing so would minimize Level A takes. USACE believes that avoiding the potential of permanent injury to protected species is preferable and therefore requests an increase in the allowable Level B Takes.

# Sand Island Pile Dike Work Area



# Pile Dike 4.01 Ongoing Work

Areas in Yellow Complete. Areas in Red not Complete



# Project Status

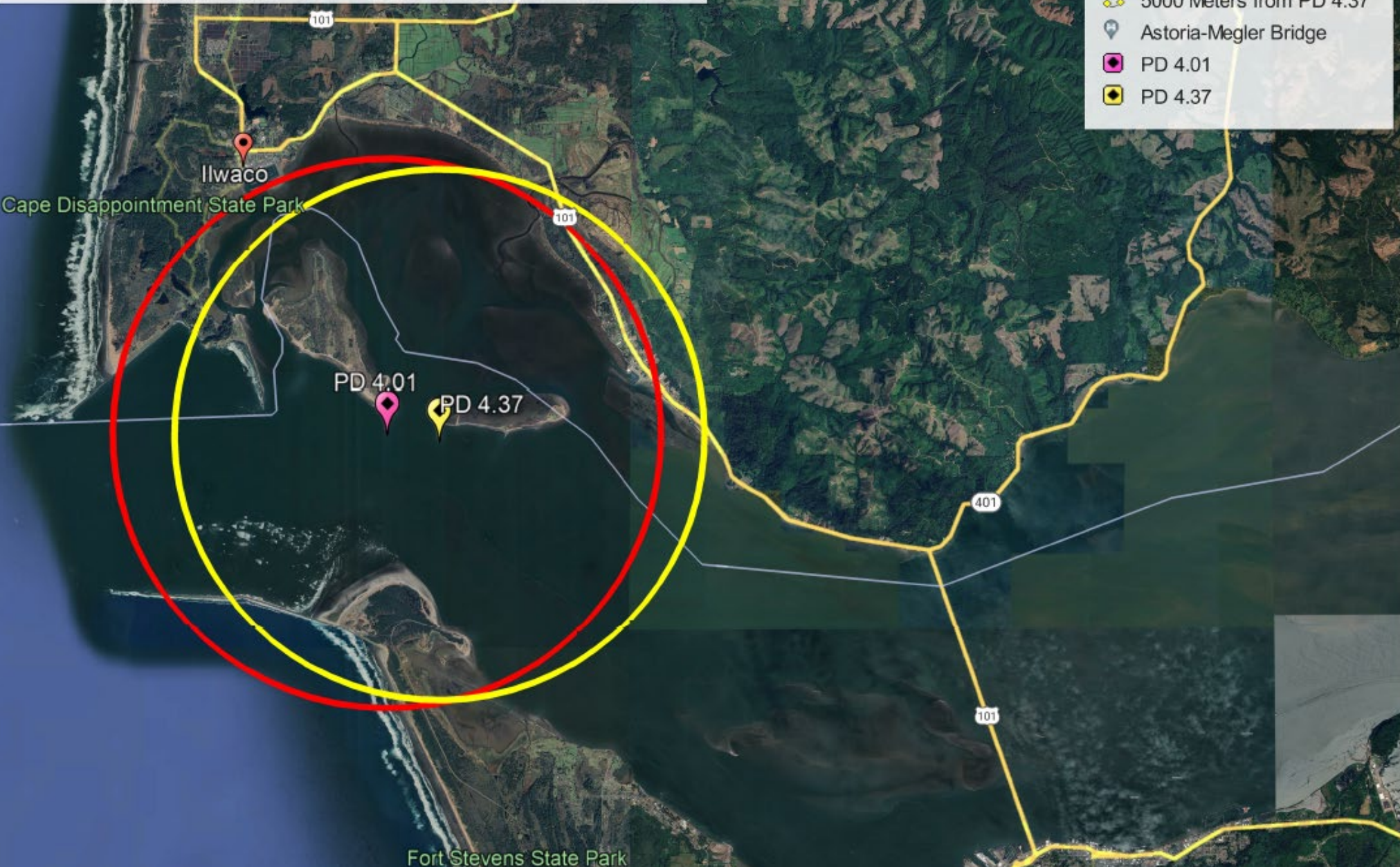
- Piles driven last year: 210- All of PD 6.37
- Piles Driven this YTD 33 as of 8/15/2024 all on PD 4.01
- Scheduled to be completed This In Water Work Window 101 on PD 4.01 and start on 4.37
- Piles Remaining in total:
- In Water Work Window August 1-November 30

# Level B Take Zone Vibratory Pile Installation

Showing proximity of Level B Take Zone to Mouth of the Columbia River

**Legend**

- 5000 Meters from PD 4.01
- 5000 Meters from PD 4.37
- Astoria-Megler Bridge
- PD 4.01
- PD 4.37



The Mouth of the Columbia River experiences heavy seas during certain tide and wind conditions. Deploying small craft to observe at the western boundary of the Level B Take zone for 24" Steel Pipe Vibratory installation is not always practicable.

# Map of Humpback Whale Sightings 7-AUG-2024



1. There was one sighting on 8-7-24, which was spotted during pile driving activities but the hammer was turned off and being hoisted by the crane. Therefore a take was not permitted because the hammer was not in active use.
2. The whale was approximately 4,023 meters away from pile driving activities.
3. PSO called an all stop to ensure AAC would not turn the hammer on once ready.
4. Once whale was confirmed, AAC continued pile installation to reach a safe embedment and then suspended work activities for the rest of the day.
5. The blue circle represents the 4,023 meter distances the whale was from the barge.
6. The yellow circle represents the approximate location of the whale.

