



# MARINE MAMMAL COMMISSION

6 November 2019

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 application submitted by the Alaska Department of Transportation and Public Facilities (AK DOT) seeking authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act (the MMPA) to take small numbers of marine mammals by harassment. The taking would be incidental to modifying a ferry terminal in Whittier, Alaska. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 22 October 2019 notice (84 Fed. Reg. 56427) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

AK DOT plans to remove and install piles during modification of the Whittier Ferry Terminal. Operators would (1) remove four 30-in steel pipe piles using a vibratory hammer and (2) install four 30-in steel pipe piles using a vibratory and/or impact hammer. AK DOT's activities could occur on up to six days, weather permitting. It would limit pile-driving and -removal activities to daylight hours from February through March 2020.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level B harassment of small numbers of five marine mammal species. NMFS anticipates that any impact on the affected species and stocks would be negligible. NMFS also does not anticipate any take of marine mammals by death or serious injury and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation measures. The proposed mitigation, monitoring, and reporting measures include—

- ceasing pile-driving and -removal activities if any marine mammal comes within 10 m of the equipment;
- using two to four (land- and/or vessel-based) qualified protected species observers (PSOs) to monitor the Level A and B harassment zones for 30 minutes before, during, and for 30 minutes after the proposed activities;
- 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 are met, approaches or is observed within the Level A and/or B harassment zone;

- reporting injured and dead marine mammals to the Office of Protected Resources and the Alaska Regional Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting a draft and final report.

### General comments

The Commission informally noted the following issues—

- To estimate the extents of the Level A harassment zones, NMFS used the (1) average rather than maximum number of piles to be installed or removed on a given day and (2) source level based on sound pressure level root-mean-square from Denes et al. (2016) and an assumed 100-msec pulse duration for impact pile driving rather than the source level based on single-strike sound exposure level from Denes et al. (2016). NMFS agreed to amend the Level A harassment zones, resulting in zones that are less than those denoted in Table 8 of the *Federal Register* notice for impact pile driving and that are greater than those denoted for vibratory pile driving and removal.
- NMFS did not specify shut-down zones that encompassed the Level A harassment zones for low- and high-frequency cetaceans, which is inconsistent with other authorizations.
- Although the Level A harassment zones extended to 195 m, NMFS did not propose to authorize any Level A harassment takes of harbor seals. NMFS acknowledged that a seal could occur within the Level A harassment zones but it is not expected to remain in the Level A harassment zone long enough<sup>1</sup> to be taken by Level A harassment. That approach is inconsistent with other authorizations.
- NMFS proposed to require AK DOT to implement 50-m shut-down zones during vibratory pile driving and removal when the Level A harassment zones were less than 20 m for pinnipeds, which could cause unnecessary delays in the activities. NMFS agreed to reduce the shut-down zone to 25 m for pinnipeds, as well as for mid-frequency cetaceans.
- Although up to 10 harbor seals and 10 Steller sea lions are known to haul out year-round adjacent to the project area, NMFS estimated that only 2.5 animals would be taken per day by Level B harassment. NMFS agreed to increase the number of Level B harassment takes from 15 to 60 for harbor seals<sup>2</sup> but believes that Steller sea lions are not likely to occur in the Level B harassment zone, given the limited prey availability in the project area in February and March.
- NMFS specified that the monitoring zone<sup>3</sup> would be 12 km for vibratory pile driving and removal, even though the maximum area that could be observed by the four PSOs would

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<sup>1</sup> NMFS assumed that it would take 30 minutes for an impact hammer to drive a pile with 400 strikes. It should take no longer than 10 minutes for an impact hammer to strike a pile up to 400 times. Generally, a single hammer strike takes 1 second to occur, equating to less than 7 minutes to drive a given pile.

<sup>2</sup> Based on up to 10 seals that could be potentially taken on each of the six days of activities.

