Bainbridge Ferry Terminal Overhead Loading Replacement Project and Eagle Harbor Slip F Improvement Project

2022/23 Marine Mammal Monitoring Report
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Washington State Department of Transportation

Submitted To:

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

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2022/23 IHA

1.0 2022/23 Marine Mammal Monitoring Report

This report is for the batched Bainbridge/Eagle Harbor projects, which were combined under one IHA permit.

The Eagle Harbor project was completed this season as planned. Due to schedule delays, the Bainbridge project was not completed in one season. A renewal request will be submitted to remove small timber and steel piles that remain. All permanent piles were completed this season.

2.0 Project Settings and Land Use

The Bainbridge Island Ferry Terminal and Eagle Harbor Maintenance Facility are located on Bainbridge Island, across from Seattle. Located in Kitsap County, Washington, the Terminal and Maintenance Facility are located in Township 25 North, Range 2 East, Section 26, in Eagle Harbor (Figure 1-2/1-3). Land use in eastern Bainbridge Island is a mix of residential, commercial, industrial, and open space and/or undeveloped lands.

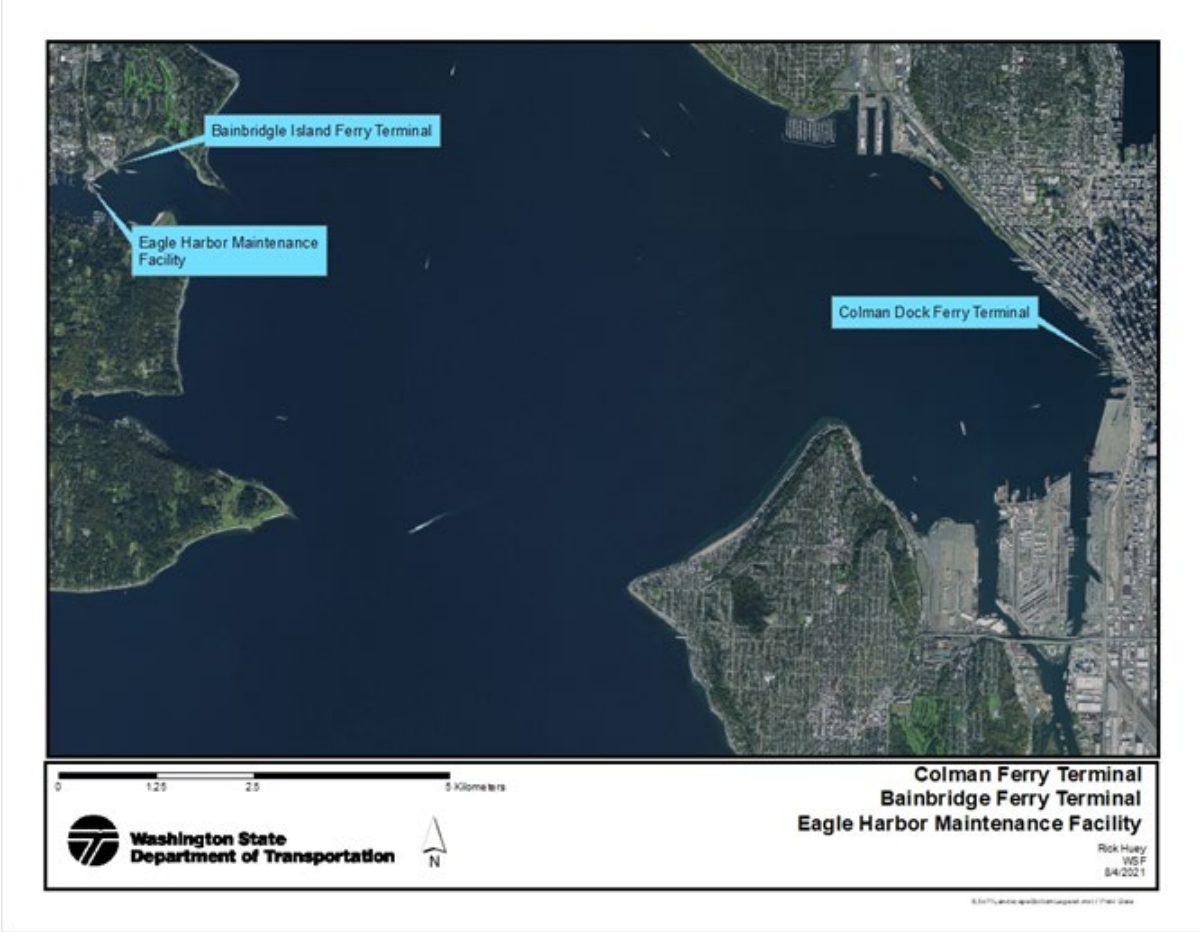

Figure 2-1 Locations of Bainbridge Island Ferry Terminal, Eagle Harbor Maintenance Facility and Colman Ferry Terminal

