



MARINE MAMMAL COMMISSION

14 August 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 ferry berth improvements and construction in Ketchikan, Alaska, during a two-year period. NMFS plans to issue two separate, but consecutive, one-year incidental harassment authorizations for the two-year project. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 17 July 2019 notice (84 Fed. Reg. 34134) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

Background

AK DOT plans to improve the existing ferry berths and construct new berths on Gravina Island and Revilla Island during a two-year period. Phase I activities would involve installing up to 320 18- to 30-in permanent steel pipe piles or sheet piles via vibratory driving, impact driving, and/or drilling of rock sockets and/or for tension anchors¹. Up to 44 20 in temporary piles would be installed and removed using a vibratory hammer. Phase I activities would occur on up to 144 days² from March 2020 to February 2021. Phase II activities would involve installing up to 24 24- to 30-in steel pipe piles via vibratory driving, impact driving, and/or drilling of rock sockets and/or for tension anchors¹ and removing up to 13 16- to 24-in steel piles using direct pull or a vibratory hammer. Up to 12 20 in temporary piles would be installed and removed using a vibratory hammer. Phase II activities would occur on up to 27 days² from March 2021 to February 2022. All activities would occur during daylight hours only.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level A and/or B harassment of small numbers of eight marine mammal species. NMFS anticipates that

¹ An activity that NMFS incorrectly discounted as not having the potential to take marine mammals in both draft incidental harassment authorizations.

² Drilling associated with tension anchors was not included in the total number of days of activities in either authorization, thus the number of days of activities has been underestimated.

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—

- using a sound attenuation device (i.e., pile caps/cushions) during impact driving of piles;
- ceasing pile-driving and -removal activities if any marine mammal comes within 10 m of the equipment;
- using at least three qualified protected species observers 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 preliminary, draft, and final report.

General concerns and comments

The Commission informally noted numerous issues in ADOT's application, NMFS's *Federal Register* notice, and/or the proposed authorization. Specifically, those issues involved—

- including numerous typographical³ and computational⁴ errors, omissions, and/or contradictory⁵ information;
- omitting the potential to take marine mammals during the installation of tension anchors⁶;
- using incorrect and inconsistent parameters to inform the Level A harassment zones⁷;

³ For example, Table 1 in the draft incidental harassment authorization incorrectly specified that ADOT would be authorized for six rather than three Level B harassment takes of minke whales.

⁴ Including specifying incorrect numbers of days of activities based on the average number of piles to be installed on a given day and the total number of piles to be installed for each phase.

⁵ Including the time needed for vibratory installation and removal of various-sized piles, the number of tension anchors to be installed during Phase I, and whether 12 tension anchors would be installed during Phase II.

⁶ Which will be discussed further herein.

⁷ In Table 1 of the *Federal Register* notice, NMFS indicated that 6 to 12 sheet piles would be installed per day, with an average of 6 sheet piles installed on a given day. Six piles is the minimum, nine piles per day would be the average. In addition, 12 should have been used as the maximum number of piles to be installed on a given day in Table 10 of the notice. Further, NMFS incorrectly specified that vibratory pile removal would involve removal of five piles at 30 minutes each in Table 10—in fact, one 24-in pile would be removed in 30 minutes and five 12- or 16-in piles would be removed during 15 minutes each (totaling 75 minutes on a given day). Lastly, installation of 18- and 20-in (incorrectly noted as 24-in) piles would involve 3 piles installed for 15 minutes each rather than for 30 minutes each as specified in Table 10. Based on these issues, some of the Level A harassment zones were underestimated and some were overestimated in Table 11, specifically those involving vibratory removal of 12-, 16-, and 24-in piles and vibratory installation of 18- and 20-in piles.

- using an incorrect weighting function adjustment for drilling of rock sockets⁸, which underestimated the extents of the Level A harassment zones for certain species⁹;
- using an unsubstantiated group size¹⁰ for Pacific white-sided dolphins to inform the Level B harassment takes;
- underestimating the number of Level B harassment takes for humpback whales⁶;
- inconsistently accounting for Level B harassment takes relative to Level A harassment takes¹¹;
- requiring an insufficient number of PSOs to monitor for marine mammals during each of the various activities¹²;
- including incomplete or inconsistent mitigation and reporting measures¹³;
- omitting information regarding which Native Alaskan communities or entities were contacted and whether any had specific concerns regarding the proposed construction activities¹⁴; and
- refraining from specifying how the two back-to-back authorizations, with the possibility for renewal, will be handled⁶.

