



MARINE MAMMAL COMMISSION

27 July 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 Washington State Department of Transportation (WSDOT) 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 reconfiguring the Seattle Ferry Terminal at Colman Dock in Washington. This is a multi-year project, but the incidental harassment authorization would be valid for one year. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 8 July 2020 notice (85 Fed. Reg. 40992) announcing receipt of the application and proposing to issue the authorization, subject to certain conditions.

WSDOT plans to install and remove piles during construction of a new ferry terminal at Colman Dock. This is the fourth and final season of pile-driving and -removal activities. Operators would (1) install 73 36-in steel pipe piles using a vibratory and impact hammer, (2) install and remove up to 30 24-in steel pipe piles using a vibratory hammer, and (3) remove up to 355 14-in timber piles and 30 12-in steel piles using a vibratory hammer. WSDOT's activities could occur on up to 47 days, weather permitting, during daylight hours only.

NMFS preliminarily has determined that, at most, the proposed activities could cause Level B harassment of small numbers of 11 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—

- using a sound attenuation device during impact installation of 36-in steel piles and implementing various measures regarding performance standards¹;

¹ The Commission informally noted that NMFS included these measures in the draft authorization but omitted them from the *Federal Register* notice. NMFS indicated that it would include the measures in the notice for final authorization issuance.

- ceasing in-water heavy machinery activities if any marine mammal comes within 10 m of the equipment and reducing vessel speed to the minimum level required to maintain steerage and safe working conditions²;
- using standard soft-start, delay, and shut-down procedures³;
- using three to five (land- or ferry-based)⁴ qualified protected species observers to monitor the Level A⁵ and B harassment zones for 30 minutes before, during, and for 30 minutes after the proposed activities;
- obtaining both marine mammal (1) sightings data from the Orca Network and/or Center for Whale Research and (2) acoustic detection data from the Orca Network⁶ on a daily basis;
- using delay and shut-down procedures, if a species for which authorization has not been granted or if a species (including Southern Resident killer whales⁷) 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 West Coast Regional Stranding Coordinator and ceasing activities, if appropriate; and
- submitting a draft and final report.

² The Commission informally noted that NMFS omitted its recently revised standard measure from the *Federal Register* notice: “For in-water heavy machinery work other than pile driving (*e.g.*, standard barges, *etc.*), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include the following activities: (1) Movement of the barge to the pile location; or (2) positioning of the pile on the substrate via a crane (*i.e.*, stabbing the pile)” 85 Fed. Reg. 35288. NMFS indicated the measure would be included in the notice for final authorization issuance and would be used for the final authorization in lieu of the measure currently included in the draft authorization.

³ The Commission informally noted that NMFS omitted the standard measures involving implementing soft-start procedures and ensuring that the entire shut-down zone is visible from the *Federal Register* notice. NMFS indicated that those measures would be included in the notice for final authorization issuance.

⁴ NMFS indicated in the *Federal Register* notice that up to five PSOs (four land-based and one ferry-based) would be monitoring during vibratory installation and removal of 24- and 36-in steel piles, four land-based PSOs would be monitoring during vibratory removal of 14-in timber and 12-in steel piles, and three land-based PSOs would be monitoring during impact installation of 36-in steel piles. The Commission informally noted that NMFS omitted the number and location of PSOs in the draft authorization. NMFS indicated that information would be included in the final authorization.

⁵ And shut-down zones. The Commission informally noted that NMFS omitted the inputs for estimating Level A harassment zones from the *Federal Register* notice. NMFS indicated that the relevant information would be included the notice for final authorization issuance. The Commission also noted that NMFS omitted the Level A harassment zones that exceed the shut-down zones in the draft authorization. NMFS indicated that the relevant Level A harassment zones would be included in the final authorization. The Commission further noted that the Level A harassment zones for vibratory removal of 12-in steel piles in WSDOT’s application and monitoring plan were incorrect based on removing 11 piles per day. NMFS clarified that the zones included in Table 6 of the notice were the correct ones.

⁶ The Commission informally noted that NMFS stated in the *Federal Register* notice that the Orca Network via the SeaSound Remote Sensing Network would provide acoustic detection data; whereas, condition 5(c)(i) in the draft authorization indicated that WSDOT would coordinate with the Local Marine Mammal Research Network to obtain such data. NMFS indicated that it would revise the final authorization to clarify this in the final authorization.

