



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

INCIDENTAL HARASSMENT AUTHORIZATION

The U.S. Navy (Navy) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1371(a)(5)(D)) to take marine mammals incidental to conducting in-water construction work for the Portsmouth Naval Shipyard Dry Dock 1 modification and expansion in Kittery, Maine, contingent upon the following conditions:

1. This Authorization is valid from October 1, 2019, through September 30, 2020.
2. This Authorization is valid only for activities associated with in-water construction work at the Portsmouth Naval Shipyard Dry Dock 1 modification and expansion in Kittery, Maine.
3. General Conditions.
 - (a) A copy of this IHA must be in the possession of the Navy, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are the harbor porpoise (*Phocoena phocoena*), harbor seal (*Phoca vitulina*), gray seal (*Halichoerus grypus*), harp seal (*Pagophilus groenlandicus*), and hooded seal (*Cystophora cristata*). The taking, by Level A and Level B harassment only, is limited to the numbers listed in table 1.
 - (c) The taking by serious injury or death of the species listed in condition 3(b) or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization. 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 Navy shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, acoustical monitoring team, and Navy staff prior to the start of all in-water construction activities, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
4. Mitigation Measures

The holder of this IHA is required to implement the following mitigation measures:



- (a) For in-water construction, heavy machinery activities other than pile driving (e.g., use of barge-mounted excavators, or dredging), if a marine mammal comes within 10 m, the Navy must cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.
- (b) The Navy is required to employ PSOs per the Marine Mammal Monitoring Plan, dated March 2019, and Monitoring Measures described in section 5 of this IHA.
- (c) Marine mammal monitoring must take place from 30 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pile driving may commence when observers have declared the shutdown zone clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone (Table 2), 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.
- (d) If a marine mammal is entering or is observed within an established shutdown zone (Table 2), pile driving must be halted or delayed. Pile driving may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without subsequent detections.
- (e) The Navy 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 thirty-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 thirty minutes or longer.
- (f) If a species for which authorization has not been granted, or a species for which authorization has been granted but the authorized takes are met, is observed approaching or within the monitoring zone (Table 3), pile driving and removal activities must shut down immediately using delay and shut-down procedures. Activities must not resume until the animal has been confirmed to have left the area or the observation time period, as indicated in condition 4(d) above, has elapsed.

5. Monitoring Measures

The holder of this IHA is required to abide by the following marine mammal and acoustic monitoring measures:

- (a) Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring Plan, dated March 2019.

- (b) Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:
- i. Independent PSOs (*i.e.*, not construction personnel) who have no other assigned tasks during monitoring periods must be used.
 - ii. A minimum of two PSOs must be posted during all in-water pile driving, pile removal and drilling, one at the tip of either Berth 12 or Berth 2 and the other to be determined based on the location of the noise generating activity, possibly stationed at Pierce Island.
 - iii. For activities that can impact the maximum area of 0.854 km², the Navy must employ 4 PSOs. These PSOs must be stationed at the following high vantage points:
 - A. Memorial Bridge;
 - B. New Castle Causeway;
 - C. Berth 2 or Berth 12 of the Naval Portsmouth Shipyard; and
 - D. Henderson's Point.
 - iii. At least one observer must have prior experience working as an observer;
 - iv. Other PSOs may substitute education (degree in biological science or related field) or training for experience.
 - v. Where a team of three or more PSOs are required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience working as a marine mammal observer during construction.
 - vi. The Navy must submit PSO CVs for approval by NMFS prior to the onset of pile driving.
- (c) Hydroacoustic monitoring:
- i. The Navy must submit a hydroacoustic monitoring plan regarding monitoring of the sound field during in-water pile driving activities for specific piles.
 - ii. Numbers of piles to be measured for pile driving are:
 - A. 10 AZ sheet piles and 10 flat web sheet piles under both impact and vibratory pile driving;

- B. 4 16-inch steel piles for impact and vibratory pile driving;
- C. 5 36-inch steel piles for impact and vibratory pile driving;
- D. 5 14-inch H-piles for impact and vibratory driving; and
- E. 4 8-foot diameter shafts for down-the-hole drilling.

6. Reporting

The holder of this IHA is required to:

- (a) Submit a draft report on all monitoring conducted under the IHA within ninety calendar days of the completion of the project or sixty days prior to the issuance of any subsequent IHA for this project, whichever comes first. A final report shall be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS. This report must contain the informational elements described in the Marine Mammal Monitoring Plan, dated March 2019, including, but not limited to:
 - i. Dates and times (begin and end) of all marine mammal monitoring.
 - ii. Construction activities occurring during each daily observation period, including how many and what type of piles were driven or removed and by what method (*i.e.*, impact or vibratory).
 - iii. Weather parameters and water conditions during each monitoring period (*e.g.*, wind speed, percent cover, visibility, sea state).
 - iv. The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal was occurring at time of sighting.
 - v. Age and sex class, if possible, of all marine mammals observed.
 - vi. PSO locations during marine mammal monitoring.
 - vii. Distances and bearings of each marine mammal observed to the pile being driven or removed for each sighting (if pile driving or removal was occurring at time of sighting).
 - viii. Description of any marine mammal behavior patterns during observation, including direction of travel.
 - ix. Number of individuals of each species (differentiated by month as appropriate) detected within the monitoring zone, and estimates of number

of marine mammals taken, by species (a correction factor may be applied to total take numbers, as appropriate).

