Appendix B
Marine Mammal Monitoring Report

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ANCHOR QEA

Memorandum

February 4, 2025

To: Morgan O'Rourke-Ligget, U.S. Army Corps of Engineers

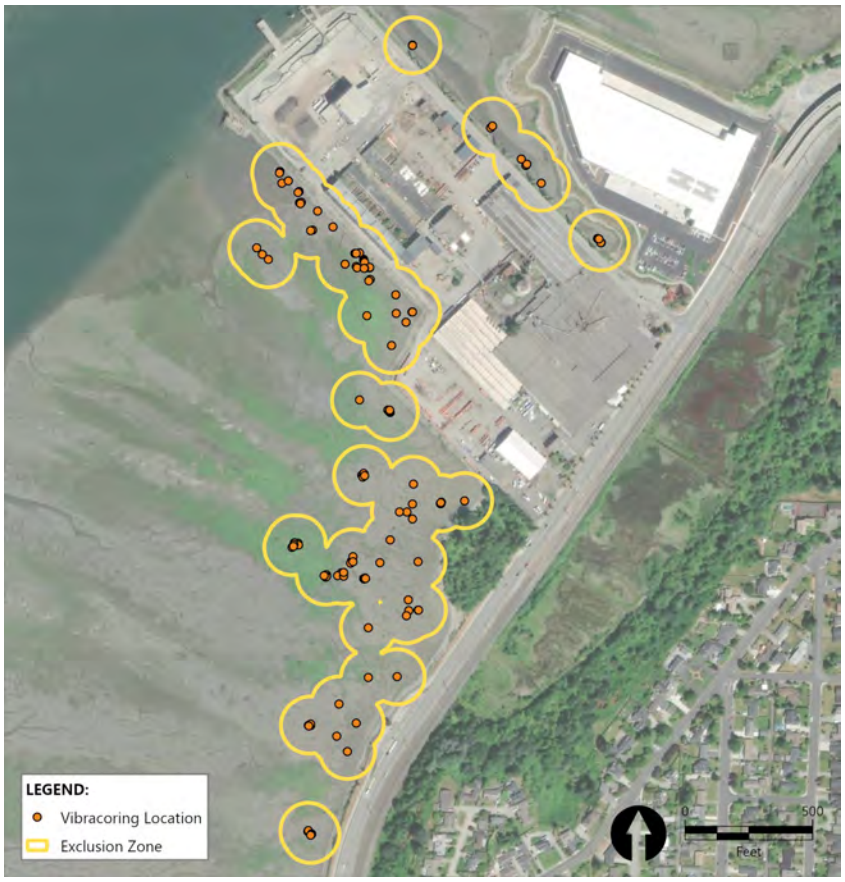
From: Michelle Havey and Lincoln Baxter, Anchor QEA

cc: Eric Rapp, JELD-WEN

Re: JELD-WEN Pre-Design Investigation Marine Sediment Sampling (NWS-2023-872)
ESA-Listed Marine Mammal Monitoring Report

This report provides the marine mammal monitoring results for the JELD-WEN Pre-Design Investigation Marine Sediment Sampling (Project). The JELD-WEN cleanup site is located Port Gardner Bay in Everett, Washington (Figure 1). In compliance with the Endangered Species Act (ESA), marine mammal monitoring was conducted during all in-water vibracore sampling activities for the Project, which occurred over three mobilizations in the summer of 2024.

Figure 1
Project Location and Monitoring Zones



Marine Mammal Monitoring Methods

Marine mammal monitoring methods and protocols were established per agency guidelines and permits, based on information in the following documents:

- *JELD-WEN Pre-Design Investigation Marine Sediment Sampling Marine Mammal Monitoring Plan (provided in Attachment A)*
- *Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts* (NMFS 2018)

Under ESA Section 7 consultation, the Project is required to monitor for four listed species of the five functional hearing groups (see Attachment A for details):

- High-Frequency Cetaceans (Porpoises): No applicable species for this Project
- Mid-Frequency Cetaceans (Dolphins and Whales): Southern Resident killer whale Distinct Population Segment (*Orcinus orca*)[1]
- Low-Frequency Cetaceans (Whales): Humpback whale (*Megaptera novaeangliae*) and gray whales (*Eschrictius robustus*)
- Otariid Pinnipeds (Sea Lions/Eared): Stellar sea lion (*Eumetopias jubatus*)
- Phocid Pinnipeds (Seals/Earless): No applicable species for this Project

No Incidental Harassment Authorization was required for the Project. Therefore, the monitoring area was composed of the Exclusion Zone, inclusive of both the permanent threshold shift and behavioral shift zones for each applicable hearing group. Thresholds for vibratory (i.e., non-impulsive) behavioral disturbance to marine mammals are set at 120 dB RMS or background sound, whichever is greater. There are no available background measurements at the Site; therefore, a background sound level of 120 dB is assumed for this Site. Using a Practical Spreading Loss Model for underwater noise transmission, underwater sound levels from vibracoring are expected to attenuate to this background level within 33 meters (108 feet) of each vibracore sampling location (Table 2). Therefore, a radius of 33 meters around each vibracore sample location will be used as the exclusion zone for ESA-listed marine mammals. The Exclusion Zone was composed of areas where a Stop Work Order was to be issued if species were present (Table 1, Figure 1). Marine mammals were closely monitored within and beyond the Exclusion Zone; if killer whales, gray whales, humpback whales or Steller sea lions were observed, a Stop/Change/Delay Work would be initiated. The Exclusion Zone

[1] Because differentiating between ESA-listed Southern Resident killer whales and non-listed transients in the field requires intimate knowledge of the individuals, a shutdown will be called for any killer whale sighting until it can be confirmed that the animals are transients and not Southern Resident killer whales.

was established for each hearing group based on the type of in-water sample collection activities (Table 1, Figure 1), including the following:

- Vibracoring to obtain sediment core samples

Table 1
ESA-Listed Marine Mammal Exclusion Zone

Marine Mammal Hearing Group	Permanent Threshold Shift			Behavioral Shift		
	Volume (dB)	Isopleth Distance (m)	Isopleth Distance (ft)	Volume (dB)	Isopleth Distance (m/km)	Isopleth Distance (ft/mi)
Low-frequency (gray and humpback whales)	199	0.0	0.1	120	33 m/ 0.033 km	108.3 ft/ 0.0205 mi
Mid-frequency (Southern Resident killer whales)	198	0.0	0.0			
Otariids (Steller sea lion)	219	0.0	0.0			

Notes:
dB: decibel
ft: foot
km: kilometer
m: meter
mi: mile

Monitoring was performed in accordance with the Marine Mammal Monitoring Plan (Attachment A) by one qualified Protected Species Observer (PSO). The PSO monitored from the sampling vessel, a 27-foot aluminum boat equipped with a VHF radio, depth sounder, and GPS, over the course of the Project. Due to the small size of the exclusion zone, the entire monitoring area for each sampling location could effectively be monitored from the vessel by one observer. Sun glare commonly presented a slight reduction in monitoring efficacy, however the PSO is confident no potential observations were missed as a result.

A qualified PSO from Anchor QEA used their naked eye along with binoculars to scan the monitoring zone and beyond for the presence of listed marine mammals during vibracore sampling activities. The PSO checked Orca Network before vibracore sampling work began to get an update on recent ESA-listed species sighting data. The PSO scanned the waters 20 minutes prior to pile driving activities to "clear" the Exclusion Zone and continued to monitor during all vibracore sampling activities. Observations and positions of marine mammals were recorded on Rite-in-The-Rain data collection forms. The following data were collected:

- Date
- Time monitoring activity begins and ends
- PSO name and monitoring location
- Sampling activity during monitoring period
- Weather conditions and environmental conditions, including any notes on conditions that could deter or prevent marine mammal detections
- Number and species of listed marine mammals observed and sex and age class, if possible
- Time, duration, and location of listed marine mammals observed

- Observable species behavior during vibracore sampling activities
- vibracore sampling activities taking place during monitoring
- Distances from vibracore sampling activities to marine mammals
- Communication between the observers and the contractor or client
- Reason a Stop Work Order was or was not initiated, if applicable

Vessel Marine Mammal Monitoring Results

Marine mammal monitoring during vibratory sediment sample collection was performed by a qualified PSO from Anchor QEA during three separate mobilizations: June 4 to June 6, July 17 to 21, and August 19 to 20, 2024 (Table 2). Vibracore sampling activity occurred off and on throughout the monitoring period, with breaks in sampling activity ranging from fewer than 10 minutes to an hour. A total of 83 locations were sampled across the three mobilizations. All vibracore sampling activity occurred during daylight hours. Daily activity logs can be found in Attachment B.

Table 2
Dates and Times of Vibracore Sampling Activity

Date	Start Time	End Time[1]	Total Approximate Time (minutes)	Activity
6/4/2024	15:12	19:18	34	Vibracore sample collection
6/5/2024	15:32	19:42	33	Vibracore sample collection
6/6/2024	16:20	19:42	39	Vibracore sample collection
7/17/2024	14:59	18:47	74	Vibracore sample collection
7/18/2024	15:13	19:45	75	Vibracore sample collection
7/19/2024	15:53	19:45	71	Vibracore sample collection
7/20/2024	16:14	19:20	50	Vibracore sample collection
7/21/2024	16:38	18:49	39	Vibracore sample collection
8/19/2024	16:25	19:57	36	Vibracore sample collection
8/20/2024	15:13	17:14	20	Vibracore sample collection

1. All vibracore sampling activity occurred within daylight hours
Note: Approximate times are listed because the hammer was operating intermittently.

During the Project, no listed marine mammal species were observed during the monitoring period. Daily monitoring forms can be found in Attachment B.

Stop Work Initiation

A total of one workday was impacted by work delays and shutdowns. Sampling was not initiated as a precaution for excessive wind conditions on June 3. The shutdown was initiated by the contractor at 11:12, prior to mobilization of the PSO, and lasted the entire day.

JELD-WEN Sediment Sampling Project Supporting Details

The Marine Mammal Monitoring Plan is provided as Attachment A. Detailed data collected during monitoring (daily activity logs and daily monitoring forms) are presented in Attachment B.

Reference

NMFS (National Marine Fisheries Service), 2018. *Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts*. Office of Protected Resources, National Marine Fisheries Service. NOAA Technical Memorandum NMFS-OPR-59. April 2018.

Attachment A
Marine Mammal Monitoring Plan

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ANCHOR QEA

Memorandum

March 8, 2024

To: Morgan O'Rourke-Liggett, U.S. Army Corps of Engineers

From: Nathan Soccorsy, Anchor QEA

cc: Eric Rapp, JELD-WEN

Re: JELD-WEN Pre-Design Investigation Marine Sediment Sampling (NWS-2023-872); Compliance with the Salish Sea Nearshore Programmatic Consultation Requirements

JELD-WEN is proposing to conduct time-sensitive pre-design marine sediment sampling to support proposed remedial activities at the JELD-WEN cleanup site at Port Gardner Bay in Everett, Washington (NWS-2023-872). Sampling activities include collecting approximately 55 core samples via boat-based vibracore methods and approximately 40 surface sediment grab samples.

The purpose of this memorandum is to provide supplemental information to support Endangered Species Act (ESA) consultation as requested by the U.S. Army Corps of Engineers (USACE). Remediation of the site is necessary to address contaminated sediments as required by the Washington state Model Toxics Control Act (MTCA) and Sediment Management Standards. The Washington State Department of Ecology (Ecology) and JELD-WEN entered into an Agreed Order for site cleanup in 2008, and a second amendment to the Agreed Order was issued in 2023, detailing design and permitting requirements. Ecology supports expedient review of the marine sediment sampling application materials to maintain its anticipated cleanup timeframe at this site (Exhibit A). A prolonged permit review process will delay the removal of contaminated sediments from the site.

The sediment sampling area is located on the intertidal mudflats of Port Gardner Bay (an embayment of Puget Sound) near the confluence of the Snohomish River (see figures in Exhibit B). It is separated from the bay by the Snohomish River federal navigation channel and Jetty Island. Numerous derelict piles and a remnant barge structure are present at the sampling area. The intertidal area may be used for recreational and tribal purposes, while the subtidal areas in the general vicinity of the project are used for commercial vessels for fishing, cargo transport, and water recreation. Sediment sampling activities are not anticipated to affect existing uses of the site.

The following sections first provide additional information about the proposed sediment sampling methods, then summarize how these activities will comply with the requirements of the National Marine Fisheries Service (NMFS) ESA Salish Sea Nearshore Programmatic Consultation (SSNP).

