DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XC062]

Endangered Species; File No. 19496

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; receipt of application for a permit modification.

SUMMARY: Notice is hereby given that Mariana Fuentes, Ph.D., Florida State University, 3263 Foley Drive, Tallahassee, FL 32309, has applied in due form for a modification to take green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), Kemp's ridley (*Lepidochelys kempii*), and loggerhead (*Caretta caretta*) sea turtles for purposes of scientific research.

DATES: Written, telefaxed, or email comments must be received on or before June 27, 2022.

ADDRESSES: The application and related documents are available for review by selecting ''Records Open for Public Comment'' from the ''Features'' box on the Applications and Permits for Protected Species (APPS) home page, *https://apps.nmfs.noaa.gov,* and then selecting File No. 19496 Mod 10 from the list of available applications. These documents are also available upon written request via email to *NMFS.Pr1Comments@noaa.gov.*

Written comments on this application should be submitted via email to *NMFS.Pr1Comments@noaa.gov.* Please include File No. 19496 in the subject line of the email comment.

Those individuals requesting a public hearing should submit a written request via email to *NMFS.Pr1Comments@noaa.gov.* The request should set forth the specific reasons why a hearing on this application would be appropriate.

FOR FURTHER INFORMATION CONTACT: Erin Markin or Amy Hapeman, (301) 427–8401.

SUPPLEMENTARY INFORMATION: The subject modification is requested under the authority of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*) and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR parts 222–226).

Mariana Fuentes, Ph.D., Florida State University, 3263 Foley Drive, Tallahassee, FL 32309, proposes to modify Permit No. 19496–04. The permit, originally issued on June 16, 2016 (81 FR 43589, July 5, 2016), and modified on June 5, 2018 (83 FR 34116, July 19, 2018), authorizes researchers to identify important foraging and developmental habitats of sea turtles in Florida. Researchers may capture sea turtles by hand or dip, strike, or tangle nets, tag, biologically sample, photograph, video record, measure, and weigh, prior to release. The permit holder requests authorization to (1) expand the study location in the Florida Big Bend region from Hernando Beach to the southern end of Marco Island, (2) add animal-borne cameras as an instrument for studying Kemp's ridley and green sea turtles, (3) increase the subset of green (from 10 to 50) and Kemp's ridley (from 10 to 30) sea turtles annually that may receive a satellite tag or animal-borne camera, and (4) increase the number of loggerhead (from 10 to 50) sea turtles that may receive a satellite tag or animal-borne camera. The total number of green and Kemp's ridley sea turtles that may be captured, handled, and released annually would not change, 245 and 195, respectively. The total number of loggerhead sea turtles that may be captured, handled, and released annually would change from 55 to 95. The permit is valid through September 30, 2025.

Dated: May 20, 2022.

Amy Sloan,

Acting Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2022–11293 Filed 5–25–22; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XB985]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Pier 58 Reconstruction and Pier 63 Removal Projects in Seattle, Washington

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of incidental harassment authorizations (IHAs).

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued two IHAs to the City of Seattle (City) to incidentally harass marine mammals during in-water construction activities associated with the Pier 58 Reconstruction Project and Pier 63 Removal Project in Seattle, Washington.

DATES: Both IHAs are valid from August 1, 2022 through July 31, 2023.

FOR FURTHER INFORMATION CONTACT: Amy Fowler, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ''means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as ''mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of the takings are set forth. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

Summary of Request

On July 21, 2021, NMFS received two requests from the City for an IHA to take marine mammals incidental to the Pier 63 Removal Project and, separately, the Pier 58 Reconstruction Project on the waterfront in downtown Seattle,

Washington. The City submitted revised applications for each project on September 29, 2021 and January 3, 2022. Both applications were deemed adequate and complete on January 26, 2022. The City's request is for take of a small number of 11 species of marine mammals, by Level B harassment only for the Pier 63 Removal Project, and by Level A harassment and Level B harassment for the Pier 58 Reconstruction Project. Neither the City nor NMFS expects serious injury or mortality to result from these activities and, therefore, IHAs are appropriate.

Description of Planned Activity

Overview

The City submitted an individual IHA application for each project. However, given the City applied for both projects concurrently, the projects' close proximity to each other, and similarities in the planned activities and potential impacts on marine mammals, NMFS is using this single **Federal Register** notice to announce the issuance of the two similar, but separate, IHAs.

The City plans to reconstruct Waterfront Park along the Elliott Bay shoreline in Seattle, Washington. When replaced, Waterfront Park will be renamed Pier 58 in reference to the original structure and to avoid confusion with the larger waterfront park promenade that will be reconstructed along Alaskan Way. The project includes vibratory removal of existing in-water piles and vibratory and impact installation of new piles to support the expanded overwater structure (Table 1). A total of 31 existing steel H-piles and timber piles will be removed in whole, wherever possible, by pulling the piles using a vibratory extraction method or clamshell bucket. Once all existing piles have been removed, the City will begin the reconstruction by using a vibratory hammer to install 100 24-inch steel pipe template piles, which will all subsequently be removed using the same vibratory hammer. The City will then install a total of 120 permanent 30-inch steel pipe piles using a vibratory hammer, followed by an impact hammer to ''proof'' the pilings to their maximum depth and load-bearing capacity. The City does not plan to conduct pile driving with multiple hammers concurrently. Funding for this project has been secured and the City expects Pier 58 reconstruction (including above-water construction that does not have the potential to take marine mammals) to take a little over a year to complete, from August 2022 to December 2023, with a total of 70 days of in-water work expected during the designated window.

TABLE 1—SUMMARY OF PILES TO BE INSTALLED AND REMOVED AT PIER 58

Pile type and size	Method	Number of piles	Maximum piles per day	Duration or strikes per pile	Maximum days of pile driving
Steel H-pile, 14-inch timber pile	Vibratory removal	31	20	20 minutes	10
24-inch steel pipe pile	Vibratory installation	[a] 100	10	15 minutes	10
24-inch steel pipe pile	Vibratory removal	[a] 100	10	5 minutes	10
30-inch steel pipe pile	Vibratory installation	[b] 120	4	45 minutes	[c] 40
30-inch steel pipe pile	Impact installation	[c] 120	3	400 strikes	[a] 40
Total	Vibratory and impact	251			70

[a] These same 100 piles will be installed and later removed.
[b] These same 120 piles will be installed first using a vibratory hammer, than finished with an impact hammer.
[c] Vibratory and impact installation of 30-inch piles will occur on the same 40 days.

The City also plans to remove Pier 63 from the downtown Seattle waterfront. The structural integrity of the pier has deteriorated and the pier has been closed to the public for safety. Removing Pier 63 will leave the nearshore environment open for improved ecosystem function and salmonid migration. The project includes vibratory removal of existing in-water piles; no plans have been made to reconstruct Pier 63, therefore no new piles will be installed (Table 1). The City plans to demolish and remove the existing pier (with a total over-water area of 35,108 square feet), including removal of 900 14-inch timber piles and 8 30-inch steel pipe piles. Pier 63 will be removed during one in-water work season, with a total of 47 days of in-water work expected. If funding for Pier 63 removal is not authorized to allow the planned work to occur during the effective dates of the IHA (August 1, 2022 through July 31, 2023), the City will request the IHA be reissued for the following year, as discussed in the **Federal Register** notice of the proposed IHAs (87 FR 12089; March 3, 2022). Due to this possibility, the analysis that follows for the Pier 63 Removal Project considers possible effects on marine mammals during either the August 2022 through July 2023 period or the August 2023 through July 2024 period, based on the current best available science.

TABLE 2—SUMMARY OF PILES TO BE REMOVED AT PIER 63

Pile type	Number of piles	Maximum piles removed per day	Duration per pile (minutes)	Maximum days of pile removal
14-inch timber pile	900	20	20	45
30-inch steel pipe pile	8	4	45	2

A detailed description of the planned activities is provided in the **Federal Register** notice of the proposed IHAs (87 FR 12089; March 3, 2022). Since that time, no changes have been made to the planned activities. Therefore, a detailed description is not provided here. Please refer to that **Federal Register** notice for descriptions of the specific activities. Mitigation, monitoring, and reporting measures are described in detail later in this document (please see Mitigation and Monitoring and Reporting sections).

Comments and Responses

A notice of NMFS's proposal to issue two IHAs to the City was published in the **Federal Register** on March 3, 2022 (87 FR 12089). That notice described, in detail, the City's activities, the marine mammal species that may be affected by the activities, and the anticipated effects on marine mammals. In that notice, we requested public input on the request for authorization described therein, our analyses, the proposed authorization, and any other aspect of the notice of proposed IHA, and requested that interested persons submit relevant information, suggestions, and comments. This proposed notice was available for a 30-day public comment period. During the public comment period, NMFS received no public comments.

