



INCIDENTAL HARASSMENT AUTHORIZATION

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

1. This incidental harassment authorization (IHA) is valid from April 1, 2022 through March 31, 2023.
2. This IHA authorizes take incidental to the specified construction activities as specified in the in Navy's February 2022 application, associated with the Multifunctional Expansion of Dry Dock 1 at Portsmouth Naval Shipyard, Kittery, Maine. Hereafter (unless otherwise specified) the term "pile driving" is used to refer to both pile installation and pile removal.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of the Holder of the Authorization (Holder or Navy), supervisory construction personnel, lead protected species observers (PSOs), and any other relevant designees of the Holder operating under the authority of this IHA at all times that activities subject to this IHA are being conducted.
 - (b) The species and/or stocks authorized for taking are listed in Table 1. Authorized take, by Level 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 IHA. Any taking exceeding the authorized amounts listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (d) The Holder must ensure that construction supervisors and crews, the monitoring team, and relevant Navy staff are trained prior to the start of all activities subject to this IHA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.
4. Mitigation Requirements



- (a) The Holder must employ PSOs and establish monitoring locations as described in section 5 of this IHA and the Marine Mammal Monitoring Plan. The Holder must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions.
- (b) Monitoring must take place from 30 minutes prior to initiation of construction activities, down-the-hole hammering (DTH), rotary drilling, and rock hammering (hereafter referred to as “construction activities” (*i.e.*, pre-start clearance monitoring) through 30 minutes post-completion of the construction activities.
- (c) If a marine mammal is observed entering or within the shutdown zones indicated in Table 2, construction activities must be delayed or halted. Construction activities may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals.
- (d) Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones indicated in Table 2 are clear of marine mammals. Construction activities may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals.
- (e) If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone indicated in Table 2 or 15 minutes have passed without re-detection of the animal.
- (f) The Holder must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of three 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.
- (g) The Holder must use a bubble curtain during impact pile driving. The bubble curtain must be operated as necessary to achieve optimal performance. At a minimum, the Holder must adhere to the following performance standards:
 - (i) The bubble curtain must distribute air bubbles around 100 percent of the piling circumference for the full depth of the water column.
 - (ii) The lowest bubble ring must be in contact with the substrate for the full circumference of the ring, and the weights attached to the bottom ring

shall ensure 100 percent substrate contact. No parts of the ring or other objects shall prevent full substrate contact.

(iii) Air flow to the bubblers must be balanced around the circumference of the pile.

- (h) Construction activities must be halted (as described in condition 4(c) of this IHA) upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the harassment zone (as shown in Table 2).
- (i) 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.
- (j) 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 pile driving and removal until observers are confident marine mammals within the shutdown zone could be detected.
- (k) Monitoring shall be conducted by trained observers, who shall have no other assigned tasks during monitoring periods. Trained observers shall be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. The Navy shall adhere to the following additional observer qualifications:
 - (i) Independent observers are required;
 - (ii) At least one observer must have prior experience working as an observer;
 - (iii) Other observers may substitute education (degree in biological science or related field) or training for experience;
 - (iv) Where a team of three or more observers are required, one observer shall be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer;
 - (v) Personnel who are engaged in construction activities may not serve as observers.

5. Monitoring Requirements

- (a) Marine Mammal monitoring must be conducted in accordance with the conditions in this section and the Marine Mammal Monitoring Plan, and this IHA. 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) PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.
 - (vi) PSOs must monitor the shutdown zones, the disturbance zones and the pre-clearance zones, as well as effectively document Level A and B harassment take.
- (c) The Holder must establish the following monitoring locations as described in the Marine Mammal Monitoring Plan. For all construction activities, a minimum of one PSO must be assigned to each active pile driving location to monitor the shutdown zones. In most cases, three PSOs will be placed at the best vantage point(s) located on boats, docks, or piers to sufficiently monitor the respective ROIs given the abundance of suitable vantage points.
- (d) PSOs must record all observations of marine mammals, regardless of distance from the pile being driven or the construction activity taking place (*i.e.*, DTH,

rotary drilling, rock hammering), as well as the additional data indicated in section 6 of this IHA.

- (e) Acoustic monitoring must be conducted in accordance with the Acoustic Monitoring Plan. The Navy must conduct hydroacoustic data collection (sound source verification and propagation loss) in accordance with a hydroacoustic monitoring plan that must be approved by NMFS in advance of construction.
- (f) The harassment and/or shutdown zones (Table 2) may be modified with NMFS' approval following NMFS' acceptance of an acoustic monitoring report (including the analysis of bubble curtain results).

