



LETTER OF AUTHORIZATION

The U.S. Navy (Navy) and their designees are hereby authorized under section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(A)) to incidentally harass marine mammals incidental to construction at the Portsmouth Naval Shipyard in Kittery, Maine, subject to the provisions of the MMPA and the Regulations Governing Taking and Importing Marine Mammals Incidental to U.S. Navy Construction at Portsmouth Naval Shipyard, Kittery, Maine (50 CFR Part 217 Subpart N) (Regulations).

1. This letter of authorization (LOA) is valid from April 1, 2023 through March 31, 2028.
2. This Authorization is valid only for take incidental to the specified Navy in-water construction activities in Kittery, Maine. Hereafter (unless otherwise specified) the term “in-water construction activities” is used to refer to vibratory pile installation and removal, impact pile installation, down-the-hole hammering (DTH), rotary drilling, and rock hammering.
3. General Conditions
 - (a) A copy of this LOA must be in the possession of the Holder of the Authorization (Holder or Navy), its designees and work personnel operating under the authority of this LOA at all times that activities subject to this LOA are being conducted.
 - (b) The species and/or stocks authorized for taking are listed in Table 1. Authorized take, by Level A and B harassment, is limited to the species and numbers listed in Table 1.
 - (c) The taking by serious injury or death of any of the species listed in Table 1 or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this LOA. Any taking exceeding the authorized amounts listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this LOA.
 - (d) The Holder must ensure that construction supervisors and crews, the monitoring team, and relevant Navy staff are trained prior to the start of all activities subject to this LOA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.
4. Mitigation Requirements
 - (a) The Holder must monitor the project area to the maximum extent possible based on the required number of protected species observers (PSOs), required



monitoring locations, and environmental conditions as described in section 5 of this LOA and the NMFS-approved Marine Mammal Monitoring Plan.

- (b) Monitoring must take place from 30 minutes prior to initiation of in-water construction activities (i.e., pre-start clearance monitoring) through 30 minutes post-completion of in-water construction activities.
- (c) For all in-water construction activities, the Holder must implement shutdown zones with radial distances as identified in Table 2. If a marine mammal comes within or approaches the shutdown zone indicated in Table 2, such operations must cease.
- (d) In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone, animals must be allowed to remain in the shutdown zone (*i.e.*, must leave of their own volition) and their behavior must be monitored and documented. If a marine mammal is observed within the shutdown zone, in-water construction activities may not commence or resume until at least one of the following conditions has been met:
 - (i) The animal has been observed exiting the shutdown zone;
 - (ii) The animal is thought to have exited the shutdown zone based on a determination of its course, speed, and movement relative to the pile driving location; or
 - (iii) The shutdown zone has been clear from any additional sightings for fifteen minutes.
- (e) If in-water construction activities cease for more than 30 minutes, the pre-activity monitoring of the shutdown zone must commence.
- (f) The Navy must conduct monitoring to include the entire region of influence, which includes the area within the Level A and Level B harassment zones with radial distances as identified in Table 2.
- (g) The Holder must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy, followed by a 30-second waiting period, then two subsequent reduced-energy strike sets. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer.



- (h) The Holder must install a bubble curtain across the entrance openings during during DTH cluster drill and hydraulic rock hammering activities. The bubble curtain adhere to the following restrictions:
- (i) The bubble curtain must distribute air bubbles across 100 percent of the entrance openings for the full depth of the water column.
 - (ii) The lowest bubble ring must be in contact with the substrate for the full extent of the curtain, and the weights attached to the bottom of the curtain must ensure 100 percent substrate contact. No parts of the curtain or other objects shall prevent full substrate contact.
 - (iii) Air flow to the bubblers must be balanced across the entrance openings to the superflood basin.
 - (iv) The Holder shall require that construction contractors train personnel in the proper balancing of air flow to the bubblers and corrections to the attenuation device to meet the performance standards. This shall occur prior to the initiation of in-water construction activities.
- (i) The bubble curtain may be discontinued for certain activities should the results of hydroacoustic recordings obtained inside the bubble curtain as required by section 6 of this LOA show that the source levels from those activities do not result in the Level A harassment thresholds being achieved across the entire region of influence, upon review of the data by NMFS.
- (j) In-water construction activities must be halted (as described in condition 4(c) of this LOA) upon observation of either a species entering or within the harassment zone (as shown in Table 2) for which incidental take is not authorized, or a species for which incidental take has been authorized but the authorized number of takes has been met.
- (k) The Holder, construction supervisors and crews, PSOs, and relevant Navy staff must avoid direct physical interaction with marine mammals during construction activity. If a marine mammal comes within 10 meters of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary to avoid direct physical interaction.
- (l) Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone would not be visible (*e.g.*, fog, heavy rain, night), the Holder shall delay in-water construction activities until observers are confident marine mammals within the shutdown zone could be detected.



