



MARINE MAMMAL COMMISSION

3 February 2020

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 reconstruction of the ferry terminal in Gustavus, Alaska. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 15 January 2020 notice (84 Fed. Reg. 39424) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions. The Commission previously provided comments in its [17 September 2018](#) and [29 August 2016](#) letters on AK DOT's proposed activities. This is the second time AK DOT has been unable to conduct the proposed activities and has requested that NMFS re-issue the authorization. The first request also was subject to minor modifications to the numbers of piles to be installed and removed. This second request was based on changing the start date to 15 February rather than 1 March as well.

AK DOT plans to reconstruct portions of the Gustavus Ferry Terminal. Operators would install up to 59 12.75- to 30-in steel piles using a vibratory and an impact hammer. They also would remove up to 25 12.75 to 24-in steel piles using a vibratory hammer or by cutting them off at the mudline. AK DOT expects activities to take up to 50 days, weather permitting. It would limit pile-driving and -removal activities to daylight hours only during the timeframe from 15 February–31 May 2020 and 1 September–30 November 2020.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level A and/or B harassment of small numbers of seven 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—

- conducting sound source verification measurements during impact and vibratory pile driving and adjusting the Level A and/or B harassment zones, as necessary;
- using a sound attenuation device (e.g., pile caps) during impact driving of steel piles;

- ceasing pile-driving and -removal activities if any marine mammal comes within 10 m of the equipment;
- using standard soft-start, delay, and shut-down procedures;
- using two qualified land-based 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 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 NMFS and the Alaska Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting draft and final marine mammal and hydroacoustic monitoring reports.

The Commission informally noted some omissions and errors in the mitigation and reporting measures in NMFS's draft authorization. Those included—

- omitting the standard mitigation measure to conduct the proposed activities only during daylight hours in section 4;
- including a 30-minute rather than the standard 15-minute clearance time for cetaceans¹ in measure 4(f);
- omitting the number² and size of piles and installation methods that would be required to be monitored in section 5(l);
- omitting the minimum hydroacoustic reporting requirements in measure 5(l) or section 6³; and
- omitting the current⁴ standard marine mammal reporting requirements in 6(a)⁵ of the draft authorization.

The Commission also informally noted that section 6 of AK DOT's proposed hydroacoustic monitoring plan, that delineated the information to be included in the hydroacoustic monitoring report, was missing the hydrophone type(s), hydrophone depth(s), distance of each hydrophone to the pile, hydrophone sampling rate, pulse duration(s) during impact pile driving, and spectra for all pile sizes and installation methods. In addition, the Commission informally indicated that AK DOT erroneously stated in its plan that auditory weighting would be applied to the root-mean-square sound pressure level (SPL_{rms}) metric, as SPL_{rms} values are unweighted. NMFS indicated that it would ensure that all errors and omissions are rectified in the final authorization and final hydroacoustic monitoring plan. The Commission appreciates that all of these issues will be resolved and

¹ During nearshore construction activities.

² AK DOT proposed to conduct hydroacoustic monitoring during impact and vibratory installation of only one 24-in and one 36-in pile. The Commission informally indicated that a sample size of one for each installation method and pile size is insufficient. AK DOT agreed to monitor three 24-in and three 36-in piles during both impact and vibratory installation.

³ Consistent with items in 5(d) of another recent construction-related draft authorization.
<https://www.fisheries.noaa.gov/webdam/download/100337105>.

⁴ Outdated requirements were included.

⁵ Consistent with items in 6(a)(i) through (xiv) in another recent construction-related draft authorization.
<https://www.fisheries.noaa.gov/webdam/download/99494590>.

recommends that in the final authorization NMFS add the following additional information to the minimum reporting requirements for the hydroacoustic monitoring report—the number of strikes per pile or strikes per day, substrate type(s), whether a sound attenuation device (e.g., pile caps/cushions, bubble curtain, etc.) was used and if so, for how long (e.g., the entire time the pile was being driven, 30 minutes, 5 minutes, etc.), pulse duration(s) associated with impact pile driving, and spectra for all pile sizes and installation methods.

General comments

The Commission's comments in its [17 September 2018](#) and [29 August 2016](#) letters on AK DOT's proposed activities involved, among other issues, (1) the appropriateness of source levels, harassment zones, and take estimates, (2) the sufficiency of the number of PSOs and availability of the hydroacoustic monitoring plan, and (3) improvements to pile-driving and -removal authorizations. Although NMFS did not implement the majority of the Commission's recommendations (83 Fed. Reg. 55350, 82 Fed. Reg. 17211⁶), those letters should be reviewed in conjunction with this letter. The recommendations that have not been followed are still relevant and should be considered with AK DOT's current authorization request. Some of those recommendations are expanded upon herein.