NMFS indicated that it plans to rectify some of these deficiencies in the final incidental harassment authorizations. However, some issues were still unaddressed more than three weeks after they were brought to NMFS's attention. All of these issues should have been recognized and addressed *prior* to publication of the draft authorizations in the *Federal Register*. The Commission recommends that NMFS (1) fix all of the aforementioned issues for the two final authorizations and (2) refrain from issuing the authorizations until ADOT specifies which Native Alaskan communities

⁸ 2.5 rather than 2.0 should have been used for drilling of rock sockets and tension anchors. The Level A harassment zones would increase for high-frequency cetaceans, mid-frequency cetaceans, and phocids.

⁹ That is, the Level A harassment zones specified in Table 11 of the *Federal Register* notice are incorrect for half of the scenarios.

¹⁰ ADOT's group size estimate was not substantiated or consistent with Ketchikan Dock Company, who just used a median group size of 92 dolphins.

¹¹ For Phase I activities, the numbers of Level B harassment takes were reduced based on the numbers of Level A harassment takes; while for Phase II activities, the full number of estimated Level B harassment takes were included. NMFS indicated that the Level B harassment takes for Phase I activities would not be reduced in the final incidental harassment authorization. The Commission agrees with that approach since the numbers of takes were based on qualitative information rather than an actual area x density method.

¹² NMFS originally indicated only two PSOs would be monitoring at a given time, which the Commission indicated was insufficient based on the size of the various Level B harassment zones (the largest being more than 12 km). NMFS has since clarified that *three or more* PSOs would monitor during the various activities, with one PSO stationed at the construction site and two PSOs stationed at either end of Tongass Narrows. It is unclear if and when a fourth PSO would be monitoring for marine mammals.

¹³ Mitigation measure 4(g) in each draft authorization should include the requirement that all activities occur during daylight hours. Reporting measure 6(b)(ix) in each authorization should specify that ADOT must extrapolate the numbers of animals taken to those portions of the harassment zones that are not able to be monitored fully. NMFS indicated these measures would be revised for the final authorizations. The Commission also notes that some action proponents were not including the marine mammal observational datasheets or raw data as required in authorizations issued in 2017 and 2018 and that specific language requiring those data to be provided had been inadvertently removed from recent authorizations. NMFS should include the requirement for action proponents to provide the marine mammal observational datasheets or raw data in *all* incidental take authorizations.

¹⁴ ADOT indicated that local Alaska Native groups were included in the discussion regarding subsistence for the final environmental impact statement for the project. However, ADOT did not provide any details regarding who was contacted and what, if any, concerns they had.

and entities were contacted, whether any concerns were conveyed, and any additional measures that may be required to mitigate any potential conflicts with subsistence hunting. This is one of multiple recent authorizations in which information has been lacking regarding whether Native Alaskan communities and entities have been contacted and whether any concerns were conveyed. That information is necessary for NMFS to make the necessary determination that the proposed activities would not have an unmitigable adverse impact on the availability of marine mammals for subsistence use by Alaska Natives. As such, the Commission recommends that NMFS require all action proponents that plan to conduct activities in areas where subsistence hunting occurs to contact the relevant Native Alaskan communities and entities well in advance of any activities commencing and specify in all related *Federal Register* notices announcing a proposed incidental take authorization which communities and entities were contacted, whether any concerns were conveyed, and whether it plans to require that any additional mitigation measures be implemented.

Outstanding issues

Tension anchors and rock socket drilling—NMFS originally discounted the potential for marine mammal taking during installation of tension anchors. The Commission informally reminded NMFS that it had included takes associated with tension anchor drilling in the authorization issued to Ketchikan Dock Company. In response to the Commission's concerns, NMFS indicated that hydroacoustic data collected during anchor installation for the White Pass and Yukon Route authorization revealed that hammering of the 8-in casing that is needed to install the tension anchor produces larger Level B harassment zones than drilling for the anchors. Specifically, impact installation of the 8-in casing yielded a Level B harassment zone of 625 m, while drilling of the 8-in hole for the anchor yielded a Level B harassment zone of 200 m¹⁵ (James Reyff pers. comm.). The Commission obtained the draft final hydroacoustic monitoring report, and the information provided by NMFS regarding the measurements for White Pass and Yukon Route is not accurate.