<sup>3</sup> The Level B harassment zone was estimated to be 15.85 km. NMFS stated in the *Federal Register* notice that should PSOs determine the monitoring zone cannot be effectively observed in its entirety, Level B harassment exposures would be recorded and extrapolated based upon the number of observed takes and the percentage of the Level B harassment zone that was not visible. The Commission informally noted that Level B harassment takes would have to be extrapolated in all cases since the Level B harassment zone is larger than the monitoring zone and that the *Federal Register* notice should be revised to state that Level B harassment takes would be recorded and extrapolated based upon the

not exceed 9 km<sup>4</sup>. NMFS agreed to reduce the monitoring zone to 9 km and state that the area monitored would be dependent on the number of PSOs.

- NMFS did not specify in the proposed authorization that (1) pile driving and removal can occur only during daylight hours<sup>5</sup>, (2) if poor environmental conditions restrict full visibility of the shut-down zone(s), pile driving and removal must be delayed until the entire shut-down zone is visible<sup>6</sup>, (3) Level B harassment takes recorded by PSOs must be extrapolated, as appropriate for each species, based upon the number of observed takes and the percentage of the Level B harassment zone that was not visible, and (4) marine mammal field datasheets must be provided as part of the draft and final monitoring report<sup>5</sup>. NMFS also did not specify the Level A and B harassment zones in the proposed authorization. NMFS agreed to include all requirements and information accordingly in the final authorization.

Although the Commission appreciates that NMFS plans to fix some of these issues, many of them are recurrent amongst the numerous proposed authorizations in recent months. Many are easily fixed when identified. As such, the Commission recommends that NMFS update its various templates for *Federal Register* notices and draft authorizations accordingly and conduct a more thorough review of the applications and *Federal Register* notices to ensure accuracy, completeness, and consistency prior to submitting them to the *Federal Register* for public comment.

### **Level A harassment takes**

The revised Level A harassment zones extend to 195 m for harbor seals during impact pile driving. However, NMFS did not propose to authorize Level A harassment takes of harbor seals. NMFS plans to require AK DOT to cease its activities when a seal is observed within 200 m of the pile. NMFS acknowledged that a seal could occur with the Level A harassment zones but it is not expected to remain in the Level A harassment zone long enough to be taken by Level A harassment. That approach is inconsistent with other recent authorizations, including one issued to AK DOT less than two weeks ago.

For the recent AK DOT authorization for pile driving and removal activities in Auke Bay, NMFS also required AK DOT to cease its activities when a seal is observed within the relevant shut-down zone, which encompassed the Level A harassment zone<sup>7</sup>. NMFS noted that, although it is unlikely that harbor seals will enter the Level A harassment zone without detection while pile driving activities are underway, it is possible they may enter the Level A harassment zone undetected (84 Fed. Reg. 56774). Thus, NMFS indicated that AK DOT estimated that up to 11 harbor seals may approach the site within 263 m<sup>8</sup> of the source each day and based on 10 days of impact pile driving,

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number of observed takes and the percentage of the Level B harassment zone that was not visible. NMFS agreed to revise the verbiage accordingly.

<sup>4</sup> If weather conditions inhibit the snowmobile from accessing the PSO monitoring locations, the maximum observable area would be approximately 5 km, which includes using a stationary vessel as needed.

<sup>5</sup> This measure was specified in the *Federal Register* notice.

<sup>6</sup> This measure was not specified in the *Federal Register* notice either.

<sup>7</sup> The shut-down and Level A harassment zones are very similar between Auke Bay and Whittier, because 30-in piles would be installed for both authorizations using an impact hammer, assuming 400 strikes/pile with a source level that differed by only 0.4 dB. See Tables 6, 7, and 9 in the final issuance for Auke Bay (84 Fed. Reg. 56773).

<sup>8</sup> The shut-down zone is 270 m.

AK DOT requested and NMFS authorized 110 takes by Level A harassment (Table 8; 84 Fed. Reg. 56775). In the last six months, NMFS has proposed to authorize or authorized Level A harassment takes of harbor seals<sup>9</sup> for each of the 17 proposed incidental harassment authorizations or proposed rules involving impact pile driving<sup>10</sup> and harbor seals.