Appropriate source levels, harassment zones, and take estimates

In 2016, AK DOT originally proposed to use 154.3 dB re 1 μ Pa at 10 m⁷ as the proxy source level for vibratory pile driving of 30-in steel piles based on the measurement of a single pile obtained at the ferry terminal in Kake, Alaska (MacGillivray et al. 2015). As the Commission noted in its earlier comments regarding this matter, that source level is much lower than other measurements obtained from vibratory pile driving of 30-in steel piles at other locations due to the fact the pile was driven in mud at Kake. Rather than following the Commission's recommendation to use a mean of 166 dB re 1 μ Pa at 10 m⁸ based on source levels measured at other locations where the substrates consisted of sand and silt similar to Gustavus, NMFS chose to use the mean levels measured at Kake, resulting in a source level of 157.7 dB re 1 μ Pa at 10 m (82 Fed. Reg. 17211). The resulting Level B harassment zone of 3.3 km is a gross underestimate⁹, as are the numbers of takes.

NMFS has never used *any* of the proxy source levels that originated from measurements taken during vibratory pile driving at Kake for *any* authorization other than AK DOT's authorization for Gustavus. Since the Commission's 2018 letter, NMFS has issued four incidental harassment authorizations for AK DOT to conduct vibratory pile driving and/or removal of 30-in

⁶ A point to note, NMFS issued the first authorization more than 7 months after receiving the Commission's first letter and more than 1 month after receiving the Commission's second letter on the second authorization, affording it sufficient time to resolve the various issues. In the current instance, based on AK DOT's start date of 15 February, NMFS apparently would plan to issue the authorization less than one day after the close of the comment period on 14 February, leaving no time for NMFS to consider public comments in a meaningful manner.

⁷ MacGillivray et al. (2015) measured vibratory driving of two piles, one with a source level of 154 and another with a source level of 160 dB re 1 μ Pa at 10 m.

⁸ Based on Naval Facilities Engineering Command Southwest (NAVFAC SW 2014, 2015) data from Naval Base Point Loma, which also has a primarily sand and silt substrate (Table 2-10 in Department of the Navy (2012)). Source levels from four 30-in piles ranged from 160 to 172 dB re 1 μ Pa at 10 m, with a mean of 166 dB re 1 μ Pa at 10 m.

⁹ Assuming 166 dB re 1 μ Pa at 10 m at the appropriate proxy source level, the Level B harassment zone would be 11.7 km. The Level A harassment zones also would increase by more than three-fold.

piles. All of the authorizations¹⁰ incorporated much higher source levels than NMFS used for Gustavus. Specifically—

- For Ketchikan/Tongass Narrows, AK DOT used a median source level of 162 dB re 1 μ Pa at 10 m (Table 7, 85 Fed. Reg. 683) from Ketchikan¹¹ as noted in Denes et al. (2016b)¹².
- For Tenakee Springs, AK DOT derived an average median source level of 165 dB re 1 μ Pa at 10 m based on source levels from Ketchikan and Auke Bay¹³ as noted in Warner and Austin (2016) and Denes et al. (2016a), respectively, and was used (Table 3, 83 Fed. Reg. 29753 and in the authorization reissuance, 85 Fed. Reg. 3647).
- For Auke Bay, AK DOT used a median source level of 168 dB re 1 μ Pa at 10 m (Table 4, 84 Fed. Reg. 56772) from Auke Bay as noted in Denes et al. (2016a).
- For Whittier, AK DOT used a median source level of 168 dB re 1 μ Pa at 10 m (Table 7, 84 Fed. Reg. 72326) from Auke Bay as noted in Denes et al. (2016a).

It is unclear why AK DOT has not proposed to increase the source level, consistent with the source levels it has used for other authorizations. More importantly, it is unclear why NMFS is not (1) fixing an issue that has been outstanding for several years in three authorizations for the same project, (2) abiding by its own rationale to use appropriate proxy source levels for other authorizations, and (3) using best available science. Although NMFS used an inappropriate proxy source level for the two previous authorizations under which AK DOT never conducted its activities, NMFS is not precluded from fixing this obvious error for this authorization.