Changes From the Proposed IHA to Final IHA

On March 28, 2022, after NMFS published the notice of proposed IHAs, the City submitted a letter to NMFS, withdrawing their request for take of Southern Resident killer whales (SRKW; *Orcinus orca*) and humpback whales (*Megaptera novaeangliae*). The City explained that it had initially included the request for incidental take coverage of SRKW in their IHA applications as a conservative approach, but had since reconsidered the expected effectiveness of proposed mitigation and monitoring measures. The City reviewed monitoring results from past projects along the Seattle Waterfront and the sightings reports of SRKW and humpback whales compiled by Orca Network. The City also proposed to increase its mitigation efforts to ensure that any SRKW or humpback whales in the general area of the projects would be immediately detected. In addition, the proposed mitigation measure to implement shutdown measures for SRKW has been expanded to apply also to humpback whales, such that if any humpback whale is sighted within the vicinity of the project areas and is approaching the Level B harassment zone, the City would shut down the pile driving equipment to avoid possible take. With this new information and additional mitigation, in conjunction with the previously proposed mitigation and monitoring, the City determined, and NMFS concurs, that incidental take of these two stocks is unlikely to occur.

Monitoring results from recent similar in-water construction projects with similar Level B harassment zones, such as the City's Pier 62 Restoration Project (Anchor QEA 2019) indicate that protected species observers (PSOs) were able to detect SRKW and humpback whales outside the Level B harassment zone. In the City's Pier 62 Restoration IHA (83 FR 39709; August 10, 2018), SRKW and humpback whales were first observed when outside of the Level B harassment zone. But because incidental take was authorized, the pile driving equipment was not required to be shut down when these species were detected. If shutdown for the Level B harassment zone had been included in that IHA, the City would have been able to cease pile driving and avoid all take of SRKW and humpback whales. Similarly, IHAs issued to the Washington State Department of Transportation (WSDOT) for in-water pile driving activities at the Seattle Ferry Terminal (Pier 52) since 2017 have authorized incidental take of humpback whales, but have included the requirement to shut down pile driving equipment prior to SRKW entering the Level B harassment zone (*e.g.,* 86 FR 38686; July 22, 2021). Over the course of 5 in-water work seasons, WSDOT has recorded observations of SRKW in the project area but has successfully implemented the required mitigation measure and reported no take of SRKW (WSDOT 2022).

PSOs for the Pier 58 Reconstruction and Pier 63 Removal projects will be stationed with views that extend beyond the Level B harassment zone, providing an opportunity for PSOs to detect SRKW and humpback whales outside of the Level B harassment zone and notify the contractor to cease pile driving activities before Level B harassment occurs. PSOs will also notify the contractor to delay the start of pile driving if these species are present. During emergency in-water demolition work at Waterfront Park between October 2020 and February 2021, PSOs were stationed at the same locations as those designated for the Pier 58 Reconstruction and Pier 63 Removal projects. The PSOs observed SRKW outside the Level B harassment zone (equivalent to the largest Level B harassment zone for the two Pier 58 and Pier 63 IHAs; see Estimated Take section) and were able to coordinate with the contractor to halt pile driving in advance of SRKW entering the harassment zone (Anchor QEA, 2021). Observations of that same group of SRKW were also reported by Orca Network as the pod traveled through Puget Sound.

Contacting, it is most likely that any occurrence of SRKW or humpback whales in Central Puget Sound will be reported to and distributed by Orca Network, and these reports will then be obtained by the PSOs employed for both projects (see below for the required frequency of PSOs obtaining reports from Orca Network) before the animals are within the Level B harassment zones for the Pier 58 and Pier 63 projects.

To obtain more real-time sightings reports of SRKW and humpback whales to even further increase the likelihood that both species will be detected before they enter the Level B harassment zone, the City proposed increasing the frequency that PSOs will contact Orca Network from what was included in the proposed IHAs (87 FR 12089; March 3, 2022). The proposed IHAs included requirements for PSOs to contact Orca Network to obtain sightings reports of marine mammals in central Puget Sound twice each day, once prior to the start of in-water work for the day, and again at the approximate mid-point of construction each day. The City amended this process such that PSOs will now contact Orca Network hourly, which will increase the likelihood that PSOs will be aware of reported sightings of SRKW and humpback whales in central Puget Sound, and be able to detect these species outside the Level B harassment zone and initiate equipment shutdowns to prevent take from occurring.

NMFS has reviewed the new information, in addition to considering the effect of the updated mitigation measures of requiring shutdown if humpback whales are sighted within the vicinity of the project areas and approaching the Level B harassment zone as well as requiring PSOs to contact Orca Network hourly for the most recent location information of SRKW and humpback whales. Although NMFS previously accepted that it was possible for a small number of SRKW to enter the Level B harassment zone undetected and proposed a small amount of Level B harassment for both SRKW and humpback whales, NMFS now concurs with the City's assessment that any take of SRKW and humpback whales is unlikely to occur, and has incorporated the new mitigation measures into the final IHAs. Accordingly, the final IHAs do not authorize incidental take of SRKW or humpback whales.

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the City's applications summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions, incorporated here by reference, instead of reprinting the information. Additional information regarding

population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find-species*).

Table 3 lists all species or stocks for which take is expected and authorized for the City's activities, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All values for each managed stock presented in Table 3 are the most recent available at the time of publication and are available in the 2020 SARs (Carretta *et al.,* 2021, Muto *et al.,* 2021) and draft 2021 SARs (available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports*).

TABLE 3—MARINE MAMMALS THAT COULD OCCUR IN THE PROJECT AREA

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N)[1]	Stock abundance (CV, N_{min}, most recent abundance survey)[2]	PBR	Annual M/SI[3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae:						
Gray whale	*Eschrichtius robustus*	Eastern N Pacific	-, -, N	26,960 (0.05, 25,849, 2016) ..	801	131
Family Balaenopteridae (rorquals):						
Minke whale	*Balaenoptera acutorostrata*	California/Oregon/Washington	-, -, N	915 (0.792, 509, 2018)	4.1	≥0.59
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Long Beaked Common Dolphin.	*Delphinus capensis*	California	-, -, N	83,379 (0.216, 69,636, 2018)	668	≥29.7
Bottlenose Dolphin	*Tursiops truncatus*	California Coastal	-, -, N	453 (0.06, 346, 2011)	2.7	≥2.0
Killer Whale	*Orcinus orca*	West Coast Transient	-, -, N	[4] 349 (N/A, 349, 2018)	3.5	0.4
Family Phocoenidae (porpoises):						
Harbor Porpoise	*Phocoena phocoena*	Washington Inland Waters	-, -, N	11,233 (0.37, 8,308, 2015)	66	≥7.2
Dall's Porpoise	*Phocoenoides dalli*	California/Oregon/Washington	-, -, N	16,498 (0.61, 10,286, 2019) ..	99	≥0.66
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						
California Sea Lion	*Zalophus californianus*	U.S.	-, -, N	257,606 (N/A,233,515, 2014)	14,011	>320
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-, -, N	[5] 43,201 (see SAR, 43,201, 2017).	2,592	112
Family Phocidae (earless seals):						
Harbor Seal	*Phoca vitulina*	Washington Northern Inland Waters.	-, -, N	[6] 11,036 (UNK, UNK, 1999)	UND	9.8
Northern Elephant Seal	*Mirounga angustirostris*	California Breeding	-, -, N	187,386 (N/A, 85,369, 2013)	5,122	13.7

[1] ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[2] NMFS marine mammal stock assessment reports online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance.

[3] These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike). Annual mortality/serious injury (M/SI) often cannot be determined precisely and is in some cases presented as a minimum value or range.

[4] Based on counts of individual animals identified from photo-identification catalogues. Surveys for abundance estimates of these stocks are conducted infrequently.

[5] Best estimate of pup and non-pup counts, which have not been corrected to account for animals at sea during abundance surveys.

[6] The abundance estimate for this stock is greater than eight years old and is therefore not considered current. PBR is considered undetermined for this stock, as there is no current minimum abundance estimate for use in calculation. We nevertheless present the most recent abundance estimates, as these represent the best available information for use in this document.