Reyff and Heyvaert (2019) indicated that the measurements from impact installation of the 8-in casings cannot be used to develop a reliable source level and distance transmission loss coefficients, because measurements were made at only two positions that were relatively close to the drill casings that were being installed (35 and 85 m). The Commission notes that, although the transmission loss coefficients could not be developed, the source levels could, and in fact Reyff and Heyvaert (2019) used practical spreading to estimate the median sound pressure level root-mean-square (SPL_{rms}) source level of 173 dB re 1 μ Pa at 10 m. It is unclear whether the source level or the Level B harassment zone of 625 is incorrect but one is incorrect based on the 160-dB re 1 μ Pa threshold. Further, Reyff and Heyvaert (2019) provided a source level of 179 dB re 1 μ Pa_{rms} at 10 m¹⁶ for rock socket drilling that far exceeds NMFS's proposed source level of 166.2 dB re 1 μ Pa_{rms} at 10 m. Thus, NMFS may have vastly underestimated the extent of the Level B harassment zone¹⁷ for rock socket drilling and the associated numbers of marine mammal takes.

The Commission also requested that NMFS specify how many days of tension anchor handling would occur during each phase¹⁸ and how the total number of days of activities would be

¹⁵ Based on the 160- and 120-dB re 1 μ Pa thresholds, respectively.

¹⁶ The transmission loss coefficient also was determined to be 15.3.

¹⁷ And to a lesser degree the Level A harassment zones.

¹⁸ Particularly since 91 tension anchors would be installed during Phase I.

affected. NMFS has yet to provide any of this information. In addition, neither the source levels¹⁹ or parameters²⁰ used to inform the Level A harassment zones, nor the respective numbers of Level A and B harassment takes, have been estimated. Absent all that information, it is unclear how the Commission, and more importantly the public which is unaware that this activity has been added to the authorizations, can comment appropriately on the extents of the Level A and B harassment zones and associated numbers of marine mammal takes for installation of tension anchors and rock socket drilling during Phase I and II.

Level A harassment take estimates—In addition to revisions to the Level A harassment zones for various installation methods and inclusion of installation of tension anchors in general, the extents of the Level A harassment zones that will inform the final authorizations are still unknown. However, it appears that Level A harassment takes of harbor seals have been underestimated.

NMFS proposed to authorize 18 Level A harassment takes of harbor seals during Phase I. Based on Table 1 of the *Federal Register* notice, impact pile driving would occur on up to 60 days during Phase I and on those days the Level A harassment zones exceed 100 m. Although ADOT would shut down its activities if a harbor seal approaches the Level A harassment zones, harbor seals can easily pop up undetected in zones that range up to 280 m. Depending on the size of the Level A harassment zone for installation of the anchor casings, harbor seals could be taken during those activities as well. At a minimum, at least 1 Level A harassment take of harbor seals should be included for each of the 60 days that impact installation of 24- and 30-in piles would occur and on each day that tension anchor casings would be installed with an impact hammer.

Level B harassment takes—It is unclear how the number of Level B harassment takes will be revised based on the number of days needed to install tension anchors. The Commission assumes that the number of Level B harassment takes will increase consistently for all species relative to the overall increase in the number of days. Beyond those issues, the Commission also informally noted that the Level B harassment takes for humpback whales were vastly underestimated based on the method NMFS used for other cetaceans for ADOT's proposed authorizations²¹. NMFS used the number of months (12) that a species could occur in the area and the frequency of occurrence²² to estimate the numbers of takes for all species other than humpback whales. For humpback whales, NMFS divided the number of days (144) by the frequency of occurrence, which resulted in 82 rather than at least 192²³ Level B harassment takes of humpback whales for Phase I.

