WASHINGTON STATE PARKS AND RECREATION COMMISSION
OLGA DOCK REPLACEMENT

MARINE MAMMAL MONITORING PLAN

PREPARED BY:

FARALLON CONSULTING, L.L.C. DBA GRETTE ASSOCIATES
2709 JAHN AVE, SUITE H5
GIG HARBOR, WASHINGTON 98383
(253) 573-9300

AUGUST 28, 2025; REVISED MARCH 26, 2026

1. INTRODUCTION

This Marine Mammal Monitoring Plan (MMMP) was developed to detect the presence of Endangered Species Act (ESA)- and Marine Mammal Protection Act (MMPA)-listed marine mammals (ESA: Southern Resident killer whales [SRKW] and humpback whales; MMPA: all other cetaceans, pinnipeds, and sea otters; "listed marine mammals" hereafter) before and during pile removal and installation at Olga State Park, Orcas Island, Washington. This MMMP will be implemented in connection with the Olga Dock Replacement Project (Project) on behalf of the Washington State Parks and Recreation Commission (State Parks).

Vibratory pile driving and removal, impact driving, and/or rock drilling for the Project will occur at one location (Figure 1 and Figure 2). The Project includes the following in-/over-water work elements. Please note, this Project is in the early design phase, so demolition components were measured in Google Earth and installation components are best conservative estimates:

Removal

- Twenty-six (26) 12-16-inch diameter creosote-treated timber pile at the moorage facility
- Fourteen (14) 16-inch creosote treated timber pile within the intertidal zone but not structurally connected to the existing pier
- One (1) 270' x 6' timber fixed pier walkway
- One (1) 30' x 4' wide aluminum gangway
- One (1) 100' x 12' wide timber float (assuming creosote decking)

Installation

- Twenty (20) 16-inch diameter galvanized steel pipe pile and associated substructures for the moorage facility,
- One (1) 240' x 6' aluminum fixed pier walkway
- One (1) 80' x 6' wide aluminum gangway
- One (1) 100' x 12' galvanized steel floats

2. VISUAL SURVEY METHODS

Visual observations will be used to detect the presence of listed marine mammals. Due to the surface behavior of these marine mammals, it is possible to locate, identify, and follow marine mammal species using binoculars and other optical equipment. The largest monitoring zone extends approximately 15,849 meters (m) to the south/southwest of construction activity (Figure 2). Monitoring of the area of potential impacts will be conducted using binoculars (10 x 42 or similar) and the naked eye.

We propose the following measures to prevent disturbance to listed marine mammals within the observation area:

1) Qualified observers will be present at all times during pile driving activities. In order to be considered "qualified," the observers will meet the list of qualifications for marine mammal observers (Section 3).
    a. Vibratory removal and impact pile driving: One observer will be stationed on the shoreline adjacent to the work area, at an elevated location with a good vantage point of East Sound. The monitoring zone for vibratory removal is 1,585 m (Figure 2). The largest monitoring zone for impact pile driving is 295.2 m (Figure 1).

b. Vibratory pile driving: The area of ensonification will be monitored by two qualified observers. One observer will be stationed on the shoreline at Olga County Park to the east of the work area, at an elevated location with a good vantage point of East Sound. A second observer will be stationed on a vessel to monitor the second half of the monitoring zone. The largest monitoring zone for vibratory pile driving is 6,310 m (Figure 2).

c. Rock drilling: Because of the forked nature of the Zone of Influence (ZOI), the area of ensonification will be monitored by six qualified observers. One observer will be stationed on the shoreline at Olga County Park to the east of the work area, at an elevated location with a good vantage point of East Sound. A second observer will be stationed on a vessel to monitor the quarter of the monitoring zone extending southwest of the work area in East Sound. A third observer will be stationed at the Upright Channel Recreation Site looking west to monitor the portion of the monitoring zone west of Lopez Island. A fourth observer will be stationed at San Juan Channel, Beach 298 looking west to monitor the southwestern quarter of the monitoring zone west of Lopez Island. A fifth observer will be stationed at Frost Island, Beach 318 looking east to monitor the portion of the monitoring zone east of Lopez Island. The sixth observer will be stationed at the Center Island Recreation Site looking west to monitor the southern quarter of the monitoring zone east of Lopez Island. The largest monitoring zone for rock drilling is 15,849 m (Figure 2).