Description of Proposed Sampling Methods

Marine sediment sampling is necessary to further characterize the sediments and refine the cleanup design as specified in the Final Cleanup Action Plan.[1] The figures in Exhibit B show the proposed sampling area boundaries. The sediment samples will be collected and submitted to an accredited laboratory for testing of contaminants and other characteristics. The results will inform the locations and details of cleanup efforts as part of the ongoing site cleanup design activities being directed by Ecology under MTCA.

No sampling will occur within the small, fringing estuarine wetlands located in the upper intertidal zone (Exhibit B, Figure 3). All sampling is expected to be completed within a few weeks, depending on tidal conditions, following agency approval.

Boat-Based Sampling

Approximately 55 vibracore and 40 grab samples are proposed to be obtained from a boat using the methods discussed below.

Vibracore Sampling

A vibracore sampler essentially consists of a tube up to 4 inches in diameter that is deployed from the bow of a boat using an A-frame and winch assembly. Cores will range from 2 to 15 feet deep below the surface. Boat-based core sampling will need to be completed during high tide to allow boat access due to the limited draft depth on the tide flats. The boat captain navigates the vessel as close as possible to the target sampling location using an onboard differential global positioning system (DGPS). Once in position, the vibracore unit is deployed into the water, energized, and vibratory-driven to target sediment penetration depth or refusal. Once target penetration depth or refusal occurs, DGPS coordinates are taken and the vibracore is turned off and returned to the surface. The sediment core is removed from the vibracore tube and processed for submittal to a laboratory. Obtaining each vibracore sample requires approximately 1 to 5 minutes of vibracore operation. It does not require any impact hammering at any time.

Grab Sampling

Grab sampling involves the use of a Van Veen or comparable clamshell-type grab sampler that is hydraulically activated. As with vibracore sampling, the boat captain navigates the vessel as close as possible to the target sampling location using onboard DGPS. The grab sampler is lowered over the side of the boat using a winch and davit connected to a cable at an approximate speed of 0.3 foot per second. The sampler is weighted as necessary to help achieve the target penetration depth and

[1] Washington State Department of Ecology, 2023. Final Cleanup Action Plan, Jeld Wen Site, 300 West Marine View Drive, Everett, Washington 98201. Issued by Toxics Cleanup Program. August 2023. Available at: https://apps.ecology.wa.gov/cleanupsearch/site/4402#site-documents

sample acceptance criteria. The sampler is retrieved aboard the vessel and the sediment sample removed and processed for submittal to a laboratory. Obtaining each grab sample typically requires less than a minute of sampler operation. This sampling method does not require any impact or vibratory hammering.

Noise Considerations

Exhibit C provides information about anticipated underwater and in-air sound levels resulting from the proposed sampling activities. Noise resulting from grab sampling is likely to be similar to or less than that from operation of the sampling boat and other vessels in the area; therefore, only vibracoring is considered here.

Underwater Noise

Federally listed salmonids, marine mammals, and foraging marbled murrelets may be present in the vicinity of the proposed sampling activities, and USACE has expressed concern that underwater noise from vibracoring could affect these species.

To penetrate seafloor sediments, the vibracore barrel or tube is vibrated by a pneumatic or electric vibrahead, resulting in local liquefaction of sediment along the core barrel surface and facilitating penetration into the sediment. Vibrations combined with instrument weight drive the core barrel into the sediment/substrate. Some sound is likely to be radiated into the water column. Exhibit C provides a detailed evaluation of sound levels resulting from vibracoring. Underwater sound impacts on diving marbled murrelets or ESA-listed marine mammals or salmonids are unlikely to occur at the JELD-WEN site because of 1) the relatively high frequency, low underwater noise levels, short duration, and intermittent nature of vibracoring; 2) the limited area in which elevated sound levels are anticipated to occur; 3) and the shallow water in which sampling will occur (approximately 3 to 5 feet deep at high tide).

These conclusions are consistent with a 2020 Biological Opinion issued by NOAA Fisheries,[2] which concluded that vibracoring by the USACE for geotechnical surveys using a 4-inch drill would not result in underwater sound levels injurious to fish or marine mammals. Similarly, a 2021 NOAA Fisheries review of proposed offshore geotechnical surveys by the federal Bureau of Ocean Energy Management[3] concluded that: "Noise associated with geotechnical surveys [including vibracores and grab samples] is below the level that we expect may result in physiological or behavioral responses by any ESA-listed species considered here. As such, effects to listed whales, sea turtles, or fish from exposure to this noise source are extremely unlikely to occur."

[2] NOAA Fisheries, 2020. 2020 South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States (2020 SARBO). SERO-2019-03111. Revised July 30, 2020.

[3] NOAA Fisheries, 2021. Letter to Bureau of Ocean Energy Management regarding programmatic consultation for geophysical and geotechnical surveys in three Atlantic renewable energy regions. June 29, 2021.

In-Air Noise

Foraging marbled murrelets can be affected by in-air noise that masks their vocalizations. However, in-air noise resulting from vibracore operation will be short-term, intermittent, and much lower than noise associated with "typical" pile driving projects for which the U.S. Fish and Wildlife Service has determined that masking will not occur (see Exhibit C). Therefore, no effects on marbled murrelet foraging resulting from in-air noise during sampling are anticipated.

Compliance with SSNP Requirements

This section outlines the project's compliance with the SSNP Requirements for General Construction Measures (Table 1), Essential Fish Habitat (EFH) Conservation Recommendations (Table 2), and Project Design Criteria No. 14: Sediment Remediation (Table 3). Note that this evaluation only covers marine sediment sampling activities and is not intended to cover future remedial actions, which will be permitted separately. The lefthand column of each table lists the SSNP requirement, and the righthand column summarizes how the project complies with the SSNP requirement. USACE has indicated that completion of a SSNP Conservation Calculator is not required.[4]

[4] Email from Morgan O'Rourke-Liggett, U.S. Army Corps of Engineers, to Josh Jensen, Anchor QEA, "RE: NWS-2023-872; ESA_SSNP Consultation Information Request," January 31, 2024.

Table 1
Compliance with Salish Sea Nearshore Programmatic Consultation General Construction Measures

SSNP Requirement*	Compliance
1. Minimize Construction Impacts at Project Site. a. To the extent feasible, retain natural vegetation, limit impermeable surfaces, limit duration of in-water work and otherwise minimize the extent and duration of earthwork (e.g., compacting, dredging, drilling, excavation, and filling).	The proposed marine sediment sampling will not impact terrestrial or riparian vegetation. No eelgrass has been mapped at the project site. In-water sampling durations will be minimized to the extent practicable. All sampling is expected to be completed within a few weeks, depending on tide conditions.
2. In-Water Work Timing. a. Complete all work waterward of the line of the Highest Astronomical Tide (HAT) during dates listed in the most recent version of in-water work guidelines, Washington Department of Fish and Wildlife (WDFW) Marine Water Work Windows: https://app.leg.wa.gov/WAC/default.aspx?cite=220-660-330. b. Hydraulic and bathymetric measurement, sediment sampling, and geotechnical sampling are not constrained by the work timing constraints in (a) above and may be completed at any time.	Sediment sampling is not subject to in-water work windows, as stated in requirement 2.b.
3. Isolation of Concrete Work a. All concrete will be placed in the dry (e.g., isolated from water) or within confined waters (i.e., within a form or cofferdam) not connected to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water. Should new concrete technology develop which has a quicker curing rate, information must be provided as part of the project submittal and NMFS and USFWS will evaluate whether a shorter cure time will be no more impactful than the cure time evaluated in this Opinion.	Not applicable. No concrete work is proposed as part of the marine sediment sampling.
4. Fish Screens a. Whenever diverting or pumping surface water or water in an isolated work area, a fish screen that meets the most recent revisions of NMFS' fish screen criteria will be installed prior to and during pumping activities and will be maintained in a condition that prevents fish movement through the barrier. Fish screen criteria can be found in Chapter 11 of NMFS Anadromous Salmonid Fish Facility manual or most recent version (NMFS 2022): https://media.fisheries.noaa.gov/2022-06/anadromous-salmonid-passage-design-manual-2022.pdf. If at any time fish screens have damage, pumping activities and in-water work shall cease until damaged fish screens are repaired.	Not applicable. The proposed marine sediment sampling does not include diverting or pumping surface water or water in an isolated work area.

SSNP Requirement*	Compliance
5. Drilling, Boring, and Tunneling a. If drilling, boring, or tunneling are used, isolate drilling operations in wetted areas using a steel casing or other appropriate isolation method to prevent drilling fluids from contacting water.	Not applicable. The proposed marine sediment sampling will not require the use of drilling fluids.
b. If drilling through decking is necessary, use containment measures to prevent drilling debris from entering the water.	Not applicable. The proposed marine sediment sampling does not include drilling through decking.
c. Sampling and directional drill recovery/recycling pits, and any associated waste or spoils will be completely isolated from surface waters and wetlands.	No directional drilling is proposed. Core sampling (completed from a boat) will result in trace quantities of excess sediment.
d. All waste or spoils will be covered if precipitation is falling or imminent.	See response to requirement 5.c.
e. All drilling fluids and waste will be recovered and recycled or disposed of to prevent entry into the water.	See response to requirements 5.a and 5.c.
f. If a drill boring case breaks and drilling fluid or waste is visible in water or a wetland, make all possible efforts to contain the waste	See response to requirement 5.a.
g. All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be contained and then completely recovered and recycled or disposed of as necessary to prevent entry into any waterway. Use a tank to recycle drilling fluids.	See response to requirements 5.a and 5.c.
h. When drilling is completed, remove as much of the remaining drilling fluid as possible from the casing (e.g., by pumping) to reduce turbidity when the casing is removed.	See response to requirement 5.a.
i. Drilling, boring, or coring may be used to collect sediment samples/cores. Work at contaminated sites is addressed in PDC #14.	Table 3 summarizes compliance with the requirements of PDC 14 for sediment sampling.
6. Pile Installation a. Piles may be round concrete, steel pipe, untreated wood or some pressure-treated wood with appropriate wrapping (see below). Pressure-treated wood may be installed as described below. Piles must be 36 inches in diameter or smaller or steel H-pile designated as HP 24 inches or smaller.	Not applicable. The proposed marine sediment sampling does not include installing any piles.
b. Whenever practical, use a vibratory hammer for in-water pile installation.	See response to requirement 6.a.
c. Jetting may be used to install pile in areas with coarse, uncontaminated sediments that meet criteria for unconfined in-water disposal.	See response to requirement 6.a.

SSNP Requirement*	Compliance
d. When using an impact hammer to drive or proof a steel pile, one of the following sound attenuation methods will be used: (a) complete isolation from water by dewatering the area around the pile; (b) a double-walled pile; or (c) a bubble curtain that will distribute small air bubbles around the pile perimeter for the full depth of the water column during pile installation (see NMFS and USFWS (2006), CALTRANS Technical Report No. CTHWASSNP-RT306.01.01 (2015), Wursig et al. (2000), and Longmuir and Lively (2001)); or c) if water velocity is greater than 1.6 feet per second, the permittee will use a confined bubble curtain (e.g., surrounded by a fabric or sleeve) that will distribute air bubbles around 100% of the pile perimeter for the full depth of the water column during impact pile installation. New technologies that have demonstrated equivalent sound attenuation can be used if verified by USFWS.	See response to requirement 6.a.
e. To assist a permittee in determining biological monitoring needs during pile installation, an optional Pile Installation Calculator is available: https://www.fws.gov/library/collections/washingtonsection-7-consultation-technical-assistance-and-guidance. The tool aids in determining the extent of underwater noise impacts and distances. Construction activities will cease if marbled murrelets are observed within or entering a zone where pile driving noise is likely to cause injury.	See response to requirement 6.a.
f. No more than 8 piles may be driven on any day using impact pile driving.	See response to requirement 6.a.
g. Impact pile driving will not begin earlier than two hours after sunrise and will be complete at least one hour before sunset for the period from April 1 through September 30.	See response to requirement 6.a.
h. Complete all work waterward of the line of the Highest Astronomical Tide (HAT) during dates listed in the most recent version of in-water work guidelines, Washington Department of Fish and Wildlife (WDFW) Marine Water Work Windows: https://app.leg.wa.gov/WAC/default.aspx?cite=220-660-330	See response to requirement 6.a.
i. Hydraulic and bathymetric measurement, sediment sampling and geotechnical sampling are not constrained by the work timing constraints above and may be completed at any time.	Sediment sampling is not subject to in-water work windows, as stated in requirements 2.b and 6.i.
7. Marbled Murrelet Monitoring Plan a. The applicant will develop and implement a marbled murrelet monitoring plan for projects that include in-water impact pile driving when injurious sound pressure levels are expected or when in-air sounds are expected to cause masking effects.	The proposed marine sediment sampling does not include any impact pile driving (i.e., no impulsive underwater noise generation). Additionally, vibracoring produces less sound than even a "typical" vibratory pile driving project, which also includes impact proofing of 24-inch and 36-inch steel piles. "Typical" projects have been determined by USFWS to have insignificant masking effects.