NMFS indicated that ADOT had requested more Level B harassment takes of humpback whales but the number of takes requested was not accepted by the section 7 biologist that conducted the consultation under the Endangered Species Act (ESA). Revising the Level B harassment takes now would require reinitiation of the section 7 consultation under the ESA and could delay obligation of funds for the project. Although the Commission can sympathize with ADOT, this was

¹⁹ Absent any information, 15 log R should be used to backcalculate the source levels to a reference distance of 10 m.

²⁰ Including the time needed to drill a tension anchor, the number of strikes per casing, the number of anchors and casings to be installed on a given day, and the weighting factor adjustment (presumably 2.5 for drilling and 2.0 for impact installation).

²¹ The takes also were underestimated based on the number authorized for similar activities conducted by Ketchikan Dock Company.

²² NMFS assumed that two groups of two whales are observed each week.

²³ If assuming 12 months of 4 weeks each. 208 takes would result if assuming 52 weeks.

an issue that NMFS should have identified long before the authorizations published in the *Federal Register* notice for applications²⁴ that were submitted in September 2018 for authorizations that are set to be issued in September 2019²⁵. The numbers of takes should be based on best available science and not process. NMFS noted that humpback whales occur year-round in low numbers in Tongass Narrows and have been observed in recent years on a weekly basis²⁶ (84 Fed. Reg. 34144). As such, NMFS should be authorizing at least 192 Level B harassment takes of humpback whales. If the humpback whale takes are not increased, ADOT could be in a situation in which they are having to shut down activities if and when the authorized takes are met, which would unnecessarily prolong the activity in general and could prolong the activity beyond the one-year authorization timeframe for Phase I activities.

One-year renewals—Similar to other recent incidental harassment authorizations, NMFS has proposed that each authorization also could have a one-year renewal²⁷. Those renewals could have unintended consequences. For example, if ADOT is unable to complete Phase I activities by March 2021 and a renewal is necessary, the renewal authorization would overlap with the Phase II activities that are to begin in March 2021. The Commission informally inquired whether the Phase II authorization would be reissued for March 2022 to March 2023 to eliminate overlap of activities or whether the unfinished Phase I activities would occur along with all of the Phase II activities as of March 2021. NMFS has yet to address the Commission's concern, noting that it would be addressed in the final issuance of the authorizations. This issue should have been recognized and addressed in the *Federal Register* notice requesting comments on the draft authorizations, particularly since this is the first time NMFS has proposed to issue back-to-back authorizations, let alone with the possibility of renewals for each. Since NMFS did not make its determinations regarding small numbers, negligible impact, and unmitigable adverse impact on subsistence use on the two authorizations combined, it should not issue a Phase I renewal without issuing a coincident one-year delay for the Phase II authorization.

Revise and republish—Based on all the issues associated with ADOT's proposed authorizations, the Commission is unable to determine whether NMFS's negligible impact and small numbers determinations are valid and whether the activities would have an unmitigable adverse impact on subsistence use of marine mammals. As such, neither the Commission nor the public was afforded an opportunity to provide informed and meaningful comments. The Commission recommends that NMFS consult with ADOT regarding the numerous issues raised in this letter and publish revised proposed authorizations prior to issuance of final authorizations. The Commission recommends that, prior to issuing final authorizations, NMFS (1) provide the extents of the Level A and B harassment zones and associated numbers of marine mammal takes for Phase I and II consistent with the increase in the (a) number of days of activities for impact installation and drilling of tension anchors and (b) source level adjustments for rock socket drilling based on Reyff and Heyvaert (2019), (2) authorize at least 60 Level A harassment takes of harbor seals during impact installation of 24- and 30-in piles and 1 Level A harassment take of harbor seals for each day that tension anchor casings would be installed with an impact hammer, (3) authorize at least 192 Level B

²⁴ And that were deemed complete in March 2019.

²⁵ The Commission notes that the Phase I authorization would not be valid until March 2020 and the Phase II authorization would not be valid until March 2021. Thus, there is time to revise the authorizations.

²⁶ Some whales have been observed more frequently, every few days or on many consecutive days.

²⁷ The general issue with one-year renewals is discussed in a subsequent section herein.

harassment takes of humpback whales, and (4) issue a one-year renewal for Phase I activities only if the Phase II authorization is delayed until 2022.