As indicated above, all 11 species (with 11 managed stocks) in Table 3 temporally and spatially co-occur with the activities to the degree that take is reasonably likely to occur. The Pacific white-sided dolphin (*Lagenorhynchus obliquidens*) is a rare visitor to the inland waters of Puget Sound (Orca Network, 2021). However, they have not been observed during recent marine mammal monitoring for projects in Elliott Bay (*e.g.,* WSDOT 2021; Anchor QEA 2019) and are considered unlikely to occur in the area during the City's planned activities. The City has not requested take of Pacific white-sided dolphins for either project and NMFS does not anticipate or authorize take of

this species. Therefore, Pacific white-sided dolphins are not discussed further in this document. Additionally, as described above in the Changes from the Proposed IHA to Final IHA section of this notice, SRKW and humpback whales also occur in the inland waters of Puget Sound and take of these species was included in the proposed IHAs (87 FR 12089; March 3, 2022). However, in consideration of the City's amended request and the requirements described in the Mitigation and Monitoring and Reporting sections of this notice, NMFS has determined that take of these species is unlikely to occur and has not authorized take of SRKW and humpback whales.

A detailed description of the species likely to be affected by the City's activities, including information regarding population trends and threats, and information regarding local occurrence, were provided in the **Federal Register** notice for the proposed IHAs (87 FR 12089; March 3, 2022). Since that time, we are not aware of any changes in this information or the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that **Federal Register** notice for those descriptions. Please also refer to NMFS's website (*https://www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 4.

TABLE 4—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, *Kogia,* river dolphins, cephalorhynchids, *Lagenorhynchus cruciger* & *L. australis*).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.* 2007) and PW pinnipeds (approximation).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.,* 2006; Kastelein *et al.,* 2009; Reichmuth and Holt, 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of underwater noise from the City's construction activities have the potential to result in Level A and Level B harassment of marine mammals in the vicinity of the project area. The notice of proposed IHAs (87 FR 12089; March 3, 2022) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from the City's construction activities on marine mammals and their habitat. That information and analysis is incorporated by reference into the final determinations for the IHAs and is not repeated here; please refer to the notice of proposed IHAs (87 FR 12089; March 3, 2022).

The Estimated Take section includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The Negligible Impact Analysis and Determination section considers the content of this section, the Estimated Take section, and the Mitigation section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Estimated Take

This section provides an estimate of the number of incidental takes authorized through this IHA, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determinations.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes are primarily by Level B harassment (in the form of

behavioral disturbance and temporary threshold shift (TTS)), as use of the acoustic sources (*i.e.,* vibratory or impact pile driving and removal) have the potential to result in disruption of behavioral patterns and cause a temporary loss in hearing sensitivity for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result for porpoises and harbor seals because predicted auditory injury zones are larger than for other hearing groups. The required mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

As described previously, no serious injury or mortality is anticipated or authorized for this activity. Below we describe how the authorized take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering: (1) Acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these factors can contribute to a basic calculation to provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the authorized take estimates.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur permanent threshold shift (PTS) of some degree (equated to Level A harassment).

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.,* frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.,* bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.,* Southall *et al.,* 2007, 2021, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 µPa)) for continuous (*e.g.,* vibratory pile-driving, drilling) and above RMS SPL of 160 dB re 1 µPa for non-explosive impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources. This take estimation includes disruption of behavioral patterns resulting directly in response to noise exposure (*e.g.,* avoidance), as well as that resulting indirectly from associated impacts such as TTS or masking.

The City's planned activities include the use of continuous (vibratory hammer) and impulsive (impact hammer) sources, and therefore the 120 and 160 dB re 1 µPa (rms) thresholds are applicable.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). The City's activities include the use of impulsive (impact hammer) and non-impulsive (vibratory hammer) sources.

These thresholds are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance, which may be accessed at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

TABLE 5—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS onset thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{p,0\text{-pk,flat}}$: 219 dB; $L_{E,p,\ LF,24h}$: 1183 dB	*Cell 2:* $L_{E,p,\ LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{p,\ 0\text{-pk,flat}}$: 230 dB; $L_{E,p,MF,24h}$: 1185 dB	*Cell 4:* $L_{E,p,\ MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{p,\ 0\text{-pk,flat}}$: 202 dB; $L_{E,p,HF,24h}$: 155 dB	*Cell 6:* $L_{E,p,\ HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{p,\ 0\text{-pk,flat}}$: 218 dB; $L_{E,p,PW,24h}$: 1185 dB	*Cell 8:* $L_{E,p,PW,24h}$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{p,0\text{-pk,flat}}$: 232 dB; $L_{E,p,OW,24h}$: 203 dB	*Cell 10:* $L_{E,p,OW,24h}$: 219 dB.

* Dual metric thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds are recommended for consideration.

Note: Peak sound pressure level ($L_{p,0\text{-}pk}$) has a reference value of 1 µPa, and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1µPa^{2}s. In this Table, thresholds are abbreviated to be more reflective of International Organization for Standardization standards (ISO 2017). The subscript "flat" is being included to indicate peak sound pressure are flat weighted or unweighted within the generalized hearing range of marine mammals (*i.e.,* 7 Hz to 160 kHz). The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The weighted cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.,* varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

The sound field in the project areas is the existing background noise plus additional construction noise from the planned projects. Marine mammals are expected to be affected by sound generated by the primary components of the project (*i.e.,* impact and vibratory pile driving).

In order to calculate distances to the Level A harassment and Level B harassment thresholds for the methods and piles being used in this project, NMFS used acoustic monitoring data from other locations to develop source levels for the various pile types, sizes, and methods for the two piers (Tables 6 and 7).

TABLE 6—PIER 58 PROJECT SOUND SOURCE LEVELS

Pile type and size (in)	Method	Source level (dB re 1 µPa)	Reference
14-in timber, steel H-piles	Vibratory removal	152 dB rms	Greenbusch Group (2018).
24-in steel pipe pile	Vibratory removal and installation	163 dB rms	Greenbusch Group (2019).
30-in steel pipe pile	Vibratory installation	163 dB rms	Greenbusch Group (2019).
30-in steel pipe pile	Impact installation	180 dB rms [1], 193 dB peak	Greenbusch Group (2019).

[1] Highest RMS sound level from bubble curtain attenuated impact driving of 30-in steel piles at Pier 62.

TABLE 7—PIER 63 PROJECT SOUND SOURCE LEVELS

Pile type and size (in)	Method	Source level (dB re 1 µPa)	Reference
14-in timber	Vibratory removal	152 dB rms	Greenbusch Group (2018).
30-in steel pipe pile	Vibratory removal	163 dB rms	Greenbusch Group (2019).

Level B Harassment Zones

Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

TL = B * Log10 (R1/R2),

Where:

TL = transmission loss in dB
B = transmission loss coefficient; for practical spreading equals 15
R1 = the distance of the modeled SPL from the driven pile, and
R2 = the distance from the driven pile of the initial measurement

The recommended TL coefficient for most nearshore environments is the practical spreading value of 15. This value results in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions, which is the most appropriate assumption for the City's planned activities in the absence of specific modelling. The Level B harassment zones for the City's planned activities are shown in Tables 8 and 9.

Level A Harassment Zones

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources such as pile installation and removal, the NMFS User Spreadsheet predicts the distance at which, if a marine mammal remained at that distance for the whole duration of the activity, it would incur PTS. The isopleths generated by the User Spreadsheet used the same TL coefficient as the Level B harassment zone calculations (*i.e.,* the practical spreading value of 15). Inputs used in the User Spreadsheet (*e.g.,* number of piles per day, duration and/or strikes per pile) are presented in Tables 1 and 2, and the resulting isopleths are reported below in Tables 8 and 9. The areas expected to be ensonified above the Level B harassment threshold(s) are also presented in Tables 8 and 9. Due to the bathymetry and geography of the project areas, sound will not reach the full distance of the harassment isopleths in all directions.

TABLE 8—PIER 58 LEVEL A HARASSMENT AND LEVEL B HARASSMENT ZONES

Pile type	Level A harassment zone (m)					Level B harassment zone (m)	Level B ensonified area (km^2)
	LF cetacean	MF cetacean	HF cetacean	Phocids	Otariids		
Timber and steel H-pile removal	6.1	0.5	9.0	3.7	0.3	[b] 1,359	2.35
24-in steel vibratory install and removal, 30-in steel vibratory install [a]	19.3	1.7	28.6	11.7	0.8	[b] 7,357	34.34
30-in steel impact install	153.3	5.5	182.6	82.0	6.0	[c] 215	0.07

[a] Level A harassment zones for vibratory installation and removal of steel piles calculated using the highest total duration of driving (installation of 30-inch piles) and conservatively applied to all vibratory pile driving.
[b] Distance to 120 dB rms threshold.
[c] Distance to 160 dB rms threshold.