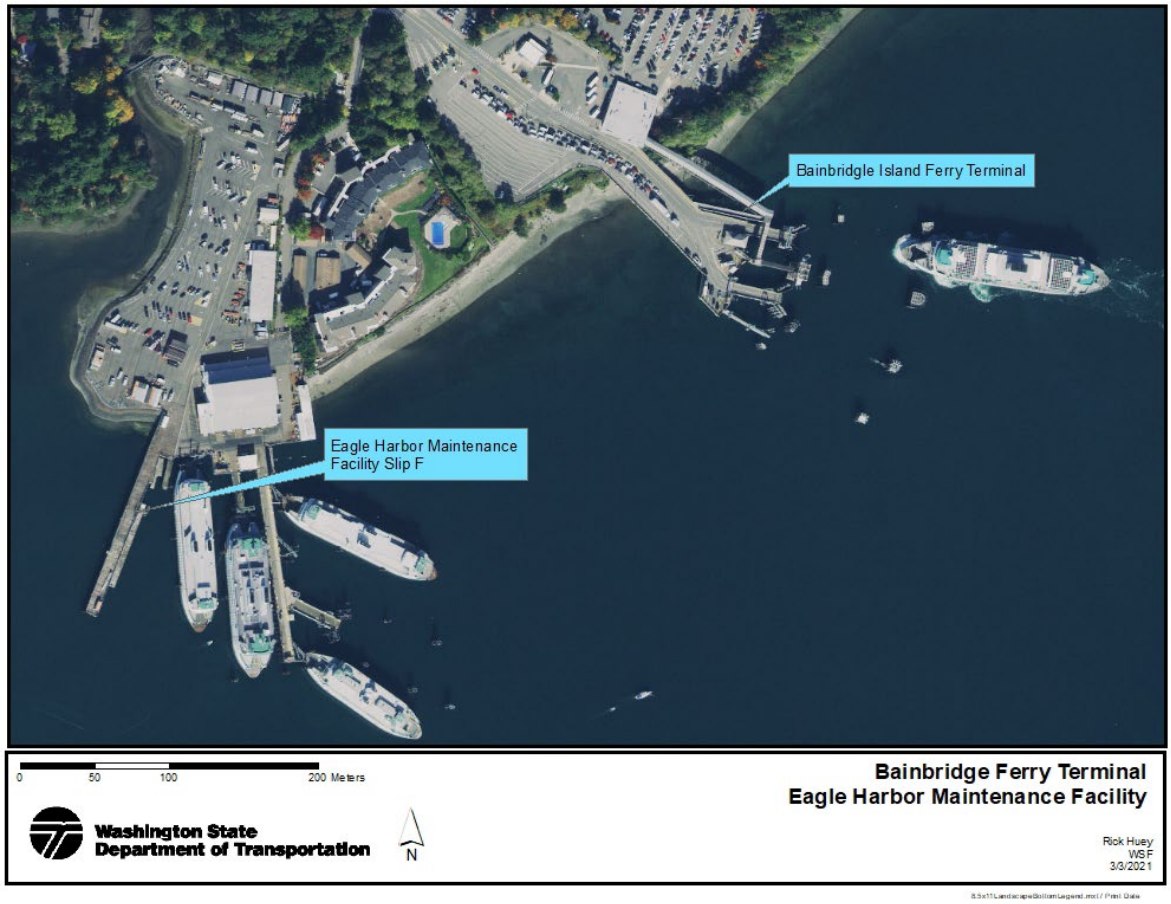

Figure 2-2 Locations of Bainbridge Island Ferry Terminals and Eagle Harbor Maintenance Facility

3.0 Bainbridge Island Ferry Terminal Overhead Loading Project

WSDOT/WSF is replacing the seismically vulnerable timber trestle and fixed steel portions of the overhead loading structure at the Bainbridge Island Ferry Terminal. A new overhead walkway will be constructed.

The existing overhead loading fixed walkway consists 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 3-4). The current timber walkway consists of creosote-treated timber piles and H-piles, which will be removed.

3.1 Project Elements

Completed Work in 2022/2023. All project elements as described in the IHA application have been completed, except for the items noted below.

Installation of Temporary Work Platform. Two temporary work platforms were planned to support construction equipment (Figure 3-4). However, the contractor chose not to use this method, so 31 24-inch diameter steel piles that would have supported the temporary structures were not driven.

Remaining Work for 2023/2024. All work was completed except for the removal of 43 12-inch wood piles and two 18-inch steel H-piles (Figure 3-6). A renewal request will be submitted to complete the project starting in August 2023. It is estimated the removal will take 2-3 weeks.