As indicated in previous letters, the revised Level B harassment zone would extend farther into Icy Strait than originally proposed. AK DOT, and in turn NMFS, based its take estimates¹⁴ on the lesser probability that a species would occur in Icy Passage than in Icy Strait¹⁵. Thus, the numbers of marine mammal takes also were underestimated. If the hydroacoustic monitoring data indicate that the Level B harassment zone was underestimated, AK DOT would have to abide by the numbers of takes authorized and cease its activities if the numbers of takes are met. AK DOT could not increase the numbers of takes, as needed, without requesting that the authorization be revised and a fourth authorization be issued. On a related point, the Commission previously indicated that the numbers of Level A harassment takes for harbor seals, harbor porpoises, and Steller sea lions during impact pile driving were underestimated, leading to a similar risk of meeting the numbers of authorized takes and being required to cease activities. This is still the case. To resolve these issues, NMFS should revise the numbers of Level A and B harassment takes to be authorized—this should be done before the authorization is issued, not after.

The Commission has recommended that NMFS require AK DOT to use three rather than two PSOs to conduct monitoring. Even with a third PSO, AK DOT would need to extrapolate the

¹⁰ Including additional authorizations that were issued to other action proponents.

¹¹ It is unclear whether the substrate at Ketchikan consisted of sand and silt as it did at Auke Bay. Table 1 in Denes et al. (2016b) provided crude information regarding the substrate at Ketchikan relative to the other four sites. Thus, sand and silt may have been overlaid with mud at Ketchikan, which could have resulted in the lower source level at Ketchikan.

¹² And originated from Warner and Austin (2016).

¹³ 161.9 and 168.0 dB re 1 μ Pa at 10 m, respectively.

¹⁴ Group sizes of the various species observed locally were used to inform the take estimates.

¹⁵ Where Steller sea lion haul-out sites are present as well (82 Fed. Reg. 17218).

numbers of observed takes to the extents of the Level B harassment zones¹⁶. However, if only two PSOs are required to monitor and one PSO is stationed at one end of the Level B harassment zone¹⁷, animals could easily approach the opposite end of the zone unobserved, resulting in an extrapolation of more than half of the overall area if NMFS's presumed 3.3-km zone is retained¹⁸. Extrapolation of takes likely would result in greater numbers of animals taken than would otherwise be observed by three PSOs. To ensure that AK DOT can finally conduct its activities without having to cease them if the numbers of takes are met, the Commission recommends that NMFS (1) use *at least* 165¹⁹ rather than 157.7 dB re 1 μ Pa at 10 m as the source level for vibratory driving of 30-in steel piles at Gustavus to re-estimate the extents of the Level A and B harassment zones, (2) increase the numbers of Level A and B harassment takes appropriately during both impact and vibratory pile driving, and (3) require AK DOT to use at least three PSOs to monitor the Level B harassment zones. It also is unclear whether AK DOT intends to keep a running tally of the total takes to ensure the authorized takes are not exceeded²⁰, but it must. Therefore, the Commission recommends that NMFS ensure that AK DOT keeps a running tally of the total takes, both observed and extrapolated, to confirm that the numbers of authorized takes are not exceeded.

Hydroacoustic monitoring plans in general

AK DOT's hydroacoustic monitoring plan was not available for comment when the Commission provided its previous comments. As such, the Commission had recommended that NMFS require action proponents to provide proposed hydroacoustic monitoring plans when authorization applications are submitted and make those plans available for public comment. If such plans are not provided in a timely manner, NMFS should, at the very least, provide them to the Commission for review sufficiently in advance of issuing the final authorization. In response to the Commission's recommendation, NMFS indicated that during the initial review period, it requests that applicants provide basic information regarding proposed hydroacoustic monitoring plans as part of authorization applications and comprehensive monitoring plans for review *prior to* publication of the final authorization (84 Fed. Reg. 55351). AK DOT did not mention hydroacoustic monitoring in its 2018 application, let alone provide basic information regarding the hydroacoustic monitoring plan. In addition, AK DOT's hydroacoustic monitoring plan is dated 13 December 2018, which is more than a month *after* NMFS's published the final authorization on 5 November of that year.