2) Observer(s) will contact the Orca Network by phone (1-866-672-2638) or by checking their Facebook page (per their recommendation) before vibratory or impact pile driving or rock drilling work begins for the day to get an update on the latest SRKW sightings data.

3) The observer will scan the visible waters within the potential impact area using binoculars (10 x 42 or similar) and the naked eye.

4) The waters of the largest zone for the applicable activity will be scanned for 30 minutes prior to and during all pile driving/removal activities. If listed marine mammals enter or are observed within the designated shutdown during the 30-minute clear, the observer(s) will notify the designated point of contact (inspector or contractor) and work will either be delayed until the zone is clear, or, if there are take allotted for the species, work may be allowed to begin and a take will be recorded. The radius of the shutdown zone will differ by project, by functional hearing group, and by number of allowable Level B take and will be specified in the project-specific MMMP. The applicable monitoring zone will be considered clear when animals have not been sighted within the designated radius for 30 minutes, or when they are observed outside the radius.

5) Monitoring will continue for 30 minutes after operations have ceased, when visibility allows, to assess post-construction activity of marine mammals in the area.

6) A shutdown will be called and shutdown procedure (as described above) followed if either SRKW or humpback whales (ESA-listed species) enter the Level B take ZOI.

7) If an animal with allotted take occurs within the Level B take ZOI for that species but not approaching the Level A shutdown zone, a "take" will be recorded on the data sheet and work will be allowed to continue without disruption. Behavior of the animal will be monitored and documented.

8) If total recorded take numbers reach total allowed take for a species, shutdown procedures will be implemented for the Level B ZOIs for that species. If take numbers for a species are approaching total allowed take, State Parks will consult with the National Oceanic and Atmospheric Administration (NOAA) Office of Protected Resources (OPR) to ascertain if an increase in issued take may be permitted. If an increase in issued take is approved by NOAA OPR, shutdowns will not be implemented for Level B ZOIs for that species until, and if, the revised issued take is expended.

9) The entirety of the largest monitoring zone must be visible to clear for operations. If visibility does not allow for clearing of the entire zone, start of operations must be delayed until the zone is visible. If vessels are being used, it is acceptable to traverse the monitoring zone until the entire monitoring zone has been observed. Once operations have commenced, if visibility of the injury zone is lost, operations must cease until visibility is restored. If visibility of the behavioral disturbance zone is lost due to weather, operations may continue as long as there is not a break in operations longer than one hour. If no noise has been introduced to the water from operations for longer than one hour, the zone must be cleared again prior to commencing work. If impact driving, a soft start will be used. Operations will not occur after dusk, except when approved by the agencies.

10) If impact hammer driving, a soft start will be used.

11) Operations will not occur after dusk, except when approved by the permitting agencies.

3. MINIMUM QUALIFICATIONS FOR MARINE MAMMAL OBSERVERS

Marine mammal monitors must be independent; however, a qualified third party hired by the Contractor is acceptable. Marine mammal monitors employed to implement the proposed MMMP shall meet the following minimum qualifications:

1) 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.

2) Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience); at least one observer must have prior experience working as an observer. Observers will submit curriculum vitae for National Marine Fisheries Service (NMFS) approval.

3) Experience or training in the field for identification of listed marine mammals.

4) Sufficient training, orientation or experience with the construction operation to provide for personal safety during observations.

5) Writing skills sufficient to prepare a report of observations that would include such information as the number and type of listed marine mammals observed; the behavior of listed 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 listed marine mammals were present at or within the defined disturbance zone; dates and times when in water construction activities were suspended to avoid incidental harassment by disturbance from construction noise; etc.

6) Ability to communicate orally, by radio or in person, with Project personnel to provide real time information on listed marine mammals observed in the area as necessary.

4. DATA COLLECTION

Observers will use the NMFS-approved Observation Records template for each day and monitoring location. At a minimum, the following data will be collected during monitoring:

- Effort Data
    - Dates and times when observations were conducted
    - Dates and times when in water construction activities were conducted
    - Weather conditions during observation periods (e.g., cloud cover, visibility, sea state)
- Sightings Data:
    - Species, number, and sex/age, if known, of listed marine mammals observed (if known resight, note that)
    - Dates, times, and locations (best guess latitude/longitude or proximity to identifiable landmark) for all marine mammal observations
    - Distance of marine mammal(s) from pile removal or driving activities
    - Distance of marine mammal(s) from observer post
    - Behavior of observed marine mammals, including bearing, direction, and speed of travel and any observed changes in behavior (include time of change and construction activity occurring at time of change, if noted)
    - Dates and times when marine mammals entered the Level B ZOI
    - Tally of Level B take incurred
    - Dates and times when in-water construction activities were suspended to avoid Level A take from construction noise
    - Other human activity occurring in the area.

