

Bainbridge Ferry Terminal Overhead Loading Replacement Project

**2024 Marine Mammal Monitoring Report
March 7, 2024**

**Washington State Department of Transportation
Ferries Division**



Submitted To:

National Marine Fisheries Service
Office of Protected Resources
1315 East-West Highway
Silver Spring, Maryland 20910-3226

Prepared By:

Washington State Ferries
Richard D. Huey
2901 Third Avenue, Suite 500
Seattle, Washington 98121-3014
206-515-3721
hueyr@wsdot.wa.gov

*Photo: Southern Resident Killer Whales with Seattle skyline (October 2013) (NOAA
Northwest Fisheries Science Center, Candace Emmons*

Table of Contents

1.0	2022/23 Marine Mammal Monitoring Report	2
2.0	Project Settings and Land Use	2
3.0	Bainbridge Island Ferry Terminal Overhead Loading Project	3
3.1	Project Elements	Error! Bookmark not defined.
4.0	Eagle Harbor Maintenance Facility Slip F Project Description.....	Error! Bookmark not defined.
4.1	Project Elements	Error! Bookmark not defined.
5.0	Bainbridge and Eagle Harbor Project Monitoring Summary	4
5.1	Mitigation	4
5.2	Dead Marine Mammal Notifications.....	4
5.3	Monitoring and Take Results.....	4
5.4	Data Collection	6

LIST OF TABLES

Table 5-1.	Observations	5
Table 5-2.	Authorized Take and Take Used.....	5
Table 5-3.	Data Fields	6

LIST OF FIGURES

Figure 2-1	Locations of Bainbridge Island Ferry Terminal, Eagle Harbor Maintenance Facility and Colman Ferry Terminal	2
Figure 2-2	Locations of Bainbridge Island Ferry Terminals and Eagle Harbor Maintenance Facility	Error! Bookmark not defined.
Figure 3-1	Existing Timber Walkway to be Removed	4
Figure 4-1.	Locations of project elements at the Eagle Harbor Maintenance Facility.....	Error! Bookmark not defined.

ATTACHMENTS

- A - IHA (2023/24) – Attached Email
- A - Marine Mammal Monitoring Observations (2024) – Attached Email
- B - Marine Mammal Monitoring Plan (24” Pile Removal (2022) – Attached Email
- C - 12-18” Pile Removal Figure (2024) – Attached Email

1.0 Marine Mammal Monitoring Report

This report is for the completion of the Bainbridge Island Ferry Terminal Overhead Loading Project. The project was scheduled to be completed in 2023, but due to delays it was not completed in one season. An IHA renewal request was approved to remove small timber and steel piles that remain (Attachment A). An additional request to remove four temporary 24” steel piles that were left out of the renewal request was also approved (NMFS 2024a).

2.0 Project Settings and Land Use

The Bainbridge Island Ferry Terminal (near the Eagle Harbor ferry maintenance facility) is located on Bainbridge Island, across from Seattle. Located in Kitsap County, Washington, in Township 25 North, Range 2 East, Section 26, in Eagle Harbor (Figure 2-1). Land use in eastern Bainbridge Island is a mix of residential, commercial, industrial, and open space and/or undeveloped lands.

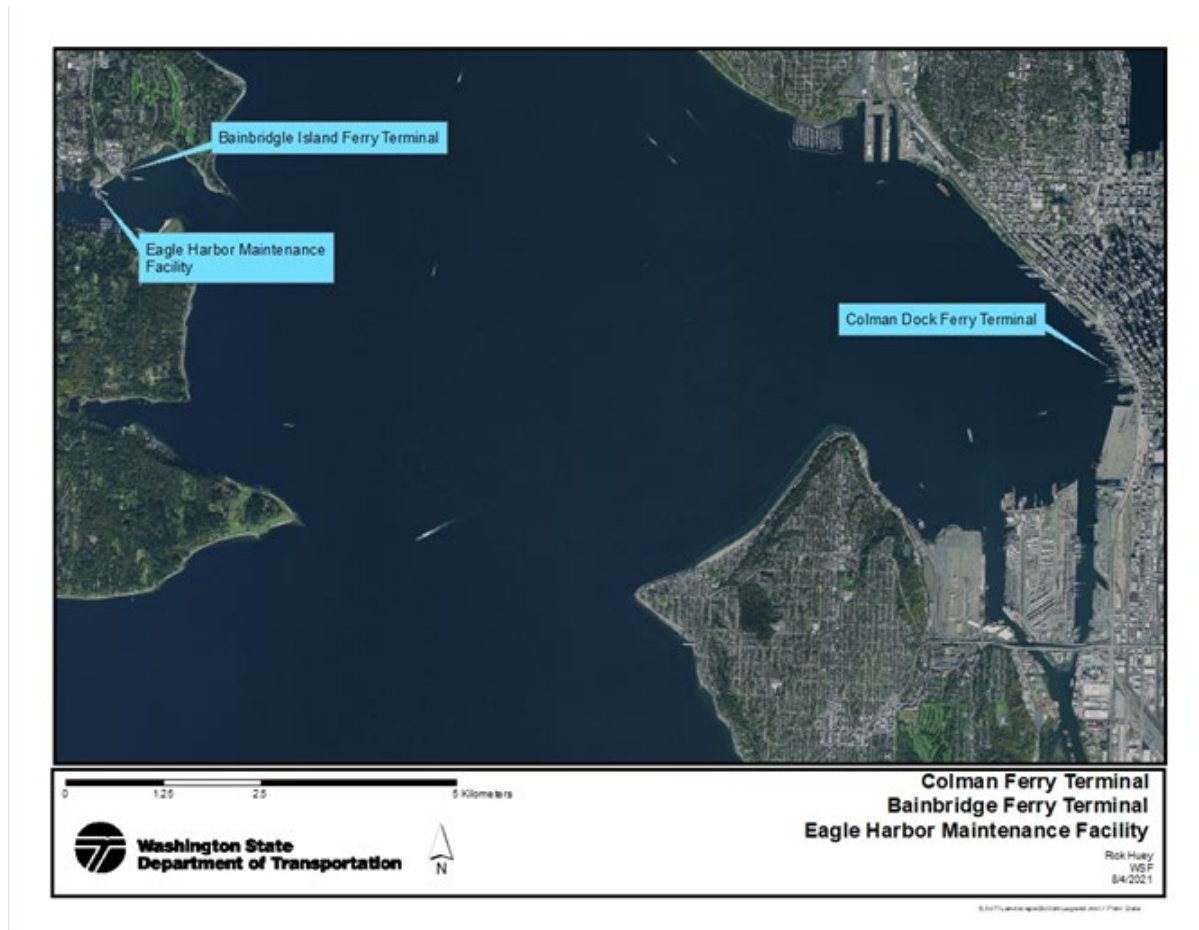


Figure 2-1 Locations of Bainbridge Island Ferry Terminal, Eagle Harbor Maintenance Facility and Colman Ferry Terminal

3.0 Bainbridge Island Ferry Terminal Overhead Loading Project

WSDOT/WSF has replaced the seismically vulnerable timber trestle and fixed steel portions of the overhead loading structure at the Bainbridge Island Ferry Terminal. A new overhead loading walkway was constructed that meets seismic standards.

The former overhead loading walkway consisted of two major components: a timber trestle, approximately 345 feet long, constructed in 1972, supported on timber batter piles; and a steel truss, approximately 78 feet long, constructed in 1988, supported on a concrete shaft at each end. The walkway is elevated approximately 40 feet above ground.