5. Monitoring Requirements

- (a) Marine Mammal monitoring must be conducted in accordance with the conditions in this section and the Marine Mammal Monitoring Plan. The Navy shall submit a Marine Mammal Monitoring Plan to NMFS for approval in advance of construction.
- (b) Monitoring must be conducted by qualified PSOs, in accordance with the following conditions:
 - (i) PSOs must be independent (*i.e.*, not construction personnel) and have no other assigned tasks during monitoring periods.
 - (ii) At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (iii) Other PSOs may substitute other relevant experience, education (degree in biological science or related field), or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (iv) Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (v) One PSO must be designated as lead PSO or monitoring coordinator. The lead PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
 - (vi) PSO must work in shifts to reduce fatigue and ensure their ability to monitor for marine mammals.
 - (vii) PSOs must be approved by NMFS prior to beginning any activity subject to this LOA.
- (c) For all in-water construction activities, a minimum of three PSOs must be stationed on boats, docks, or piers sufficient to monitor the harassment and shutdown zones, and as described in the Marine Mammal Monitoring Plan.



- (d) PSOs must record all observations of marine mammals, regardless of distance from the pile/hole being driven/drilled, as well as additional data indicated in the section 6 of this LOA.
- (e) The Holder must conduct hydroacoustic data collection (sound source verification and propagation loss) for up to a maximum limit of 10 piles/holes for each in-water construction activity as indicated in Table 3 and in accordance with a hydroacoustic monitoring plan that must be approved by NMFS in advance of construction. This plan shall include acoustic monitoring inside the bubble curtain to measure construction generated noise levels.
- (f) The harassment and/or shutdown zones (Table 2) may be modified with NMFS' approval following NMFS' acceptance of an acoustic monitoring report.

6. Reporting

- (a) The Holder must submit a draft monitoring report to NMFS within 90 work days of the completion of required monitoring for each portion of the project as well as a comprehensive summary report at the end of the project. The reports will detail the monitoring protocol and summarize the data recorded during monitoring. Final annual reports (each portion of the project and comprehensive) must be prepared and submitted within 30 days following resolution of any NMFS comments on the draft report. If no comments are received from NMFS within 30 days of receipt of the draft report, the report must be considered final. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.
- (b) All draft and final monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.tyson.moore@noaa.gov*.
- (c) The marine mammal report must contain the informational elements described in the Marine Mammal Monitoring Plan and, at minimum, must include:
 - (i) Dates and times (begin and end) of all marine mammal monitoring;
 - (ii) Construction activities occurring during each daily observation period, including:
 - A. The number and type of piles that were driven or removed and by what method (*i.e.*, impact, vibratory, DTH, rotary drilling, rock hammering);



- B. The total duration of driving time for each pile/hole (vibratory driving, rotary drilling) and number of strikes for each pile/hole (impact driving, hydraulic rock hammering); and
 - C. For DTH, the duration of operation for both impulsive and non-pulse components as well as the strike rate.
- (iii) PSO locations during marine mammal monitoring;
- (iv) Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance (if less than the harassment zone distance);
- (v) Upon observation of a marine mammal, the following information:
- A. Name of PSO who sighted the animal(s) and PSO location, as well as the activity at time of sighting;
 - B. Time of sighting;
 - C. Identification of the animal(s) (*e.g.*, genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species;
 - D. Distances and bearing of each marine mammal observed in relation to the pile being driven or drilled for each sighting (if pile driving or drilling was occurring at time of sighting);
 - E. Estimated number of animals (min/max/best estimate);
 - F. Estimated number of animals by cohort (adults, juveniles, neonates, group composition, etc.);
 - G. Animal's closest point of approach and estimated time spent within the harassment zone;
 - H. Description of any marine mammal behavioral observations (*e.g.*, observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.*, no response or changes in behavioral state

such as ceasing feeding, changing direction, flushing, or breaching);

- (vi) Number of marine mammals detected within the harassment zones, by species; and
 - (vii) Detailed information about any implementation of any mitigation triggered (*e.g.*, shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any;
- (d) The Holder must submit all PSO datasheets and/or raw sighting data with the draft reports referenced in condition 6(a) of this LOA.
- (e) The Holder must report the hydroacoustic data as described in the Acoustic Monitoring Plan which at a minimum, must include:
- (i) Hydrophone equipment and methods: recording device, sampling rate, distance (m) from the pile where recordings were made; depth of water and recording device(s);
 - (ii) Type and size of pile being driven, substrate type, method of driving during recordings (*e.g.*, hammer model and energy), and total pile driving duration;
 - (iii) Whether a sound attenuation device is used and, if so, a detailed description of the device used and the duration of its use per pile;
 - (iv) For impact pile driving, rock hammering and/or DTH excavation (DTH mono-hammer and cluster drill) (per pile/hole): Number of strikes and strike rate; depth of substrate to penetrate; pulse duration and mean, median, and maximum sound levels (dB re: 1 μ Pa): root mean square sound pressure level (SPL_{rms}); cumulative sound exposure level (SEL_{cum}), peak sound pressure level (SPL_{peak}), and single-strike sound exposure level (SEL_{ss});
 - (v) For vibratory driving/removal, rotary drilling, and/or DTH excavation (DTH mono-hammer and cluster drill) (per pile/hole): Duration of driving per pile; mean, median, and maximum sound levels (dB re: 1 μ Pa): root mean square sound pressure level (SPL_{rms}), cumulative sound exposure level (SEL_{cum}) (and timeframe over which the sound is averaged);
 - (vi) One-third octave band spectrum and power spectral density plot; and
 - (vii) General Daily Site Conditions, including the date and time of activities, and environmental data such as wind speed and direction, air temperature, humidity, surface water temperature, tidal state, water depth, wave height,