SSNP Requirement*	Compliance
b. Applicants may request technical assistance from the USFWS while developing a Marbled Murrelet Monitoring Plan to ensure it meets requirements under the USFWS Protocol for Marbled Murrelet Monitoring During Pile Driving (further detail is provided in Appendix B of USFWS's Biological Opinion for this programmatic consultation). A plan must be submitted with the project notification.	See response to requirement 7.a.
c. Certified observers will visually monitor the monitoring area (area of potential injury) for marbled murrelets following the protocol. Protocol is provided in Appendix B of USFWS's Biological Opinion for this programmatic consultation.	See response to requirement 7.a.
d. An appropriate number of certified marbled murrelet observers will be positioned to provide adequate coverage of the monitoring area without looking farther than 50 meters to ensure no murrelets are in the monitoring area.	See response to requirement 7.a.
e. All monitoring will be conducted by observers meeting appropriate qualifications and certified by the USFWS.	See response to requirement 7.a.
f. One qualified biologist will be identified as the Lead Biologist. The Lead Biologist has the authority to stop pile driving when murrelets are detected in the monitoring area or when visibility impairs monitoring.	See response to requirement 7.a.
g. If murrelets are spotted in the monitoring area, pile driving will not resume until the murrelets have left the monitoring area and at least 2 full sweeps of the monitoring area have confirmed no murrelets are present. If visibility impairs monitoring, pile driving will not resume until effective monitoring can be conducted.	See response to requirement 7.a.
h. If weather or sea conditions restrict the observer's ability to observe for marbled murrelets, or become unsafe for the monitoring vessels to operate, cease pile installation until conditions allow for monitoring to resume. Monitoring will only occur when the sea state is at a Beaufort scale of 2 or less.	See response to requirement 7.a.
i. The Permittee will provide a summary of marbled murrelet monitoring results, including observation dates, times, and conditions; description of any "take" identified by the biologist, and seabirds found during beach surveys to USFWS.	See response to requirement 7.a.
8. Treated Wood Piles a. Inorganic arsenical pressure-treated wood piles (chromated copper arsenate (CCA) or ammoniacal copper zinc arsenate (ACZA)) that are sealed with a wrapping or a polyurea barrier may be installed under SSNP. Any proposal to use arsenical pressure-treated wood pilings without a wrapping or polyurea barrier systems is not covered by SSNP.	Not applicable. The proposal is for marine sediment sampling and does not include installation of any piles.

SSNP Requirement*	Compliance
9. Pile Removal – Intact	Not applicable. The proposal is for marine sediment sampling and does not include any pile removal.
10. Pile Removal – Broken or Intractable Pile	See response to requirement 9.
11. Treated Wood For Uses Other Than Piles	Not applicable. The proposal is for marine sediment sampling and does not include the use of treated wood.
12. Barge Use a. Barges will be large enough to remain stable under foreseeable loads and adverse conditions.	Not applicable. In-water sediment sampling will be completed from a boat and use of a barge is not proposed.
b. Barges will be inspected before arrival to ensure the vessel and ballast are free of invasive species if the barge has been used in any other waterbody.	The sampling boat will be inspected for invasive species and decontamination measures will be applied prior to use.
c. Barges will be secured, stabilized, and maintained as necessary to ensure no loss of balance, stability, anchorage, or other condition that can result in the release of contaminants or construction debris.	The sampling boat crew will follow safety measures so that no materials are released (see response to requirement 14.a).
d. Ensure the barge does not ground out.	Boat-based sediment core sampling will be completed during high tide to ensure the sampling boat does not ground out.
13. Stormwater Management a. Stormwater management, as described below, is required for PDC #3 and any other project that will create or prolong stormwater runoff discharging to a stream, river, estuary, or nearshore marine area when that proposed project: (1) Includes construction of new impervious surface that; (2) repairs or replaces existing impervious surface when the stormwater management at the site does not currently meet all the criteria identified below; or (3) prolongs the life of an existing impervious surface and the stormwater management at the site does not currently meet the all of the criteria identified below.	Not applicable. No changes to existing on-site stormwater systems are proposed as part of marine sediment sampling.
14. Pollution and Erosion Control a. Use site planning and site erosion control measures commensurate with the scope of the project to minimize damage to natural vegetation and permeable soils and prevent erosion and sediment discharge from the project site.	The following measures will be used to avoid and minimize potential impacts to Port Gardner Bay during sampling: • Estuarine wetlands will be avoided during sampling. • The sampling boat will be operated by a licensed captain and will not be allowed to ground out during sampling. Boat-based samples will be obtained during high tide. • Field crews will follow a health and safety plan for proper handling of all sediment samples, equipment decontamination, and disposal of any excess sediment.

SSNP Requirement*	Compliance
	• All sampling equipment will be clean and free of toxic materials or invasive vegetation (seeds or segments) prior to use in the water or sediment. These measures will minimize the potential for increased turbidity, exposure of contaminated sediments, and disturbance of wetlands or wildlife during sampling.
b. Before significant earthwork begins, install appropriate, temporary erosion controls downslope to prevent sediment deposition in the riparian area, wetlands, or water body. In tidal areas, plan work in dry areas as much as possible.	See response to requirement 14.a.
c. During construction: i. Complete earthwork in wetlands, riparian areas, and stream channels as quickly as possible. ii. Cease project operations when high flows may inundate the project area, except for efforts to avoid or minimize resource damage. iii. If eroded sediment appears likely to be deposited in the stream during construction, install additional sediment barriers as necessary. iv. Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric. v. Soil stabilization using wood fiber mulch and tackifier (hydro-applied) may be used to reduce erosion of bare soil, if the materials are free of noxious weeds and non-toxic to aquatic and terrestrial animals, soil microorganisms, and vegetation. vi. Inspect and monitor pollution and erosion control measures throughout the length of the project. vii. Remove sediment from erosion controls if it reaches one-third of the exposed height of the control. viii. Whenever surface water is present, maintain a supply of sediment control materials and an oil-absorbing floating boom at the project site. ix. Stabilize all disturbed soils following any break in work unless construction will resume within four days.	See response to requirement 14.a.
d. Remove temporary erosion controls after construction is complete and the site is fully stabilized.	See response to requirement 14.a.
15. Fish Capture and Release	Not applicable. Fish capturing will not be conducted as part of marine sediment sampling.

SSNP Requirement*	Compliance
PA #9 Marine Mammals a. In-water construction activities causing underwater noise greater than 120dBrms, such as pile driving, jackhammering, and underwater sawing, will shut down if marine mammals enter the zone of influence. See Program Administration (PA) Section 9 of the Biological Opinions for supporting information. Construction activities will not resume until all marine mammals have been cleared from the zone of harm and are observed to be moving away from the construction site.	See Exhibit C for underwater sound calculations and Exhibit D for the Marine Mammal Monitoring Plan, both of which include a confined (33-meter) exclusion zone where noise would be above 120 dB RMS during active vibracoring.
b. If Southern Resident Killer whales have been documented more than four times during the proposed work window in the quadrant the project area is in, a Marine Mammal Monitoring Plan (MMMP) must be prepared and submitted with the project notification. The MMMP will be reviewed by a NMFS biologist. The goal of a MMMP is to stop or not start work if a marine mammal is in the area where it may be affected by pile driving noise.	Southern Resident killer whales have been sighted in the vicinity throughout the year.[5,6] However, they are unlikely to be present in the confined exclusion zone due to shallow water depths. (Designated critical habitat includes waters at least 20 feet deep.) See Exhibit D for the Marine Mammal Monitoring Plan.
c. If in the previous two years there were four or more humpback whale sightings during the proposed work month, in the action area of the proposed work, a MMMP must be submitted with the project notification.	Humpback whales have been sighted in the vicinity.[5, 6] However, they are unlikely to be present in the immediate sampling area due to the confined exclusion zone and shallow water depths. See Exhibit D for the Marine Mammal Monitoring Plan.

*Source: General Construction Measures (GCM) and Essential Fish Habitat (EFH) Conservation Recommendations, Version: May 25, 2023, https://www.nws.usace.army.mil/Portals/27/docs/regulatory2/ESA/SSNP/GCMandEFH-ListOfRequirements-v20230523.pdf?ver=eNrQN3uDPXFuT_w7yRgr6w%3d%3d.

[5] Shannon & Wilson, 2019. Biological Assessment, Bay Wood Shoreline Interim Cleanup and Restoration, Everett, Washington. Prepared for Port of Everett. September 2019.

[6] Orca Network, 2023. Sightings Report Summary Archives. Available at: https://indigo-ukulele-jm29.squarespace.com/sightings-report-archive

Table 2
Compliance with Essential Fish Habitat Conservation Recommendations

Requirement*	Compliance
1. All projects resulting in a loss of eelgrass habitat, are required to follow eelgrass mitigation monitoring requirements put forth in the Washington Department of Fish and Wildlife "Eelgrass/Macroalgae Habitat Interim Survey Guidelines" unless it conflicts with Seattle District Corps guidelines, in which case the Corps guidelines apply.	No eelgrass has been mapped at the project site. The proposed marine sediment sampling would not result in a loss of eelgrass habitat and no mitigation is proposed.
Mooring Anchors and Persistently Moored Vessels	
2. All new moorings buoys should be anchored in areas where SAV (e.g., eelgrass, kelp) habitat is absent. This will reduce adverse impacts to SAV. Additionally, all new mooring buoys should, to the maximum extent practicable, be in waters deep enough so that the bottom of the vessel remains a minimum of 18 inches off the substrate during extreme low tide events. This will reduce adverse grounding impacts to benthic habitat.	Not applicable. No mooring buoys are proposed as part of marine sediment sampling.
3. When repairing or replacing mooring buoys, located within SAV habitat should be of the type that use midline floats, where appropriate, to prevent chain scour to the substrate. This will reduce adverse impacts to SAV and other benthic habitat.	See response to requirement 2.a.
Pile Removal and Installation	
4. Encircle the pile with a silt curtain that extends from the surface of the water to the substrate, where appropriate and feasible.	Not applicable. No pile removal is proposed as part of marine sediment sampling.
5. Drive piles during low tide periods when substrates are exposed in intertidal areas, where appropriate and feasible. This minimizes the direct impacts to fish from sound waves and minimizing the amount of sediments re-suspended in the water column.	See response to requirement 4.a.
Over- and in-water Structures	
6. Any cross or transverse bracing should be placed above the plane of MHHW, where appropriate and feasible, to avoid impacts to water flow and circulation.	Not applicable. No overwater or in-water structures are proposed as part of marine sediment sampling.
7. Minimize, to the maximum extent practicable, the footprint of the overwater structure.	See response to requirement 6.a.
8. Design structures in a north-south orientation, to the maximum extent practicable, to minimize persistent shading over the course of a diurnal cycle.	See response to requirement 6.a.
9. For residential dock and pier structures, the height of the structure above water should be a minimum of 5 feet above MHHW, where appropriate and feasible.	See response to requirement 6.a.
10. The use of floats should be minimized to the extent practicable and should be restricted to terminal platforms placed in deep water where appropriate and feasible and when the Corps determines there will not be a navigation hazard.	See response to requirement 6.a.

Requirement*	Compliance
11. When breakwaters are required, floating breakwaters are preferred. Encourage seasonal use of breakwaters.	See response to requirement 6.a.
Nearshore Structures	
12. Use soft approaches (e.g., beach nourishment, soft or hybrid armoring, vegetative plantings, and placement of LWD) in lieu of "hard" shoreline stabilization and modifications (such as concrete bulkheads and seawalls, concrete or rock revetments), where appropriate and feasible.	Not applicable. The proposed sediment sampling does not include any new shoreline stabilization or changes to bulkheads.
13. If planting in the riparian zone, use an adaptive management plan with ecological indicators and performance standards to oversee monitoring and ensure mitigation objectives are met, unless it is contrary to a Corps approved riparian planting plan.	Not applicable. The proposed sediment sampling does not include any planting in the riparian zone.

