



# MARINE MAMMAL COMMISSION

30 September 2016

Ms. Jolie Harrison, Chief  
Permits and Conservation Division  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the U.S. Navy's application seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act to take marine mammals by harassment. The taking would be incidental to pile driving and removal in association with a waterfront restoration project in Kittery, Maine, during a one-year period. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 9 August 2016 notice (81 Fed. Reg. 52614) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

## Background

The Navy plans to install and remove piles during demolition and repair of various structures at the Portsmouth Naval Shipyard (the Shipyard). This would be the first authorization for the six-year project—Berth 11 would be repaired during the first year of activities. The Navy could install up to 320 14- to 36-in steel H-type or steel sheet piles and 7 15-in timber piles using a vibratory and/or an impact hammer or by drilling rock sockets. The Navy could remove up to 141 15-in timber or 14-in steel H-type piles using a vibratory hammer. The *Federal Register* notice indicated that the proposed activities could occur for up to 72 days throughout the year. Activities would be limited to daylight hours only.

NMFS indicated in the *Federal Register* notice that it had preliminarily determined that, at most, the proposed activities would temporarily modify the behavior of small numbers of harbor porpoises, harbor seals, gray seals, and harp seals. It also anticipates that any impact on the affected species and stocks would be negligible. NMFS does not anticipate any take of marine mammals by death or serious injury and believes that the potential for temporary or permanent hearing impairment would be at the least practicable level because of the proposed mitigation measures. The proposed mitigation, monitoring, and reporting measures include—

- conducting empirical sound source and sound propagation measurements during 10 percent<sup>1</sup> of installation and removal activities and adjusting the Level A and B harassment zones, if necessary;
- using soft-start, delay, and shut-down procedures;
- using delay and shut-down procedures if a species for which authorization has not been granted or for which the authorized numbers of takes have been met approaches or is observed within the Level A or B harassment zone<sup>2</sup>;
- using two qualified protected species observers (PSOs; land-, pier-, and/or vessel-based) to monitor the Level A and B harassment zones for 15 minutes before, during, and for 30 minutes after pile driving and removal activities;
- ceasing other heavy machinery work if any marine mammal comes within 10 m of the vessel or equipment;
- reporting injured and dead marine mammals to NMFS and the Greater Atlantic Regional Stranding Coordinator using NMFS's phased reporting approach and suspending activities, if appropriate; and
- submitting a draft and final acoustic and marine mammal monitoring report to NMFS.

### General concerns and comments

The Commission had extensive questions and comments regarding the proposed incidental harassment authorization. Those comments primarily involved incorrect information, general oversights, and inaccurate assessments of species-specific takes based on biological and ecological considerations. After multiple communications with the Commission, NMFS indicated that numerous issues would be resolved prior to issuance of the incidental harassment authorization. Those include—

- increasing the number of activity days from 72 to 156 based on an incorrect assumption that 10 rather than 1 rock socket would be drilled in a given day and re-estimating the numbers of Level B harassment takes of marine mammals;
- increasing the harbor porpoise average density estimate from 0.9578 to 1.0214 porpoises/km<sup>2</sup> based on harbor porpoises occurring year-round at the project site<sup>3</sup> and re-estimating the number of Level B harassment takes;
- increasing the number of calculated Level B harassment takes from the re-estimated<sup>4</sup> 30 to 312 harbor seal takes and the re-estimated 33 to 156 gray seal takes<sup>5</sup> based on harbor seals being more common than gray seals and a haul-out site occurring less than 2.5 km from the project site;

---

<sup>1</sup> 10 percent of each different type of pile and each method of installation and removal.

<sup>2</sup> NMFS informed the Commission that it would require these measures after publication of the notice in the *Federal Register*.

<sup>3</sup> Thus, inclusion of the winter density estimate that was omitted initially from the average density estimate.

<sup>4</sup> Assuming 156 days of activities based on the Navy's simple area x density x number of days of activities method to enumerate takes.

<sup>5</sup> Which were based on 2 harbor seals and 1 gray seal being taken on each of the 156 days of proposed activities.

- increasing the number of calculated Level B harassment takes from the re-estimated two to five harp seal takes to account for the potential that harp seals could occur at the project site on multiple days;
- authorizing Level B harassment takes of five hooded seals based on hooded seals being observed at the project site in previous years; and
- requiring standard mitigation measures that were omitted inadvertently from the *Federal Register* notice.

The Commission agrees that NMFS should include all the aforementioned modifications in the final incidental harassment authorization. However, the Commission cautions, as it had repeatedly in correspondence with NMFS, that the take estimates specifically for harbor and gray seals still may be underestimated. However, NMFS confirmed that the Navy is aware that if the authorized limits for either species are met, the Navy would have to delay or shut down its pile-driving (including drilling rock sockets) and -removal activities when that species either approaches or is observed within the Level A or B harassment zone.

In addition, the Commission was made aware on 23 September that NMFS plans to re-estimate the Level A harassment zones and to authorize Level A harassment takes<sup>6</sup> based on the NMFS's new permanent threshold shift (PTS) thresholds—thresholds that were considered final and published a few days prior<sup>7</sup> to the proposed authorization publishing in the *Federal Register*. The Commission was not afforded sufficient time to review the manner in which the new Level A harassment thresholds would be implemented, nor was the public made aware of any such changes in the proposed authorization. The Commission agrees that the new thresholds should be implemented in all proposed incidental take authorizations but not at the expense of minimizing the public's opportunity to comment. As such, the Commission recommends that NMFS include its new thresholds (for PTS and/or temporary threshold shift) in all relevant proposed incidental take authorizations rather than when the final authorization is issued.