TABLE 9—PIER 63 LEVEL A HARASSMENT AND LEVEL B HARASSMENT ZONES

Pile type	Level A harassment zone (m)					Level B harassment zone (m) [a]	Level B ensonified area (km^2)
	LF cetacean	MF cetacean	HF cetacean	Phocids	Otariids		
Timber	6.1	0.5	9.0	3.7	0.3	1,359	2.35
Steel	19.3	1.7	28.6	11.7	0.8	7,357	34.34

[a] Distance to 120 dB rms threshold.

Marine Mammal Occurrence and Take Calculation and Estimation

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the authorized take incidental to the City's pile driving activities. Unless otherwise specified, the term ''pile driving'' in this section, and all following sections, may refer to either pile installation or removal.

As described in the Changes from the Proposed IHA to Final IHA section of this notice, while take of SRKW and humpback whales was included in the proposed IHAs, the City has reassessed the likelihood of take of these species in consideration of the effectiveness of the required mitigation and monitoring measures. The City determined that by implementing the additional mitigation and monitoring requirements, take of SRKW and humpback whales is unlikely to occur. NMFS has carefully considered the new information and additional mitigation measures, and concurs with the City's assessment. Incidental take of SRKW and humpback whales is no longer anticipated to occur and has not been authorized.

To estimate the number of marine mammals that may be taken incidental to the Pier 58 Reconstruction and Pier 63 Removal projects, the City considered using the ensonified area (see Tables 8 and 9) and density estimates from the U.S. Navy's Marine Species Density Database for the Northwest Training and Testing Study Area (U.S. Navy, 2019) but did not consider the resulting take estimates to be realistic (*i.e.,* they either over- or underestimated take). Instead of using the U.S. Navy's density estimates, the City therefore compiled monitoring results from recent construction projects in Elliott Bay (*e.g.,* WSDOT, 2019; Anchor QEA, 2021) to estimate the likely daily or monthly occurrence of each species in the project areas. Unless otherwise specified, the occurrence information described below is used to estimate take for both the Pier 58 and Pier 63 projects. NMFS has carefully reviewed the City's analysis and concludes that it represents an appropriate and accurate method for estimating incidental take caused by the City's activities.

Gray Whale

Gray whales are infrequent visitors to the project areas but are most commonly seen during the winter months. Although no observations of gray whales have been reported during recent pile driving projects along the Seattle waterfront (*e.g.,* WSDOT 2021; Anchor QEA 2019), individual gray whales have been reported in Elliott Bay by WSDOT ferry operators in December 2018, January 2019, and November 2019. Therefore, the City estimates that one gray whale may be taken by Level B harassment in each winter month (November, December, January, and February) of the work window. Therefore, the City requested, and NMFS has authorized, 4 takes of gray whales by Level B harassment from Pier 58 reconstruction. Since Pier 63 removal is expected to take only 3 months total, the City requested, and NMFS has authorized, 3 takes of gray whales by Level B harassment from Pier 63 removal.

Since the City must comply with all mitigation and monitoring measures, including marine mammal monitoring and coordination with Orca Network, these measures will likely be successful in detecting gray whales given their size and visibility, the City must stop work before gray whales could enter the small Level A harassment zones (up to 153.3 m), and gray whales are infrequent visitors to the project areas, it is unlikely that any gray whales will be taken by Level A harassment. No take of gray whales by Level A harassment is requested or authorized.

Minke Whale

Minke whales are rarely observed in the project areas and none have been reported during monitoring for recent pile driving activities in the area (*e.g.,* WSDOT 2021; Anchor QEA 2019). The City estimates that no more than one minke whale per month may be taken by Level B harassment. Therefore, the City requested, and NMFS has authorized, 6 takes of minke whales by Level B harassment from Pier 58 reconstruction and 3 takes by Level B harassment from Pier 63 removal.

Like gray whales, minke whales are considered infrequent visitors to the project areas. As with gray whales, PSOs must coordinate with Orca Network and will likely be alerted to the presence of minke whales in the area, allowing the City to shut down pile driving equipment before a minke whale could enter the Level A harassment zones. Hence, in consideration of the expected

effectiveness of mitigation and infrequent occurrence, no take of minke whales by Level A harassment is requested or authorized.

Transient Killer Whale

Transient killer whales are frequently seen in central Puget Sound and occasionally within Elliott Bay (Orca Network 2021). Transient killer whales typically travel in small groups. The City estimates that a group of 6 transient killer whales may enter the Level B harassment zone per month. Therefore, the City has requested, and NMFS has authorized, take of 36 transient killer whales by Level B harassment from Pier 58 reconstruction and 18 takes by Level B harassment from Pier 63 removal.

The Level A harassment zones for mid-frequency cetaceans are all less than 10 m. PSOs must coordinate with Orca Network and will likely be alerted to the presence of transient killer whales in the area, allowing them to detect the animals and the City to cease pile driving well before killer whales could enter the Level A harassment zone. No take of transient killer whales by Level A harassment is requested or authorized.

Bottlenose Dolphin

In 2017 the Orca Network (2017) reported sightings of a bottlenose dolphin in Puget Sound and in Elliott Bay, and WSDOT observed two bottlenose dolphins in one week during monitoring for the Colman Dock Multimodal Project (WSDOT 2018). In addition, a group of 7 bottlenose dolphins were observed in 2017 and were positively identified as part of the California coastal stock (Cascadia Research Collective, 2017). Bottlenose dolphins typically travel in groups of 2 to 15 in coastal waters (Carretta *et al.,* 2020). The City estimates that 7 bottlenose dolphins may be taken by Level B harassment per month. Therefore, the City has requested, and NMFS has authorized, take of 42 bottlenose dolphins by Level B harassment from Pier 58 reconstruction and 21 takes by Level B harassment from Pier 63 removal.

The Level A harassment zones for mid-frequency cetaceans are all less than 10 m. Given the visibility of bottlenose dolphins, the City will be able to cease pile driving before bottlenose dolphins could enter the Level A harassment zone. No take of bottlenose dolphins by Level A harassment is requested or authorized.

Long-Beaked Common Dolphin

In June 2011, two long-beaked common dolphins were sighted in South Puget Sound. Sightings continued in 2012, and in 2016–17 (Carretta *et al.,* 2018). Sightings of 4 to 12 individuals were reported regularly, with confirmed sightings of up to 30 individuals. In 2016, the Orca Network (2016) reported a pod of up to 20 long-beaked common dolphins. During monitoring for the Colman Dock Project in 2017–2018, 2 long-beaked common dolphins were observed in smaller Level B harassment zones than estimated for pile driving at Piers 58 and 63 (WSDOT, 2018). The average reported group size of long-beaked common dolphins in Puget Sound is 7 individuals. Therefore, the City estimates 7 long-beaked common dolphins may be taken by Level B harassment per month. The City requested, and NMFS has authorized, take of 42 long-beaked common dolphins by Level B harassment from Pier 58 reconstruction and 21 takes by Level B harassment from Pier 63 removal.

The Level A harassment zones for mid-frequency cetaceans are all less than 10 m. Given the visibility of long-beaked common dolphins, the City will be able to cease pile driving before long-beaked common dolphins could enter the Level A harassment zone. No take of long-beaked common dolphins by Level A harassment is requested or authorized.

Harbor Porpoise

Recent monitoring data from the Colman Dock Project (Pier 52) in 2017 and 2018 (WSDOT 2019) included observations of 288 harbor porpoises over 99 days of monitoring activity. This equates to approximately 3 porpoises per day.

To account for unobserved animals at the outer extent of the Level B harassment zones, the City estimates up to 6 harbor porpoises may enter the Level B harassment zone per day of pile driving at Pier 58 (70 days) for a total of 420 harbor porpoises. For impact installation of steel piles at Pier 58, the Level A harassment zone for high-frequency cetaceans is 183 m. Although the City must implement a shutdown zone of 185 m during this activity (see Mitigation section), due to the cryptic nature and lower detectability of harbor porpoises at large distances, the City anticipates that up to 12 of the harbor porpoises (2 per month) that enter the Level B harassment zone could approach the project site closer and potentially enter the Level A harassment zone undetected during impact installation at Pier 58, which could occur as one group in one day or single animals over two days. These harbor porpoises would be counted as taken by Level A harassment, but would not count toward the City's authorized number of takes of harbor porpoises by Level B harassment because they would have already been counted as Level A harassment takes. The Level A harassment zones for all vibratory pile driving at Pier 58 are all under 30 m. At that distance, the PSOs will be able to detect harbor porpoises and alert the City to cease pile driving activities before harbor porpoises could enter the Level A harassment zone. Therefore, no take of harbor porpoises by Level A harassment is anticipated from vibratory pile driving. In total, the City has requested, and NMFS has authorized, take of 420 harbor porpoises, 408 takes by Level B harassment and 12 takes by Level A harassment from Pier 58 reconstruction.