⁷ Including shutting down when killer whales are observed and their stock is unknown. The Commission informally noted that NMFS omitted the 15-minute clearance time from condition 4(j)(iii) in the draft authorization. NMFS indicated it would include the clearance time in condition 4(j)(iii) in the final authorization

General comments

Issues with the proposed authorization—In addition to the various inconsistencies and omissions in the *Federal Register* notice and draft authorization that have already been noted herein, the Commission informally noted multiple substantive issues. Those included—

- The Level A harassment zones for impact installation of 36-in steel piles were underestimated. WSDOT indicated that it had used the highest source level of 174 dB re 1 $\mu\text{Pa}^2\text{-sec}_{\text{single-strike (s-s)}}$ at 10 m from previous measurements of pile S19-SF at Colman Dock. However, the highest source level was 174 dB re 1 $\mu\text{Pa}^2\text{-sec}_{\text{s-s}}$ at 11 m from pile S17-SF. NMFS indicated that it would increase the Level A harassment zones⁸ and shut-down zones⁹ accordingly.
- Multiple take estimates were unsubstantiated, incorrectly calculated, and/or underestimated based on previous WSDOT monitoring data from Colman Dock.
 - An incorrect harbor porpoise density of 0.75 porpoises/km² was used rather than 0.54 porpoises/km² based on Department of the Navy (2019)¹⁰. The number of harbor porpoise takes would decrease from 649 to 442. However, the revised number of takes are underestimated based on WSDOT's monitoring data from 2019–2020. Up to 16 harbor porpoises were observed by PSOs on a given day in 2019–2020¹¹. Based on 47 days of activities, Level B harassment takes of harbor porpoises should be increased to 752.
 - The number of Level A harassment takes of harbor porpoises was underestimated based on average group size. Average group size of harbor porpoises was three, not two, based on WSDOT's 2019–2020 monitoring data. Level A harassment takes of harbor porpoises should be increased from 14¹² to 21.
 - The number of Level B harassment takes of Dall's porpoises was unsubstantiated. Up to five Dall's porpoises were observed by PSOs on a given day in 2019–2020. Level B harassment takes of Dall's porpoises should be decreased from 40 to 35¹³.
 - The number of Level B harassment takes of gray whales was unsubstantiated and underestimated based on WSDOT's 2019–2020 monitoring data. Single gray whales were observed by PSOs on a given day in 2019–2020. Level B harassment takes of gray whales should be increased from 5 to 7¹².
 - The number of Level B harassment takes of Steller sea lions was underestimated based on WSDOT's 2019–2020 monitoring data. Up to three Steller sea lions were observed by

⁸ The Level A harassment zones would increase from 343.2 m to 377.5 m for low-frequency (LF) cetaceans, from 12.2 m to 13.4 m for mid-frequency (MF) cetaceans, from 408.7 m to 449.6 m for high-frequency (HF) cetaceans, from 183.6 m to 202.0 m for phocids, and from 13.4 m to 14.7 m for otariids.

⁹ The shut-down zones would increase from 350 m to 380 m for LF cetaceans and from 410 m to 450 m for HF cetaceans.

¹⁰ Based on the location of Seattle.

¹¹ Based on sightings denoted as 'not a duplicate' on 14 August 2019 in WSDOT's raw sightings spreadsheet. Ten harbor porpoises were observed on 13 August 2019 and 11 harbor porpoises were observed on 22 February 2020, all of which are greater than the 9 takes per day that have been estimated based on the revised density estimate.

¹² NMFS assumed that a single group could be taken during each of the 7 months of proposed activities.

¹³ Consistent with NMFS's assumption that a single group could be taken during each of the 7 months of proposed activities.

PSOs on a given day in 2019–2020. Based on 47 days of activities, Level B harassment takes of Steller sea lions should be increased from 39 to 141.