weather conditions, and other factors that could contribute to influencing the airborne and underwater sound levels (e.g., aircraft, boats, etc.).

- (f) In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the Holder must report the incident to the Office of Protected Resources (OPR), NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *ITP.tyson.moore@noaa.gov*) and to the Greater Atlantic Region New England/Mid-Atlantic Regional Stranding Coordinator (978-282-8478 or 978-281-9291) as soon as feasible. If the death or injury was clearly caused by the specified activity, the Holder must immediately cease the activities until NMFS OPR is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of this LOA. The Holder must not resume their activities until notified by NMFS.

The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
 - (ii) Species identification (if known) or description of the animal(s) involved;
 - (iii) Condition of the animal(s) (including carcass condition if the animal is dead);
 - (iv) Observed behaviors of the animal(s), if alive;
 - (v) If available, photographs or video footage of the animal(s); and
 - (vi) General circumstances under which the animal was discovered.
7. This Authorization may be modified, suspended or revoked if the Holder fails to abide by the conditions prescribed herein (including, but not limited to, failure to comply with monitoring or reporting requirements), or if NMFS determines: (1) the authorized taking is likely to have or is having more than a negligible impact on the species or stocks of affected marine mammals or (2) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.

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



Table 1. Authorized Incidental Take

Common Name	Scientific Name	Stock	Level A Harassment	Level B harassment
Harbor porpoise	<i>Phocoena phocoena</i>	Gulf of Maine/Bay of Fundy	29	5
Harbor seal	<i>Phoca vitulina</i>	Western North Atlantic	2,018	4,260
Gray seal	<i>Halichoerus grypus</i>	Western North Atlantic	133	284
Hooded seal	<i>Cystophora cristata</i>	Western North Atlantic	25	25
Harp seal	<i>Pagophilus groenlandicus</i>	Western North Atlantic	25	25

Table 2. Pile Driving Shutdown Zone and Monitoring Zones during Project Activities

LOA Year	Activity, Size, And Component	Shutdown Zone (m)		Monitoring Zone ¹ (km ²)
		Harbor Porpoise	Seals	
2	Rock Hammering ²	200	50	ROI ³
2	Impact Pile Driving – 8 sheet piles per day	200	50	ROI ⁴
2	Impact Pile Driving – 4 sheet piles per day	200	50	ROI ⁴
2/3	Impact Pile Driving – 2 sheet piles per day	200	50	ROI ⁴
2/3	Vibratory Pile Driving/Extraction – 8 sheet piles per day	20	10	ROI ⁴
2	Vibratory Pile Driving/Extraction – 6 sheet piles per day	20	10	ROI ⁴
2	Vibratory Pile Driving/Extraction – 4 sheet piles per day	15	10	ROI ⁴
2/3	Vibratory Pile Driving/Extraction – 2 sheet piles per day	10	10	ROI ⁴
2	DTH mono-hammer 4-6 inch relief holes	180	50	ROI ⁴
2/3/4/5	DTH mono-hammer 9-inch rock anchors for tie-downs	200	50	ROI ⁴
2/3/4	Rotary Drilling – 1 hour to set casings	10	10	ROI ⁴
2/3/4	Rotary drilling – 9 hours to drill socket	10	10	ROI ⁴
2/3/4	Rotary Drilling – 15 minutes to remove casings and temporary work trestle piles	10	10	ROI ⁴
2/3/4	Cluster Drilling ²	200	50	ROI ^{3,4}

Notes:

¹ In instances where the harassment zone is larger than the region of influence (ROI), the entire ROI is indicated as the limit of monitoring (see Figure 1-3 in the Navy’s application).

² Activities will employ a bubble curtain to reduce underwater noise impacts outside of the basin.

³ The entire ROI would be ensouffied to the Level A threshold.

⁴ The entire ROI would be ensouffied to the Level B threshold.



Table 3. Hydroacoustic Monitoring Summary

Pile Type / Shaft Size	Number Installed/Removed	Method of Install/Removal	Number Monitored
126-inch shaft	138	Rotary Drill	10
84-inch shaft	148	Rotary Drill	10
108-inch shaft	46	DTH Cluster Drill	10
84-inch shaft	40	DTH Cluster Drill	10
72-inch shaft	16	DTH Cluster Drill	10