On all but two days of work at Pier 63, the Level B harassment zone will be well within Elliott Bay. Since the extent of the Level B harassment zone for this project on most days is less than for Pier 58, the City estimates that up to 5 harbor porpoises may be taken by Level B harassment per day during 47 days of pile removal at Pier 63. Therefore, the City requested, and NMFS has authorized, a total of 235 takes of harbor porpoises by Level B harassment from Pier 63 removal. The largest Level A harassment zone from pile removal at Pier 63 is 29 m. At that close range, the PSOs will be able to detect harbor porpoises and the City must shut down pile driving activities before they approach within 29 m. Therefore, no take of harbor porpoises by Level A harassment from pile driving at Pier 63 is requested or authorized.

Dall's Porpoise

Dall's porpoises are rarely sighted in the project areas. The City conservatively estimates that up to 12 Dall's porpoises may enter the Level B harassment zone per month, for a total of 72 Dall's porpoises from Pier 58 reconstruction and 36 from Pier 63 removal.

For impact installation of steel piles at Pier 58, the Level A harassment zone for high-frequency cetaceans is 183 m. Although the City must implement a shutdown zone of 185 m during this activity, the City anticipates that up to 12 of the Dall's porpoises (2 per month) that enter the Level B harassment zone could approach the project site closer and potentially enter the Level A harassment zone undetected during impact installation at Pier 58, which could occur as one group in one day or a single animal over two days. These Dall's porpoises would be counted as taken by Level A harassment, but would

not count toward the City's authorized number of takes of Dall's porpoises by Level B harassment because they would have already been counted as Level A harassment takes. The Level A harassment zones for all vibratory pile driving at Pier 58 are all under 30 m. At that distance, the PSOs will be able to detect Dall's porpoises and alert the City to cease pile driving activities before Dall's porpoises could enter the Level A harassment zone. Therefore, no take of Dall's porpoises by Level A harassment is anticipated from vibratory pile driving. In total, the City requested, and NMFS has authorized, take of 72 Dall's porpoise, 60 takes by Level B harassment and 12 takes by Level A harassment from Pier 58 reconstruction.

The largest Level A harassment zone from pile removal at Pier 63 is 29 m. At that close range, the PSOs will be able to detect Dall's porpoises and the City must shut down pile driving activities before they approach within 29 m. Therefore, no take of Dall's porpoises by Level A harassment from pile driving at Pier 63 is requested or authorized. The City requested, and NMFS has authorized, 36 takes of Dall's porpoise by Level B harassment only for activities at Pier 63.

California Sea Lion

During monitoring for the Pier 62 Project, a maximum of 31 California sea lions were observed in one day, with an average of 6 takes per day (Anchor QEA 2019). To account for unobserved animals at the outer extent of the Level B harassment zones, the City estimates up to 10 California sea lions may be taken by Level B harassment per day. Therefore, the City requested, and NMFS has authorized, 700 takes of California sea lions by Level B harassment from Pier 58 reconstruction and 470 takes by Level B harassment from Pier 63 removal.

The largest Level A harassment zone for otariid pinnipeds is 6 m. The City must implement a minimum shutdown zone of 10 m for all activities. At that close range, the PSOs will be able to detect California sea lions and the City will implement the required shutdown measures before California sea lions could enter the Level A harassment zone. Therefore, no takes of California sea lions by Level A harassment are requested or authorized.

Steller Sea Lion

Recent monitoring data from the Colman Dock Project in 2017 and 2018 (WSDOT 2019) reported observations of 54 Steller sea lions over 99 days of monitoring activity, which is roughly equivalent to one Steller sea lion every other day. To account for unobserved animals at the outer extent of the Level B harassment zones, the City estimates two Steller sea lions may be taken by Level B harassment per day. Therefore, the City requested, and NMFS has authorized, 140 takes of Steller sea lions by Level B harassment from Pier 58 reconstruction and 94 takes by Level B harassment from Pier 63 removal.

The largest Level A harassment zone for otariid pinnipeds is 6 m. The City must enforce a minimum shutdown zone of 10 m for all activities. At that close range, the PSOs will be able to detect Steller sea lions and the City will implement the required shutdown measures before Steller sea lions could enter the Level A harassment zone. Therefore, no takes of Steller sea lions by Level A harassment are requested or authorized.

Northern Elephant Seal

Individual elephant seals have occasionally been reported in central Puget Sound (*e.g.,* Orca Network, 2020) but are considered rare in the project areas. WSDOT (2019) reported observations near Alki Point (at the outer extent of the Level B harassment zones) and Maury Island (just outside the Level B harassment zones) in 2017 and 2015, respectively. Based on these reports, the City estimates that one northern elephant seal may be taken by Level B harassment per month. Therefore, the City requested, and NMFS has authorized, 6 takes of northern elephant seals by Level B harassment from Pier 58 reconstruction and 3 takes by Level B harassment from Pier 63 removal.

The largest Level A harassment zone (82 m) occurs during impact installation of steel pipe piles at Pier 58. It is unlikely that northern elephant seals will be found within this zone, and even more unlikely that northern elephant seals will be found within the Level A harassment zones for vibratory pile driving at either pier (less than 12 m for all pile types). However, even if northern elephant seals are encountered in the project areas, at that close range, the PSOs will be able to detect them and the City will implement the required shutdown measures before any northern elephant seals could enter the Level A harassment zones. Therefore, no take of northern elephant seals by Level A harassment is requested or authorized.

Harbor Seal

During monitoring for the Pier 62 Project, the maximum number of harbor seals documented as taken by Level B harassment in one day was 54, but the average number documented per day was 5 (Anchor QEA 2019). To account for potentially unobserved animals at the outer extent of the Level B harassment zone during the previous monitoring, the City estimates that 10 harbor seals per day may enter the Level B harassment zone during pile driving work at Pier 58 for a total of 700 harbor seals. In addition, due to their apparent curious nature and previously reported close approaches to pile driving equipment (Anchor QEA 2019), the City estimates that of those 700 harbor seals that could enter the Level B harassment zone, one harbor seal may approach closer and enter the 82-m Level A harassment zone before the animal is detected and activities shut down, and thus be taken by Level A harassment on each day of impact pile installation at Pier 58 (40 days). These harbor seals would be counted as taken by Level A harassment, but would not count toward the City's authorized number of takes of harbor seals by Level B harassment because they would have already been counted as Level A harassment takes. The Level A harassment zones for phocids for all vibratory pile driving at Pier 58 are all under 12 m. At that distance, the PSOs will be able to detect harbor seals and alert the City to cease pile driving activities before harbor seals could enter the Level A harassment zone. Therefore, no take of harbor seals by Level A harassment is anticipated from vibratory pile driving at Pier 58. In total, the City has requested, and NMFS has authorized, 700 takes of harbor seals (660 takes by Level B harassment and 40 takes by Level A harassment) from Pier 58 reconstruction.

On all but two days of work at Pier 63, the Level B harassment zone will be well within Elliott Bay. Since the extent of the Level B harassment zone for this project on most days is less than for Pier 58, the City estimates that up to 6 harbor seals may be taken by Level B harassment per day during the 47 days of pile removal at Pier 63. Therefore, the City requested, and NMFS has authorized, 282 takes of harbor seals by Level B harassment from Pier 63 removal.

The largest Level A harassment zone for the City's planned activities at Pier 63 is 12 m. The City must implement a 15 m shutdown zone to prevent Level A take of phocids for this project (see Mitigation section). At that close range, the PSOs will be able to detect harbor seals and alert the City to cease pile driving activities before harbor seals could enter the Level A harassment zone. Therefore, no take of harbor seals by Level A harassment is requested or authorized for work at Pier 63.

NMFS has carefully considered all information and analysis presented by the City as well as all other applicable information and, based on the best available science, concurs that the City's estimates of the types and amounts of take for each species and stock are complete and accurate. NMFS has authorized the numbers and level of take for each species as requested by the City.