- x. 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.
- xi. Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals.

(b) Reporting injured or dead marine mammals:

- i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as serious injury, or mortality, the Navy must immediately cease the specified activities and report the incident to the NMFS Office of Protected Resources (301-427-8401) and Greater Atlantic Region Stranding Coordinator (866-755-6622). The report must include the following information:
 - A. Time and date of the incident;
 - B. Description of the incident;
 - C. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
 - D. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;
 - E. Species identification or description of the animal(s) involved;
 - F. Fate of the animal(s); and
 - G. Photographs or video footage of the animal(s).

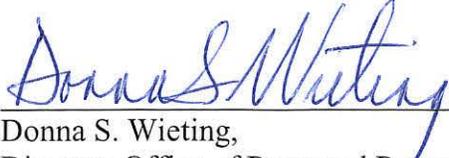
Activities must not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with the Navy to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Navy may not resume their activities until notified by NMFS.'

- ii. In the event the Navy discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (e.g., in less than a moderate

state of decomposition), the Navy must immediately report the incident to the Office of Protected Resources, NMFS, and the Greater Atlantic Coast Region Stranding Coordinator, NMFS. The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with the Navy to determine whether additional mitigation measures or modifications to the activities are appropriate.

- iii. In the event that the Navy discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the specified activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Navy must report the incident to the Office of Protected Resources, NMFS, and the Greater Atlantic Coast Region Stranding Coordinator, NMFS, within 24 hours of the discovery.
7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.
 8. Renewals - On a case-by-case basis, NMFS may issue a one-year IHA renewal with an expedited public comment period (15 days) when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that allowed for under this IHA, provided all of the following conditions are met:
 - (a) A request for renewal is received no later than 60 days prior to expiration of the current IHA.
 - (b) The request for renewal must include the following:
 - i. An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements.
 - 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 remain the same and appropriate, and the original findings remain valid.



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National Marine Fisheries Service

MAY 16 2019

Date

Table 1. Species/stocks and numbers of marine mammals authorized to be taken under this IHA.

Species	Level A	Level B
Harbor porpoise	5	12
Harbor seal	284	776
Gray seal	25	35
Hooded seal	0	5
Harp seal	0	5

Table 2. Shutdown distances for various pile driving activities

Pile type, size & driving method	Shutdown distance (m)	
	Porpoise	Seal
Vibratory drive 14" H-pile (2 pile/day)	10	10
Impact drive 14" H-pile (2 pile/day)	35	20
Vibratory drive 24" sheet pile (12 pile/day)	20	10
Impact drive 18" & 24" sheet pile (12 pile/day)	110	50
Vibratory removal 14" H-pile (8 pile/day)	10	10
Vibratory drive 14" H-pile (1 pile/day)	10	10
Impact drive 14" H-pile (1 pile/day)	25	10
Down-hole drive 96" steel casing (0.5 pile/day)	60	25
Vibratory drive 36" steel pipe pile (1 pile/day)	20	10
Impact drive 36" steel pipe pile (1 pile/day)	110	50
Vibratory drive 16" steel pipe pile (1 pile/day)	10	10
Impact drive 16" steel pipe pile (1 pile/day)	15	10

Table 3. Marine mammal Level A and Level B harassment zones for monitoring

Pile type, size & driving method	Level A harassment		Level B harassment
	HF cetacean	Phocid	
	Dist. (m)	Dist. (m)	Dist. (m)
Vibratory drive 14" H-pile (2 pile/day)	1.9	0.8	3414.5
Impact drive 14" H-pile (2 pile/day)	33.7	15.1	135.9
Vibratory drive 24" sheet pile (12 pile/day)	13.7	5.6	7356.4
Impact drive 18" & 24" sheet pile (12 pile/day)	1763	792	1000
Vibratory removal 14" H-pile (8 pile/day)	4.9	2	3414
Vibratory drive 14" H-pile (1 pile/day)	1.2	0.5	3414
Impact drive 14" H-pile (1 pile/day)	21.2	9.5	135.9
Down-hole drive 96" steel casing (0.5 pile/day)	56.5	23.2	10000
Vibratory drive 36" steel pipe pile (1 pile/day)	16.5	6.8	10000
Impact drive 36" steel pipe pile (1 pile/day)	533.1	239.5	3414.5
Vibratory drive 16" steel pipe pile (1 pile/day)	2.2	0.9	6310
Impact drive 16" steel pipe pile (1 pile/day)	11.5	5.2	15.8