* Source: General Construction Measures (GCM) and Essential Fish Habitat (EFH) Conservation Recommendations, Version: May 25, 2023, https://www.nws.usace.army.mil/Portals/27/docs/regulatory2/ESA/SSNP/GCMandEFH-ListOfRequirements-v20230523.pdf?ver=eNrQN3uDPXFuT_w7yRgr6w%3d%3d.

Table 3
Compliance with Project Design Criteria No. 14 Sediment Remediation

Requirement*	Compliance
1. Dredging, excavation, capping, or other methods of removing or isolating contaminated sediments from aquatic habitats that are performed, ordered, or sponsored by government agency with established legal or regulatory authority.	The proposed sampling is required by the Washington State Department of Ecology to support design of contaminated sediment cleanup measures.
2. This activity category includes actions to remediate contaminants bound in sediments, tidal and seasonally inundated soils, upland soils, and groundwater.	See response to requirement 1.a.
3. Minimally disturbing activities include pile removal from sediments that are contaminated.	The proposed marine sediment sampling will be the minimum needed to meet legal requirements and to inform the extent and type of cleanup measures that will be implemented.
4. When removing piles from contaminated sediments use the general construction measures outlined in General Construction Measure #9 and #10.	Not applicable. The proposed sediment sampling does not include pile removal.
5. Place carbon-amended sand around the base of each pile to backfill the void post-removal.	See response to requirement 4.
6. Include BMPs to limit re-suspension of contaminants/ contaminated sediments during dredging activities.	See Table 1, response to requirement 14 (Pollution and Erosion Control).
7. Include best available BMPs to preclude contaminated groundwater from interfacing with a receiving water supporting ESA-listed species or habitat	Not applicable. The proposed sediment sampling will be limited to marine intertidal areas and will not affect groundwater.
8. Minimize impacts to in-water habitat from capping actions by including cap features to promote long-term habitat development (e.g., top dressing cap with round appropriately sized, round, river rock and gravels).	Not applicable. The proposed marine sediment sampling does not include any capping actions.

* Source: Project Design Criteria (PDC) #14 Sediment Remediation, Version: May 25, 2023.
https://www.nws.usace.army.mil/Portals/27/docs/regulatory2/ESA/SSNP/PDC14-ListOfRequirements-v20230523.pdf?ver=q2V2afRPQ6m4ON0nJQlC7w%3d%3d

Exhibit A
Ecology Letter

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

February 7, 2024

Morgan O'Rourke-Ligget
Biologist/Project Manager, Regulatory Branch
U.S. Army Corps of Engineers, Seattle District
4735 E Marginal Way S 1202, Seattle, WA 98134
Morgan.M.O'Rourke-Liggett@usace.army.mil

Re: **Proposed Pre-Design Investigation Activities at Jeld Wen Site:** (NWS-2023-872; ESA_SSNP Consultation Information Request)

- **Site Name:** Jeld Wen
- **Site Address:** 300 W Marine View Dr, Everett, WA 98201-1030
- **Facility/Site No.:** 2757
- **Cleanup Site No.:** 4402
- **Agreed Order No.:** DE 5095

Dear Morgan O'Rourke-Ligget:

The Washington State Department of Ecology (Ecology) is working with Jeld-Wen, Inc. and their consultant, Anchor QEA, to clean up contaminated sediments at the Jeld Wen Site, which is a former wood-treating and processing facility located along the Snohomish River delta in Everett. Jeld-Wen, Inc. is currently conducting pre-design sampling with oversight from Ecology, as required by a Model Toxics Control Act (MTCA) agreed order between the parties. Sampling results will inform future cleanup; the goal of which is to reduce risks to human and ecological receptors by removing, neutralizing, and/or isolating substances known to cause adverse health effects within contaminated media – in this case tidal mudflats at this Site.

Due to the nature and configuration of the contaminated area, sediment coring needs to occur from a vessel during extreme high tides. Anchor QEA has been targeting daylight high tides in March or April 2024 to carry out this work.

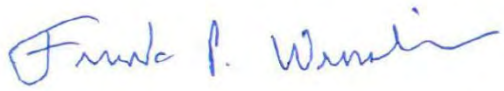
Recently, Anchor QEA informed Ecology that sediment sampling may be delayed due to a new requirement for a consultation with the National Marine Fisheries Services (NMFS) and the U.S. Fish and Wildlife Service (USFWS) prior to U.S. ACE permitting such investigation activities. Anchor QEA indicated that based on their experience with previous consultations implementation of their Step 2 Pre-Design Investigation could be delayed by as much as a year or more.

Ecology is concerned that such delays would result in delayed cleanup of contaminated sediments at the Site – extending exposure of sensitive aquatic organisms to contaminated media. We are reaching out in the hope that there may be a way to expedite the consultation process that allows Anchor QEA to collect sediment samples this spring.

We appreciate your time and consideration in the examination of this concern and will be very thankful if there is any mechanism to expedite this process. Please call or email me or Susannah Edwards, sediment cleanup regulatory compliance specialist with Ecology Toxics Cleanup Program at (360) 280-1963 or susannah.edwards@ecy.wa.gov for more information regarding this matter.

Your assistance in this matter is very much appreciated.

Sincerely,



Frank P. Winslow, LHG
Cleanup Site Manager
Toxics Cleanup Program
Headquarters Section

fpw: af

cc: Susannah Edwards, Ecology

Exhibit B
Figures

NOTE:
1. Aerial imagery: Esri

LEGEND

Project Study Area

0 2,000

Scale in Feet

REFERENCE #:

APPLICANT: JELD-WEN, INC.

LOCATION: 300 WEST MARINE VIEW DRIVE, EVERETT, WA 98201

ADJACENT PROPERTY OWNERS: W&W EVERETT INVESTMENTS LLC, BAYWOOD INDUSTRIAL LLC

NAME: JELD-WEN PRE-DESIGN INVESTIGATION MARINE SEDIMENT SAMPLING

PROPOSED: OBTAIN SEDIMENT SAMPLES FROM INTERTIDAL AREA

PURPOSE: CHARACTERIZE SEDIMENT TO SUPPORT CLEANUP ACTIONS

HORIZONTAL DATUM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 (US FEET)

LATITUDE: 48.01386111 N
LONGITUDE: 122.21412222 W
S-T-R: 7 - 29N - 5E

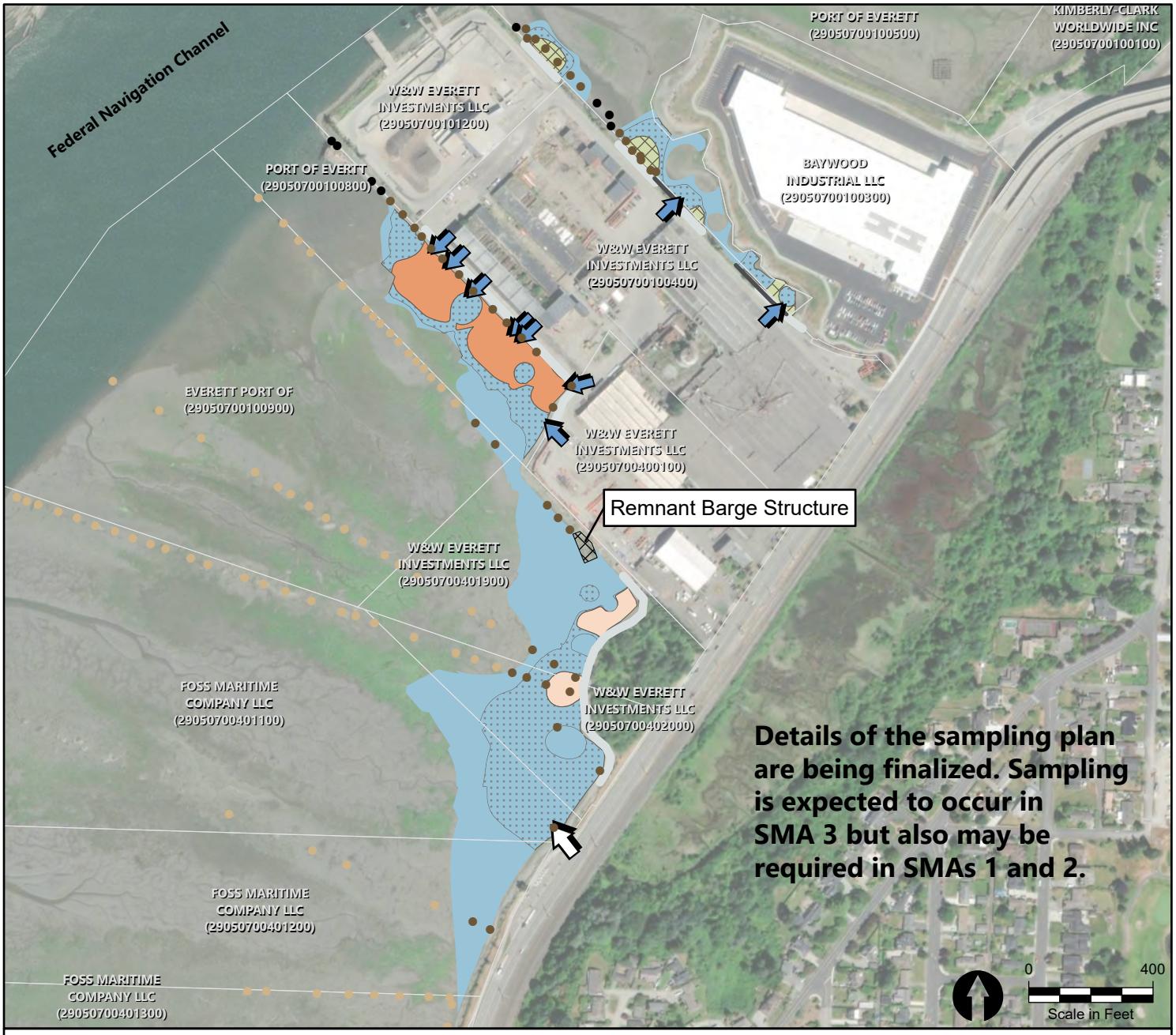
IN: PORT GARDNER BAY
NEAR/AT: EVERETT
COUNTY: SNOHOMISH
STATE: WASHINGTON

DATE: NOVEMBER 2023

ANCHOR QEA
1201 3rd Avenue, Suite 2600
Seattle, WA 98101
206-287-9130

VICINITY MAP

FIGURE: 1 OF 3



LEGEND

- Stormwater Outfall
- Outfall
- Bulkhead Removal (350 L.F.)
- Rip Rap Shoreline Protection (2,300 L.F.)
- Remnant Barge Structure to be Removed
- Parcels
- Pile Location Outside Project Boundary
- Pile Location Within Project Boundary
- Pile Location Outside Project Boundary But Identified For Removal Pending Owner Approval

SMA 1
- Monitored Natural Recovery (8.2 Acres)

SMA 2
- Enhanced Monitored Natural Recovery (5.2 Acres)

SMA 3
- 2-foot Removal and Backfill (0.5 acres)
- Remove All (4-foot assumption)* and backfill
- 2-foot Removal and Engineered Cap (0.47 Acres)

REFERENCE #:

APPLICANT: JELD-WEN, INC.