Permanent piles for the new overhead walkway were completed in the 2022/2023 season (Figure 3-1). The 2024 work consisted of the vibratory removal of the former timber walkway creosote-treated timber piles and steel H-piles, along with four 24" steel temporary piles in (Figure 3-1/3-2).

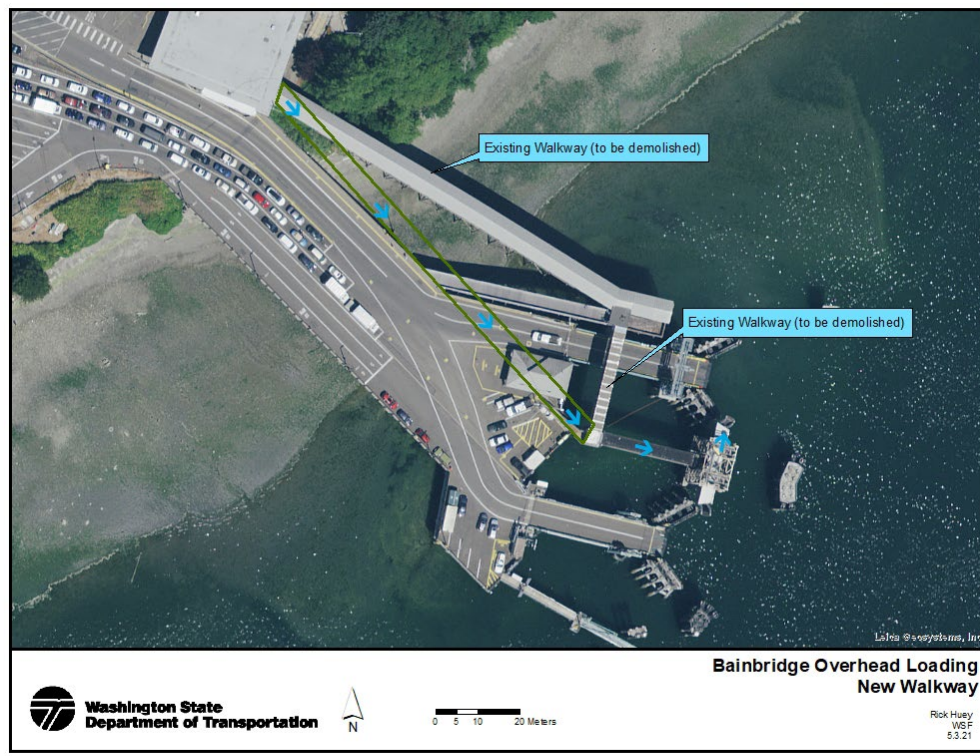


Figure 3-1 Bainbridge Overhead Loading Permanent Project Elements



Figure 3-2 Existing Timber Walkway to be Removed

4.0 Bainbridge Project Monitoring Summary

There were three days of vibratory pile removal monitoring. The project is now complete.

4.1 Mitigation

There were no shutdowns for marine mammals approaching the injury exclusion zones. There were no shutdowns for Southern Resident killer whale that approached the Level B vibratory zone. There were no weather or visibility stoppages.

4.2 Dead Marine Mammal Notification

No dead marine mammals were observed during the 2024 monitoring.

4.3 Monitoring and Take Results

During removal of the 24" temporary steel piles, the 2022 plan was followed (Attachment B).

For removal of small piles, a request to move a monitoring position was approved (NMFS 2024b). As documented in the IHA 5(c)(i), a PSO was to be placed on the Seattle-Bainbridge ferry. However, when the ferry leaves the monitoring zone, the PSO would have been away for about 1.5 hours and would not have been to help monitor during small pile removal. Approval was given to move the monitor to one of the ferries that are docked at our Eagle Harbor shipyard



for repair, within the ZOI. This was a high above the water position, that helped with monitoring in-harbor harassment (Attachment C).

Monitoring data (including behavioral observations) is included as Attachment D. Observations, permitted take, and take used for both projects are provided in Tables 5-1 and 5-2.

Only one unidentified marine mammal (a pinniped) was noted in the summary of sightings. Given the position (Bainbridge Terminal during small pile removal), it is assumed to have been a harbor seal. It was not included in the Table 5-2 Level B count, because it was observed during No Active Pile Driving/Removal (NAP).

Individuals that are noted in the monitoring data as possibly a duplicate (70-90% certainty), or a duplicate (90-100% certainty), or noted as Out of Zone (OutZone) during active pile removal have been eliminated from Table 5-2 Level B count.

Allotted take was not exceeded for this project.

Table 4-1. Observations

Species	Number
Harbor Seal	38
California Sea Lion	3
Unidentified pinniped	1

Table 4-2. Authorized Take and Take Used

Species	Authorized Level B	Level B Used
Harbor Seal	60	9
California Sea Lion	3	2



4.4 Data Collection

All data was collected in ArcGIS Survey 123. Data fields collected are listed below. All monitoring data (Appendix D) is attached as an email.

Table 4-3. Data Fields

Protected Species Observer Data Fields
PSO Monitor Name
Project
PSO Monitoring Station ID
Construction Activity
Weather Conditions
Specify other. (Weather)
Observation Date & Time
Species Observed
Specify other. (Species)
Duplicate Sighting
Number of Individuals Observed
Direction of Sighting from the PSO
Distance from the PSO
Compass Bearing towards Animal from PSO (optional data)
Distance from PSO to Animal (Meters) (optional data)
Compass Bearing to Noise Source from PSO (optional data)
Distance from PSO to Noise Source (Meters) (optional data)
Calculated Angle between the Bearings (optional data)
Distance of Animal from Noise Source (Meters) (optional data)
Observed Behavior
Direction of Travel
Comments about the Sighting
Zone Selection
Number of Individuals in Shutdown Zone
Number of Individuals in Harassment Zone
Harassment/Shutdown Comments

4.5 Citations

NMFS 2024a. Personal communication (email) from Rachel Wachtendonk (NMFS) to Rick Huey (WSF). February 5, 2024.

_____. 2024b. Personal communication (email) from Rachel Wachtendonk (NMFS) to Rick Huey (WSF). February 5, 2024.



INCIDENTAL HARASSMENT AUTHORIZATION

The Washington State Department of Transportation (WSDOT) and their designees are hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to incidentally harass marine mammals, under the following conditions:

1. This incidental harassment authorization (IHA) is valid from September 16, 2023 through September 15, 2024.
2. This IHA authorizes take incidental to the Bainbridge Island Ferry Terminal Overhead Loading Replacement Project and Eagle Harbor Maintenance Facility Slip F Improvement Project in Bainbridge Island, Washington, as specified in WSDOT's February 15, 2023 renewal request. Hereafter (unless otherwise specified) the term "pile driving" is used to refer to pile removal by vibratory methods.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of the Holder of the Authorization (Holder), supervisory construction personnel, lead protected species observers (PSOs), and any other relevant designees of the Holder operating under the authority of this IHA at all times that activities subject to this IHA are being conducted.
 - (b) The species and/or stocks authorized for taking are listed in Table 1. Authorized take, by Level B harassment only, is limited to the species and numbers listed in Table 1.
 - (c) The taking by serious injury or death of any of the species listed in Table 1 or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA. Any taking exceeding the authorized amounts listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (d) The Holder must ensure that construction supervisors and crews, the monitoring team, and relevant staff are trained prior to the start of activities subject to this IHA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.
4. Mitigation Requirements
 - (a) The Holder must employ PSOs and establish monitoring locations as described in section 5 of this IHA. The Holder must monitor the project area to the maximum



extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions.