# Humpback Whale Sightings 12-AUG-2024



1. There five sightings on 8-12-24, none were Level B takes as we were conducting maintenance at the times of sightings.
2. Whale were approximately 1700, 650, 2500, 1500, 400 meters away from the barge.
3. PSO's spotted whales but AAC was not installing pile so an all stop was not needed.
4. Blue circle represents the distances whales were from the barge.
5. Yellow circle represents the approximate location of the whales.



# Humpback Whale Sightings 13-AUG-2024



1. There two sightings on 8-13-24, the first of which was our first Level B takes of the six allowed.
2. Whale was approximately 450 meters away from pile driving activities.
3. PSO called an all stop.
4. Once whale was confirmed, AAC continued pile installation to reach a safe embedment and then suspended work activities for the rest of the day.
5. Blue circle represents the 450 and 1200 meter distances whales were from the barge.
6. Yellow circle represents the approximate location of the whales.
7. The second whale spotted was not spotted during pile installation activities. AAC had already suspended work for the day.

# Humpback Whale Sightings 14-AUG-2024



1. The single sighting on 8-14-24 was the second Level B takes of the six allowed.
2. Whale was approximately 500 meters away from pile driving activities.
3. PSO called an all stop.
4. Once whale was confirmed, AAC removed the pile and suspended work activities for the rest of the day.
5. Blue circle represents the 500 meter distance whale was from barge.
6. Yellow circle represents the approximate location of the whale.

# Observation Times and Data

## Marine Mammal Observation Times 2024

Date	MMM Start Time	MMM End Time
8/1/2024	10:20	16:45
8/2/2024	10:15	17:15
8/3/2024	9:00	14:59
8/4/2024	N/A	N/A
8/5/2024	N/A	N/A
8/6/2024	7:39	17:07
8/7/2024	7:48	17:01
8/8/2024	N/A	N/A
8/9/2024	8:36	15:48
8/10/2024	N/A	N/A
8/11/2024	N/A	N/A
8/12/2024	10:11	14:56
8/13/2024	7:29	14:45
8/14/2024	7:39	14:46

## Humpback Whale Sightings and Takes 2024

Date	Observer	Time	Bearing	Distance to Pile Driving	Behavior	Weather	Beaufort Scale	Construction Activity	Take Level	Takes	High Tide
7-Aug	MP	15:32	S	4023	TRAVEL	CLEAR	1	IMPACT	N/A	0	15:57
12-Aug	MP	14:02	SW	1700	TRAVEL	CLOUDY	2	NONE	N/A	0	18:27
12-Aug	MP	14:26	SW	650	FEEDING	CLOUDY	2	NONE	N/A	0	18:27
12-Aug	MP	15:05	S	2500	TRAVEL	CLOUDY	2	NONE	N/A	0	18:27
12-Aug	MP	15:40	SSE	1500	FEEDING	CLOUDY	2	NONE	N/A	0	18:27
12-Aug	MP	16:14	S	400	TRAVEL	CLOUDY	2	NONE	N/A	0	18:27
13-Aug	MP	13:40	SW	450	TRAVEL	CLEAR	2	NONE	B	1	19:20
13-Aug	MP	14:11	S	1200	FEEDING	CLEAR	2	VIBE	N/A	0	19:20
14-Aug	MP	14:46	SW	500	TRAVEL	CLOUDY	2	NONE	B	1	20:26

# Take Increase Request

USACE requests Level B Take increase based on new data obtained on the presence and utilization of humpback whales in the action area. Currently there are 103 days remaining in the In Water Work Window (IWW). USACE estimates contractor will work 6 days a week driving pile therefore it is assumed that there are 89 pile driving days remaining this IWW, and 37 of those are within the August/ September time frame when the species is historically more active in the project area. It is assumed that sightings will continue at the same level through August and September, then diminish as the season continues through November 30th.

Based on the current frequency of sightings (0.643 sightings per observation day) USACE estimates that as many as 24 humpback may enter the work area in this time frame. ( $37 \text{ workdays} * 0.643 \text{ sightings per day} = 23.786$  sightings rounded to 24 animals.) Due to the large Level B Take area for this species from vibratory pile driving USACE assumes any sighting could be a Level B Take.

USACE assumes that sightings will decrease by half in October as prey species availability and therefore requests 9 Humpback whale Takes for the month of October ( $27 \text{ workdays} * (0.643 \text{ sightings per day} / 2) = 8.681$  sightings rounded to 9).

USACE has no record of sightings in November in the work area and therefore does not believe there will be any take in November.

In total USACE estimates 33 Level B humpback whale takes for the remainder of the project year. This is likely an overestimation as observations indicate that presence of the species is more frequent around daily high tides which will be after work hours  $\frac{1}{2}$  the remaining workdays.

In order to reduce the potential for takes the Contractor has voluntarily reduced pile driving activity before and after daily high tides. Contractor considered adding additional observer downstream, of work area but determined that sea conditions at the MCR Bar would present a hazard to the observer and boat operator.

USACE is meeting with the Contractor regularly to discuss the situation and options to avoid impacts to humpback whales.