TABLE 10—AUTHORIZED TAKE OF MARINE MAMMALS BY LEVEL A AND LEVEL B HARASSMENT FROM PIER 58 RECONSTRUCTION, BY SPECIES AND STOCK AND PERCENT OF TAKE BY STOCK

Species	Stock	Authorized take by Level B harassment	Authorized take by Level A harassment	Stock abundance	Percent of stock
Gray whale	Eastern North Pacific	4	0	26,960	0.01
Minke whale	California/Oregon/Washington	6	0	915	0.66
Killer whale	West Coast Transient	36	0	349	10.32
Bottlenose dolphin	California Coastal	42	0	453	9.27
Long-beaked common dolphin	California	42	0	83,379	0.05
Harbor porpoise	Washington Inland Waters	408	12	11,233	3.74
Dall's porpoise	California/Oregon/Washington	60	12	16,498	0.44
California sea lion	U.S	700	0	257,606	0.27
Steller sea lion	Eastern	140	0	43,201	0.32
Northern elephant seal	California Breeding	6	0	187,386	0.003
Harbor seal	Washington Northern Inland Waters	660	40	11,036	6.34

TABLE 11—AUTHORIZED TAKE OF MARINE MAMMALS BY LEVEL A AND LEVEL B HARASSMENT FROM PIER 63 REMOVAL, BY SPECIES AND STOCK AND PERCENT OF TAKE BY STOCK

Species	Stock	Authorized take by Level B harassment	Authorized take by Level A harassment	Stock abundance	Percent of stock
Gray whale	Eastern North Pacific	3	0	26,960	0.01
Minke whale	California/Oregon/Washington	3	0	915	0.33
Killer whale	West Coast Transient	18	0	349	5.16
Bottlenose dolphin	California Coastal	21	0	453	4.64
Long-beaked common dolphin	California	21	0	83,379	0.02
Harbor porpoise	Washington Inland Waters	235	0	11,233	2.1
Dall's porpoise	California/Oregon/Washington	36	0	16,498	0.22
California sea lion	U.S	470	0	257,606	0.18
Steller sea lion	Eastern	94	0	43,201	0.22
Northern elephant seal	California Breeding	3	0	187,386	0.002
Harbor seal	Washington Northern Inland Waters	282	0	11,036	2.56

Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned); and

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, and impact on operations.

Time Restrictions

The City has provided in its description of the projects that pile driving will occur only during daylight hours, when visual monitoring of marine mammals can be conducted. In addition, all in-water construction will be limited to the period between September 1 and February 15.

Shutdown Zones

Before the commencement of in-water construction activities, the City must establish shutdown zones for all activities. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity will occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Pile driving must also not commence until all marine mammals are clear of their respective shutdown zones. Shutdown zones will encompass the Level A harassment zones for all species and

stocks listed in Table 3 and therefore will vary based on the activity type and marine mammal hearing group (Tables 12 and 13). At minimum, the shutdown zone for all hearing groups and all activities is 10 m. For in-water heavy machinery work other than pile driving (*e.g.,* standard barges, *etc.*), if a marine mammal comes within 10 m, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include, for example, the movement of the barge to the pile location or positioning of the pile on the substrate via a crane.

The City must also establish shutdown zones for all marine mammals for which take has not been authorized, including SRKW and humpback whales, and for which incidental take has been authorized but the authorized number of takes has been met. These zones are equivalent to the Level B harassment zones for each activity (see Tables 12 and 13).

The City must also implement shutdown measures for SRKW and humpback whales. If SRKW or humpback whales are sighted within the vicinity of the project areas and are approaching the Level B harassment zone, the City must shut down the pile driving equipment to avoid possible take. If a killer whale approaches the Level B harassment zone during pile driving, and it is unknown whether it is a SRKW or a transient killer whale, it must be assumed to be a SRKW and the City must implement the shutdown measure. If a SRKW, an unidentified killer whale, or a humpback whale enters the Level B harassment zone undetected, in-water pile driving must be suspended until the whale exits the Level B harassment zone, or 15 minutes have elapsed with no sighting of the animal, although with the updated mitigation measures in place it is unlikely that this will occur.

TABLE 12—SHUTDOWN ZONES FOR PIER 58 RECONSTRUCTION

Pile type and method	Shutdown zone (m)					
	LF cetacean	MF cetacean	HF cetacean	Phocids	Otariids	All unauthorized species (*e.g.,* SRKW, humpback whale)
Timber and steel H-pile vibratory removal	10	10	10	10	10	1,359
24-in steel vibratory installation and removal, 30-in steel vibratory installation	20	10	30	15	10	7,357
30-in steel impact installation	155	10	185	85	10	215

TABLE 13—SHUTDOWN ZONES FOR PIER 63 REMOVAL

Pile type	Shutdown zone (m)					
	LF cetacean	MF cetacean	HF cetacean	Phocids	Otariids	All unauthorized species (*e.g.,* SRKW, humpback whale)
Timber pile vibratory removal	10	10	10	10	10	1,359
Steel pile vibratory removal	20	10	30	15	10	7,357

Protected Species Observers

The placement of protected species observers (PSOs) during all pile driving activities (described in the Monitoring and Reporting section) must ensure that the entire shutdown zone is visible. Should environmental conditions deteriorate such that the entire shutdown zone would not be visible (*e.g.,* fog, heavy rain), pile driving must be delayed until the PSO is confident marine mammals within the shutdown zone could be detected.

Monitoring for Level A and Level B Harassment

PSOs must monitor the entire Level B harassment zones and Level A harassment zones. To the extent practicable, PSOs must monitor the area beyond the Level B harassment zone to enable observers to be aware of and communicate the presence of marine mammals in the project areas outside the shutdown zones to the City and thus prepare for a potential cessation of activity should the animal enter the shutdown zone.

Pre-Activity Monitoring

Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, PSOs must observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone is considered cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zones listed in Tables 12 and 13, pile driving activity must be delayed or halted. If pile driving is delayed or halted due to the presence of a marine mammal, the activity must not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zones or 15 minutes have passed without re-detection of the animal. When a marine mammal for which Level B harassment take is authorized is present in the Level B harassment zone, activities may begin and Level B harassment take will be recorded. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones must commence. A determination that the shutdown zone is clear must be made during a period of good visibility (*i.e.,* the entire shutdown zone and surrounding waters must be visible to the naked eye).

Coordination With Local Marine Mammal Research Network

Prior to the start of pile driving for the day, and hourly after pile driving has begun, the PSOs must contact the Orca Network to find out the location of the nearest marine mammal sightings. The Local Marine Mammal Research Network consists of a list of over 600 (and growing) residents, scientists, and government agency personnel in the United States and Canada. Sightings are called or emailed into the Orca Network

and immediately distributed to other sighting networks including: The NMFS Northwest Fisheries Science Center, the Center for Whale Research, Cascadia Research, the Whale Museum Hotline, and the British Columbia Sightings Network.

Sightings information collected by the Orca Network includes detection by hydrophone. The SeaSound Remote Sensing Network is a system of interconnected hydrophones installed in the marine environment of Haro Strait (west side of San Juan Island) to study orca communication, in-water noise, bottom fish ecology, and local climatic conditions. A hydrophone at the Port Townsend Marine Science Center measures average in-water sound levels and automatically detects unusual sounds. These passive acoustic devices allow researchers to hear when different marine mammals come into the region. This acoustic network, combined with the volunteer visual sighting network allows researchers to document presence and location of various marine mammal species.

Soft Start

Soft-start procedures are used to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors must provide an initial set of three strikes from the hammer at reduced energy, followed by a 30-second waiting period, then two subsequent reduced-energy strike sets. Soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer.

Bubble Curtain

A bubble curtain must be employed during impact installation or proofing of steel piles. A noise attenuation device is not required during vibratory pile driving. When a bubble curtain or similar measure is used, it must distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column. Any other attenuation measure must provide 100 percent coverage in the water column for the full depth of the pile. The lowest bubble ring must be in contact with the mudline for the full circumference of the ring. The weights attached to the bottom ring must ensure 100 percent mudline contact. Parts of the ring or other objects must not prevent full mudline contact.

Based on our evaluation of the City's proposed mitigation measures, as well as other measures required by NMFS, NMFS has determined that the required mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance for the Pier 58 Reconstruction Project. NMFS also finds that the City's proposed mitigation measures and other measures required by NMFS provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance for the Pier 63 Removal Project.

Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present while conducting the activities. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) Action or environment (*e.g.,* source characterization, propagation, ambient noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.,* age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) Long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.,* marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and,
- Mitigation and monitoring effectiveness.

Visual Monitoring

Marine mammal monitoring during pile driving activities must be conducted by PSOs meeting NMFS' standards and in a manner consistent with the following:

- Independent PSOs (*i.e.,* not construction personnel) who have no other assigned tasks during monitoring periods must be used;
- At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience; and
- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer is required to have prior experience working as a marine mammal observer during construction.

