



## LETTER OF AUTHORIZATION

The U.S. Navy (Navy) is hereby authorized under section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(A)) to take marine mammals incidental to construction activities at Naval Station Norfolk, Virginia subject to the provisions of the MMPA and the Regulations Governing Taking Marine Mammals Incidental to U.S. Navy Construction Activities at Naval Station Norfolk, Virginia (50 CFR Part 218, Subpart A) (Regulations)

1. This Letter of Authorization (LOA) is valid from June 8, 2021 through June 6, 2026.
2. This LOA is valid only for take incidental to the specified construction activities at Naval Station Norfolk, Virginia, and described in the preamble to the Regulations.
3. General Conditions
  - (a) A copy of this LOA must be in the possession of the Navy, its designees, and work crew personnel operating under the authority of this LOA.
  - (b) The species and/or stocks authorized for taking are listed in Table 1. Authorized take, by Level B harassment only, is limited to the species and numbers listed in Table 1.
  - (c) The taking by Level A harassment, 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 Navy shall conduct briefings for construction supervisors and crews, the monitoring team, and Navy staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, the marine mammal monitoring protocol, and operational procedures.
4. Mitigation Requirements
  - (a) For in-water heavy machinery work other than pile driving, if a marine mammal comes within 10 m, the Navy shall cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.



- (b) For all pile driving activity, the Navy shall implement a minimum shutdown zone of a 10 m radius around the pile. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease.
- (c) For all pile driving activity, the Navy shall implement shutdown zones as indicated in Table 2. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease.
- (d) The Navy shall deploy PSOs as indicated in its Marine Mammal Monitoring Plan approved by NMFS.
- (e) A minimum of three PSOs shall be stationed at the best vantage points practicable to monitor for marine mammals and implement shutdown/delay procedures during vibratory pile driving at Pier 3, Pier 12, and Craney Island. At least four PSOs must be stationed at the best vantage points practicable during vibratory pile driving at Lambert's Point. For all other pile driving activities, a minimum of two observers shall be stationed at the best vantage points practicable to monitor for marine mammals and implement shutdown/delay procedures.
- (f) Monitoring shall take place from 30 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pre-activity monitoring shall be conducted for 30 minutes to ensure that the shutdown zone is clear of marine mammals, and 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, animals shall be allowed to remain in the shutdown zone (i.e., must leave of their own volition) and their behavior shall be monitored and documented. If a marine mammal is observed within the shutdown zone, a soft-start cannot proceed until the animal has left the zone or has not been observed for 15 minutes. Monitoring shall occur throughout the time required to drive a pile. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones must commence. A determination that the shutdown zone is clear must be made during a period of good visibility (i.e., the entire shutdown zone and surrounding waters must be visible to the naked eye).
- (g) If a marine mammal approaches or enters the shutdown zone, all pile driving activities at that location shall be halted. If pile driving is halted or delayed due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or fifteen minutes have passed without re-detection of the animal.
- (h) Pile driving activity must be halted 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.

- (i) Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone would not be visible (*e.g.*, fog, heavy rain, night), the Navy shall delay pile driving and removal until observers are confident marine mammals within the shutdown zone could be detected.
- (j) 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.
- (k) The Navy shall use soft start techniques for impact pile driving. Soft start for impact drivers requires the Navy and those persons it authorizes or funds to provide an initial set of three strikes at reduced energy, followed by a 30-second waiting period, then two subsequent reduced energy three-strike sets. Soft start shall 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.

5. Monitoring Requirements

- (a) The Navy shall submit a Marine Mammal Monitoring Plan to NMFS for approval in advance of construction.
- (b) The Navy shall deploy at least three PSOs during vibratory pile driving at Pier 3, Pier 12, and Craney Island, and at least four PSOs during vibratory pile driving at Lambert's Point. For all other pile driving activities, the Navy shall deploy a minimum of two PSOs.
- (c) Observers shall be trained in marine mammal identification and behaviors. Observers shall have no other construction-related tasks while conducting monitoring.

- (d) For all pile driving activities, a minimum of two observers shall be stationed at the active pile driving site or in reasonable proximity in order to monitor the shutdown zone.
- (e) The Navy shall monitor the Level B harassment zones (areas where SPLs are equal to or exceed the 160 dB rms threshold for impact driving and the 120 dB rms threshold during vibratory pile driving) to the extent practicable and the shutdown zones. The Navy shall monitor at least a portion of the Level B harassment zone on all pile driving days.
- (f) PSOs must record all observations of marine mammals, regardless of distance from the pile being driven, as well as the additional data indicated in section 6 of this LOA.

6. Reporting Requirements

- (a) The Navy shall submit a draft monitoring report to NMFS within 45 work days of the completion of required monitoring for each marine structure maintenance, pile replacement, and upgrades project. The report must detail the monitoring protocol and summarize the data recorded during monitoring. If no comments are received from NMFS within 30 days, the draft report will constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments. All draft and final monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.Davis@noaa.gov*.

Specifically, the report must include:

- (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) Environmental conditions during monitoring periods (at beginning and end of observer 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);
- (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 and estimated time spent within the Level A and Level B harassment zones while the source was active;
  - (ix) Number of marine mammals detected within the harassment zones, by species;
  - (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; and
  - (xii) Estimated percentage of the Level B harassment zone that was not visible.
- (b) The Holder must submit all PSO datasheets and/or raw sighting data with the draft reports referenced in condition 6(a) of this LOA.
- (c) 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.Davis@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, (2) the authorized taking is likely to have or is having an unmitigable adverse impact on the availability of the affected species or stocks for subsistence uses, or (3) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.

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Catherine Marzin,  
Acting Director, Office of Protected Resources  
National Marine Fisheries Service

**Table 1. Authorized Incidental Take.**

<b>Common name</b>	<b>Scientific name</b>	<b>Stock</b>	<b>Level B Harassment (Five-Year)</b>
Humpback whale	<i>Megaptera novaeangliae</i>	Gulf of Maine	24
Bottlenose dolphin	<i>Tursiops truncatus</i>	Western North Atlantic Coastal, Northern Migratory	7,566
		Western North Atlantic Coastal, Southern Migratory	
		Northern North Carolina Estuarine System	
Harbor porpoise	<i>Phocoena phocoena</i>	Gulf of Maine/Bay of Fundy	24
Harbor seal	<i>Phoca vitulina</i>	Western North Atlantic	7,399
Gray seal	<i>Halichoerus grypus</i>	Western North Atlantic	9

**Table 2. Shutdown and Harassment Zones.**

<b>Site</b>	<b>Pile Size/Type</b>	<b>Minimum Shutdown Zone (m)</b>				<b>Harassment Zone</b>
		<b>Low-frequency Cetacean</b>	<b>Mid-frequency Cetacean</b>	<b>High-frequency Cetacean</b>	<b>Phocid</b>	
Impact Pile Driving						
Pier 3	16-in Composite	20				27
Pier 12	16-in Composite	20				24
MWR Marina	24-in Concrete	55				59
	16-in Composite	20				18
V-Area	24-in Concrete	55			10	47
	16-in Composite	20				17
Craney Island	16-in Composite	20				21
Lambert's Point	16-in Composite	20				28

Vibratory Pile Driving			
Pier 3	16-in Composite/ 12-in Timber	10	5,615
Pier 12			4,159
MWR Marina			469
V-Area			382
Craney Island			3,001
Lambert's Point			7,161