LOCATION: 300 WEST MARINE VIEW DRIVE, EVERETT, WA 98201

ADJACENT PROPERTY OWNERS: W&W EVERETT INVESTMENTS LLC, BAYWOOD INDUSTRIAL LLC

NAME: JELD-WEN PRE-DESIGN INVESTIGATION MARINE SEDIMENT SAMPLING

PROPOSED: OBTAIN SEDIMENT SAMPLES FROM INTERTIDAL AREA

PURPOSE: CHARACTERIZE SEDIMENT TO SUPPORT CLEANUP ACTIONS

HORIZONTAL DATUM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 (US FEET)

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LONGITUDE: 122.21412222 W
S-T-R: 7 - 29N - 5E

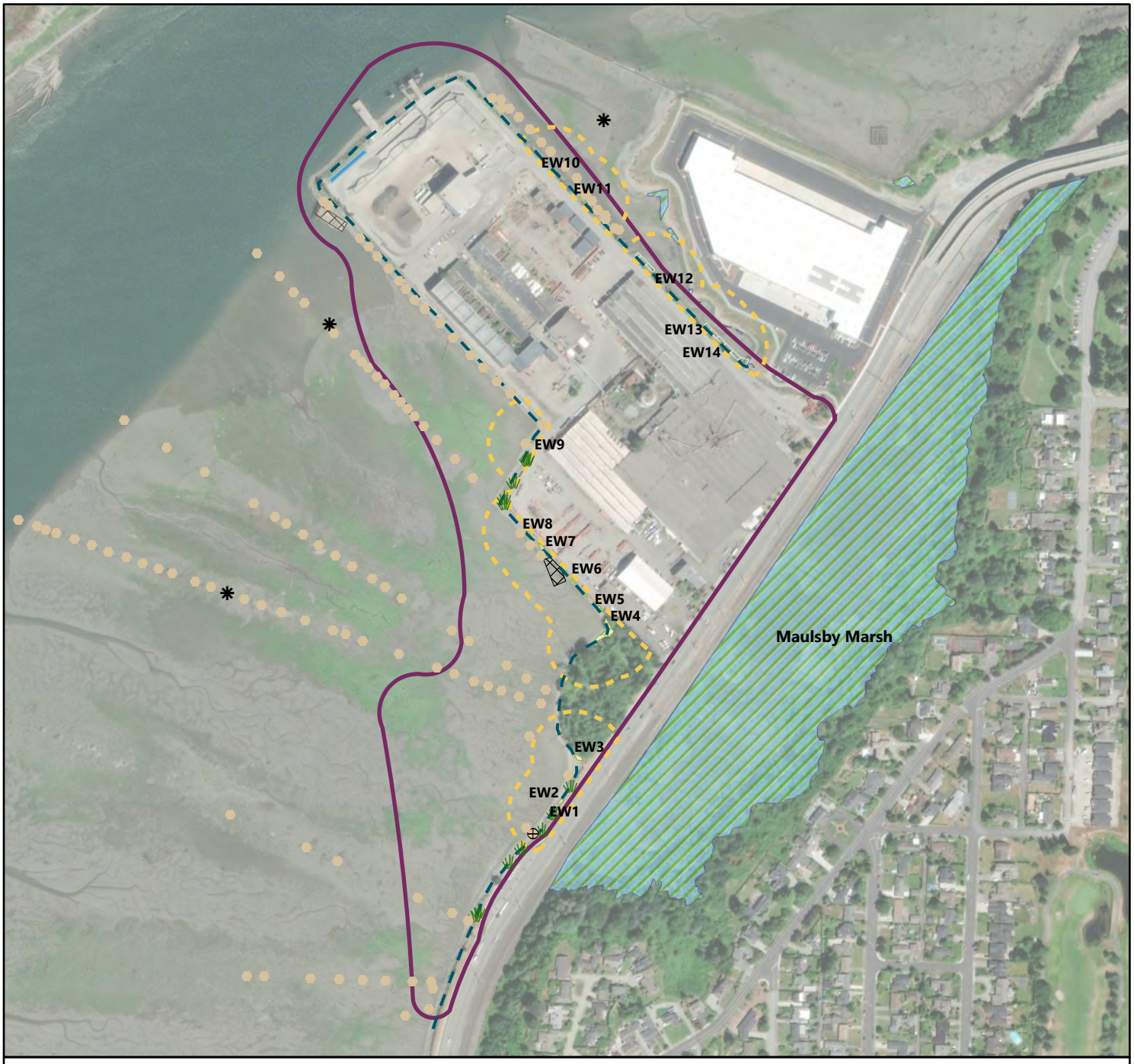
IN: PORT GARDNER BAY
NEAR/AT: EVERETT
COUNTY: SNOHOMISH
STATE: WASHINGTON

DATE: NOVEMBER 2023

PARCELS AND SEDIMENT MANAGEMENT AREAS

ANCHOR QEA
1201 3rd Avenue, Suite 2600
Seattle, WA 98101
206-287-9130

FIGURE: 2 OF 3



NOTE:
1. Aerial imagery: Esri

- Dune Grass
- Osprey Nest
- Outfall and Pile
- Piles
- Ordinary High Water Mark (OHWM)
- Stormwater Basin
- Estuarine Wetland and Designation (EW#)
- Wetland Buffer (150 feet)
- Wetland
- Abandoned Barge Structure
- Remnant Barge Structure
- Remnant Wood Bulkhead and Piles
- Study Area

0 300
Scale in Feet

REFERENCE #:

APPLICANT: JELD-WEN, INC.

LOCATION: 300 WEST MARINE VIEW DRIVE, EVERETT, WA 98201

ADJACENT PROPERTY OWNERS: W&W EVERETT INVESTMENTS LLC, BAYWOOD INDUSTRIAL LLC

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COUNTY: SNOHOMISH
STATE: WASHINGTON

DATE: NOVEMBER 2023

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Seattle, WA 98101
206-287-9130

WETLANDS

FIGURE: 3 OF 3

Exhibit C
Sound Information and Calculations

Underwater Noise Considerations

Table C-1 summarizes underwater sound levels that were recorded during a similar vibracore sampling project in south Puget Sound.

Table C-1
Recorded Underwater Sound Levels – Vibracore Sampling

Location	Equipment Specifications	Distance to Hydrophone	Sound Level [1,2]
South Puget Sound	RIC 3500 vibracore drill rig mounted on research vessel; 1,800 vibrations per minute; 2,000 foot-pounds of force; 4-inch-diameter polycarbonate tubes	20 feet (6.1 meters)	131.0 dB RMS (median value)

Notes:

1. Gravity Consulting, LLC, 2014. Acoustic Monitoring Results During Vibracoring. Prepared for Washington State Department of Transportation.
2. Gravity Consulting, LLC (2014) supplemented by personal communication with Shawn Hinz on February 28, 2024, to confirm median value.

The proposed sampling is anticipated to use a vibracore similar to the south Puget Sound example in Table C-1; therefore, 131.0 dB RMS (median value measured at a 20-foot distance) is used as the sound level for purposes of these noise calculations. A background sound level of 120 dB is assumed based on WSDOT information for developed marine waterfronts.[7] Using the accepted Practical Spreading Loss model for underwater noise transmission, underwater sound from vibracoring will attenuate to background levels approximately 33 meters from the sampling location. Table C-2 provides the noise calculation worksheet.

The National Marine Fisheries Service and U.S. Fish and Wildlife Service have established a threshold of 150 dB for behavioral effects in marbled murrelet and fish resulting from underwater noise. Based on the source sound level of 131 dB RMS, vibracoring is below that established threshold. Therefore, no effects to salmonids or marbled murrelets are anticipated as a result of these sampling activities.

Thresholds for vibratory (i.e., non-impulsive) behavioral disturbance to marine mammals are set at 120 dB RMS or background sound, whichever is greater. In this case, the threshold and the background sound levels are assumed to be the same. As shown in Table C-2, sound levels from vibracoring are expected to attenuate to this threshold within 33 meters (108 feet) of each sampling

[7] WSDOT, 2023. Biological Assessment Manual, Chapter 7. "Background sound levels in deep freshwater lakes or deep slow moving rivers are approximately 120 dB RMS, similar to marine levels near developed shorelines."

location. Therefore, 33 meters would be the project-specific exclusion zone for vibracoring. More details on marine mammal monitoring requirements are provided in Exhibit D.

Table C-2
Underwater Noise Calculations

Practical Spreading Loss Model for Underwater Sound		
R1=R2x10^[(RMS-backgroundRMS)/log value]		
Where R2 is the distance at which the RMS is measured.		
Vibracore Sampling Marine Mammal Level B Harassment Zone		
Value	*Input*	*Notes*
R2 (m)	6.096	*Gravity 2014 (South Sound vibracore)*
source sound (dbRMS)	131	*Gravity 2014 (South Sound vibracore; median value at 20 feet)*
disturbance threshold (dbRMS)	120	*WSDOT 2020 (marine developed shoreline)*
log value	15	*per NOAA guidance*
R1 (m)	**33**	

In-Air Noise Considerations

Foraging marbled murrelets can be affected by in-air noise that masks their vocalizations. However, vibracoring is expected to result in short-term, intermittent in-air noise that will be much lower than noise resulting from pile driving. The U.S. Fish and Wildlife Service has determined that "typical" pile driving projects are not expected to result in measurable effects to murrelets and that a masking monitor is not required. A "typical" pile driving project is one that uses a vibratory hammer as much as possible before impact driving to proof the piles.

Exhibit D
Marine Mammal Monitoring Plan

March 2024
JELD-WEN Pre-Design Investigation Marine Sediment Sampling

ANCHOR QEA

Marine Mammal Monitoring Plan

JELD-WEN, Inc.

March 2024
JELD-WEN Pre-Design Investigation Marine Sediment Sampling

Marine Mammal Monitoring Plan

Prepared for
JELD-WEN, Inc.
500 JELD-WEN Road
Craigsville, WV 262056

Prepared by
Anchor QEA, LLC
1201 3rd Avenue, Suite 2600
Seattle, Washington 98101

TABLE OF CONTENTS

FIGURES

APPENDICES

ABBREVIATIONS

dB RMS	decibel root-mean-square
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
MTCA	Model Toxics Control Act
NOAA	National Oceanic and Atmospheric Administration
OPR	Office of Protected Resources
Site	JELD-WEN site
SMA	Sediment Management Area
SRKW	Southern Resident killer whale

1 Introduction

This Marine Mammal Monitoring Plan has been prepared for vibracore sediment sampling activities proposed at the JELD-WEN site (Site) located at 300 West Marine View Drive in Everett, Washington (Figure 1). As a result of historic industrial activities over the past century, marine sediments at the Site are contaminated with hazardous substances. Sampling and studies of the Site have identified concerns about potential human health risks if people come in contact with contaminated materials or consume contaminated shellfish. Remediation of the Site is necessary to address these risks and to meet the requirements of the Washington state Model Toxics Control Act (MTCA) and state Sediment Management Standards (Washington Administrative Code Chapters 173-340 and 173-204).

The Washington State Department of Ecology (Ecology) and JELD-WEN entered into an Agreed Order for the Site cleanup in 2008 (Ecology and JELD-WEN 2008). A second amendment to the Agreed Order was issued in 2023, detailing design and permitting requirements (Ecology 2023a).

Marine sediment samples are needed to characterize areas of the Site in order to design specific cleanup actions for sediment removal, enhanced monitored natural recovery, or monitored natural recovery as specified in the Final Cleanup Action Plan (Ecology 2023b). Approximately 55 vibracore samples will be obtained within the Sediment Management Areas (SMAs) shown in Figure 2. Exact sample locations within these areas will be determined based on site conditions.

Vibracoring to obtain sediment core samples will be completed from a boat. Core depths will range from 2 to 15 feet deep below the surface. Boat-based vibracore sampling will be completed during high tide to allow boat access. All sampling is expected to be completed within a few weeks, depending on tide conditions.

This Marine Mammal Monitoring Plan includes the monitoring protocol and guidelines for marine sediment sampling using a vibracore. Monitoring will occur by observing sampling activities and the surrounding marine environment for signs of Endangered Species Act (ESA)-listed marine mammals and potential threats to these species. This Marine Mammal Monitoring Plan is intended to retain enough flexibility for the monitors to use their best scientific judgment for unforeseen events that will allow for optimal protection of ESA-listed marine mammals.

2 Exclusion Zone

Monitoring during vibracore sampling will be conducted to ensure protection of ESA-listed marine mammal species anticipated to occur in the project vicinity, Southern Resident killer whale (SRKW), gray whale, humpback whale, and Steller sea lion ("listed marine mammals" hereafter).

Vibracore sampling at the Site is anticipated to use equipment similar to the south Puget Sound project in Table 1. Based on the observed median value for that vibracore operation, 131.0 decibel root-mean-square (dB RMS) is an appropriate source sound level to use for this sampling activity.

Table 1
Recorded Underwater Sound Levels – Vibracore Sampling

Location	Equipment Specifications	Distance to Hydrophone	Sound Level [1,2]
South Puget Sound	RIC 3500 vibracore drill rig mounted on research vessel; 1,800 vibrations per minute; 2,000 foot-pounds of force; 4inch-diameter polycarbonate tubes	20 feet (6.1 meters)	131.0 dB RMS (median value)

Notes:
1. Gravity Consulting, LLC, 2014. Acoustic Monitoring Results During Vibracoring. Prepared for Washington State Department of Transportation.
2. Gravity Consulting, LLC (2014) supplemented by personal communication with Shawn Hinz on February 28, 2024, to confirm the measured median value for acoustic monitoring during vibracore operation.