PSOs must have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

The City must have PSOs stationed around Elliott Bay to monitor during all pile driving activities. During removal of timber and/or steel H-piles at Pier 58

and Pier 63, two PSOs must monitor the area, one at the construction site and one at Alki Point on the south side of Elliott Bay. During vibratory removal and/or installation of steel piles at Pier 58 and Pier 63, PSOs must be stationed at the same locations as above, with an additional PSO monitoring from Magnolia on the north side of Elliott Bay and one PSO monitoring from the Seattle-Bainbridge ferry. Impact installation of 30-inch permanent steel piles at Pier 58 is expected to occur on the same day as vibratory installation of those piles. If all vibratory installation has concluded for the day, only the PSO stationed at the construction site is required to continue monitoring during impact pile driving.

Monitoring must be conducted 30 minutes before, during, and 30 minutes after all in water construction activities. In addition, observers must record all incidents of marine mammal occurrence, regardless of distance from activity, and must document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

Reporting

A draft marine mammal monitoring report must be submitted to NMFS within 90 days after the completion of pile driving activities, or 60 days prior to a requested date of issuance of any future IHAs for the project, or other projects at the same location, whichever comes first. All draft and final monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.Fowler@noaa.gov.* The marine mammal report must include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including: (a) How many and what type of piles were driven or removed and the method (*i.e.,* impact or vibratory); and (b) the total duration of time for each pile (vibratory driving) and number of strikes for each pile (impact driving);
- PSO locations during marine mammal monitoring; and
- Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance.

For each observation of a marine mammal, the following must be reported:

- Name of PSO who sighted the animal(s) and PSO location and activity at time of sighting;
- Time of sighting;
- Identification of the animal(s) (*e.g.,* genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species;
- Distance and location of each observed marine mammal relative to the pile being driven or hole being drilled for each sighting;
- Estimated number of animals (min/max/best estimate);
- Estimated number of animals by cohort (adults, juveniles, neonates, group composition, etc.);
- Description of any marine mammal behavioral observations (*e.g.,* observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.,* no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);
- Number of marine mammals detected within the harassment zones, by species; and
- Detailed information about implementation of any mitigation (*e.g.,* shutdowns and delays), a description of specified actions that ensued, and resulting changes in behavior of the animal(s), if any.

If no comments are received from NMFS within 30 days, the draft reports will constitute the final reports. If comments are received, a final report addressing NMFS' comments must be submitted within 30 days after receipt of comments. All PSO datasheets and/or raw sighting data must be submitted with the draft marine mammal report.

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the City must report the incident to the Office of Protected Resources (OPR) (*PR.ITP.MonitoringReports@noaa.gov* and *ITP.Fowler@noaa.gov*), NMFS (301–427–8401) and to the West Coast Region (WCR) regional stranding coordinator (866–767–6114) as soon as feasible. If the death or injury was clearly caused by the specified activity, the City must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHAs. The City must not resume their activities until notified by NMFS.

The report must include the following information:

1. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
2. Species identification (if known) or description of the animal(s) involved;
3. Condition of the animal(s) (including carcass condition if the animal is dead);
4. Observed behaviors of the animal(s), if alive;
5. If available, photographs or video footage of the animal(s); and
6. General circumstances under which the animal was discovered.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.,* intensity, duration), the context of any impacts or responses (*e.g.,* critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

Pile driving activities from Pier 58 reconstruction and Pier 63 removal have the potential to disturb or displace marine mammals and cause auditory

injury (PTS). Specifically, the project activities may result in take, in the form of Level A and Level B harassment, from underwater sounds generated from pile driving. Potential takes could occur if individuals are present in the ensonified zone when these activities are underway.

The takes from Level A and Level B harassment would be due to potential behavioral disturbance, TTS, and PTS. Serious injury or mortality are not anticipated or authorized given the nature of the activities and measures designed to minimize the possibility of injury to marine mammals. The potential for harassment is minimized through the construction method and the implementation of the required mitigation measures (see Mitigation section).

To avoid repetition, the majority of our analysis applies to all the species listed in Table 3, and to both the Pier 58 and Pier 63 IHAs, given that the anticipated effects of the City's two projects on these different marine mammal stocks are expected to be relatively similar in nature. Where there are special circumstances for a species or stock (*e.g.,* gray whales), they are included as a separate subsection below. Similarly, where there are differences between the two IHAs, they are highlighted below.

NMFS has identified key factors which may be employed to assess the level of analysis necessary to conclude whether potential impacts associated with a specified activity should be considered negligible. These include (but are not limited to) the type and magnitude of taking, the amount and importance of the available habitat for the species or stock that is affected, the duration of the anticipated effect to the species or stock, and the status of the species or stock. The following factors support negligible impact determinations for all affected stocks.

No take by Level A harassment is anticipated or authorized incidental to the Pier 63 Removal Project. For the Pier 58 Reconstruction Project, take by Level A harassment is authorized for three species (harbor seals, harbor porpoise, and Dall's porpoise) to account for the possibility that an animal could enter a Level A harassment zone prior to detection, and remain within that zone for a duration long enough to incur PTS before being observed and the City shutting down pile driving activity. Any take by Level A harassment is expected to arise from, at most, a small degree of PTS, *i.e.,* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by impact pile driving (*i.e.* the low-frequency region below 2 kHz), not severe hearing impairment or impairment within the ranges of greatest hearing sensitivity. Animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of PTS. Two of the 3 species for which Level A harassment is authorized are high-frequency cetaceans (harbor porpoise and Dall's porpoise), and the hearing ability of the third species for which Level A harassment is authorized (harbor seal) below 2 kHz is also poor (NMFS, 2018). Given the hearing ranges of these 3 species, PTS incurred at the low frequencies of pile driving noise would not interfere either with conspecific communication or echolocation, and therefore would not be expected to impact on the survival or reproductive abilities of the affected individuals, let alone the stock or population.

Additionally, the amount of authorized take by Level A harassment is very low for all marine mammal stocks and species. For the Pier 58 Reconstruction Project, for 10 of 13 stocks, NMFS anticipates and authorizes no Level A harassment take over the duration of the IHA period; for the other three stocks, NMFS authorizes no more than 40 takes by Level A harassment for any species or stock. These low numbers of takes of individuals by Level A harassment (and involving only a small degree of PTS) are not expected to affect the reproductive success or survival of any individuals, much less result in adverse impacts on the species or stock.

As described above, NMFS expects that marine mammals would likely move away from an aversive stimulus, especially at levels that would be expected to result in PTS, given sufficient notice through use of soft start. The City is also required to shut down pile driving activities if marine mammals approach within hearing group-specific zones that encompass the Level A harassment zones (see Tables 12 and 13), further minimizing the likelihood and degree of PTS that would be incurred. Even absent mitigation, no serious injury or mortality from construction activities is anticipated or authorized.

Effects on individuals that are taken by Level B harassment in the form of behavioral disruption, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as avoidance, increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff 2006). Most likely, individuals would simply move away from the sound source and temporarily avoid the area where pile driving is occurring. If sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activities are occurring, particularly as the project is located on a busy waterfront with high amounts of vessel traffic. We expect that any avoidance of the project areas by marine mammals would be temporary in nature and that any marine mammals that avoid the project areas during construction would not be permanently displaced. Short-term avoidance of the project areas and energetic impacts of interrupted foraging or other important behaviors is unlikely to affect the reproduction or survival of individual marine mammals, and the effects of behavioral disturbance on individuals is not likely to accrue in a manner that would affect the rates of recruitment or survival of any affected stock.

Additionally, and as noted previously, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. However, since the hearing sensitivity of individuals that incur TTS is expected to recover completely within minutes to hours, it is unlikely that the brief hearing impairment would affect the individual's long-term ability to forage and communicate with conspecifics, and would therefore not likely impact reproduction or survival of any individual marine mammal, let alone adversely affect rates of recruitment or survival of the species or stock.

The projects are also not expected to have significant adverse effects on affected marine mammals' habitats. The project activities will not modify existing marine mammal habitat for a significant amount of time. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected (with no known particular importance to marine mammals), the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences. Aside from the biologically important area (BIA) for gray whales described below, there are no known areas of importance for other marine mammals, such as feeding or pupping areas, in the project area.