NMFS indicated that it would fix all of the aforementioned issues except for increasing the number of Level B harassment takes of harbor porpoises. The revised Level B harassment takes of 442 harbor porpoises could be exceeded based on the numbers of harbor porpoises observed in 2019–20 and particularly when WSDOT extrapolates the number of observed takes to the total takes based on the actual extents of the Level B harassment zones, which is discussed in further detail herein. The Commission therefore recommends that NMFS (1) include the revised Level A harassment zones and shut-down zones for impact installation of 36-in steel piles in the *Federal Register* for final issuance and in Table 2 of the final authorization and (2) revise the Level B harassment takes to 752 for harbor porpoises, 35 for Dall’s porpoises, 7 for gray whales, and 141 for Steller sea lions and revise the Level A harassment takes to 21 for harbor porpoises in the *Federal Register* for final issuance and in Table 1 of the final authorization.

Issues with WSDOT’s monitoring reports—Similar to the comments the Commission made in its [9 July 2020 letter](#) regarding WSDOT’s proposed activities at Mukilteo, WSDOT’s monitoring report for 2019–2020 activities did not include the basic information (e.g., distance from the pile to the animal and total number of each species taken, including a correction factor as appropriate) that was required to be reported under the final authorization (e.g., conditions 6(a)(vii) and (ix), respectively)¹⁴. WSDOT must specify how far each animal is from the pile to determine whether the animal has been taken and extrapolate the observed takes to the total number of takes to ensure that it has not exceeded the authorized number. The Commission has informally and formally commented on this latter issue for previous WSDOT authorizations¹⁵, the most recent were for authorizations involving activities at Bremerton, Edmonds, and at Colman Dock in summer 2019. At the time, NMFS indicated it would discuss internally how to extrapolate takes. The Commission assumed that the explicit requirements to extrapolate takes as included in the final authorizations, as well as any pre-determined method, would be conveyed to WSDOT. That apparently did not occur. In fact, NMFS removed the standard extrapolation requirement¹⁶ from section 6(a) of the draft authorization for WSDOT’s activities at Colman Dock and indicated that it is discussing whether to include such a requirement in its final authorizations. This would be a step backward with regard to NMFS prescribing adequate monitoring and reporting requirements as required by section 101(a)(5)(D)(ii)(III) of the MMPA.

For example, the overwhelming majority of the pinniped sightings (89 percent of all harbor seal and California sea lion sightings and 88 percent of all Steller sea lion sightings) included in the previous Colman Dock monitoring report occurred at or within 500 m of the PSOs¹⁷. As such, it is not appropriate to assume that only the animals sighted within a specific distance from the PSOs

¹⁴ <https://www.fisheries.noaa.gov/webdam/download/94057494>.

¹⁵ WSDOT did not provide raw sightings data in previous monitoring reports, otherwise the Commission would have alerted NMFS to this issue as well.

¹⁶ The requirement has been to include an extrapolation of the estimated takes by Level B harassment based on the number of observed exposures within the Level B harassment zone and the percentage of the Level B harassment zone that was not visible (see condition 6(a)(xii) in NMFS’s draft authorization for WSDOT’s proposed activities at Mukilteo; <https://www.fisheries.noaa.gov/webdam/download/107396797>).

¹⁷ NMFS acknowledged in another recently-proposed incidental harassment authorization that land-based PSOs stationed on elevated platforms would be able to observe pinnipeds effectively only out to 500 m (85 Fed. Reg. 43409).

were taken during the activities. Similarly, WSDOT should not assume that it can detect animals consistently at greater distances. The Commission questions the reported sightings of both harbor seals and California sea lions at 3 to 4 km from the PSOs. Sighting a pinniped at that distance is nearly impossible, including identifying it to the species. As one would expect, few animals are observed consistently at larger distances, but this does not mean pinnipeds are not present. Rather, detectability declines with distance.