- (b) Monitoring must take place from 30 minutes prior to initiation of pile driving activity (i.e., pre-start clearance monitoring) through 30 minutes post-completion of pile driving activity.
- (c) If a marine mammal is observed entering or within the shutdown zones indicated in Table 3, pile driving activity must be delayed or halted. Pile driving must be commenced or resumed as described in condition 4(e) of this IHA.
- (d) Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones indicated in Table 3 are clear of marine mammals. Pile driving may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals.
- (e) If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone indicated in Table 3 or 15 minutes have passed without re-detection of the animal.
- (f) Pile driving activity must be halted (as described in condition 4(c) of this IHA) upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the harassment zone (as shown in Table 2).
- (g) The Holder, construction supervisors and crews, PSOs, and relevant staff must avoid direct physical interaction with marine mammals during construction activity. If a marine mammal comes within 10 meters of construction activity or a vessel involved with construction activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary to avoid direct physical interaction.
- (h) Specific measures for avoiding take of unauthorized species (*e.g.*, Southern Resident killer whales (SRKW), humpback whales):
 - (i) Prior to the start of pile driving activities each day, the Holder must contact the Orca Network to obtain the latest sightings information for SRKW and humpback whales.
 - (ii) The Holder must delay or halt pile driving activities if SRKW or humpback whales are sighted within the vicinity of the project area and are approaching the Level B harassment zones (Table 2) during in-water activities.

- (iii) If a killer whale approaches the Level B harassment zone during pile driving activities, and it is unknown whether it is a SRKW or transient killer whale (an unidentified killer whale), it must be assumed to be a SRKW and the Holder must delay or halt pile driving activities as described in condition 4(j)(ii) of this IHA.
- (iv) If a SRKW, unidentified killer whale, or humpback whale enters the Level B harassment zone undetected, in-water pile driving must be suspended immediately upon detection and must not resume until the animal exits the Level B harassment zone or 15 minutes have passed without re-detection of the animal.

5. Monitoring Requirements

- (a) Marine mammal monitoring must be conducted in accordance with the conditions in this section and this IHA.
- (b) Monitoring must be conducted by qualified, NMFS-approved PSOs, in accordance with the following conditions:
 - (i) PSOs must be independent (i.e., not construction personnel) and have no other assigned tasks during monitoring periods.
 - (ii) At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (iii) Other PSOs may substitute other relevant experience, education (degree in biological science or related field), or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (iv) Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (v) PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.
- (c) The Holder must establish the following monitoring locations:
 - (i) For vibratory removal of timber, one PSO must be assigned to monitor the area from the construction site, one must monitor from across Eagle Harbor looking toward the construction site, and one must monitor from on board the Seattle-Bainbridge ferry.

- (d) PSOs must record all observations of marine mammals, regardless of distance from the in-water specific activities, as well as the additional data indicated in section 6 of this IHA.

6. Reporting

- (a) The Holder must submit its draft report(s) on all monitoring conducted under this IHA within 90 calendar days of the completion of monitoring or 60 calendar days prior to the requested issuance of any subsequent IHA for construction activity at the same location, whichever comes first. A final report must be prepared and submitted within 30 calendar days following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final.
- (b) All draft and final monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.Fowler@noaa.gov*.
- (c) The marine mammal report, at minimum, must include:
 - (i) Dates and times (begin and end) of all marine mammal monitoring;
 - (ii) Construction activities occurring during each daily observation period, including:
 - A. The number and type of piles that were driven and the method (e.g., impact, vibratory, steel, timber); and
 - B. Total duration of driving time for each pile (vibratory driving) and number of strikes for each pile (impact driving).
 - (iii) PSO locations during marine mammal monitoring;
 - (iv) Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance;
 - (v) Upon observation of a marine mammal, the following information:
 - A. Name of PSO who sighted the animal(s) and PSO location and activity at time of sighting;
 - B. Time of sighting;
 - C. Identification of the animal(s) (e.g., genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species;

- D. Distance and location of each observed marine mammal relative to the pile being driven for each sighting;
 - E. Estimated number of animals (min/max/best estimate);
 - F. Estimated number of animals by cohort (adults, juveniles, neonates, group composition, etc.);
 - G. Animal's closest point of approach and estimated time spent within the harassment zone;
 - H. Description of any marine mammal behavioral observations (e.g., observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (e.g., no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);
- (vi) Number of marine mammals detected within the harassment zones, by species; and
 - (vii) Detailed information about implementation of any mitigation (e.g., shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.
- (d) The Holder must submit all PSO datasheets and/or raw sighting data with the draft report, as specified in condition 6(a) of this IHA.
 - (e) Reporting injured or dead marine mammals:

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the Holder must report the incident to the Office of Protected Resources (OPR), NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *ITP.Wachtendonk@noaa.gov*) and to the West Coast regional stranding network (1-866-767-6114) as soon as feasible. If the death or injury was clearly caused by the specified activity, the Holder must immediately cease the activities until NMFS OPR is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of this IHA. The Holder must not resume their activities until notified by NMFS.

The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- (ii) Species identification (if known) or description of the animal(s) involved;
- (iii) Condition of the animal(s) (including carcass condition if the animal is dead);

- (iv) Observed behaviors of the animal(s), if alive;
- (v) If available, photographs or video footage of the animal(s); and
- (vi) General circumstances under which the animal was discovered.

7. This Authorization may be modified, suspended, or revoked if the Holder fails to abide by the conditions prescribed herein (including, but not limited to, failure to comply with monitoring or reporting requirements), or if NMFS determines: (1) the authorized taking is likely to have or is having more than a negligible impact on the species or stocks of affected marine mammals, or (2) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.

For Kimberly Damon-Randall,
Director, Office of Protected Resources
National Marine Fisheries Service

Table 1. Authorized Incidental Take

Species	Stock	Authorized take by Level A harassment	Authorized take by Level B harassment
Harbor seal	Washington Northern Inland Waters	0	60
California sea lion	U.S.	0	3
Steller sea lion	Eastern	0	1
Harbor porpoise	Washington Inland Waters	0	9
Killer whale	West Coast Transient	0	6

Table 2. Level A Harassment and Level B Harassment Zones

Pile size/type	Pile driving method	Level A harassment zone (m)					Level B harassment zone (m)
		LF cetaceans	MF cetaceans	HF cetaceans	Phocids	Otariids	
12-in timber/steel	Vibratory removal	3.7	0.3	5.5	2.2	0.2	1,600

Table 3. Shutdown Zones

Pile type and method	Shutdown zone (m)					
	LF cetacean	MF cetacean	HF cetacean	Phocids	Otariids	Southern Resident killer whales, humpback whales, and other unauthorized species
12-in timber/steel vibratory	10	10	10	10	10	2,175

Bainbridge Island Ferry Terminal Overhead Loading Structure Replacement Project
Eagle Harbor Slip F Project
Marine Mammal Monitoring Plan

June 30, 2022

In accordance with the January 2022, Washington State Ferries Bainbridge Island Ferry Terminal Overhead Loading Structure Replacement Project Incidental Harassment Authorization Request, marine mammal monitoring will be implemented during this project.

Qualified Protected Species Observers (PSOs) will be present on site at all times during pile removal and driving. Marine mammal behavior, overall numbers of individuals observed, frequency of observation, and the time corresponding to the daily tidal cycle will be recorded.