For all species and stocks, and both project areas (Pier 58 and 63), take would occur within a limited, relatively confined area (Elliott Bay within central Puget Sound) of the stocks' ranges. Given the availability of suitable habitat nearby, any displacement of marine mammals from the project areas is not expected to affect marine mammals' fitness, survival, and reproduction due to the limited geographic area that will be affected in comparison to the much larger habitat for marine mammals in Puget Sound. Level A harassment and Level B harassment will be reduced to the level of least practicable adverse impact to the marine mammal species or stocks and their habitat through use of mitigation measures described herein. Some individual marine mammals in the project areas may be present and be subject to repeated exposure to sound from pile driving on multiple days. However, these individuals would likely return to normal behavior during gaps in pile driving activity. The Seattle Waterfront is a busy industrial area and monitoring reports from previous in-water pile driving activities in the area (*e.g.,* WSDOT, 2022; Anchor QEA, 2019) indicate that marine mammals continue to remain in the greater project area throughout pile driving activities. Therefore, any behavioral effects of repeated or long duration exposures are not expected to negatively affect survival or reproductive success of any individuals. Thus, even repeated Level B harassment of some small subset of an overall stock is unlikely to result in any effects on rates of reproduction and survival of the stock.

Gray Whales

Puget Sound is part of a BIA for migrating gray whales (Calambokidis *et al.,* 2015). While Elliott Bay is included in the BIA, gray whales typically remain further north in Puget Sound, primarily in the waters around Whidbey Island (Calambokidis *et al.,* 2018). Gray whales are rarely observed in Elliott Bay. Therefore, even though the project areas overlap with the BIA, the infrequent occurrence of gray whales suggests that the projects would have minimal, if any, impact on the migration of gray whales in the BIA, and would therefore not affect reproduction or survival.

There is an ongoing UME for gray whales (see the Description of Marine Mammals in the Area of Specified Activities section in the notice of proposed IHAs (87 FR 12089; March 3, 2022)). However, we do not expect the authorized takes to exacerbate or compound upon this ongoing UME. As noted previously, no Level A harassment, serious injury, or mortality is expected or authorized, and any Level B harassment takes of gray whales would most likely be in the form of behavioral disturbance. Preliminary findings from necropsied gray whales that are considered part of the ongoing UME have shown evidence of emaciation, suggesting that impacts to feeding would be of most concern. However, the project areas have not been identified as important for feeding of gray whales. Additionally, the project areas are not considered important for breeding gray whales. Therefore the projects are unlikely to disrupt any critical behaviors (*e.g.,* feeding, mating) or have any effect on the reproduction or survival of gray whales, even in light of the ongoing UME.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect any of the species or stocks through effects on annual rates of recruitment or survival:

- No mortality or serious injury is anticipated or authorized for either project;
- No take of any species by Level A harassment is anticipated or authorized for the Pier 63 Removal Project;
- For the Pier 58 Reconstruction Project, Level A harassment is not anticipated or authorized for 8 of the 11 species. For the other 3 species (2 high-frequency cetaceans and 1 phocid pinniped), the amount of Level A harassment is low and would be in the form of a slight degree of PTS in limited low frequency ranges (<2 kHz) which are not the most sensitive primary hearing ranges for these species and would not interfere with conspecific communication or echolocation;
- For both projects, Level B harassment would be in the form of behavioral disturbance, primarily resulting in avoidance of the project areas around where impact or vibratory pile driving is occurring, and some low-level TTS that may limit the detection of acoustic cues for relatively brief amounts of time in relatively confined footprints of the activities;
- Nearby areas of similar habitat value within Puget Sound are available for marine mammals that may temporarily vacate the project areas during construction activities for both projects;
- Effects on species that serve as prey for marine mammals from the activities are expected to be short-term and, therefore, any associated impacts on marine mammal feeding are not expected to result in significant or long-term consequences for individuals, or to accrue to adverse impacts on their populations from either project;
- The number of anticipated takes by Level B harassment is relatively low for all stocks for both projects;
- The ensonified areas from both projects are very small relative to the overall habitat ranges of all species and stocks, and will not adversely affect ESA-designated critical habitat, or cause more than minor impacts in any BIAs or any other areas of known biological importance;
- The lack of anticipated significant or long-term negative effects to marine mammal habitat from either project;
- The efficacy of the mitigation measures in reducing the effects of the specified activities on all species and stocks for both projects;
- The enhanced mitigation measures (*e.g.,* shutdown zones equivalent to the Level B harassment zones) to eliminate the potential for any take of unauthorized species; and
- Monitoring reports from similar work in Puget Sound that have documented little to no behavioral effect on individuals of the same species that could be impacted by the specified activities from both projects, suggesting the degree/intensity of behavioral harassment would be minimal.

Based on the analysis contained herein of the likely effects of the specified activities on marine mammals and their habitat, and taking into consideration the implementation of the monitoring and mitigation measures, NMFS finds that the total marine mammal take from the Pier 58 Reconstruction Project will have a negligible impact on all affected marine mammal species or stocks. NMFS also finds that the total marine mammal take from the Pier 63 Removal project will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors

may be considered in the analysis, such as the temporal or spatial scale of the activities.

The authorized take for each project is below one third of the population for all marine mammal stocks (Tables 10 and 11).

Based on the analysis contained herein of the proposed activities (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks for the Pier 58 Reconstruction Project. NMFS also finds that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks for the Pier 63 Removal Project.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species.

No incidental take of ESA-listed species is authorized or expected to result from these activities. Therefore, NMFS has determined that consultation under section 7 of the ESA is not required for this action.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.,* the issuance of two IHAs) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the issuance of the IHAs qualifies to be categorically excluded from further NEPA review.

Authorizations

As a result of these determinations, NMFS has issued two IHAs to the City, one each for their Pier 58 Reconstruction Project and their Pier 63 Removal Project on the Seattle Waterfront in Seattle, Washington (both effective from August 1, 2022 through July 31, 2023), with the previously discussed mitigation, monitoring, and reporting requirements incorporated.

Dated: May 20, 2022.

Kimberly Damon-Randall,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2022–11280 Filed 5–25–22; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XC060]

Permanent Advisory Committee To Advise the U.S. Commissioners to the Western and Central Pacific Fisheries Commission; Meeting Announcement

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; update.

SUMMARY: NMFS announces the public meeting of the Permanent Advisory Committee (PAC) to advise the U.S. Commissioners to the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) on June 8, 2022. This notice replaces an earlier document in the **Federal Register** on April 1, 2022 since the time for this meeting has changed.

DATES: The meeting of the PAC will be held via web conference on June 8, 2022, from 10 a.m. to 12 p.m. Hawaii Standard Time (HST) (or until business is concluded). Members of the public may submit written comments on meeting topics or materials; comments must be received by June 3, 2022.

ADDRESSES: The public meeting will be conducted via web conference. For details on how to call in to the web conference or to submit comments, please contact Emily Reynolds, NMFS Pacific Islands Regional Office; telephone: 808–725–5039; email: *emily.reynolds@noaa.gov.* Documents to be considered by the PAC will be sent out via email in advance of the conference call. Please submit contact information to Emily Reynolds (telephone: 808–725–5039; email: *emily.reynolds@noaa.gov*) at least 2 days in advance of the call to receive documents via email.

Participants and public commenters are urged not to provide Personally Identifiable Information (PII) BII or Business Identifiable Information (BII) during this meeting, as any public comments are made publicly available. The audio portion of this meeting may be recorded for the purposes of generating notes of the meeting and participation in the meeting constitutes consent to the audio recording.

FOR FURTHER INFORMATION CONTACT: Emily Reynolds, NMFS Pacific Islands Regional Office; 1845 Wasp Blvd. Bldg. 176, Honolulu, HI 96818; telephone: 808–725–5039; facsimile: 808–725–5215; email: *emily.reynolds@noaa.gov.*

SUPPLEMENTARY INFORMATION: This notice replaces a notice published in the **Federal Register** on April 1, 2022 (87 FR 19079) announcing the June 8, 2022, PAC meeting because of a change in start time. In accordance with the Western and Central Pacific Fisheries Convention Implementation Act (16 U.S.C. 6901 *et seq.*), the PAC, has been formed to advise the U.S. Commissioners to the WCPFC. The PAC is composed of: (i) Not less than 15 nor more than 20 individuals appointed by the Secretary of Commerce in consultation with the U.S. Commissioners to the WCPFC; (ii) the chair of the Western Pacific Fishery Management Council's Advisory Committee (or the chair's designee); and (iii) officials from the fisheries management authorities of American Samoa, Guam, and the Northern Mariana Islands (or their designees). The PAC supports the work of the U.S. National Section to the WCPFC in an advisory capacity. The U.S. National Section is made up of the U.S. Commissioners and the Department of State. NMFS Pacific Islands Regional Office provides administrative and technical support to the PAC in cooperation with the Department of State. More information on the WCPFC, established under the Convention on the Conservation and Management of