Specifically, NMFS has proposed to authorize and has authorized Level A harassment takes to account for a seal approaching and entering the Level A harassment zone (1) undetected before activities can cease and/or (2) that extends beyond a given shut-down zone. In both instances, PSOs are required to enumerate and report the number of seals that occur within the Level A harassment zone. PSOs are not required to, nor can they, account for the duration that an animal remains in the Level A harassment zone to determine whether an animal possibly incurred a permanent threshold shift (PTS). The animal could have been within the zone but underwater for 5 or more minutes<sup>11</sup> before being detected, *if* it was detected on its first surfacing. Harbor seals can easily be obscured by moorings, the catwalk, the pile-driving barge, and other construction equipment. PSOs only report where an animal was observed at the surface (i.e., distance to the pile), when it was observed, and when mitigation measures are implemented—they cannot account for the time the animal was within the 195 m zone undetected. Moreover, PSOs are not able to know the location of the animal while it is underwater. A seal could easily follow prey into the Level A harassment zone undetected, travel to within 25 m of the pile in pursuit of the prey, and surface at 50 m. The location where an animal surfaces in the zone is recorded, but it does not account for underwater movements of the animal. Furthermore, when an animal approaches a pile at closer distances, fewer pile strikes are necessary for them to potentially incur PTS. In this instance, a seal would have to be within 50 m of the pile for only 120 strikes or 2 to 3 minutes to be taken by Level A harassment. Given that the duration that an animal occurs within a Level A harassment zone and movements of that animal underwater are not able to be elucidated, action proponents should be enumerating and reporting the numbers of animals that occur within the Level A harassment zone as Level A harassment takes based on the statutory definition of having the potential to injure under section 3(18)(A)(i) of the MMPA. That definition is not predicated on proving that an injury or PTS occurred.

This is the same approach that is used for Level B harassment. PSOs do not determine whether each animal's behavioral patterns (i.e., migration, breathing, nursing, breeding, feeding, or sheltering) have been disrupted. PSOs enumerate and report the number of animals that occur, or were presumed to occur based on extrapolation, within the Level B harassment zone. Action proponents do not reduce the number of animals that have occurred within the Level B harassment zone to that number that constitute being taken by Level B harassment in their monitoring reports. They should not do so for Level A harassment either. For consistency with all other authorizations

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<sup>9</sup> And harbor porpoises under similar circumstances. For larger Level A harassment zones, NMFS has proposed to authorize and has authorized Level A harassment takes of mysticetes as well.

<sup>10</sup> AK DOT Auke Bay (84 Fed. Reg. 56775) and Tongass Narrows (84 Fed. Reg. 34157), Alaska Gasline Development Corporation (84 Fed. Reg. 31007), Carnival (84 Fed. Reg. 54887), Chevron (84 Fed. Reg. 28484), City of Alameda (84 Fed. Reg. 45992), City of Juneau (84 Fed. Reg. 55934), Duck Point Development II, LLC (84 Fed. Reg. 27280), Jim Erickson (84 Fed. Reg. 50402), U.S. Navy Portsmouth (84 Fed. Reg. 24486), Santa Cruz Port District (84 Fed. Reg. 22825), San Francisco Bay Area Water Emergency Transportation Authority (84 Fed. Reg. 26408), Transcontinental Gas Pipe Line Company, LLC (84 Fed. Reg. 45977), U.S. Army Corps of Engineers Columbia River Sand Island (84 Fed. Reg. 38242) and pile markers (84 Fed. Reg. 53695), Vineyard Wind, LLC (84 Fed. Reg. 18371), and Washington State Department of Transportation Seattle (84 Fed. Reg. 36587). Level A harassment takes also were authorized for pipe and/or pile driving for two proposed rules involving oil and gas activities in Alaska.