Distances to Level A (Table 1/3) and Level B (Table 2/4) shutdown and take zones are provided below:

Table 1. Bainbridge OHL Level A Shutdown/Take Zones

Project	Pile size, type & method	Level A Shutdown/Take Zone (m)/Take Area (m ²)					SRKW Shutdown (m)
		LF	MF	HF	Phocid	Otariid	
BA	12-in timber vibratory	720	60	720	60	60	2,175
BA	24-in steel vibratory	720	60	720	60	60	13,345
BA	30-in steel vibratory	720	60	720	60	60	13,345
BA	36-in steel vibratory	720	60	720	60-295 /179,253	60	13,345
BA	24-in steel impact	2,175	60	720-1,620 /920,723	60-728 /1,016,940	60	2,175
BA	30-in steel impact	2,175	60	720-1,620 /920,723	60-728 /1,016,940	60	2,175
BA	36-in steel impact	2,175	60	720-1,620 /920,723	60-728 /1,016,940	60	2,175

Table 2. Bainbridge OHL Level B Shutdown/Take Zones

Project	Pile size, type & method	Level B Shutdown/Take Zone (m)				
		LF	MF	HF	Phocid	Otariid
BA	12-in timber vibratory	720-1,600	60-1,600	720-1,600	60-1,600	60-1,600
BA	24-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
BA	30-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
BA	36-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
BA	24-in steel impact	2,175	60-2,175	720-2,175	60-2,175	60-2,175
BA	30-in steel impact	2,175	60-2,175	720-2,175	60-2,175	60-2,175
BA	36-in steel impact	2,175	60-2,175	720-2,175	60-2,175	60-2,175

Table 3. Eagle Harbor Slip F Level A Shutdown/Take Zone

Project	Pile size, type & method	Level A Shutdown/Take Zone (m)/Take Area (m ²)					SRKW Shutdown (m)
		LF	MF	HF	Phocid	Otariid	
EH	12-in timber vibratory	720	60	720	60	60	2,175
EH	18-in steel vibratory	720	60	720	60	60	13,345
EH	24-in steel vibratory	720	60	720	60	60	13,345
EH	30-in steel vibratory	720	60	720	60	60	13,345
EH	36-in steel vibratory	720	60	720	60-295 /213,667	60	13,345
EH	24-in steel impact	2,175	60	720-948 /303,364	60-426 /421,157	60	2,175
EH	36-in steel impact	2,175	60	720-948 /303,364	60-426 /421,157	60	2,175

Table 4. Eagle Harbor Slip F Level B Shutdown/Take Zone

Project	Pile size, type & method	Level B Shutdown/Take Zone (m)				
		LF	MF	HF	Phocid	Otariid
EH	12-in timber vibratory	720-1,600	60-1,600	720-1,600	60-1,600	60-1,600
EH	18-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
EH	24-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
EH	30-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
EH	36-in steel vibratory	720-13,345	60-13,345	720-13,345	60-13,345	60-13,345
EH	24-in steel impact	2,175	60-2,175	720-2,175	60-2,175	60-2,175
EH	36-in steel impact	2,175	60-2,175	720-2,175	60-2,175	60-2,175

Monitoring for Level A and B Zones

WSF proposes the following Marine Mammal Monitoring Plan:

- Three PSOs (two land-based and one ferry-based) will monitor during impact driving of 24/30/36-inch steel piles, and during vibratory removal of 12” timber/18” steel piles (Figures 1-6).
- Five PSOs (four land-based and one ferry-based) will monitoring during vibratory driving of 24/30/36-inch steel piles (Figures 2/3/5/6).
- All WSF ferries report whale sightings to WSF Operations, the Whale Report Alert System, and Orca Network. These sightings are available to the PSOs when the data is posted. There are two ferries on the Seattle to Bainbridge route, and two on the Seattle to Bremerton route. These ferries travel through the vibratory ZOIs on a regular basis. The ferry based PSO monitoring will be complemented by sightings reported by the other three ferries. These complementary sightings will be recorded as take as appropriate. Other sightings will serve as notification that these species of marine mammals are in the area and may be approaching the ZOIs.
- To verify the required monitoring distance, the ZOI will be determined by using a range finder or hand-held global positioning system device.
- The ZOI will be monitored for the presence of marine mammals 30 minutes before, during, and 30 minutes after any pile removal activity.
- Monitoring will be continuous unless the contractor takes a significant break, in which case, monitoring will be required 30 minutes prior to restarting pile removal.

Monitoring to Prevent Killer Whale Take

WSF proposes the following measures to prevent SRKW Level B acoustical harassment take:

- If SRKW (as identified by Orca Network, NMFS or another qualified source) approaches the relevant ZOI during pile removal or driving, work will be paused until the SRKW exit the ZOI to avoid harassment take.
- If killer whales approach the ZOI during pile removal or driving, and it is unknown whether they are SRKW or transient, it shall be assumed they are SRKW in order to prevent SRKW harassment take.

Minimum Qualifications for Protected Species Observers

Qualifications for PSOs include:

- Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance. Use of binoculars may be necessary to correctly identify the target.
- Experience or training in the field identification of marine mammals (cetaceans and pinnipeds).
- Sufficient training, orientation or experience with the construction operation to provide for personal safety during observations.
- Ability to communicate orally, by radio or in person, with project personnel to provide real time information on marine mammals observed in the area as necessary.
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- Writing skills sufficient to prepare a report of observations that would include such information as the number and type of marine mammals observed; the behavior of marine mammals in the project area during construction, dates and times when observations were conducted; dates and times when in water construction activities were conducted; dates and times when marine mammals were present at or within the Level B acoustical harassment ZOI; dates and times when pile removal was paused due to the presence of marine mammals.

