



# MARINE MAMMAL COMMISSION

2 April 2018

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

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 (the MMPA) to take marine mammals by harassment. The taking would be incidental to pile driving and removal in association with the service pier extension project at Naval Base Kitsap Bangor (Bangor) in Washington. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 12 March 2018 notice (83 Fed. Reg. 10689) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

## Background

The Navy plans to extend the service pier and construct associated support facilities to accommodate the relocation of two SEAWOLF Class submarines from Naval Base Kitsap Bremerton. During the project, the Navy would remove 36 15- to 18-in timber piles and 27 36-in temporary steel piles using direct pull, a vibratory hammer, and/or cutting at the mudline. The Navy also would install 27 36-in temporary steel piles, 50 24-in and 203 36-in permanent steel piles, and 103 18-in concrete piles using a vibratory and/or impact hammer. It expects the activities to occur on up to 160 days during daylight hours<sup>1</sup>. In-water activities would occur from 16 July 2018 through 15 January 2019.

NMFS preliminarily has determined that, at most, the proposed activities would cause Level A and/or B harassment of small numbers of harbor seals<sup>2</sup>, California sea lions, Steller sea lions, harbor porpoises, and transient killer whales. 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 mitigation, monitoring, and reporting measures include—

---

<sup>1</sup> In-water activities would occur only during daylight hours (sunrise to sunset). From July 16 to September 15, impact pile-driving activities would only occur starting two hours after sunrise and ending two hours before sunset.

<sup>2</sup> The Commission noted that NMFS incorrectly reduced the number of Level B harassment takes by the number of Level A harassment takes in the *Federal Register* notice. NMFS verified the error and clarified that it plans to issue 4,375 Level B and 125 Level A harassment takes in the final authorization.

- using only one hammer at any given time;
- using a bubble curtain during impact pile driving of 24- to 36-in piles and implementing various performance standards measures;
- 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 if a species for which authorization has been granted but the authorized takes have been met, approaches or is observed within the Level A and/or B harassment zone;
- using three to five qualified protected species observers to monitor the Level A and B harassment zones for 15 minutes before, during, and for 30 minutes after pile driving;
- ceasing other heavy machinery work (i.e., activities other than pile driving including pile removal) if any marine mammal comes within 10 m of the vessel or equipment;
- reporting any pinniped hauled out at unusual sites (e.g., in work boats) immediately to the local stranding network, and as soon as time allows to NMFS, and following any procedures or measures stipulated by the stranding network<sup>3</sup>;
- reporting injured and dead marine mammals to the regional stranding network and NMFS using NMFS's phased reporting approach and suspending activities, if appropriate; and
- submitting draft and final monitoring reports to NMFS.

### **Rounding of take estimates**

The method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each species across project days, does not account for and negates the intent of NMFS's 24-hour reset policy. As the Commission has indicated in previous letters regarding this matter<sup>4</sup>, the issue at hand involves policy rather than mathematical accuracy. Although NMFS developed criteria associated with rounding quite some time ago, NMFS has indicated that the draft criteria need additional revisions before it can share them with the Commission. Therefore, the Commission recommends that NMFS promptly revise its draft rounding criteria in order to share them with the Commission.

### **Appropriateness of the Level A harassment zones**

As the Commission has indicated in previous letters, it supports NMFS's use of the updated permanent threshold shift (PTS) thresholds and associated weighting functions that are used to estimate the Level A harassment zones. However, there are some shortcomings that need to be addressed regarding the methodology for determining the extent of the Level A harassment zones based on the associated PTS cumulative sound exposure level (SEL<sub>cum</sub>) thresholds for the various types of sound sources, including stationary sound sources. For determining the range to the PTS SEL<sub>cum</sub> thresholds, NMFS uses a baseline accumulation period of 24 hours unless an activity would occur for less time (e.g., 8 hours). The Commission supports that approach *if* an action proponent is able to conduct more sophisticated sound propagation and animat modeling. However, that

---

<sup>3</sup> The Commission noted that this standard measure was not included in the proposed incidental harassment authorization. NMFS has since clarified that the measures would be included in the final authorization.

<sup>4</sup> See the Commission's [29 November 2016 letter](#) detailing this issue.

approach is less than ideal for action proponents that either are unable, or choose not, to conduct more sophisticated modeling.

As an example, the Level A harassment zone for high-frequency cetaceans was estimated to be much greater than the Level B harassment zone (740 vs. 541 m, respectively) for impact driving of 36-in piles<sup>5</sup>. Based on the extent of those zones, it is assumed that an animal would experience PTS before behaviorally responding and avoiding the area. That notion runs counter to the logic that permanent and temporary physiological effects are expected to occur closest to the sound source, with behavioral responses triggered at lower received levels, and thus at farther distances. Numerous Navy environmental impact statements<sup>6</sup>, as well as a National Research Council (NRC) report (Figure 4-1; NRC 2005), support this logic.