<sup>11</sup> Based on average dive duration from Eguchi and Harvey (2006).

involving impact pile driving and to account for the possibility that harbor seals can occur within the Level A harassment zone of 195 m, the Commission recommends that NMFS authorize at least four Level A harassment takes of harbor seals based on impact driving of four piles.

### **Level B harassment takes**

The Commission believes the number of proposed Level B harassment takes of Steller sea lions is insufficient. NMFS noted that up to 10 Steller sea lions haul out year-round on the channel buoy in Shotgun Cove (84 Fed. Reg. 56439). While NMFS indicated that the buoy is 6 km from the action area, it is less than 2 km from the Level B harassment zone, similar to the proximity of the harbor seal haul-out site. Steller sea lions, as well as harbor seals, follow their prey, particularly if prey are limited in winter. Thus, if prey are found in the Level B harassment zone, Steller sea lions can readily occur within the zone as well. To minimize unnecessary construction delays if the authorized number of Steller sea lion takes are met, the Commission recommends NMFS increase the number of Level B harassment takes of Steller sea lions from 15 to 30 based on five animals potentially occurring in the Level B harassment zone on each of the six days of activities.

### **Mitigation and reporting measures**

*Sufficiency of shut-down zones*—NMFS proposed to require AK DOT to implement a shut-down zone of 550 m for humpback whales during impact pile driving ‘to prevent take by Level A harassment’ based on a Level A harassment zone of 547 m (see Tables 10 and 8, respectively in the *Federal Register* notice and 84 Fed. Reg. 56439). In re-estimating the Level A harassment zones based on the issues detailed previously herein, the zone for humpback whales was reduced from 547 to 364 m. However, NMFS informally indicated that AK DOT would be required to implement a 350-m shut-down zone. NMFS’s original intent clearly was to require AK DOT to shut down its activities based on a zone greater than or equal to the Level A harassment zone. It is perplexing why that tack has since changed, as humpback whales, if able to be seen at 550 m and for which activities could be shut down, could easily be seen at lesser distances of 375 m or even 400 m.

In addition, the shut-down zone for Dall’s porpoises originally was 200 m, even though the Level A harassment zone was estimated to be 652 m during impact pile driving. The re-estimated Level A harassment zone was 434 m, and NMFS indicated the shut-down zone would be increased to 400 m. Although NMFS plans to increase the shut-down zone for Dall’s porpoises, it still does not encompass the Level A harassment zone. Dall’s porpoises, unlike harbor porpoises, can be sighted out to at least 450 m.

Both instances differ from the approach taken in other authorizations that either were proposed or finalized within two weeks of publication of the Whittier authorization<sup>12</sup>. In those, the shut-down zones for low- and high-frequency cetaceans were equal to or greater than the Level A harassment zones (84 Fed. Reg. 54867, 84 Fed. Reg. 55920, 84 Fed. Reg. 56767<sup>13</sup>). In instances when the shut-down zones are less than the Level A harassment zones, NMFS routinely authorizes Level A harassment takes. For AK DOT’s activities, NMFS indicated that it does not expect the animals to remain in the area within the Level A harassment zone long enough to experience Level A

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<sup>12</sup> And numerous previous authorizations.

<sup>13</sup> Which was an authorization for AK DOT to conduct pile driving of the same size piles in Auke Bay.

harassment<sup>14</sup>. That approach contradicts NMFS proposal to authorize Level A harassment takes for zones that are half of the size of the 375- and 450-m zones necessary for AK DOT for recent activities in Juneau (see Tables 7 and 8 at 84 Fed. Reg. 55934-55935). For all these reasons and because implementation of appropriately-sized shut-down zones are practicable and would not cause unnecessary delays in activities, the Commission recommends that NMFS require AK DOT to implement shut-down zones of 375 m for low-frequency cetaceans and 450 m for high-frequency cetaceans.