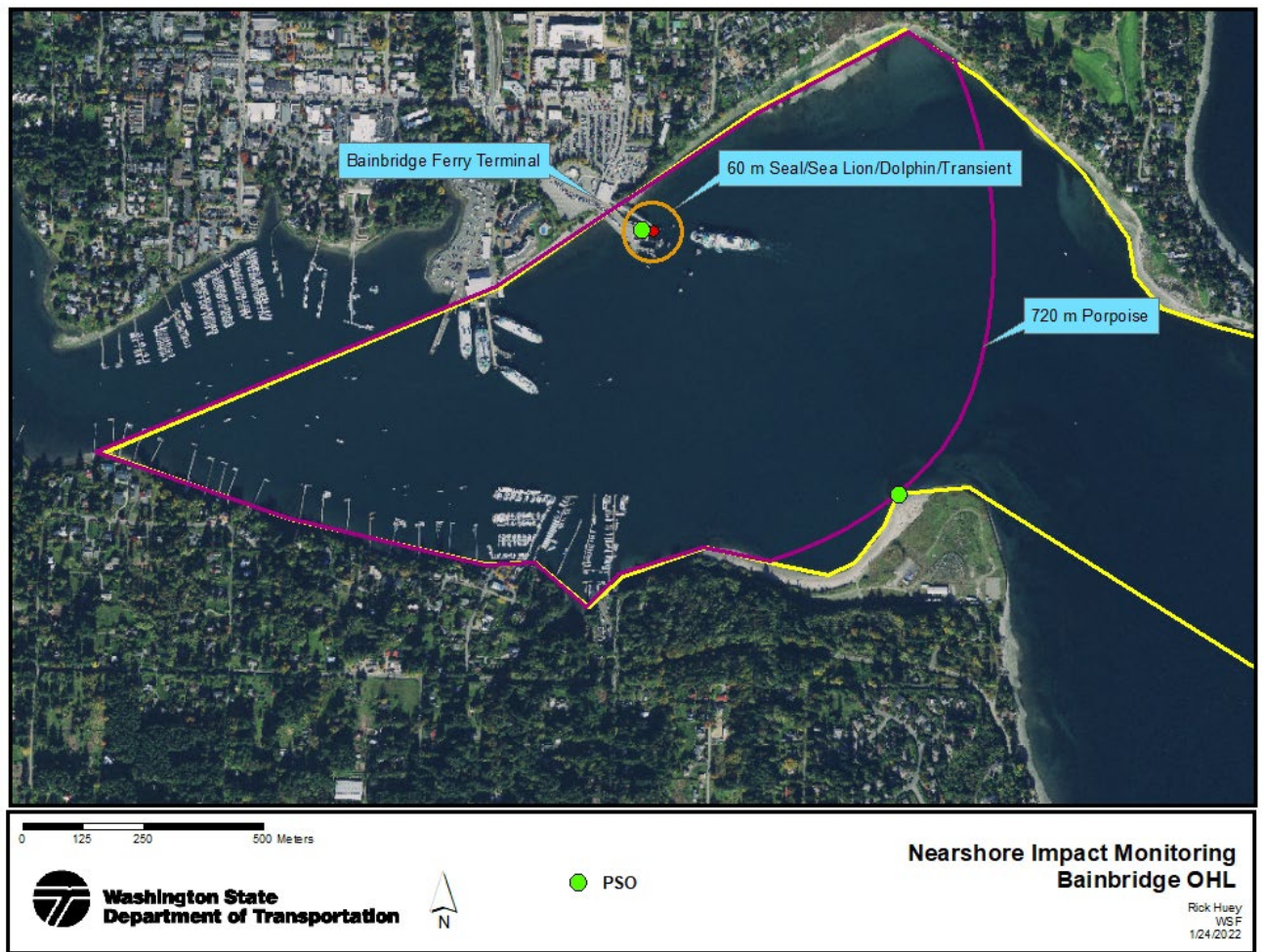


Figure 1 – Bainbridge OHL Nearshore Impact Monitoring

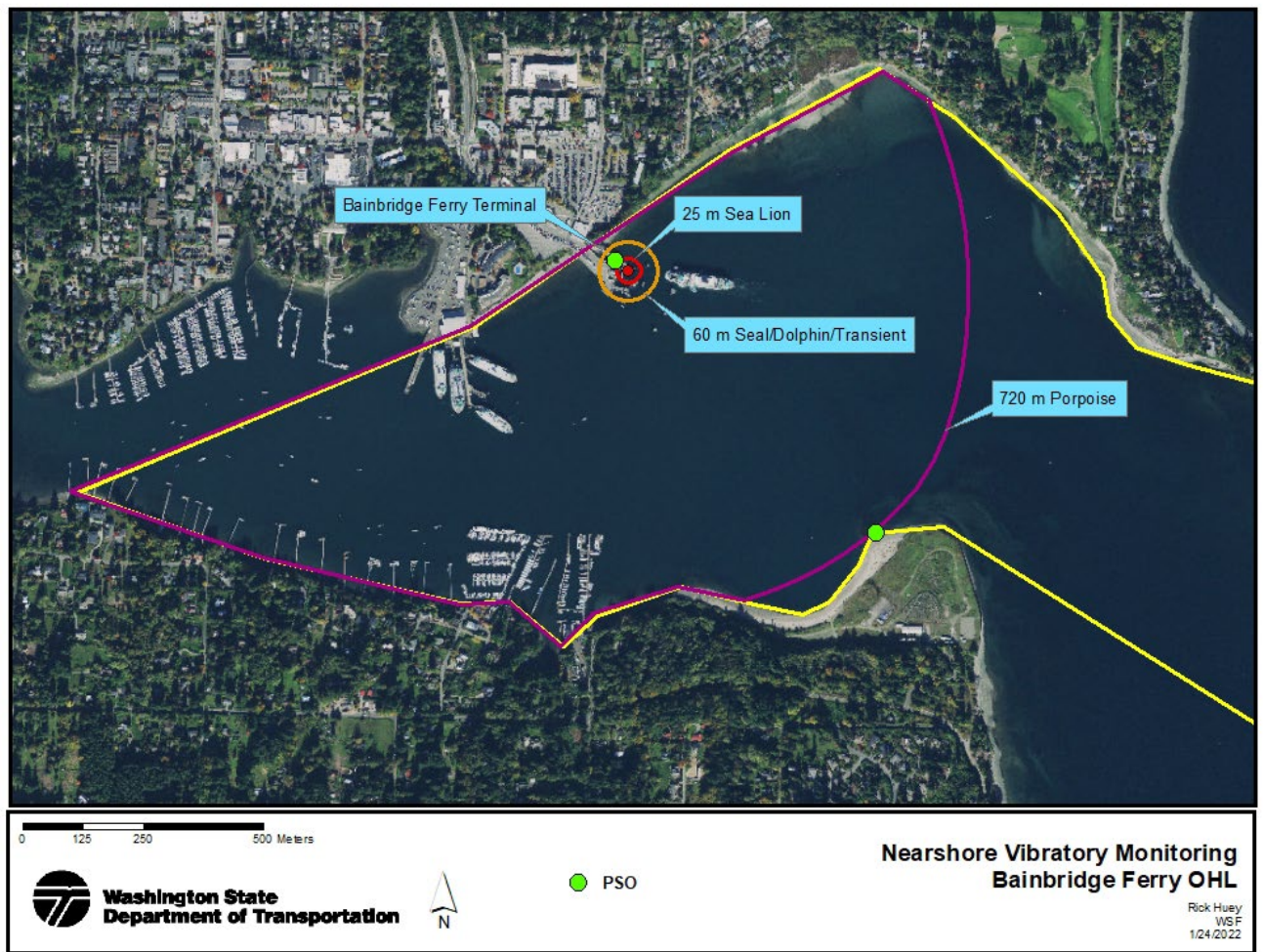


Figure 2 – Bainbridge OHL Nearshore Vibratory Monitoring

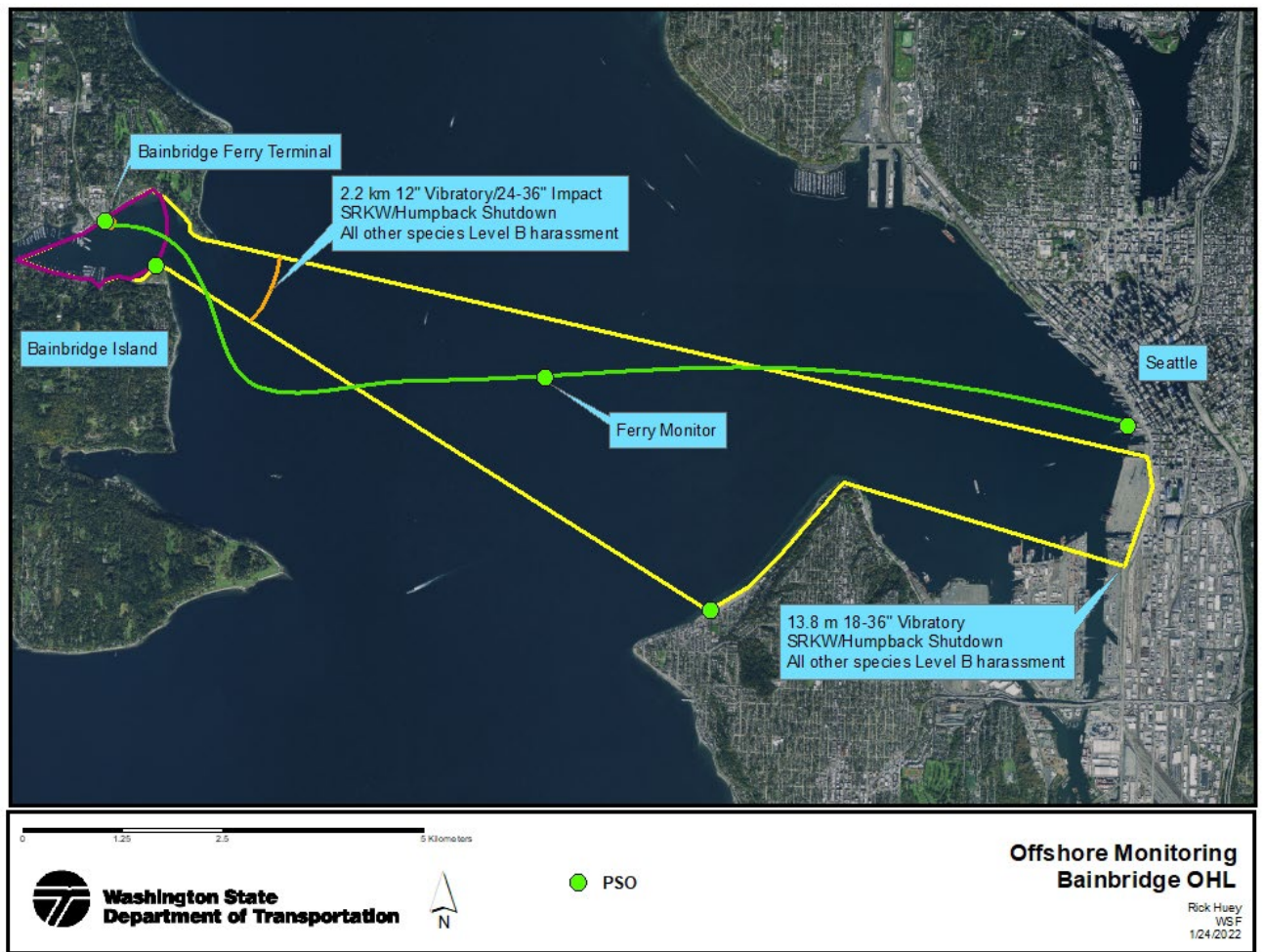


Figure 3 – Bainbridge OHL Offshore Monitoring

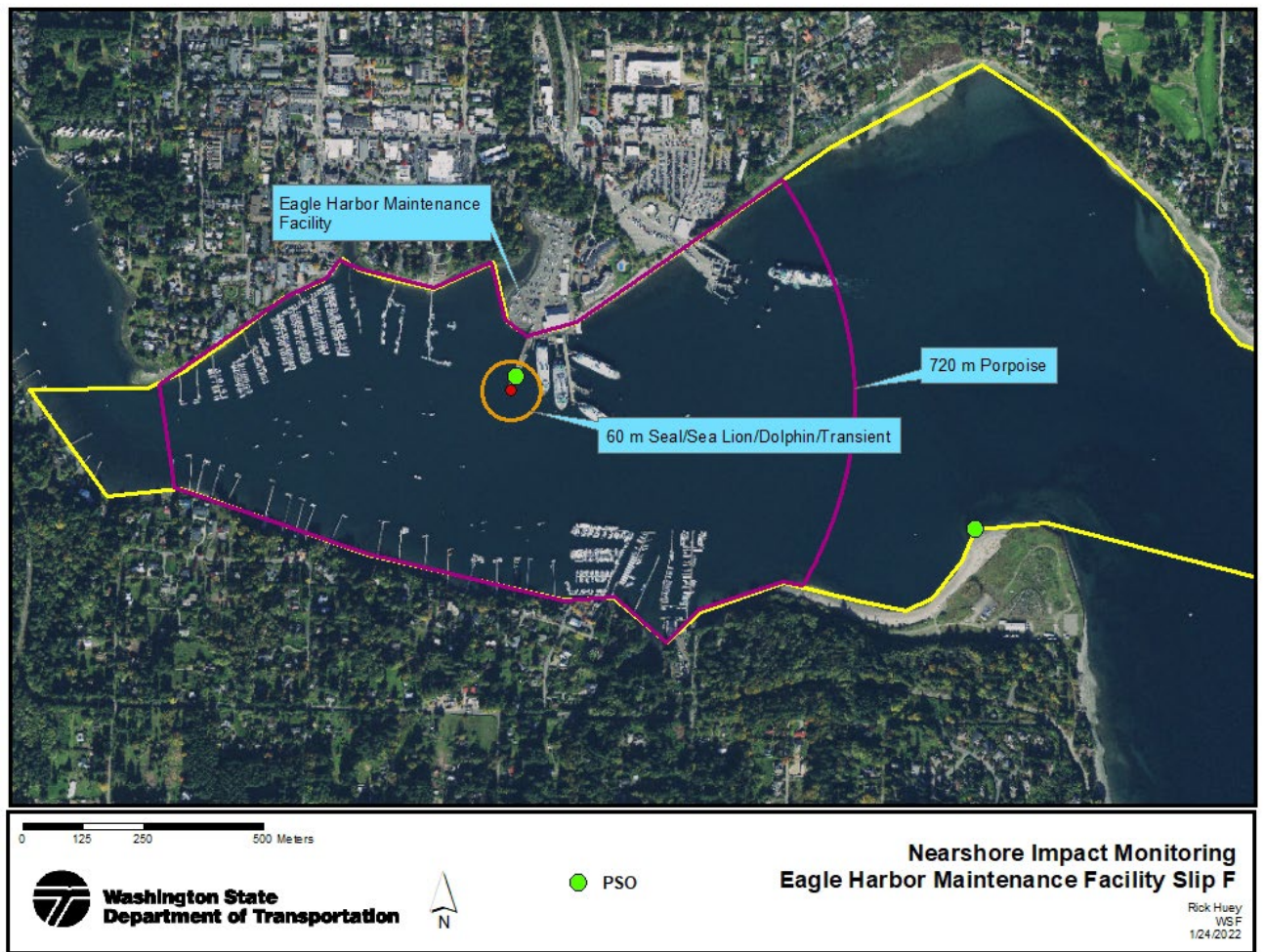


Figure 4 – Eagle Harbor Slip F Nearshore Impact Monitoring

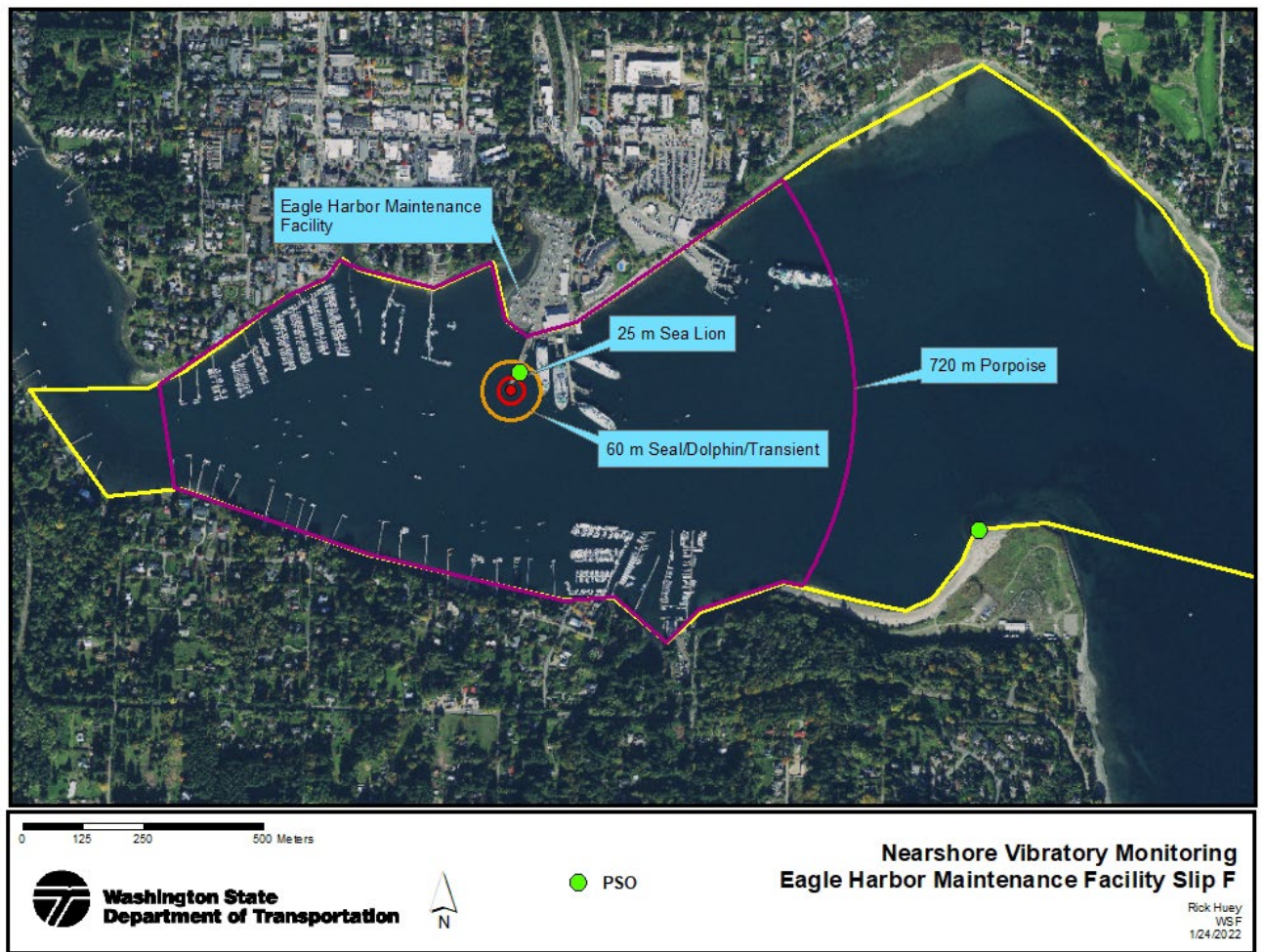


Figure 5 – Eagle Harbor Slip F Nearshore Vibratory Monitoring

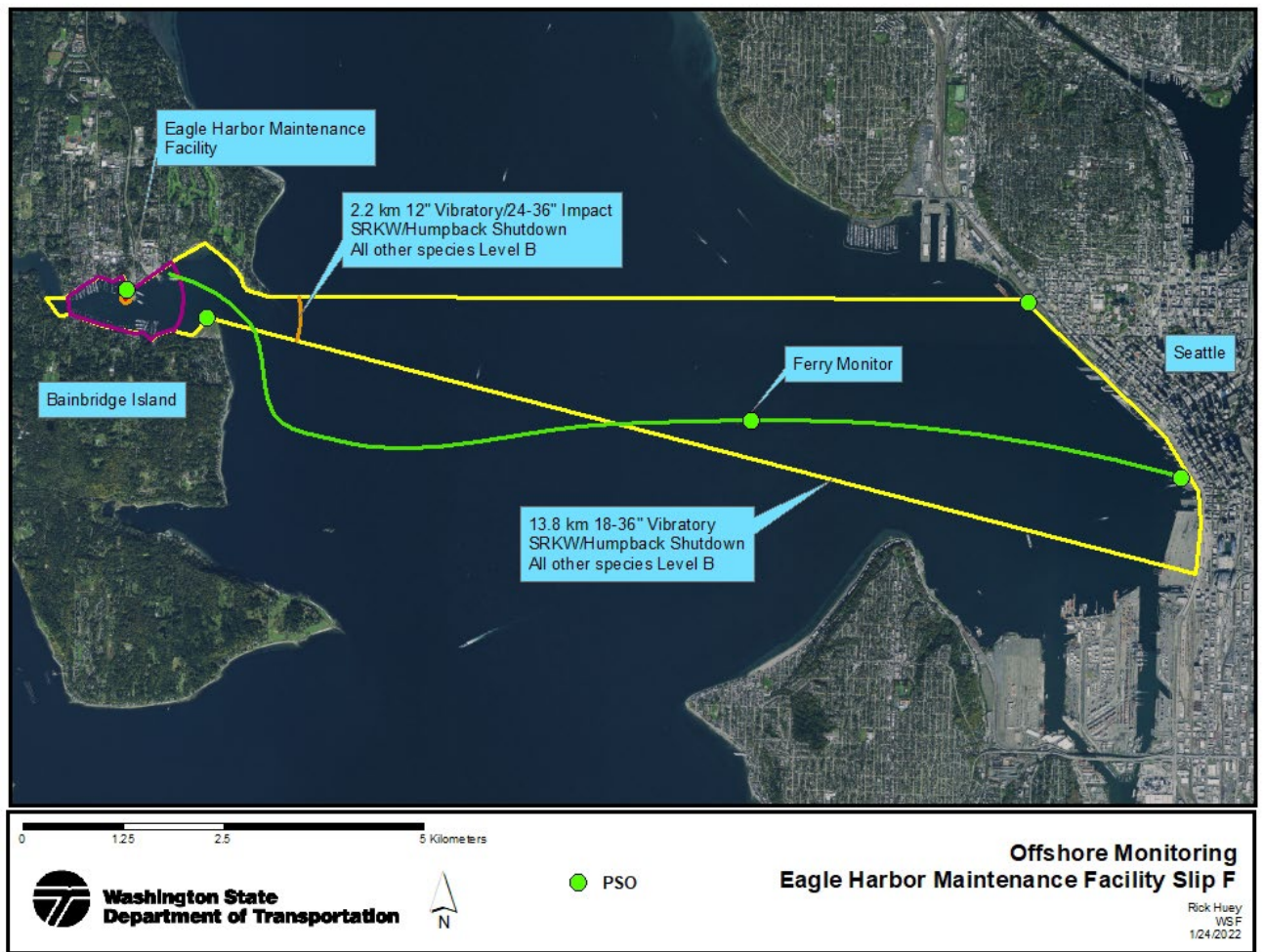


Figure 6 – Eagle Harbor Slip F Offshore Monitoring



● PSO

PSO Monitor Name	Project	PSO Monitoring Station ID	Construction Activity	Precipitation
Jill Cooper	BI_9737	FerryS2B	24" Steel	Rain
Shawn Gisriel	BI_9737	PritchardPark	NAP*	None
Raquel Corniuk	BI_9737	ColmanDock	24" Steel	Rain
Shawn Gisriel	BI_9737	PritchardPark	NAP	None
Raquel Corniuk	BI_9737	ColmanDock	24" Steel	None
Raquel Corniuk	BI_9737	ColmanDock	24" Steel	None
Jill Cooper	BI_9737	FerryS2B	24" Steel	None
Raquel Corniuk	BI_9737	ColmanDock	24" Steel	None
Shawn Gisriel	BI_9737	PritchardPark	24" Steel	None
Raquel Corniuk	BI_9737	ColmanDock	24" Steel	None
Raquel Corniuk	BI_9737	FerryS2B	24" Steel	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Winn McEnery	BI_9737	BI_Terminal	NAP	None