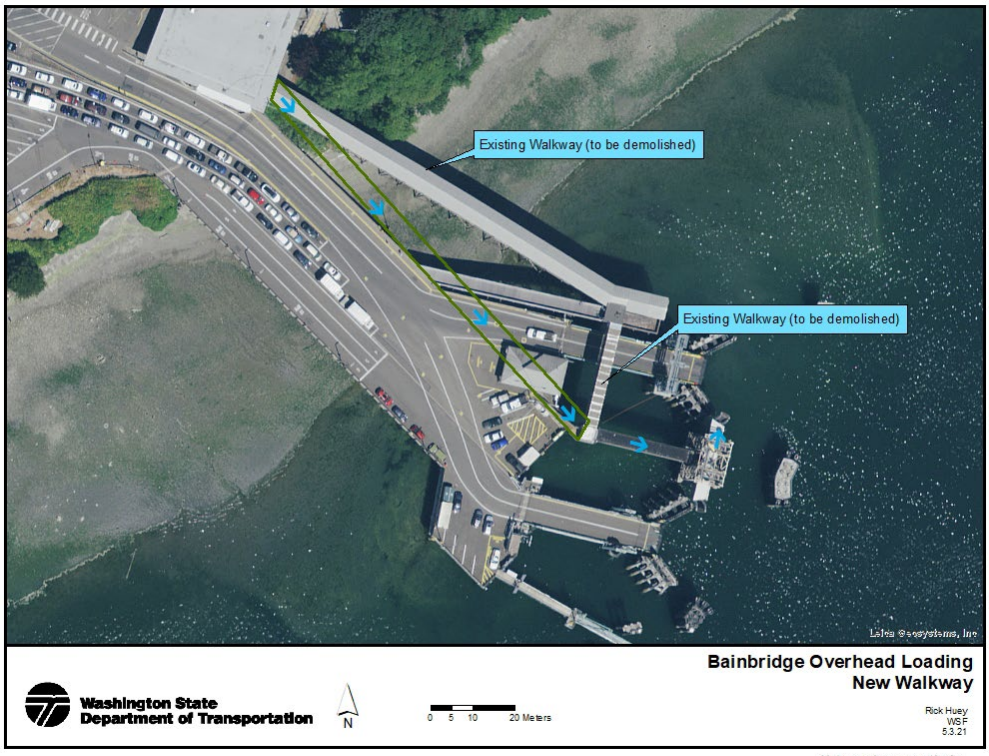

Figure 3-4 Bainbridge Overhead Loading Permanent Project Elements

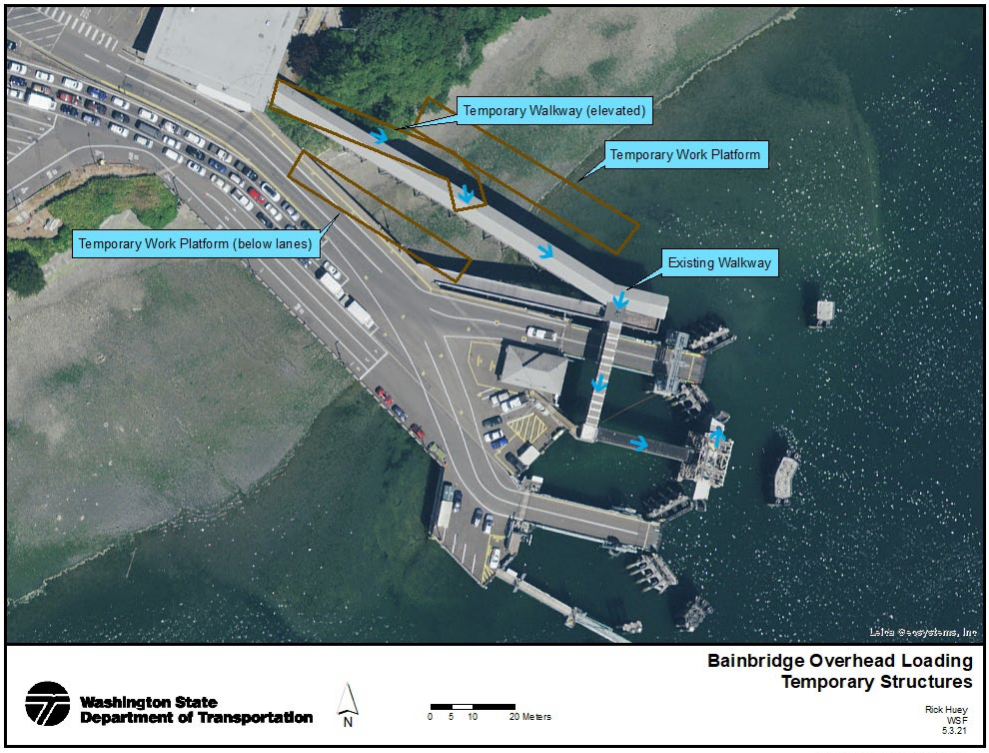

Figure 3-5 Bainbridge Overhead Loading Temporary Structures (not built)

Figure 3-1 Existing Timber Walkway to be Removed

4.0 Eagle Harbor Maintenance Facility Slip F Project Description

The purpose of the Eagle Harbor Maintenance Facility Project is to improve the maintenance efficiency of the facility. The facility has six vessel slips whose purpose is to maintain the Washington State Ferry system's vessels.

A new vehicle drive-on slip will be constructed to reduce maintenance delays, and provide more flexibility in accomplishing the various maintenance activities on the vessels that is crucial to making the WSF system as reliable as possible.

4.1 Project Elements

The locations of the Eagle Harbor Maintenance Facility project elements are shown in Figure 4-1.