### **Estimation of takes**

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each species across days, does not account for and negates the intent of NMFS's 24-hour reset policy. Instead of summing fractions of takes across days and then rounding to estimate total takes, NMFS should have calculated a daily take estimate (determined by multiplying the estimated density of marine mammals in the area by the daily ensonified area) and then rounded that to a whole number *before* multiplying it by the number of days that activities would occur—a method NMFS implemented for the previous Navy authorizations (80 Fed. Reg. 53130, 79 Fed. Reg. 53041, 78 Fed. Reg. 30892). As stated in previous Commission letters, NMFS should use the average group size as a proxy for the estimated number of takes for species in which estimated daily takes would round down to zero, as has been done for other incidental harassment authorizations (80 Fed. Reg. 75380, 81 Fed. Reg. 23144). Furthermore, if NMFS believes any of those species could be taken on multiple days, NMFS should multiply the average group size by the number of days of activities. NMFS ultimately took those approaches for the four pinniped species

---

<sup>6</sup> The Level A harassment takes for harbor and gray seals were amended again on 26 September.

<sup>7</sup> On 4 August 2016.

after discussions with the Commission. However, the harbor porpoise takes still were estimated based on NMFS summing fractions of takes across days, resulting in an underestimation<sup>8</sup> of takes.

As the Commission has indicated in previous letters regarding this matter<sup>9</sup>, the issue at hand involves policy rather than mathematical accuracy. Summing fractions of takes<sup>10</sup> across days nullifies the intent of the 24-hour reset, which is a policy decision that NMFS made many years ago and continues to implement<sup>11</sup>. It appears NMFS understands the implications for certain applications of its 24-hour reset but is choosing to inconsistently apply the method across the various metrics, which in this case is the sound pressure level (root-mean-square) metric. Thus, the Commission recommends that NMFS (1) follow its policy of a 24-hour reset for enumerating the number of each species that could be taken during the proposed activities, (2) apply standard rounding rules before summing the numbers of estimated takes across days, and (3) for species that have the potential to be taken but model-estimated or calculated takes round to zero, use group size to inform the take estimates—these methods should be used consistently for all future incidental take authorizations. The Commission has discussed this matter with NMFS and is willing to engage in further discussions to resolve this matter in the near future.

### **Mitigation and monitoring measures**

The proposed authorization would require PSOs to implement mitigation measures, validate take estimates, and document marine mammal responses to a portion of the dismantling activities. Specifically, the authorization would require monitoring of the Level A harassment zones for 100 percent of all pile driving and Level B harassment zones for 67 percent of all impact pile driving and vibratory pile driving and removal. NMFS has indicated for other similar construction authorizations (78 Fed. Reg. 2371, 79 Fed. Reg. 2422) that the extent of proposed work made it infeasible and costly for action proponents to implement marine mammal monitoring for Level B harassment zones at all times. However, the Commission notes that the extent of the Level B harassment zone for vibratory pile driving and removal appears to extend to approximately 1.5 km before intersecting land—a distance that the Commission notes is far smaller than other similar pile-driving authorizations.

In addition, monitoring and reporting requirements adopted under section 101(a)(5) of the MMPA need to be sufficient to provide a reasonably accurate assessment of the manner of taking and the numbers of animals taken incidental to the specified activity. If monitoring occurs only for a portion of the activities, (1) the numbers and species of marine mammals taken during the proposed activities may not be determined accurately, which is especially concerning for harbor and gray seals that may reach their authorized limit and (2) takes would be underestimated for species that rarely occur in the project area (e.g., harp and hooded seals) if those animals were present on any of the days in which monitoring would not occur. Any behavioral responses of those species also would not be documented. Therefore, monitoring during all pile-driving and -removal activities is the only

---

<sup>8</sup> The Navy estimated 0.96 porpoises could be taken on 156 days, which resulted in 150 takes rather than assuming 1 harbor porpoise would be taken each day resulting in 156 takes.

<sup>9</sup> See the Commission's 7 September 2016 letter detailing this issue.

<sup>10</sup> Especially those that are much less than 0 (e.g., 0.05 takes).

<sup>11</sup> See the *Federal Register* notice regarding NMFS's technical guidance for assessing the effects of anthropogenic sound on marine mammal hearing—underwater acoustic thresholds for onset of permanent and temporary threshold shifts (PTS and TTS, respectively; 81 Fed. Reg. 51694).

Ms. Jolie Harrison  
30 September 2016  
Page 5

way for NMFS and the Navy to be confident that the numbers of marine mammals taken are within the limits authorized and the least practicable impact occurs. Thus, the Commission recommends that NMFS require the Navy to implement full-time monitoring of Level A and B harassment zones during all pile-driving (including drilling rock sockets) and -removal activities.

The Commission hopes its comments are useful. Please contact me if you have questions regarding the Commission's recommendations.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca J. Lent". The signature is written in a cursive style with a long, sweeping underline that extends to the left.

Rebecca J. Lent, Ph.D.  
Executive Director