NMFS also indicated that the MMPA does not require submission of the monitoring plan prior to publication of the final authorizations but that a hydroacoustic monitoring plan must be submitted to NMFS and approved prior to initiation of the monitoring (84 Fed. Reg. 55351). The purpose of a hydroacoustic monitoring plan is to substantiate the proposed mitigation measures to ensure that the action proponent is effecting the least practicable impact on the species or stock and to inform the numbers of authorized takes to ensure NMFS is able to meet its negligible impact and small numbers determinations. Although the MMPA may not explicitly require a hydroacoustic

¹⁶ Whether or not NMFS increases the zones from 3.3 km to 10 km or more, as would result from increasing the source level appropriately.

¹⁷ One of the PSOs would always be stationed at the terminal, or center of the Level B harassment zone, to monitor the shut-down and Level A harassment zones.

¹⁸ Takes would need to be extrapolated to a larger area if the zone is revised.

¹⁹ Based on the average median source levels from Ketchikan (Warner and Austin 2016) and Auke Bay (Denes et al. 2016a).

²⁰ As required by condition 5(j) in the draft authorization.

monitoring plan, it provides necessary information similar to a marine mammal monitoring plan—which also is not explicitly required by the MMPA. Finally, NMFS indicated it would share such plans with the Commission for review in situations when the plans were not previously available (84 Fed. Reg. 55351). NMFS has had AK DOT’s hydroacoustic monitoring plan for more than a year and did not share it with the Commission²¹—nor is the plan available on NMFS’s website²² for public comment.

Given the shortcomings noted for AK DOT’s proposed and other previous hydroacoustic monitoring plans, it is imperative that the plans be made available for comment. AK DOT is investing significant resources in such monitoring, thus it is critical that the monitoring is conducted correctly and for an adequate number of piles and that the results are reported appropriately. The Commission recommends that NMFS require all action proponents that would be required to²³ or propose to conduct hydroacoustic monitoring to provide their proposed hydroacoustic monitoring plans prior to publication of the proposed authorization in the *Federal Register* notice and ensure all such plans are posted on its website the day the notice publishes in the *Federal Register*.

General improvements for pile-driving authorizations

In its 2016 letter for AK DOT’s proposed activities, the Commission recommended that NMFS make some general improvements regarding proxy source levels and various requirements for hydroacoustic monitoring reports. In more recent letters²⁴, the Commission recommended that NMFS include additional requirements specific to the hydroacoustic monitoring reports. In 2017, NMFS indicated that it was developing guidance on pile-driving assessments²⁵, as well as compiling the source level data into a central database (82 Fed. Reg. 17211 and 23537). Nearly three years later, the guidance is still unavailable and the proxy source levels have yet to be finalized. Based on the continued shortcomings in various action proponents’ hydroacoustic monitoring plans and associated with NMFS’s reporting requirements in its draft authorizations, the Commission recommends that NMFS (1) incorporate the Commission’s various recommendations into its pile-driving assessment guidance, finalize the guidance in the next three months, and make it available on NMFS’s incidental take authorization website and (2) update NMFS’s templates for draft authorizations to include all the relevant minimum reporting requirements for hydroacoustic monitoring reports consistent with the Commission’s recommendations. Moreover, based on AK DOT’s proposed authorization and other recent authorizations²⁶, it is apparent that NMFS needs to finalize its recommended proxy source levels for pile driving in the near term. Therefore, the Commission recommends that NMFS finish reviewing and finalize its recommended proxy source levels for both impact and vibratory installation of the various pile types and sizes. If the proxy

²¹ The Commission had to request the plan when the notice for the current proposed authorization published in the *Federal Register*.

²² <https://www.fisheries.noaa.gov/action/incidental-take-authorization-gustavus-ferry-terminal-improvements-project-gustavus-ak-2020>. It also is not posted on the webpage for the 2018 authorization, <https://www.fisheries.noaa.gov/action/incidental-take-authorization-alaska-dot-gustavus-ferry-terminal-improvement-project>.

²³ Which is the case when either proxy source levels or modeling approaches are questionable, as is the case for AK DOT at Gustavus.

²⁴ For example, see the Commission’s [23 January 2019](#), [16 April 2018](#), [10 July 2017](#), and [3 January 2017](#) letters.

²⁵ And in 2018 (83 Fed. Reg. 55351).

²⁶ See the Commission’s recent [9 January 2020](#) and [18 December 2019](#) letters.

source levels for impact pile driving are finalized prior to those for vibratory pile driving and removal, they should be made available to action proponents and the public when completed and should not be retained until the vibratory source levels are finalized.