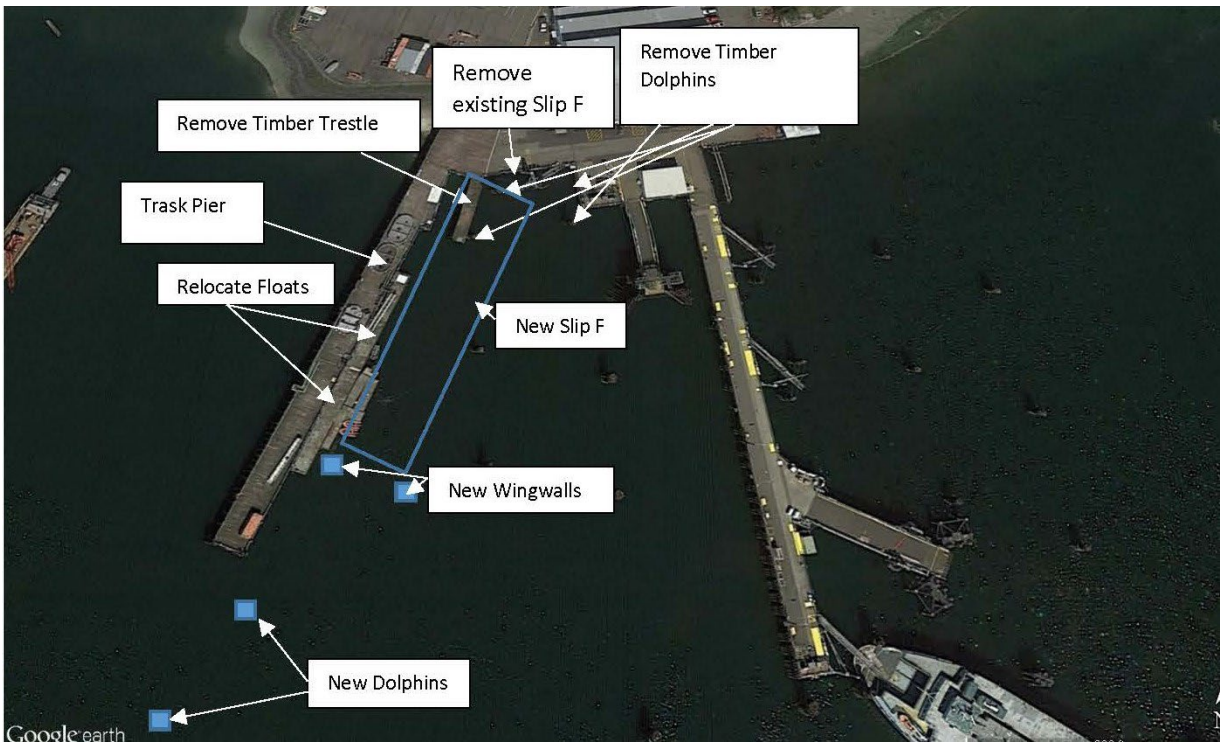

Figure 4-1. Locations of project elements at the Eagle Harbor Maintenance Facility

All project elements have been completed as described in the IHA application. The new trestle and transfer span, wingwalls and dolphin piles are installed. The timber walkway, timber dolphins and U-Float have been removed.

5.0 Bainbridge and Eagle Harbor Project Monitoring Summary

For the Bainbridge project, there were 33 days of monitoring for vibratory driving or removal of piles, and impact driving of piles. Vibratory removal/driving took place over 23 days. Impact driving took place over 16 days. On some days there was a mix of vibratory and impact driving. On other days just one or the other method was used.

For the Eagle Harbor project, there were 22 days of monitoring for vibratory driving or removal of piles, and impact driving of piles. Vibratory removal/driving took place over 20 days. Impact driving took place over 3 days. On some days there was a mix of vibratory and impact driving. On other days just one or the other method was used.

A summary sightings, pile types, installation dates, vibratory durations and impact strikes for the Bainbridge project is included as Attachment A. The same information for the Eagle Harbor project is included as Attachment B. Both projects were under one IHA permit, so takes were combined for both projects and summarized in Table 5-2.

5.1 Mitigation

Mitigation for the Bainbridge project included seven shutdowns for harbor seal and seven for harbor porpoise that approached injury shutdown zones. There were 10 shutdowns for Southern Resident killer whale that approached the Level B vibratory zone. No change in behavior was noted for these species during shutdowns. There were no weather or visibility stoppages.