Thresholds for vibratory (i.e., non-impulsive) behavioral disturbance to marine mammals are set at 120 dB RMS or background sound, whichever is greater. There are no available background measurements at the Site; therefore, a background sound level of 120 dB is assumed for this Site.[1] Using a Practical Spreading Loss Model for underwater noise transmission, underwater sound levels from vibracoring are expected to attenuate to this background level within 33 meters (108 feet) of each vibracore sampling location (Table 2). Therefore, a radius of 33 meters around each vibracore sample location will be used as the exclusion zone for ESA-listed marine mammals.

The 33-meter-radius exclusion zone will be centered on each vibracore sample. Sampling will be limited to the SMAs shown in Figure 2. Figure 2 illustrates several example sampling locations to show the farthest waterward extent to which the exclusion zones are likely to extend beyond the SMA boundaries. The exact locations of vibracore samples within the SMAs will be determined during field sampling, and the exclusion zones will be adjusted accordingly.

[1] Based on WSDOT information for developed marine waterfronts (WSDOT 2020).

Table 2
ESA-Listed Marine Mammal Exclusion Zones

	Permanent Threshold Shift (PTS)			Behavioral Shift		
Marine Mammal Hearing Group	**Volume (dB)**	**Isopleth Distance (m)**	**Isopleth Distance (ft)**	**Volume (dB)**	**Isopleth Distance (m)**	**Isopleth Distance (ft)**
Low-frequency (gray and humpback whales)	199	0.0	0.1	120	33.0	108.3
Mid-frequency (SRKW)	198	0.0	0.0			
Otariids (Steller sea lions)	219	0.0	0.0			

3 Marine Mammal Monitoring Protocol

Because of the small size of the exclusion zone (33-meter radius around each vibracore location), one marine mammal observer will be able to implement the protocol. The observer will be based on the sampling vessel, which will move throughout the SMAs shown in Figure 2 as needed to collect vibracore samples.

The marine mammal observer will be tasked with continuously scanning their viewshed within the exclusion zone and surrounding water, documenting all ESA-listed marine mammals and, if seen, closely tracking their behaviors and locations and communicating their observations to the vessel crew and sampling equipment operator.

Coordination between the sampling equipment operator, vessel crew, and marine mammal observer will occur at least once each day prior to the start of work. This coordination will include a review of the work scheduled and any marine mammal issues that could potentially occur.

Each day before sampling activities begin, the marine mammal observer will check Orca Network (1-866-672-2638 or https://www.orcanetwork.org/recent-sightings) and other social media platforms[2] to get an update on the latest ESA-listed marine mammal sighting data. Marine mammal monitoring will begin at least 20 minutes prior to the start of vibracoring each day to clear the exclusion zone and will continue at all times during active vibracoring. The observer will scan the visible waters within the potential impact area using binoculars (7x or greater) and the naked eye. If any listed marine mammals are observed during the pre-clear period within the exclusion zone or seen approaching the exclusion zone, then sampling will be delayed until the animal leaves the area or has not been observed for 20 minutes. If any ESA-listed marine mammals are observed approaching the exclusion zone during sampling, then the stop-work protocol (Section 3.1) will be implemented. If necessary due to the presence of an ESA-listed marine mammal within or near the exclusion zone at the end of the shift, marine mammal monitoring will continue for up to 30 minutes following the end of vibracoring activities. If visibility precludes the monitors from viewing their designated viewshed (due to fog or poor lighting), then sampling activities will not be allowed until conditions become suitable.

The marine mammal observer will have good eyesight and marine mammal identification skills. They will be properly equipped with necessary gear during their shift, including binoculars (7x or greater), field guides, compass, cellular phone, and back-up power.

The marine mammal observer may work, on average, 8 to 10 hours per day and will be relieved by a new observer if activities occur over a longer day, or fatigue or lack of preparedness begins to

[2] https://www.facebook.com/OrcaNetwork; https://twitter.com/orcanetwork; https://www.facebook.com/groups/796445174629551 (Puget Sound Orcas); https://blog.island-adventures.com/

decrease the monitor's ability to detect marine mammals. Vibracore sampling is limited to high tide windows when the boat can access sample locations, which may require night sampling. Because the exclusion is so confined (33 meters), it is anticipated that the observer will be able to effectively monitor the exclusion zone and immediate surrounding areas with the assistance of lights on the sampling boat. However, the observer will determine if visibility is sufficient on a case-by-case basis. The observer will have no other responsibilities while making observations.

A comprehensive marine mammal monitoring manual will be assembled for the sampling team prior to the start of in-water work. The manual will contain all relevant permit requirements and will describe the procedures the vessel crew, sampling equipment operator, and observer will implement to comply with the conditions of applicable permits.

3.1 Stop-Work Protocol

A temporary stop-work protocol will be triggered when an ESA-listed marine mammal is observed approaching the 33-meter exclusion zone. In response, the marine mammal observer will immediately require the operator of the vibratory sampling equipment to stop that work in a manner that does not have the potential to compromise worker or vessel safety.

Following issuance of a temporary stop-work order, the marine mammal will be closely monitored by the observer, and updates of location and behavior will be provided to the sampling equipment operator at appropriate intervals, likely less than 15 minutes apart. The listed marine mammal will continue to be monitored until it has clearly moved out of and away from the exclusion zone, has not been observed for at least 20 minutes, or when the end of the workday is reached.

Work will resume only after the marine mammal observer has notified the sampling equipment operator that the marine mammal has moved outside of, and is headed away from, the exclusion zone or has not been observed for at least 20 minutes.

If a killer whale approaches the exclusion zone and it is unknown whether it is a SRKW or a transient killer whale, it should be assumed to be a SRKW and a stop-work order will be issued.

3.2 ESA-Listed Marine Mammal Sighting Form

The sighting form in Appendix A will be used to capture all necessary details important to ESA-listed marine mammal identification and protection during vibracore sampling. The sighting form will be used to record the following information:

- Background information
  - Date, observer name, and location
  - Environmental conditions (weather, wind, waves), plus notes on conditions that could confound marine mammal detections and the time and location that they occurred

- For ESA-listed marine mammal sightings
  - Species observed, number, pod composition, distance to vibracore sampling activities, and behavior of marine mammals throughout duration of sighting
  - Time of first and last sighting
  - Discrete behavioral reactions to construction, if apparent
  - Vibracore sampling activities taking place concurrently with each sighting
  - Monitor response including whether a stop-work order was issued, why, and for how long, or if a take was recorded
  - The number of take(s) (by species), their locations, and behavior

3.3 Reporting Dead or Injured Animals

In the event that any personnel involved in the sampling activities discover an injured or dead marine mammal, the marine mammal observer shall report the incident to Ecology, JELD-WEN, and to the West Coast regional stranding network (1-866-767-6114) as soon as feasible.

The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable)
- Species identification (if known) or description of the animal(s) involved
- Condition of the animal(s) (including carcass condition if the animal is dead)
- Observed behaviors of the animal(s), if alive
- If available, photographs or video footage of the animal(s)
- General circumstances under which the animal was discovered

4 Reporting

In addition to capturing ESA-listed marine mammal monitoring data on sighting forms and a daily monitoring log, the marine mammal observer will prepare a final marine mammal monitoring summary report.

4.1 Daily Monitoring Log

A daily marine mammal monitoring log will be maintained by the marine mammal observer and updated at the end of each survey day, summarizing important observations and applicable aspects of sampling activities. The daily monitoring log will summarize important details noted by the observer in a format that readily conveys these details to interested and appropriate parties.

4.2 Final Marine Mammal Monitoring Summary Report

At the completion of construction activities, the marine mammal observer will prepare a final summary monitoring report for submittal to USACE to satisfy permit requirements. The report will summarize the marine mammal monitoring effort in a manner to effectively convey important marine mammal observations made during the sampling period. The summary monitoring report will include the following:

- Daily sighting forms and/or raw sighting data
- Name of observer who sighted the listed animal(s) and observer location and activity at time of sighting
- Time of sighting
- Identification of the listed animal(s) (e.g., genus/species, lowest possible taxonomic level, or unidentified), observer confidence in identification, and the composition of the group if there is a mix of species
- Distance and location of each observed listed marine mammal relative to the vibracore sampling location for each sighting
- Estimated number of listed animals (min/max/best estimate)
- Estimated number of listed animals by cohort (adults, juveniles, neonates, group composition, etc.)
- Listed animal's closest point of approach and estimated time spent within the exclusion zone
- Description of any listed 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)
- Number of listed marine mammals detected within the harassment zones, by species

- 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 listed animal(s), if any

5 References

Ecology (Washington State Department of Ecology), 2023a. Second Amendment to Agreed Order No. DE 5095 for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan – Jeld Wen. June 2023.

Ecology, 2023b. Final Cleanup Action Plan, Jeld Wen Site, 300 West Marine View Drive, Everett, Washington 98201. Issued by Toxics Cleanup Program. August 2023. Available at: https://apps.ecology.wa.gov/cleanupsearch/site/4402#site-documents

Ecology and JELD-WEN, 2008. Agreed Order for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan – JELD-WEN. No. DE 5095. Available at: https://apps.ecology.wa.gov/cleanupsearch/site/4402#site-documents

Gravity (Gravity Consulting, LLC), 2014. Acoustic Monitoring Results During Vibracoring. Prepared for Washington State Department of Transportation.

WSDOT (Washington State Department of Transportation), 2020. Biological Assessment Preparation Manual, Chapter 7. Updated June 2023. Available at: https://wsdot.wa.gov/sites/default/files/2022-11/BA-Manual-Chapter7.pdf

Figures

NOTE:
1. Aerial imagery: Esri

LEGEND

Project Study Area

0 2,000

Scale in Feet

REFERENCE #:

APPLICANT: JELD-WEN, INC.

LOCATION: 300 WEST MARINE VIEW DRIVE, EVERETT, WA 98201

ADJACENT PROPERTY OWNERS: W&W EVERETT INVESTMENTS LLC, BAYWOOD INDUSTRIAL LLC

NAME: JELD-WEN PRE-DESIGN INVESTIGATION MARINE SEDIMENT SAMPLING

PROPOSED: OBTAIN SEDIMENT SAMPLES FROM INTERTIDAL AREA

PURPOSE: CHARACTERIZE SEDIMENT TO SUPPORT CLEANUP ACTIONS

HORIZONTAL DATUM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 (US FEET)