Shawn Gisriel	BI_9737	PritchardPark	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	12-18" Piles	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Raquel Corniuk	BI_9737	BI_Terminal	12-18" Piles	None
Shawn Gisriel	BI_9737	PritchardPark	12-18" Piles	None
Raquel Corniuk	BI_9737	BI_Terminal	NAP	None
Shawn Gisriel	BI_9737	PritchardPark	NAP	None
Winn McEnery	BI_9737	BI_Terminal	NAP	None
Madalyn Walker	BI_9737	EH_DockedFerry	NAP	None
Madalyn Walker	BI_9737	EH_DockedFerry	NAP	None
Madalyn Walker	BI_9737	EH_DockedFerry	NAP	None
Shawn Gisriel	BI_9737	PritchardPark	NAP	None
Madalyn Walker	BI_9737	EH_DockedFerry	NAP	None
Madalyn Walker	BI_9737	EH_DockedFerry	NAP	None

*NAP = No Active Pile Driving/Removal

**UP = Unidentified Pinniped

Percent Cloud Cover	Impacts to Visibility	Wind Speed	Observation Date & Time	Species Observed
Overcast	None	Beaufort2	2/9/2024 6:59	Zc
Broken	None	Beaufort1	2/9/2024 8:21	Pv
Overcast	Rain	Beaufort1	2/9/2024 9:54	Pv
Scattered	None	Beaufort1	2/9/2024 10:19	Pv
Broken	None	Beaufort1	2/9/2024 10:44	Pv
Broken	None	Beaufort1	2/9/2024 10:52	Pv
Broken	None	Beaufort0	2/9/2024 13:19	Pv
Broken	None	Beaufort1	2/9/2024 13:22	Pv
Few	None	Beaufort1	2/9/2024 13:34	Pv
Broken	None	Beaufort1	2/9/2024 13:41	Pv
Broken	None	Beaufort1	2/9/2024 14:12	Zc
Overcast	None	Beaufort1	2/12/2024 7:51	Pv
Overcast	None	Beaufort0	2/12/2024 8:13	UP**
Overcast	None	Beaufort1	2/12/2024 8:26	Pv
Overcast	Fog	Beaufort1	2/12/2024 8:30	Pv
Overcast	Fog	Beaufort1	2/12/2024 8:51	Pv