The Commission does not question the Level A harassment thresholds themselves, but rather the manner in which the PTS SEL<sub>cum</sub> thresholds are currently implemented. The Level A and B harassment zones do not make sense biologically or acoustically due to NMFS's unrealistic assumption that the animals remain stationary throughout the entire day of the activity.<sup>7</sup> This is particularly problematic when action proponents, including the Navy, are using a simple area x density method for take estimation. By assuming a stationary receiver, all of the energy emitted during a 24-hour period is accumulated for the PTS SEL<sub>cum</sub> thresholds.

The Commission continues to believe that it would be prudent for NMFS to consult with scientists and acousticians to determine the appropriate accumulation time that action proponents should use to determine the extent of the Level A harassment zones based on the associated PTS SEL<sub>cum</sub> thresholds in such situations. Those zones should incorporate more than a few hammer strikes (or acoustic pulses) but less than an entire workday's worth of strikes (or pulses). This recommendation is the same as those made in the Commission's [11 July 2017 letter](#) on NMFS's final Technical Guidance and multiple previous letters<sup>8</sup>. Other federal partners, including the Navy, have made similar recommendations. Since the Commission and other federal partners determined that this issue needs resolution, the Commission recommends that NMFS make this issue a *priority* to resolve in the near future. The Commission further recommends that NMFS consult with both internal<sup>9</sup> and external scientists and acousticians to determine the appropriate accumulation time that action proponents should use to determine the extent of the Level A harassment zones based on the associated PTS SEL<sub>cum</sub> thresholds for the various types of sound sources, including stationary sound sources, when simple area x density methods are employed. Estimated swimming speeds of various species and behavior patterns (including residency patterns)<sup>10</sup> should be considered. Evaluating

---

<sup>5</sup> A similar, but more pronounced, trend is observed for low-frequency cetaceans for which taking was not requested (see Table 6-5 in the application).

<sup>6</sup> With which NMFS has been a cooperating agency.

<sup>7</sup> Which generally has been more of an issue for stationary sound sources. However, this also could be an issue for moving sound sources that have short distances between transect lines, in which the user spreadsheet may not be appropriate for use unless the source level could be adjusted accordingly.

<sup>8</sup> Including its 11 May 2017, 11 April 2017, and 31 August 2015 letters.

<sup>9</sup> Including staff in the Marine Mammal and Sea Turtle Conservation Division of the Office of Protected Resources and staff in the Office of Science and Technology.

<sup>10</sup> Results from monitoring reports, including animal responses, submitted in support of incidental harassment authorizations issued by NMFS also may inform this matter.

various scenarios using animat modeling should help address this issue as well.

### **Shut-down zones**

The aforementioned issue is further confounded because the Navy has proposed to shut down its activities if a pinniped is observed within 220 m for impact pile driving and 30 m for vibratory pile driving. Both proposed zones are excessively large for otariids<sup>11</sup> in general and are exceedingly large for phocids<sup>12</sup> during all activities except for driving of 36-in piles. As noted in the Navy's application, harbor seals and California sea lions are present year-round at Bangor. The Navy also assumed that 35 harbor seals and 49 California sea lions could be harassed on each day of activities<sup>13</sup>, which is not an insignificant number of animals.

In the Commission's review of previous monitoring reports from Bangor, it notes that the Navy had to shut down its activities 22 times on 15 separate days due to harbor seals occurring in the 20-m shut-down zone for impact pile driving (Department of the Navy 2015). Given that the previous shut-down zone is 10 times smaller than the proposed shut-down zone, it is very likely that the Navy would spend more time shutting down its activities and clearing its zone than actually driving piles. In addition, 44 of 47 harbor seal sightings were observed within 220 m of the Navy's other previous construction activities on just three days of observations (Department of the Navy 2016)<sup>14</sup>.

The Commission understands that NMFS also believes that the Navy's proposed shut-down zones are overly conservative and could result in numerous shut downs. However, the Navy has indicated that it is comfortable with its approach. The Commission is unsure why the Navy is reticent to change its approach—which is inconsistent with past practice—but notes this will set precedent for what is considered practicable for mitigation and monitoring. The Commission further contends that the Navy's proposed approach is neither necessary nor practical in regards to the Navy being able to conduct its activities in a timely manner. For these reasons, the Commission recommends that NMFS strongly encourage the Navy to reduce the sizes of its shut-down zones<sup>15</sup> to ensure both that pinnipeds are sufficiently protected from Level A harassment and the activities can be completed in an appropriate manner and within an appropriate timeframe. If the sizes of the zones are reduced below 46 m, the Commission recommends that NMFS include the appropriate number of Level B harassment takes for all pinniped species during the 35 days of impact driving of 18-in concrete piles. Those additional takes should not affect NMFS's small numbers or negligible impact determinations.

---

<sup>11</sup> The predicted Level A harassment zones range from 1 to 12 m for impact pile driving and 1 to 2 m for vibratory pile driving.

<sup>12</sup> The predicted Level A harassment zones range from 19 to 34 m for impact driving of 18- and 24-in piles and 217 m for 36-in piles; while the Level A harassment zones range from 5 to 12 m for vibratory driving of 15- and 24-in piles and 26 m for 36-in piles.