6. Reporting

- (a) The Holder must submit its draft report(s) on all monitoring conducted under this IHA within 90 calendar days of the completion of monitoring or 60 calendar days prior to the requested issuance of any subsequent IHA for construction activity at the same location, whichever comes first. The report will detail the monitoring protocol and summarize the data recorded during monitoring. A final report (each 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.Egger@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 how many and type of piles that were driven or removed and by what method (*i.e.*, impact, vibratory, DTH, rotary drilling, rock hammering);
 - B. Total duration of driving time for each pile (vibratory driving) and number of strikes for each pile (impact driving); and

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

- (vii) Detailed information about 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 IHA.
- (e) The acoustic monitoring report must contain the informational elements described in the Acoustic Monitoring Plan and, at 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 (per pile) of DTH: 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_{s-s});
 - (v) For vibratory driving/removal (per pile), rotary drilling, and rock hammering: 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); and
 - (vi) One-third octave band spectrum and power spectral density plot.
 - (vii) Collect and evaluate acoustic sound record levels for 10 percent of the new rotary drilling, DTH excavation (DTH mono-hammer and cluster drill), and rock hammering activities (see Table 3).
 - (viii) Environmental data will be collected, including but not limited to, the following: wind speed and direction, air temperature, humidity, surface water temperature, 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) Reporting injured or dead marine mammals:

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the Holder must report the incident to the Office of Protected Resources (OPR), NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *ITP.Egger@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 IHA. The Holder must not resume their activities until notified by NMFS.

The report must include the following information:

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

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

8. Renewals

On a case-by-case basis, NMFS may issue a one-time, one-year Renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical, or nearly identical, activities (or a subset of those activities) are planned or (2) the specified activities will not be completed by the time the IHA expires

and a Renewal would allow for completion of the activities, provided all of the following conditions are met:

- (a) A request for renewal is received no later than 60 days prior to the needed Renewal IHA effective date (note a Renewal IHA expiration date cannot extend beyond one year from expiration of this IHA).
- (b) The request for renewal must include the following:
 - (i) An explanation that the activities to be conducted under the requested Renewal IHA are identical to the activities analyzed for this IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).
 - (ii) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.
- (c) Upon review of the request for Renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings made in support of this IHA remain valid.

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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	15	9
Harbor seal	<i>Phoca vitulina</i>	Western North Atlantic	1,269	1,125
Gray seal	<i>Halichoerus grypus</i>	Western North Atlantic	85	75
Hooded seal	<i>Cystophora cristata</i>	Western North Atlantic	0	5
Harp seal	<i>Pagophilus groenlandicus</i>	Western North Atlantic	0	5

Table 2. Shutdown and Harassment Zones.

P-381 Year 1 Activity Description	Shutdown Zone (m)		Level B Harassment ¹ (m)
	Harbor Porpoise	Phocids	
78-inch cluster drill	200 ²	50 ²	ROI
DTH monohammer- 42-inch	200 ²	50 ²	ROI
DTH monohammer – 9-inch Center wall tie downs	200 ²	50 ²	ROI
DTH monohammer – 9-inch tremie tie-downs	200 ²	50 ²	ROI
DTH monohammer – 4-6-inch (500)	200 ²	50 ²	ROI
Impact install of sheet piles (16) West Closure Wall Tie-in	200 ²	50 ²	ROI
Impact install of sheet piles (60) Secant pile guide wall; (96) temporary coffer dam	200 ²	50 ²	ROI
Rock hammering – all durations	200 ²	50 ²	ROI
Rotary drilling – Install 102-inch casing	10	10	ROI
Rotary drilling –Predrill 102-inch socket	10	10	ROI
Rotary drilling – Remove 102-inch casing	10	10	ROI
Vibratory pile driving (16) 28-inch sheets	20	10	ROI
Vibratory pile driving (60) and (96) 28-inch sheets	20	10	ROI
Vibratory extraction (238) 28-inch sheets	10	10	ROI

Notes:

1. In instances where the harassment zone is larger than the ROI, the entire ROI is indicated as the limit of monitoring.

2. Reduced Monitoring area distance negotiated with NMFS

Key: NA- Not Applicable because the entire ROI would be ensnified to the Level A harassment threshold and, therefore, there would be no Level B harassment zone. ROI – region of influence

Table 3. Hydroacoustic Monitoring Summary.

Size	Count	Activity	Number Monitored
102-inch	94	Rotary Drill	9
78-inch	94	DTH Cluster Drill	9
42-inch	445	DTH Mono-hammer	10
9-inch	154	DTH Mono-hammer	10
4 to 6-inch	2,701	DTH Mono-hammer	10
NA	252 days	Rock Hammering	10

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