Overcast	Fog	Beaufort1	2/12/2024 8:59	Pv
Overcast	Fog	Beaufort1	2/12/2024 10:41	Pv
Overcast	Fog	Beaufort1	2/12/2024 11:17	Pv
Overcast	None	Beaufort1	2/12/2024 12:22	Pv
Obscured	None	Beaufort1	2/12/2024 13:32	Pv
Overcast	None	Beaufort1	2/12/2024 13:58	Pv
Broken	None	Beaufort1	2/12/2024 15:35	Pv
Broken	None	Beaufort1	2/12/2024 16:02	Pv
Isolated	None	Beaufort0	2/12/2024 16:41	Pv
Overcast	None	Beaufort1	2/12/2024 16:50	Pv
Scattered	None	Beaufort1	2/19/2024 7:11	Pv
Scattered	None	Beaufort1	2/19/2024 7:11	Pv
Broken	None	Beaufort0	2/19/2024 7:36	Pv
Scattered	None	Beaufort0	2/19/2024 8:12	Pv
Scattered	None	Beaufort1	2/19/2024 8:50	Pv
Scattered	None	Beaufort1	2/19/2024 10:54	Pv
Overcast	None	Beaufort1	2/19/2024 11:58	Pv
Overcast	None	Beaufort1	2/19/2024 12:00	Pv

Duplicate Sighting	Number of Individuals Observed	Direction of Sighting from the PSO
0-50	1	275
0-50	1	315
0-50	1	358
50-70	2	318
50-70	1	318
50-70	2	29
0-50	2	213
70-90	2	270
70-90	1	310
50-70	4	250
0-50	1	117
0-50	1	104
50-70	1	130
0-50	1	183
70-90	1	160
90-100	1	146
90-100	1	65
90-100	1	300
50-70	2	132
50-70	1	154
70-90	1	180
0-50	1	104
50-70	1	123
70-90	1	123
0-50	1	171
50-70	1	99
0-50	1	340
0-50	1	226
0-50	1	200
50-70	1	195
50-70	1	223
50-70	1	357
0-50	3	199
0-50	2	200

Distance from the PSO Compass Bearing towards Animal from PSO

75	275
30	315
60	358
50	318
150	318
160	29
80	213
300	270
40	310
350	250
150	117
300	104