5. MONITORING ZONES

Figure 1. Project area, location of pile installation (beige dot), monitoring zones, and proposed observer location (yellow star) for impact pile driving operations.

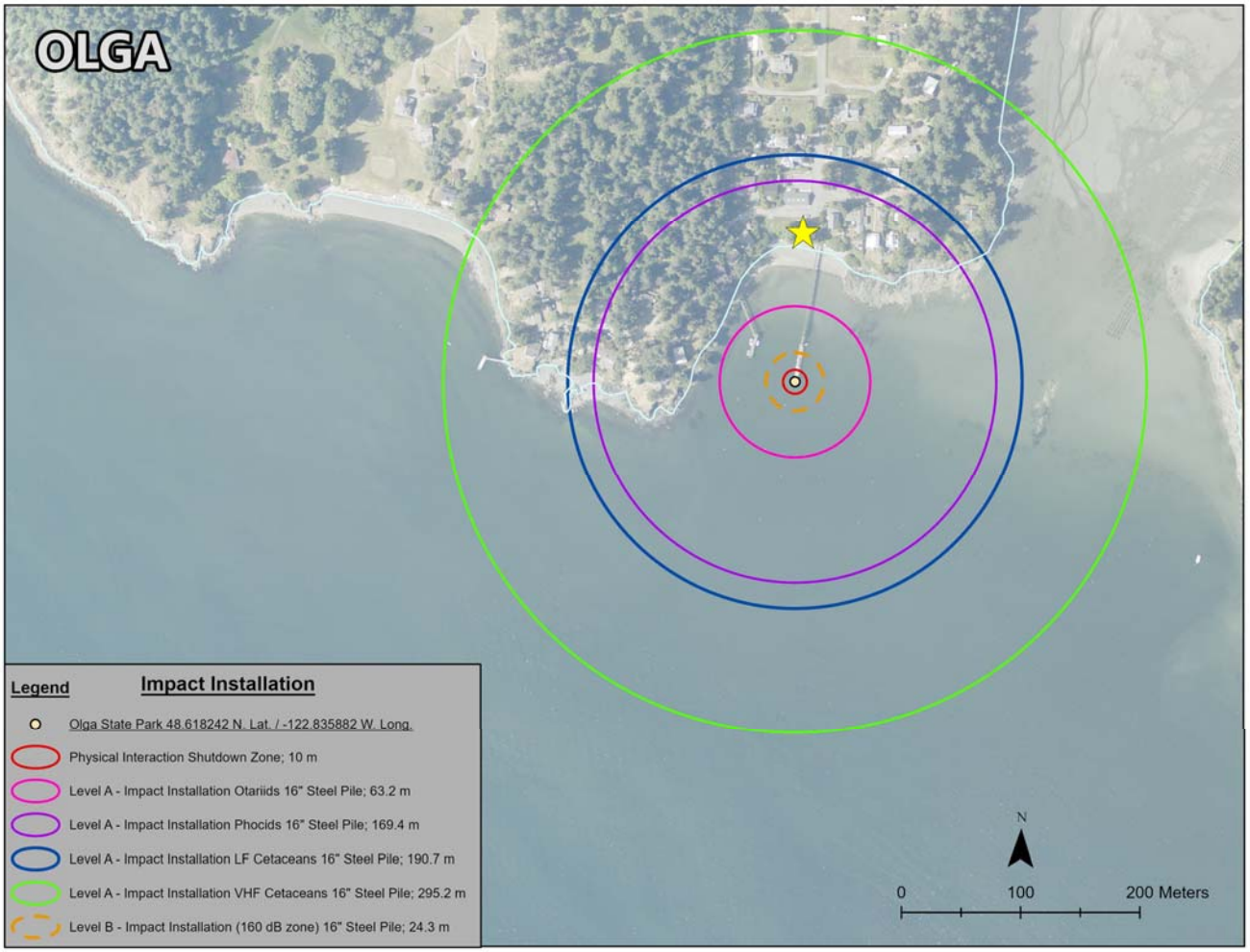
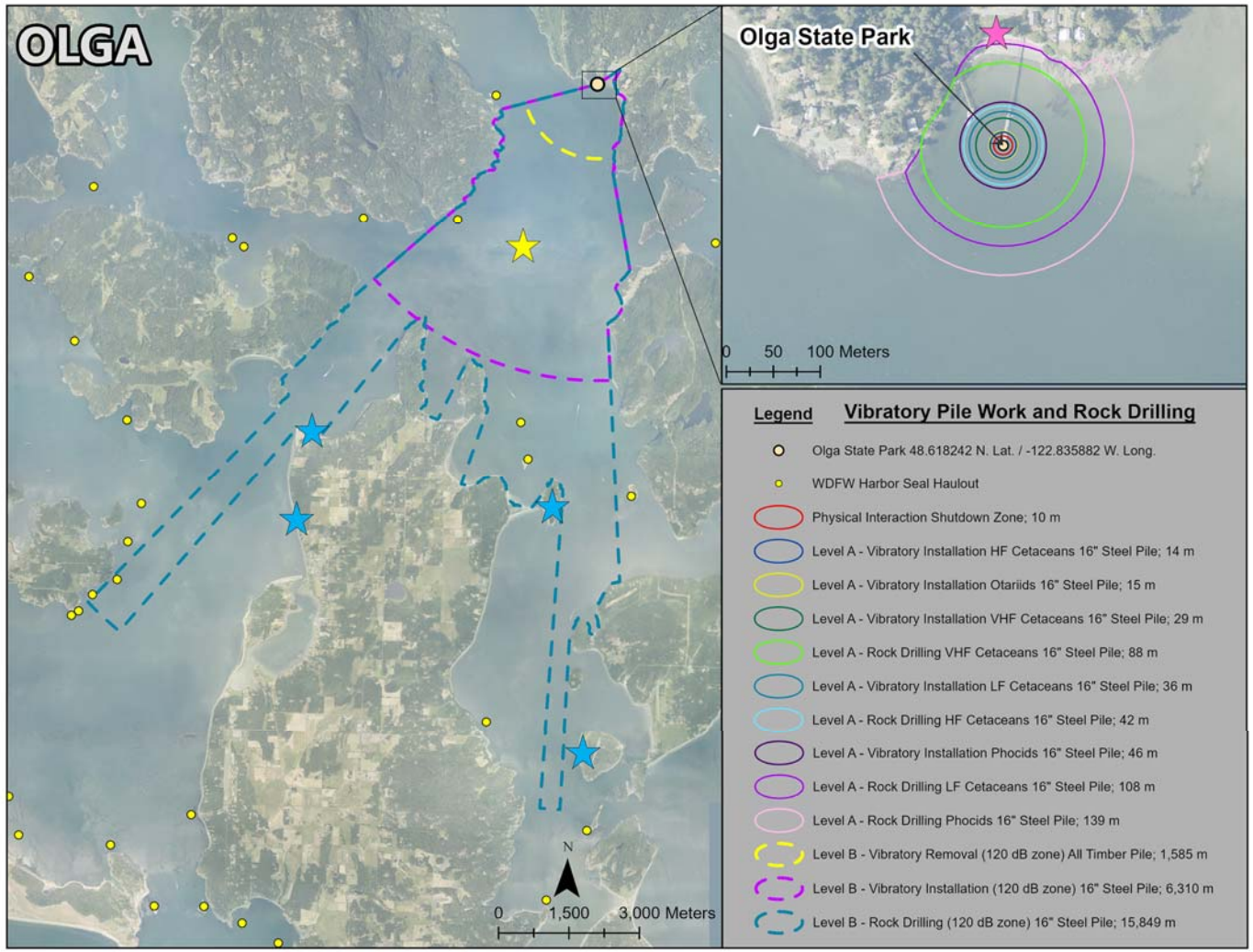
Figure 2. Project area, location of pile removal and installation (beige dot), and monitoring zones for vibratory removal (dashed yellow polygon) and installation (dashed purple polygon) and rock drilling (dashed blue polygon). Proposed observer locations are also shown for vibratory removal (pink star) and installation (pink and yellow stars) and rock drilling (pink, yellow, and blue stars).