LATITUDE: 48.01386111 N
LONGITUDE: 122.21412222 W
S-T-R: 7 - 29N - 5E

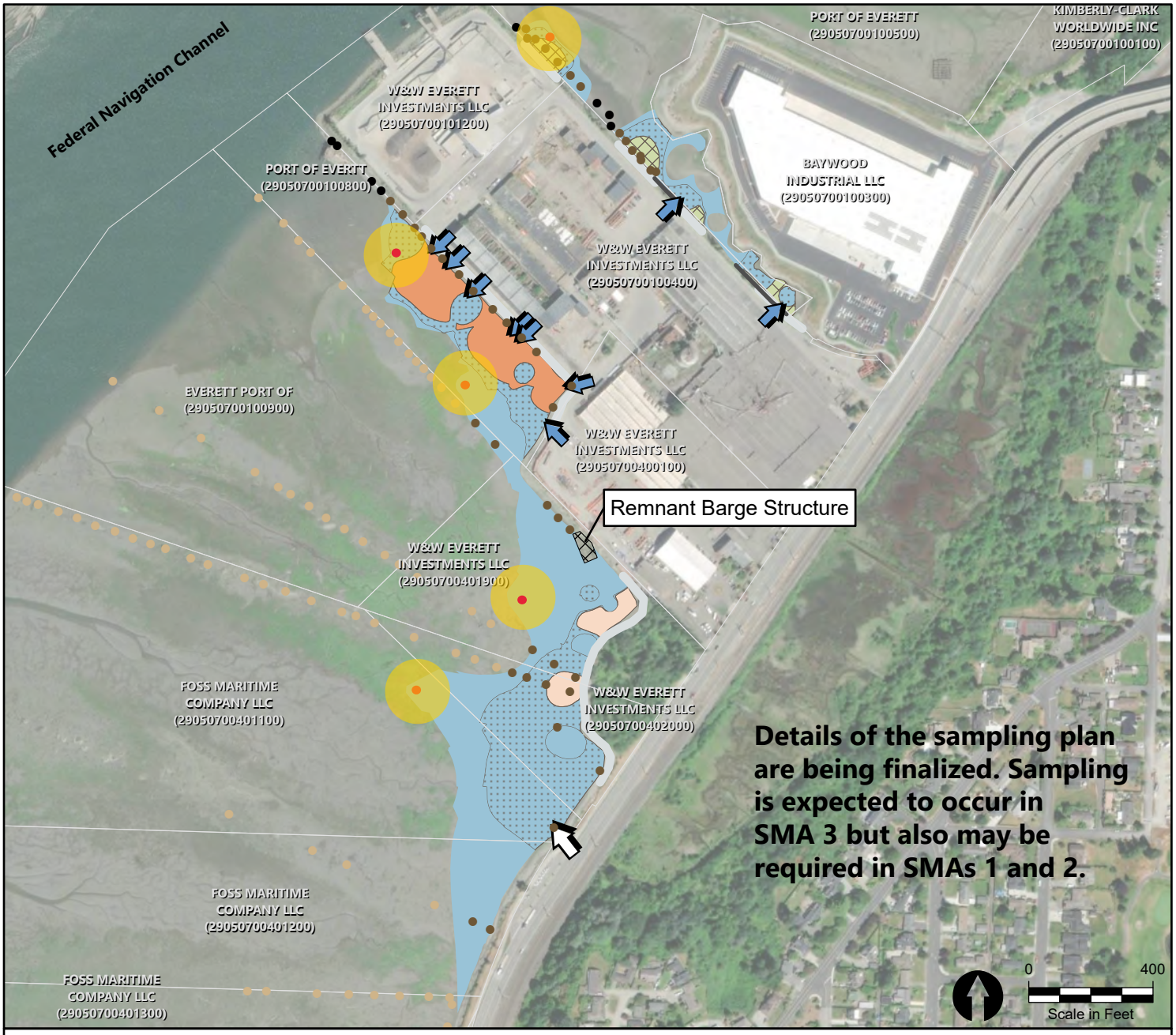
IN: PORT GARDNER BAY
NEAR/AT: EVERETT
COUNTY: SNOHOMISH
STATE: WASHINGTON

DATE: NOVEMBER 2023

ANCHOR QEA
1201 3rd Avenue, Suite 2600
Seattle, WA 98101
206-287-9130

VICINITY MAP

FIGURE: 1



LEGEND

- Stormwater Outfall
- Outfall
- Bulkhead Removal (350 L.F.)
- Rip Rap Shoreline Protection (2,300 L.F.)
- Remnant Barge Structure to be Removed
- Parcels
- Pile Location Outside Project Boundary
- Pile Location Within Project Boundary
- Pile Location Outside Project Boundary But Identified For Removal Pending Owner Approval
- Example sampling locations and exclusion zones (33-meter radius) Note: Exclusion zones will be adjusted as needed, based on location of sampling activities.

SMA 1
- Monitored Natural Recovery (8.2 Acres)

SMA 2
- Enhanced Monitored Natural Recovery (5.2 Acres)

SMA 3
- 2-foot Removal and Backfill (0.5 acres)
- Remove All (4-foot assumption)* and backfill
- 2-foot Removal and Engineered Cap (0.47 Acres)

REFERENCE #:

APPLICANT: JELD-WEN, INC.

LOCATION: 300 WEST MARINE VIEW DRIVE, EVERETT, WA 98201

ADJACENT PROPERTY OWNERS: W&W EVERETT INVESTMENTS LLC, BAYWOOD INDUSTRIAL LLC

NAME: JELD-WEN PRE-DESIGN INVESTIGATION MARINE SEDIMENT SAMPLING

PROPOSED: OBTAIN SEDIMENT SAMPLES FROM INTERTIDAL AREA

PURPOSE: CHARACTERIZE SEDIMENT TO SUPPORT CLEANUP ACTIONS

HORIZONTAL DATUM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 (US FEET)

LATITUDE: 48.01386111 N
LONGITUDE: 122.21412222 W
S-T-R: 7 - 29N - 5E

IN: PORT GARDNER BAY
NEAR/AT: EVERETT
COUNTY: SNOHOMISH
STATE: WASHINGTON

SEDIMENT MANAGEMENT AREAS AND EXAMPLE EXCLUSION ZONES FOR VIBRACORE SAMPLING

ANCHOR QEA
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Seattle, WA 98101
206-287-9130

FIGURE: 2

Appendix A
Marine Mammal Monitoring Form

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? _____Yes _____ No *If yes, complete the MM observation table below*	
Monitor Name: Date:	GPS Coordinates: Lat: Long:	Monitoring start time:	Monitoring end time:

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**

Describe any stop-work orders (time start and end):
Describe any conditions that could make observations difficult and the time they occurred:
Additional observations:

Attachment B
Monitoring Data

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-125	Weather Conditions: cloudy, intermittent rain	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-4-24	GPS Coordinates: Lat: 1302292.86 / 1302285.10 / 1302280.69 Long: 372258.40 / 372246.87 / 372252.10	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SG-144	cloudy, rain	___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-4-24	GPS Coordinates: Lat: 1302419.22 1302418.47 1302417.77 Long: 372140.63 372134.33 372131.08	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

LNB

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: n/a
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-132	Weather Conditions: cloudy, rainy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-4-24	GPS Coordinates: Lat: 1302361.34 / 1302696 / 1302358.80 Long: 371124.58 / 371121.62 / 371117.90	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
						LNB			

Describe any stop-work orders (time start and end): N/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-131	Weather Conditions: cloudy, rainy	Were any ESA-listed MMs observed during sampling at this location? ____Yes ____ No *If yes, complete the MM observation table below*	
Monitor Name: Linah Baxter Date: 6-4-24	GPS Coordinates: Lat: 1302352.07 Long: 371546.79	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						UNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-122	Weather Conditions: Cloudy, rainy	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ ____ No *If yes, complete the MM observation table below*	
Monitor Name: Lindsay Bader Date: 6-4-24	GPS Coordinates: Lat: 1302566.08 1302569.41 Long: 372537.39 372528.51	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-118	Weather Conditions: cloudy, rain	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-4-24	GPS Coordinates: Lat: 130266606 Long: 372785.68	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						CNB			

Describe any stop-work orders (time start and end):

Describe any conditions that could make observations difficult and the time they occurred:

Additional observations:

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-151	Weather Conditions: Cloudy, rain	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-4-24	GPS Coordinates: Lat: 1302568.94 / 1302570.38 Long: 373368.76 / 373365.27	Monitoring start time: 1445	Monitoring end time: 1918

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-118	Weather Conditions: Sun, wind	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302660.52 Long: 362785.05	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						CNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-026	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Linda Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302735.91 Long: 372385.76	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-024	Weather Conditions: sunny, wind	Were any ESA-listed MMs observed during sampling at this location? ____Yes ___✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bates Date: 6-5-24	GPS Coordinates: Lat: 1302962.31 Long: 372430.92	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-027	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Linnea Baker Date: 6-5-24	GPS Coordinates: Lat: 1302779.48 Long: 373190.90	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					UNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-123	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302740.96 Long: 370242.27	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						UNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-124	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302743.35 Long: 371999.20	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-146	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302697.66 Long: 371740.01	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-145	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ____Yes ___✓__ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302733.93 Long: 370980.24	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-130	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302502.81 Long: 371447.31	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-128	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302537.06 Long: 371558.14	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-129	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-5-24	GPS Coordinates: Lat: 1302460.95 Long: 371506.35	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-127	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bates Date: 6-5-24	GPS Coordinates: Lat: 1302686.44 Long: 371736.39	Monitoring start time: 1500	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-126	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302585.46 Long: 371932.50	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-147	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302469.36 Long: 371632.67	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-143	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ ____ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bates Date: 6-6-24	GPS Coordinates: Lat: 1302671.11 Long: 372276.42	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

LNB

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-119	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ✓ ____Yes ____ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302757.27 Long: 372417.31	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-142	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302762.57 Long: 372494.90	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: Sun glare – all day
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-120	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lucas Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302757.34 Long: 372359.27	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

LNB

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SG-121	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bastos Date: 6-6-24	GPS Coordinates: Lat: 1302706.79 Long: 372387.01	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						CNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun Glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ____Yes __✓__ No *If yes, complete the MM observation table below*	
Monitor Name: Lineal Baker Date: 6-6-24	GPS Coordinates: Lat: 1302629.64 Long: 372187.87	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNYS			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: sun glare - all day

Additional observations:

n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-031	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302578.94 1302516.34 1302523.35 Long: 372194.83 372186.01 372210.42	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LNB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: Sun glare - all day

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-030	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lindsay Baxter Date: 6-6-24	GPS Coordinates: Lat: 1302479.13 / 1302465.20 / 1302482.64 Long: 372146.64 / 372135.88 / 372134.34	Monitoring start time: 1600	Monitoring end time: 1942

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LNB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: sun glare - all day

Additional observations: n/a

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
6-4-24			Arrive on site at 1300. H&S discussion with crew lead and boat crew work deliverable for tidal access. Conducted pre-work monitoring at 14:45.
			SG-125 1512-1514, 1519-1521, 1526-1528
			SG-144 1606-1608, 1615-1617, 1623-1626
			SG-132 1701-1704, 1709-1712, 1717-1720
			SG-131 1752-1755
			SG-122 1822-1823, 1829-1830
			SG-118 1848-1850
			~~SG-026~~ LB SG-151 1906-1909, 1916-1918
			End monitoring at 1918
			LNB

Notes: No ESA-listed species observed today.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
6-5-24			Arrive on site 1430. H&S discussion with crew lead and boat crew. Begin pre-work monitoring at 15:00
			SG-118 1532-1533
			SC-026 1547-1549
			SC-024 1632-1637
			SC-027 1659-1703
			SG-123 1715-1718
			SG-124 1727-1730
			SG-146 1744-1746
			SG-145 1815-1818
			SG-130 1832-1834
			SG-128 1844-1846
			SG-129 1925-1927
			SG-127 1938-1942
			End monitoring at 1942
			LNB

Notes: no ESA-listed species observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
6-6-24			Arrive on site 1550. H&S discussion with crew lead and boat crew. Begin pre-work monitoring at 16:00
			SG-126 1620-1623
			SG-147 1635-1639
			SG-143 1651-1652
			SG-119 1700-1702
			SG-142 1710-1713
			SG-120 1720-1722
			SG-121 1826-1829
			SC-028 1840-1844
			SC-031 1852-1857, 1903-1905, 1910-1913
			SC-030 1920-1922, 1929-1931, 1939-1942
			End monitoring at 1942
			LNB

Notes: no ESA-listed species observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-001	Weather Conditions: Sunny, no clouds	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln ~~Baxter~~ Date: 7-17-24	GPS Coordinates: Lat: 1302238.09 (1302257.07) Long: 373722.47 (373716.62)	Monitoring start time: 14:20	Monitoring end time: 18:47

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
						LB			

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-002	Weather Conditions: sunny, no clouds	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-17-24	GPS Coordinates: Lat: 1302245.24 Long: 1373676.80	Monitoring start time: 14:20	Monitoring end time: 18:47

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
						LB			

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-003	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-17-24	GPS Coordinates: Lat: 1302271.69 Long: 373684.27	Monitoring start time: 14:20	Monitoring end time: 18:47

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
					UB				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-005	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-17-24	GPS Coordinates: Lat: 1302315.16 Long: 373599.98	Monitoring start time: 1420	Monitoring end time: 1847

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-008	Sunny	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Lincoln Baxter	GPS Coordinates:	Monitoring start time:	Monitoring end time:
Date: 7-17-24	Lat: (1302366.60) (1302359.21) Long: 373492.58 (373489.44)	1420	1847

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-007	Weather Conditions: Sunny, no clouds	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302385.30 Long: 373567.11	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LB			

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: n/a
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-009	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302446.65 Long: 373504.27	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-020	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302733.26 Long: 373130.77	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
					LB				

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: n/a
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-018	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302694.19 Long: 373165.11	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
							LB		

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-017	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bexto Date: 7-18-24	GPS Coordinates: Lat: 1302691.77 Long: 373237.97	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-011	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302549.67 1302532.53 Long: 373402.45 373399.75	Monitoring start time: 14:30	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-012	sunny	___Yes ___✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302538.03 1302540.72 Long: 373350.02 373344.88	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-014	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-18-24	GPS Coordinates: Lat: 1302592.07 Long: 373297.79	Monitoring start time: 14:50	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-036	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Date: 7-19-24	GPS Coordinates: Lat: 1302758.82 (1302758.82) 1302758.26 Long: 374218.22 (374218.22) 374215.56	Monitoring start time: 15:04	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						LB			

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-044	Sunny	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Linda Baxter	GPS Coordinates:	Monitoring start time:	Monitoring end time:
Date: 7-19-24	Lat: 130398.47 130395.99	15:04	19:45
	Long: 373442.41 373443.03		

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a.