78	130
70	183
40	160
80	146
40	65
50	300
200	132
300	154
80	180
800	104
50	123
700	123
100	171
900	99
45	340
11	226
43	200
40	195
90	223
40	357
415	199
411	200

Distance from PSO to Animal (Meters)	Observed Behavior	Direction of Travel
75	H	N
30	L	W
60	D	S
50	H	W
150	L,D	S
160	D,L	NW
80	T	S
300	L	S
40	L	E
350	L,D	S
150	D,L	NE
300	D,L	N
78	L,D	NW
70	H	SW
40	D,T,L	NE
80	T,L,D	NE
40	T,D,L	NE
50	D,T,L	S
200	D,T,L	NW
300	D,T,L	NW
80	D	NW
800	D	NW
50	D	NW
700	D,S	NE
100	D	SW
900	D	W
45	L,H	SE
11	R	SW
43	D,L	N
40	T	S
90	D,R	SE
40	D,L	SW
415	R	ST
411	T	SE

Comments about the Sighting	Zone Selection	Number of Individuals in Shutdown Zone
Could have been a stellars- only gc	LvlB	
	NAPZone	
	LvlB	
	NAPZone	
	LvlB	
	LvlB	
Playing	LvlB	
	LvlB	
	OutZone	
	LvlB	
	LvlB	
	NAPZone	
Likely harbor seal	NAPZone	
	NAPZone	
Observer location: eagle harbor	NAPZone	
Observer location: eagle harbor	NAPZone	
Observer location: eagle harbor	NAPZone	
Observer location: eagle harbor	LvlB	
Observer location: eagle harbor	NAPZone	
Observer location: eagle harbor. S	NAPZone	
Observer position: eagle harbor	NAPZone	
Observer position: eagle harbor. S	NAPZone	
Observer position: eagle harbor	NAPZone	
	LvlB	
	OutZone	
Observer position: eagle harbor	NAPZone	
	NAPZone	
	OutZone	
	NAPZone	
	NAPZone	
	NAPZone	
Hauled out on dock at far side of E	NAPZone	
Circling slowly dock area where ot	NAPZone	

[illegible]