Absent information denoting otherwise and consistent with NMFS's assumption that densities are uniform in its take estimation method, extrapolation of the total number of takes should be implemented consistently across the Level B harassment zones. That is, if a PSO is only able to observe consistently out to 1 km (or an area of 1.5 km²) and two PSOs are expected to be monitoring a total ensouffied area of 6 km², then the number of *observed takes* should be multiplied by two¹⁸ to estimate the number of *total takes*. NMFS proposed to require another action proponent to implement a similar approach for extrapolating takes in another recently-proposed authorization (85 Fed. Reg. 43409). As such, the same approach should be taken for WSDOT. It also is imperative that WSDOT not assume that each observation platform affords the same detection range for the same species or across species. There could be, and likely are, two different detection ranges for each species or group (e.g., 500 m for land-based PSOs and 1 km for ferry-based PSOs for pinnipeds, 1 km for PSOs monitoring from the terminal and ferry and 3 km for PSOs monitoring from overlooks for porpoises, etc.). The Commission recommends that NMFS (1) reinforce that WSDOT must comply with the various reporting requirements in the final authorization, including condition 6(a)(vii), (2) include the standard requirement that WSDOT extrapolate the observed numbers of takes to the extents of the Level B harassment zones when estimating the total numbers of takes and by considering both the observation platform of each PSO and the species for the 2020 final authorization, and (3) require WSDOT to submit a revised monitoring report for its 2019–2020 activities, consistent with conditions 6(a)(ix) and (xi) in the 2019 final authorization and the recommendations herein.

The Commission has commented informally and formally on the shortcomings and inconsistencies associated with numerous recent proposed incidental harassment authorizations and monitoring reports¹⁹. It appears that NMFS's review processes (including its early review team meetings) are not adequately identifying and evaluating whether the proper source levels, Level A harassment inputs, modeling methodologies, Level A and B harassment zones, densities, group size estimates, take estimates, shut-down zones, etc. are being used. It is clear that NMFS needs to review of applications, monitoring reports, *Federal Register* notices, and draft and final authorizations more thoroughly to minimize inaccuracies and inconsistencies and ensure transparency for the public.

¹⁸ The PSOs would only be able to monitor 3 km² of the 6 km² ensouffied area.

¹⁹ For example, see the Commission's recent [9 July 2020](#), [29 June 2020](#), [5 June 2020](#), [21 May 2020](#), [20 April 2020](#), [23 March 2020](#), [10 February 2020](#), [3 February 2020](#), [23 January 2020](#), and [9 January 2020](#) letters

Mitigation, monitoring, and reporting measures

Daylight hours—NMFS did not stipulate in the draft authorization that activities must occur during daylight hours only, a standard condition included in other recently-issued authorizations²⁰ and draft authorizations²¹. It is unclear why it was not included since NMFS indicated that daylight hours were one of two timing restrictions in the ‘Proposed Mitigation’ section of its notice and specifically stated that work would occur only during daylight hours, when visual monitoring of marine mammals can be conducted (85 Fed. Reg. 41002). The Commission agrees that the requirement is necessary to ensure that WSDOT is effecting the least practicable adverse impact on the species and stocks, particularly Southern Resident killer whales²², and recommends that NMFS include in the final authorization the requirement that WSDOT conduct pile-driving and -removal activities during daylight hours only.

Tally of takes—Although it is unclear from both the preamble and the draft authorization whether WSDOT will keep a running tally of the total Level B harassment takes, including observed and extrapolated takes, it is imperative that WSDOT do so to ensure that the takes are within the authorized limits and the authorized numbers of takes are not exceeded, as required by condition 4(i) in the draft authorization. The Commission recommends that NMFS reinforce that WSDOT must keep a running tally of the total takes, based on observed and extrapolated takes, for Level B harassment consistent with condition 4(i) of the final authorization.

Proposed one-year authorization renewals

The Commission has raised ongoing concerns regarding NMFS’s renewal process over the past few years²³. NMFS responded generally to those concerns in just the last few days. The Commission has not yet had time to consider fully whether and how it plans to respond. As such, for purposes of this letter, the Commission recommends that NMFS refrain from issuing a renewal for any authorization unless it is consistent with the procedural requirements specified in section 101(a)(5)(D)(iii) of the MMPA.

Please contact me if you have questions regarding the Commission’s recommendations.

Sincerely,



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

²⁰ e.g., see the Chesapeake Tunnel Joint Venture final authorization; <https://www.fisheries.noaa.gov/webdam/download/104970969>.

²¹ e.g., see the City and County of San Francisco draft authorization that published three days before the WSDOT proposed authorization; <https://www.fisheries.noaa.gov/webdam/download/107318912>.

²² WSDOT is required to shut down if any Southern Resident killer whale or a killer whale of an unknown stock is observed approaching or within the Level B harassment zones.

²³ Some of which can be reviewed in the Commission’s [10 February 2020](#) letter.

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Reference

Department of the Navy. 2019. U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area: Final technical report. Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii. 262 pages.