Mitigation for the Eagle Harbor project included one shutdown for harbor seal that approached injury shutdown zones. No change in behavior was noted for the harbor seal during shutdowns. There were no weather or visibility stoppages.

5.2 Dead Marine Mammal Notifications

On December 2, 2022, PSOs for the Bainbridge project reported a dead sea lion (discovered at 9:44 am) and a dead harbor seal (discovered at 9:58 am). The Stranding Network was notified the same day, and NOAA OPR was notified on December 6, 2022.

Both animals were far from the ferry terminal construction site, and had clearly been dead for a while. The sea lion was located near Colman Dock in Seattle, and the seal was located mid-channel between Seattle and Bainbridge Island.

On January 4, 2023, at 12:45 a PSO for the Eagle Harbor project reported a dead porpoise/dolphin (too decomposed to identify which) mid-channel between Seattle and Bainbridge Island. The Stranding Network was notified the same day. NOAA OPR was not notified until this report, as the information was not shared with the lead WSF monitor.

There is no reason to believe that the death of these animals was related to the Bainbridge or Eagle Harbor projects.

5.3 Monitoring and Take Results

Observations, permitted take, and take used for both projects are provided in Tables 5-1 and 5-2. Because both projects were under one IHA, reporting is not divided by project. The marine mammal monitoring plan, and sightings data, including behavioral observations, are provided as separate attachments.

One unidentified dolphin or porpoise, five unidentified pinnipeds and one unknown animal were observed. For this report, it is assumed that these individuals were the most common of these animals, or one harbor porpoise and six harbor seals. These animals have been included in Table 5-1 maximum number and best estimate observation counts.

Only one unidentified pinniped was in a take zone (Level B) during active pile driving. All other unidentified individuals, were observed when no pile driving or removal was taking place, or were outside of active take zones. Individuals that are noted as possibly a duplicate (70-90% certainty), or a duplicate (90-100% certainty) have been eliminated from Table 5-2 counts.

Table 5-1. Observations

Species	Minimum Number	Maximum Number	Best Estimate
Harbor Seal	556	562	562
Elephant Seal	0	0	0
California Sea Lion	139	139	139
Steller Sea Lion	13	13	13
Transient Killer Whale	9	9	9
Gray Whale	0	0	0
Humpback Whale	1	1	1
Minke Whale	2	2	2
Harbor Porpoise	35	36	36
Dall's Porpoise	0	0	0
Bottlenose Dolphin	0	0	0
Southern Resident killer whale	34	34	34
Pacific White-sided Dolphin	0	0	0
Unidentified dolphin/porpoise[1]	1	1	1
Unidentified pinniped[2]	6	6	6

[1]included as a harbor porpoise in maximum number and best estimate observations
[2] included as a harbor seals in maximum number and best estimate observations

Table 5-2. Authorized Take and Take Used

Species	Authorized Level A	Level A Used	Authorized Level B	Level B Used
Harbor Seal	183	26	3,450	200*
Northern Elephant Seal	0	0	20	0
California Sea Lion	0	0	621	57
Steller Sea Lion	0	0	360	3
Transient Killer Whale	0	0	120	0
Gray Whale	0	0	40	0
Minke Whale	0	0	40	1
Harbor Porpoise	25	0	481	0
Dall's Porpoise	10	0	40	0
Bottlenose Dolphin	0	0	40	0
Long-Beaked Common Dolphin	0	0	40	0
Pacific White-sided Dolphin	0	0	40	0

*one unidentified pinniped counted as harbor seal Level B take

5.4 Data Collection

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

Table 5-3. 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

Appendix A

Bainbridge Overhead Loading Sightings and Pile Information

(*provided as a separate file*)

Appendix B

Eagle Harbor Slip F Sightings and Pile Information

(provided as a separate file)

Appendix C

Marine Mammal Monitoring Report

(provided as a separate file)

Appendix D

Bainbridge/Eagle Harbor IHA Permit

(provided as a separate file)