General issues with authorization renewals

NMFS has indicated that it may issue a second one-year²⁸ incidental harassment authorization renewal for the two separate 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 provision²⁹.

Another potentially 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 documentation³⁰, the draft monitoring report(s), the renewal application or request³¹, 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 are 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 on 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 as required in section 101(a)(5)(D)(iii) of the MMPA.

²⁸ 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.

²⁹ 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.

³⁰ Including the original application, hydroacoustic and marine mammal monitoring plans, take estimation spreadsheets, etc.

³¹ Including any proposed changes or any new information.

Increasing efficiencies

NMFS has been striving to streamline its authorization process and thereby increase the agency's efficiency for the last few years. Although NMFS's renewal process could achieve efficiencies in the short term, the best way to provide long-term efficiencies—particularly for those activities in which multiple years of activities would occur—would be to issue incidental taking authorizations via a rulemaking process rather than one-year authorizations with subsequent renewals should one phase of the activity not be completed within a given year. In this case, two incidental harassment authorizations and two authorization renewals may need to be issued. Those processes increase the workload burden unnecessarily for both NMFS and the action proponent. Further, the Phase I authorization would not need to be issued until spring 2020, which would have allowed for ample time to process the request as a rulemaking rather than two separate authorizations. In the spirit of increasing efficiencies for both NMFS and the action proponent, the Commission recommends that NMFS authorize the incidental taking of marine mammals via a rulemaking rather than individual incidental harassment authorizations and authorization renewals for activities that are scheduled to last more than one year at the outset.

Completeness and accuracy

For many years, the Commission has expressed concern over errors, inconsistencies, and omissions in applications and *Federal Register* notices regarding incidental take authorizations. Many of those issues affect the numbers of Level A and B harassment takes to be authorized and mitigation and monitoring measures to be required. The Commission contends that NMFS should not be processing applications that include incomplete information or inaccuracies. The Commission and the public rely on the accuracy of the applications, and the proposed authorizations developed from them by NMFS, in formulating comments and recommendations. Failure of the agency to identify and rectify incomplete information and inaccuracies undermines the public review process.

In a brief review of the last year of NMFS's incidental take authorizations³², the Commission notes that 69 percent of the proposed authorizations or proposed rules included errors in the estimated numbers of Level A and/or B harassment takes and 79 percent included incomplete, incorrect, or inconsistent mitigation, monitoring, or reporting requirements in the proposed authorization or proposed rule. To a lesser degree, but still prevalent, were issues involving incorrect Level A and B harassment thresholds and incorrect extents of the Level A and B harassment zones, involving incorrect densities and group sizes, and requiring either insufficient or overly conservative mitigation and monitoring measures³³. It is evident that NMFS must take a more active role in reviewing its proposed authorizations and proposed rules prior to publication. NMFS cannot rely solely on the Commission or the public to continue to catch careless errors that should be identified during internal review processes. Therefore, the Commission again recommends that NMFS

³² Incidental take authorizations were reviewed from June 2018 to June 2019. These do not include four Navy rulemakings for testing and training activities or the Bureau of Ocean Energy Management's rulemaking for geological and geophysical activities in the Gulf of Mexico. The statistics also do not include ongoing Commission concerns (i.e., flaws of Lamont-Doherty Earth Observatory's model, use of the 160- rather than 120-dB re 1 μ Pa threshold for intermittent, non-impulsive sources, etc.).

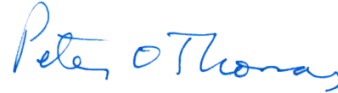
³³ With 86 percent of proposed authorizations and proposed rules exhibiting issues in at least two of the five categories noted.

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conduct a more thorough review of the applications and *Federal Register* notices to ensure not only accuracy, completeness, and consistency, but also to ensure that they are based on best available science, prior to submitting them to the *Federal Register* for public comment.

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

Reference

Reyff, J., and C. Heyvaert. 2019. White Pass & Yukon railroad mooring dolphin installation pile driving and drilling sound source verification: Skagway, Alaska. Illingworth & Rodkin, Inc., Cotati, California. 93 pages.