*Tally of takes*—The Commission also inquired whether AK DOT would be keeping a running tally of both observed and extrapolated takes to ensure the authorized takes are not exceeded. NMFS indicated that AK DOT would be keeping a running tally of only the observed takes. The Commission does not believe that keeping track of only the observed takes is sufficient when the Level B harassment zones extend to 12 km and only 5 to 9 km would be monitored. For pinnipeds and porpoises, PSOs generally cannot observe the animals beyond 1 km from the observation platform<sup>15</sup>. Mysticetes and killer whales are generally observable out to a few kilometers. Thus, adjusting the takes based on the extent of the Level B harassment zone would not only be a simple calculation but also a necessity for ensuring that the authorized takes are not exceeded. Therefore, the Commission recommends that NMFS ensure that AK DOT keep a running tally of the *total* takes, which includes extrapolated takes, for each species to comply with section 4(g) of the authorization.

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

NMFS has indicated that it may issue a second one-year<sup>16</sup> incidental harassment authorization renewal for this and other future authorizations if various criteria are met and after an expedited public comment period of 15 days. 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)(iii) clearly states that proposed authorizations are subject to a 30-day comment period—and Congressional expectations regarding the length of the comment period when it passed that provision<sup>17</sup>.

Another significant issue with the proposed 15-day comment period is the burden that it places on reviewers, who will need to review the original authorization and supporting

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<sup>14</sup> This topic already has been discussed at length herein.

<sup>15</sup> Keeping in mind that that radius also applies to the vessel. Assuming the entire vessel track is observed at a given time is not appropriate.

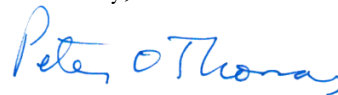
<sup>16</sup> NMFS informed the Commission that the renewal would be issued as a one-time opportunity, after which time a new authorization application would be required. NMFS has yet to specify this in any *Federal Register* notice detailing the new proposed renewal process but should do so.

<sup>17</sup> See, for example, the legislative history of section 101(a)(5)(D), which states “...in some instances, a request will be made for an authorization identical to one issued the previous year. In such circumstances, the Committee expects the Secretary to act expeditiously in complying with the notice and comment requirements.” (H.R. Rep. No. 439, 103d Cong., 2d Sess. 29 (1994)). The referenced “notice and comment requirements” specify a 30-day comment period.

documentation<sup>18</sup>, the draft monitoring report(s), the renewal application or request<sup>19</sup>, and the proposed authorization and then formulate comments very quickly. Depending on how frequently NMFS invokes the renewal option, how much the proposed renewal or the information on which it is based deviates from the original authorization, and how complicated the activities and the taking authorization is, those who try to comment on all proposed authorizations and renewals, such as the Commission, would be hard pressed to do so within the proposed 15-day comment period. Therefore, the Commission recommends that NMFS refrain from using the proposed renewal process for AK DOT's authorization. The renewal process should be used sparingly and selectively, by limiting its use only to those proposed incidental harassment authorizations that are expected to have the lowest levels of impacts to marine mammals and that require the least complex analyses. Notices for other types of activities should not even include the possibility that a renewal might be issued using the proposed foreshortened 15-day comment period. If NMFS intends to use the renewal process frequently *or* for authorizations that require a more complex review or for which much new information has been generated (e.g., multiple or extensive monitoring reports), the Commission recommends that NMFS provide the Commission and other reviewers the full 30-day comment opportunity set forth in section 101(a)(5)(D)(iii) of the MMPA.

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

Sincerely,



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

## References

- Denes, S.L., G.J. Warner, M.E. Austin, and A.O. MacGillivray. 2016. Hydroacoustic pile driving noise study: Comprehensive report. Document 001285, Version 2.0. JASCO Applied Sciences, Anchorage, Alaska. 238 pages.
- Eguchi, T., and J.T. Harvey. 2005. Diving behavior of the Pacific harbor seal (*Phoca vitulina richardii*) in Monterey Bay, California. *Marine Mammal Science* 21(2):283–295.

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<sup>18</sup> Including the original application, hydroacoustic and marine mammal monitoring plans, take estimation spreadsheets, etc.

<sup>19</sup> Including any proposed changes or any new information.