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-043	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓___ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-19-24	GPS Coordinates: Lat: 1303483.89 (1303488.79) Long: 373459.48 (373457.54)	Monitoring start time: 15:04	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
					LB				

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: n/a
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-041	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-19-24	GPS Coordinates: Lat: 1303202.54 / 1303206.83 Long: 373746.13 / 373750.65	Monitoring start time: 15:04	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-040	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bexter Date: 7-19-24	GPS Coordinates: Lat: 1303184.78 Long: 343770.87	Monitoring start time: 19:04	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-038	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-19-24	GPS Coordinates: Lat: 1303065.06 (1303071.61) Long: 373893.62 (373899.59)	Monitoring start time: 15:04	Monitoring end time: 19:45

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-011	Sunny	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Lincoln Baxter Date: 7-20-24	GPS Coordinates: Lat: 1302538.14 Long: 373399.87	Monitoring start time: 15:50	Monitoring end time: 19:20

ESA-Listed Marine Mammal Observations									
Time Begin	**Time End**	**Duration (minutes)**	**Species**	**Species #**	**Approx. Distance from Sample Location**	**Sampling Activities Occurring**	**Behavior (swimming, resting, foraging, etc.)**	**Reactions to Vibracoring? (describe if yes)**	**Any Take (by species, locations, and behavior)**
					LB				

Describe any stop-work orders (time start and end): n/a
Describe any conditions that could make observations difficult and the time they occurred: n/a
Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-014	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes _✓_ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-20-24	GPS Coordinates: Lat: 1302586.09 Long: 373293.56	Monitoring start time: 15:30	Monitoring end time: 19:20

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-013	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-20-24	GPS Coordinates: Lat: 130258.96 / 130258.60 / 130259.40 / 130258.66 Long: 373344.84 / 3733 / 373342.45 / 373342.73	Monitoring start time: 15:50	Monitoring end time: 19:20

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					UB				

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-025	Sunny	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Lincoln Bento	GPS Coordinates:	Monitoring start time:	Monitoring end time:
Date: 7-20-24	Lat: 1302868.24 1302870.03 1302870.38 1302869.34	15:50	19:45
	Long: 372419.4 372419.24 372423.74 372423.33		

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-032	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-20-24	GPS Coordinates: Lat: (1302779.08) (1302781.08) Long: (372000.85) (372001.90)	Monitoring start time: 15:50	Monitoring end time: 19:20

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-004	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-21-24	GPS Coordinates: Lat: 1302342.43 (1302310.05) Long: 373642.78 (373640.38)	Monitoring start time: 16:15	Monitoring end time: 18:49

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___No *If yes, complete the MM observation table below*	
SC-019	Sunny		
Monitor Name: Lincoln Baxter Date: 7-21-24	GPS Coordinates: Lat: (1302758.36) (1302758.11) Long: 373171.47 373171.94	Monitoring start time: 16:15	Monitoring end time: 18:49

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LD				

Describe any stop-work orders (time start and end):

n/a

Describe any conditions that could make observations difficult and the time they occurred:

n/a

Additional observations:

n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-029	Sunny	___Yes ___√___ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Brantley Date: 7-21-24	GPS Coordinates: Lat: 1302566.93 1302568.77 1302572.57 1302573.55 Long: 372125.09 372123.74 372127.37 372126.02	Monitoring start time: 16:15	Monitoring end time: 18:49

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SC-030	Sunny	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Lincoln Baxter	GPS Coordinates:	Monitoring start time:	Monitoring end time:
Date: 7-21-24	Lat: 1302488.86	16:15	18:45
	Long: 372148.77		

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SC-031	Weather Conditions: Sunny	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 7-22-24	GPS Coordinates: Lat: 1302524.12 Long: 372190.35	Monitoring start time: 16:15	Monitoring end time: 16:49

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)

Describe any stop-work orders (time start and end): n/a

Describe any conditions that could make observations difficult and the time they occurred: n/a

Additional observations: n/a

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
7-17-24			Arrive on site at 11:53. Coordination and H&S discussion with boat crew and AQ staff. Rework monitoring started 1420
			SC-001: 1459-1508, 1524-1533. Consistent harbor seal presence, ~200 ft from vessel
		LB	SC-002: 15:49-16:00
			SC-003: 16:35-16:42 Continued harbor seal presence
			SC-005: 1656-1704, 1717-1731, 1803-1814 intermittent vibe action - dealing with some generator issues
			SC-008: 1842-1847
			End monitoring at 1847
			LB

Notes: No ESA-listed species observed today

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
7-18-24			Arrive on site 14:00. Prework coordination and H+S discussion. Atework monitoring began 14:50.
			SC-008: 1513-1517
			SC-007: 1529-1538
			SC-009: 1549-1557
		LB	SC-020: 1643-1649
			SC-018: 1658-1703
			SC-017: 1714-1727
			SC-011: 1746-1753, 1815-1819
			SC-012: 1835-1843, 1856-1902
			SC-014: 1940-1945
			End monitoring at 1945
			LB

Notes: No ESA-listed species were observed this day

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
7-19-24			Arrive on site 14:00-coordination and HTS discussion prior to leaving dock at 1435 to get gas. Prework monitoring began at 1504
			SC-036: 1553-1558, 1606-1608, 1622-1625
			SC-044: 1654-1659, 1711-~~1725~~ LB 1715
		LB	SC-043: 1728-1734, 1749-1753
			SC-041: 1807-1815, 1825-1828
			SC-040: 1843-1850
			SC-038: 1926-1932, 1939-1945
			End monitoring at 1945
			LB

Notes: No ESA listed species were observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
7-20-24			Arrive on site ~~1330~~ 1500 - prework discussion with boat crew prior to leaving dock at 1550. Prework monitoring began 1550
			SC-011: 1614-1620
		LB	SC-014: 1635-1640
			SC-013: 1651-1659, 1709-1714, 1728-1734, 1744-1751
			SC-025: 1820-1822, 1827-1829, 1840-1843, 1853 to 1855
			SC-032: 1908-1910, 1918-1920
			End monitoring at 1920
			LB

Notes: No ESA-listed species were observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
7-21-24			Arrive on site 1530. Prework coordination at HHS discussion with crew before leaving dock at 1615. Prework monitoring began at 1615.
			SC-004: 1638-~~1653~~ 1641. Periodic presence of harbor seal, ~100 ft away. LB
			SC-004: 1648-1653
		LB	SC-019: 1706-1710, 1718-1720
			SC-029: 1739-1743, 1747-1751, 1759-1802, 1808-1812
			SC-031: 1825-1829
			SC-030: 1843-1849
			End monitoring at 1849
			LB

Notes: No ESA-listed species were observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-04	Weather Conditions: 76°F, Partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.0157747 Long: 122.2147376	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end):

N/A

Describe any conditions that could make observations difficult and the time they occurred:

N/A

Additional observations:

N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-05	Weather Conditions: 76°F, Partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.01520669 Long: 122.21414682	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					UB				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-06	Weather Conditions: 76°F, partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.01471366 (48.01473407) Long: 122.24280835 (122.21424847)	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-07	Weather Conditions: 78°F, partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.01448899 / 48.01444784 / 48.0144598 Long: 122.21382028 / 122.21385093 / 122.2137[illegible]203	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					CB				

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ____Yes ✓ No *If yes, complete the MM observation table below*	
SV-09	76°F, partly cloudy		
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.0144725 Long: 122.2132799	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						UB			

Describe any stop-work orders (time start and end):
N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations:
N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-08	Weather Conditions: 76°F partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Bates Date: 8-19-24	GPS Coordinates: Lat: 48.01423139 (48.0142525 Long: 122.21349969) (122.21349624) cont'd* below	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						VS			
					N/A				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

* (48.01425818, 122.21353015) (48.01424153, 122.21355808) (48.01426353, 122.21357263)

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-13	Weather Conditions: 76°F, partly cloudy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-19-24	GPS Coordinates: Lat: 48.01015478 Long: 122.21385985	Monitoring start time: 16:25	Monitoring end time: 19:57

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LVS				

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location?	
SV-01	68°F, cloudy, windy	___Yes ✓ No	
		If yes, complete the MM observation table below	
Monitor Name: Linda Baker	GPS Coordinates:	Monitoring start time:	Monitoring end time:
Date: 8-20-24	Lat: 48.01786828	15:13	17:14
	Long: 122.21339241		

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-02	Weather Conditions: 68°F, cloudy and windy	Were any ESA-listed MMs observed during sampling at this location? ___Yes ___✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lindsay Baxter Date: 8-20-24	GPS Coordinates: Lat: 48.01652442 Long: 122.21148237	Monitoring start time: 15:13	Monitoring end time: 17:14

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					113				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ___Yes _✓_ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Dexter Date: 8-20-24	GPS Coordinates: Lat: 48.01536668 Long: 122.21014127	Monitoring start time: 15:13	Monitoring end time: 17:14

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					LB				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ____Yes __✓__ No *If yes, complete the MM observation table below*	
Monitor Name: Linah Baxter Date: 8-20-24	GPS Coordinates: Lat: 48.01353311 (48.01351706 UB) Long: 122.21329894 (~~122.21329894~~ 122.21333176)	Monitoring start time: 15:13	Monitoring end time: 17:14

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
					UB				

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

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Use a Separate Form for Each Sample Location

Vibracore Sample Number:	Weather Conditions:	Were any ESA-listed MMs observed during sampling at this location? ____Yes ___✓__ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-20-24	GPS Coordinates: Lat: 48.011845333 Long: 122.21379663	Monitoring start time: 15:13	Monitoring end time: 17:14

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						VB			

Describe any stop-work orders (time start and end): N/A
Describe any conditions that could make observations difficult and the time they occurred: N/A
Additional observations: N/A

ESA-Listed Marine Mammal Monitoring Form for JELD-WEN Vibracore Sampling

Use a Separate Form for Each Sample Location

Vibracore Sample Number: SV-127	Weather Conditions: 68°F, cloudy/wind	Were any ESA-listed MMs observed during sampling at this location? ___Yes ✓ No *If yes, complete the MM observation table below*	
Monitor Name: Lincoln Baxter Date: 8-20-24	GPS Coordinates: Lat: 48.01115131 Long: 122.21365583	Monitoring start time: 15:13	Monitoring end time: 17:14

ESA-Listed Marine Mammal Observations

Time Begin	Time End	Duration (minutes)	Species	Species #	Approx. Distance from Sample Location	Sampling Activities Occurring	Behavior (swimming, resting, foraging, etc.)	Reactions to Vibracoring? (describe if yes)	Any Take (by species, locations, and behavior)
						CB			

Describe any stop-work orders (time start and end): N/A

Describe any conditions that could make observations difficult and the time they occurred: N/A

Additional observations: N/A

Construction Site Lead Form

Lead Monitor: Lindsey Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
8-2024			Arrive on site 1450, conduct HASP discussion and left dock 1513. Pre-work monitoring began 1513.
			SV01- 1534-1536
		LB	SV02- 1545-1548
			SV03- 1558-1600
			SV10- 1619-1623, 1631-1635
			SV11-1709-1714
			End monitoring at 1714

Notes: No ESA-listed species observed this day.

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.

Construction Site Lead Form

Lead Monitor: Lincoln Baxter

Date	Vibe Ramp-up Time	Unable to Confirm Ramp-up[1]	Start and Stop Times,[2] Comments
8-19-24			Arrive on site 1353pm, crew faced with equipment related setbacks. Conducted H&S discussion and left dock at 1815. Pre work monitoring began 1825.
			SV04: 1641-1642
			SV05: ~~1603-1608~~ UB 1703-1706
			SV06: 1723-1725 Harbor seal ~100 ft out
		UB	SV06: 1733-1736
			SV07: 1752-1756, 1803-1804, 1811-1813
			SV09: 1847-1850
			SV08: 1905-1907, 1911-1913, 1918-1921, 1929-1931, 1938-1940
			SV13: 1953-1957
			End monitoring at 1957.
			UB

Notes: No ESA-listed species observed this day

1. If unable to confirm proper ramp up procedures were followed, notify environmental lead or the construction manager.
2. For breaks longer than one hour, ramp up procedures must be repeated. Please start a new data line.