Proposed one-year authorization renewals

NMFS has indicated that it may issue a one-year 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 and various other entities (e.g., 84 Fed. Reg. 31035 and 52466) have asserted and continue to consider that the renewal process is inconsistent with the statutory requirements under section 101(a)(5)(D) of the MMPA. As such, the Commission recommends that NMFS refrain from issuing renewals for any authorization and instead use its abbreviated *Federal Register* notice process. That process, as was used for AK DOT's proposed authorization, is similarly expeditious and fulfills NMFS's intent to maximize efficiencies.

Over the past few years, NMFS has informed the Commission that a renewal would be issued as a one-time opportunity, after which time a new authorization application would be required. NMFS also has included such verbiage in its response to comments regarding renewals. Specifically, NMFS indicated that it had modified the language for future proposed incidental harassment authorizations to clarify that all authorizations, including renewal authorizations, are valid for no more than one year and that the agency will consider *only one renewal* for a project at this time (e.g., 84 Fed. Reg. 36892 from 30 July 2019). However, NMFS has yet to stipulate that the agency will consider *only one renewal* or that a renewal is a *one-time opportunity* in any *Federal Register* notice requesting comments on the possibility of a renewal, on its webpage detailing the renewal process²⁷, or in any draft or final authorization that includes a term and condition for a renewal (including section 8 of AK DOT's draft authorization).

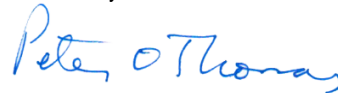
In response to the Commission's 29 November 2019 letter recommending that NMFS stipulate those specifics in the relevant documents and on its webpage, NMFS indicated that, in the 'summary' portion of its notices, it requests comments on a possible *one-year renewal* that could be issued under certain circumstances and if all requirements are met (84 Fed. Reg. 68131). However, neither the notices nor the webpage or final authorizations state that *one-year renewals* are *one-time opportunities*. NMFS also indicated that, for notices involving proposed renewals, it has not included an option of an additional renewal (84 Fed. Reg. 68131). Absent specifics regarding one-year renewals being a one-time opportunity in the *Federal Register* notices, on NMFS's webpage, and more importantly as a term and condition in its draft and final authorizations, NMFS appears to knowingly allow that door to remain open. If NMFS chooses to continue proposing to issue renewals, the Commission recommends that it (1) stipulate that a renewal is a *one-time opportunity* (a) in all *Federal Register* notices requesting comments on the possibility of a renewal, (b) on its webpage detailing the renewal process, and (c) in all draft and final authorizations that include a term and condition for a renewal and, (2) if NMFS refuses to stipulate a renewal being a one-time opportunity, justify why it will not do so in its *Federal Register* notices, on its webpage, and in all draft and final authorizations.

²⁷ <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-harassment-authorization-renewals>

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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., A. MacGillivray, and G. Warner. 2016a. Alaska DOT Hydroacoustic pile driving noise study: Auke Bay monitoring results. JASCO Document 01133, Version 2.0. JASCO Applied Sciences (Canada) Ltd., Victoria, British Columbia, Canada. 34 pages.
- Denes, S.L., G.J. Warner, M.E. Austin, and A.O. MacGillivray. 2016b. Hydroacoustic pile driving noise study: Comprehensive report. Document 001285, Version 2.0. JASCO Applied Sciences, Anchorage, Alaska. 238 pages.
- Department of the Navy. 2012. Draft version 3: Naval Base Point Loma fuel pier replacement and dredging (P-151/DESC1306) environmental assessment. San Diego, California. 685 pages.
- MacGillivray, A., G. Warner, and C. McPherson. 2015. Alaska DOT hydroacoustic pile driving study, Kake monitoring results. JASCO Applied Sciences, Victoria, British Columbia. 29 pages.
- NAVFAC SW. 2014. Naval Base Point Loma Fuel Pier Replacement Project: Acoustic, marine mammal, green sea turtle, and California least tern monitoring report. San Diego, California. 98 pages.
- NAVFAC SW. 2015. Monitoring Report for Fuel Pier Replacement Project (P-151) at Naval Base Point Loma, San Diego, CA 8 October 2014 to 30 April 2015. San Diego, California. 120 pages.
- Warner, G. and M. Austin. 2016. Alaska DOT Hydroacoustic pile driving noise study: Ketchikan monitoring results. JASCO Document 01167, Version 1.0. JASCO Applied Sciences (Canada) Ltd., Victoria, British Columbia, Canada. 37 pages.