<sup>13</sup> Level B harassment takes were not included for impact driving of 18-in concrete piles on 35 days of activities due to the Level B harassment zone of 46 m being subsumed by the 220 m shut-down zone. Level A harassment takes were included for harbor seals.

<sup>14</sup> California sea lions have been observed within 220 m of previous activities at Bangor for multiple authorizations but to a lesser degree than harbor seals.

<sup>15</sup> 15 m is more than sufficient for California sea lions during all activities. 35 m (or less for certain activities) would be reasonable for harbor seals, while retaining the 220-m shut-down zone only for impact driving of 36-in piles.

### **Proposed one-year authorization renewals**

NMFS has indicated that it may issue a one-year<sup>16</sup> incidental harassment authorization renewal for this and other future authorizations—a tactic that is quite relevant in this particular instance given that an additional authorization likely would be necessary based on the Navy’s proposed measures. Generally though, NMFS would issue a renewal on a case-by-case basis without additional public notice or comment opportunity when (1) another year of identical, or nearly identical activities, as described in the ‘Specified Activities’ section of the *Federal Register* notice is planned or (2) the originally planned activities would not be completed by the time the incidental harassment authorization expires and a renewal would allow for completion of the authorized activities beyond the timeframe described in the ‘Dates and Duration’ section of the notice. NMFS would consider issuing a renewal only if—

- the request for renewal is received no later than 60 days prior to the expiration of the current authorization;
- the activities to be conducted either are identical to the previously analyzed and authorized activities or include changes so minor (e.g., reduction in pile size) that they do not affect the previous analyses, take estimates, or mitigation and monitoring requirements;
- a preliminary monitoring report provides the results of the required monitoring to date and those results do not indicate impacts of a scale or nature not previously analyzed or authorized;
- the status of the affected species or stocks and any other pertinent information, including the mitigation and monitoring requirements, remain the same and appropriate; and
- the original determinations under the MMPA remain valid.

The Commission agrees that NMFS should take appropriate steps to streamline the authorization process under section 101(a)(5)(D) of the MMPA to the extent possible. However, the Commission is concerned that the renewal process proposed in the *Federal Register* notice is inconsistent with the statutory requirements. Section 101(a)(5)(D) clearly states that proposed authorizations are subject to publication in the *Federal Register* and elsewhere and that there be a presumably concurrent opportunity for public review and comment. NMFS’s proposed renewal process would bypass the public notice and comment requirements at the point that NMFS is considering the renewal. Although sympathetic to what NMFS is trying to accomplish, the Commission recommends that NMFS refrain from implementing the proposed renewal process unless it is revised to allow for contemporaneous public notice and review.

If NMFS believes that its proposed renewal process is consistent with the applicable statutory requirements and intends that process to be generally applicable to all incidental harassment authorizations that meet the specified criteria, it should not seek to adopt such a process through a brief notice at the end of a specific proposed authorization. That process should be adopted through more general procedures, preferably a rulemaking, that provides NMFS’s rationale and analysis regarding why it believes the proposed renewal process is consistent with the

---

<sup>16</sup> In another recent proposed authorization (83 Fed. Reg. 8456), NMFS clarified that it would issue a *second* one-year authorization. However, NMFS has yet to specify whether the renewal would be issued as a one-time opportunity, after which time a new authorization application would be required. These specifics should be included in all *Federal Register* notice that details the new proposed renewal process.

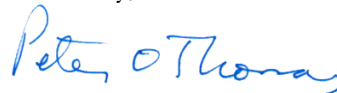
Ms. Jolie Harrison  
2 April 2018  
Page 6

requirements of section 101(a)(5)(D) of the MMPA and adequate public notice and opportunity for comment.

If NMFS adopts the proposed renewal process notwithstanding the Commission's recommendation, the Commission further recommends that NMFS provide it and the public with a legal analysis supporting NMFS's conclusion that such a process is consistent with the requirements under section 101(a)(5)(D) of the MMPA. In addition, if NMFS decides to bypass the notice and comment process in advance of issuing a renewal, it should nevertheless publish notice in the *Federal Register* whenever such a renewal has been issued.

The Commission hopes you find its letter useful. Please feel free to contact me should you have questions regarding the Commission's recommendations and comments.

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

## References

- Department of the Navy. 2015. Naval Base Kitsap–Bangor Explosives Handling Wharf 2: Year 3 marine mammal monitoring report (2014–2015), Bangor, Washington. Naval Facilities Engineering Northwest, Silverdale, Washington. 51 pages.
- Department of the Navy. 2016. Marine mammal monitoring report: EHW-1 pile replacement project 2015, Naval Base Kitsap–Bangor Washington. Naval Facilities Engineering Northwest, Silverdale, Washington. 73 pages.
- NRC. 2005. Marine mammal populations and ocean noise: Determining when noise causes biologically significant effects. The National Academies Press, Washington, D.C. 126 pages.