(i) Objections must be provided to VA in writing.

(ii) VA's decision stands while an objection is under consideration.

(iii) Other VA decisions (such as competing award decisions, continuation award decisions, decisions made with the consent of the grantee) are not subject to this opportunity to object.

(2) The grant agreement will provide additional requirements and responsibilities for grantees in the event of noncompliance under paragraph (a) of this section.

§ 84.105 Oversight.

VA may inspect the telehealth access points and records of any entity that has received a telehealth grant when VA deems necessary to determine compliance with this part. The authority to inspect does not authorize VA to manage or control the organization. Monitoring and oversight requirements for each grantee will be determined by a pre-award risk assessment in alignment with 2 CFR 200.206.

§ 84.110 Telehealth grant closeout procedures.

Telehealth grants will be closed out in accordance with 2 CFR part 200.

[FR Doc. 2024–25892 Filed 11–12–24; 8:45 am]

BILLING CODE 8320–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 76

[MB Docket No. 23–203; Report No. 3220; FR ID 260366]

Petition for Reconsideration of Action in Rulemaking Proceeding; Correction

AGENCY: Federal Communications Commission.

ACTION: Petition for Reconsideration; correction.

SUMMARY: The Federal Communications Commission corrects Dates for the filing of replies to oppositions to the Petition for Reconsideration, published in the **Federal Register** of November 1, 2024, announcing the dates for filing oppositions and replies to the Petition for Reconsideration of Action. The document contained an error in the **DATES** section.

DATES: November 13, 2024.

FOR FURTHER INFORMATION CONTACT: For further information, please contact Joseph Price, Policy Division, Media Bureau, at 202–418–1423 or *Joseph.Price@fcc.gov.*

SUPPLEMENTARY INFORMATION:

Correction

In the **Federal Register** of November 1, 2024, in FR Doc. 2024–25497, on page 87322, in the third column, correct the **DATES** caption to read:**DATES:** Oppositions to the Petition must be filed on or before November 18, 2024. Replies to oppositions to the Petition must be filed on or before November 29, 2024.

Federal Communications Commission.

Marlene Dortch,

Secretary.

[FR Doc. 2024–26213 Filed 11–12–24; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 241104–0288]

RIN 0648–BN12

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Lower Columbia River Dredged Material Management Plan, Oregon and Washington

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

ACTION: Proposed rule, request for comments.

SUMMARY: NMFS has received a request from the U.S. Army Corps of Engineers, for Incidental Take Regulations (ITR) and Letter of Authorization (LOA) pursuant to the Marine Mammal Protection Act. The requested regulations would govern the authorization of take of small numbers of marine mammals over 5 years (2027–2032) incidental to the Lower Columbia River Dredged Material Management Plan in Oregon and Washington. NMFS requests public comments and will consider them prior to making any final decision on the requested ITR and issuance of the LOA; agency responses to comments will be summarized in the final rule, if issued.

DATES: Comments and information must be received no later than December 13, 2024.

ADDRESSES: A plain language summary of this proposed rule is available at: *https://www.regulations.gov/docket/NOAA-NMFS-2024-0123.*

• *Electronic Submissions:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to *https://www.regulations.gov* and enter NOAA–NMFS–2024–0123 in the Search box (*note:* copying and pasting the FDMS Docket Number directly from this document may not yield search results). Click on the ''Comment'' icon, complete the required fields, and enter or attach your comments.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by the National Marine Fisheries Service (NMFS). All comments received are a part of the public record and will generally be posted for public viewing at: *https://www.regulations.gov* without change. All personal identifying information (*e.g.,* name, address, *etc.*), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter ''N/A'' in the required fields if you wish to remain anonymous).

FOR FURTHER INFORMATION CONTACT: Robert Pauline, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION: A copy of the U.S. Army Corps of Engineers' (USACE) application any supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/action/incidental-take-authorization-us-army-corps-engineers-lower-columbia-river-dredged-material.* In case of problems accessing these documents, please call the contact listed above (see **FOR FURTHER INFORMATION CONTACT**).

Purpose and Need for Regulatory Action

This proposed rule, if adopted, would establish a framework under the authority of the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1361 *et seq.*) to authorize, for a 5-year period (2027–2032), take of marine mammals incidental to the USACE's construction activities associated with the Lower Columbia River (LCR) Dredged Materials Management Plan (DMMP). NMFS received an application (the Application) from the USACE requesting 5-year regulations and an LOA to take 3 species of marine mammals. Take would occur by harassment only, incidental to impact and vibratory pile driving. 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). No mortality or serious injury is anticipated or proposed for authorization.

Legal Authority for the Proposed Action

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, regulations are promulgated, and public notice and an opportunity for public comment are provided.

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 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 below.

Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I, provide the legal basis for proposing and, if appropriate, issuing 5-year regulations and an associated LOA. This proposed rule also establishes required mitigation, monitoring, and reporting requirements for the USACE's activities.

Summary of Major Provisions Within the Proposed Rule

The following is a summary of the major provisions of this proposed rule regarding USACE construction activities. These provisions include measures requiring:

- Monitoring of the construction areas to detect the presence of marine mammals before beginning construction activities;
- Shutdown of construction activities under certain circumstances to avoid injury of marine mammals;
- Soft start for impact pile driving to allow marine mammals the opportunity to leave the area prior to beginning impact pile driving at full power; and
- Use of bubble curtains to attenuate sound levels when impact driving.

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 evaluate the proposed action (*i.e.,* promulgation of regulations and subsequent issuance of a 5-year LOA) and alternatives 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 NAO 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 preliminarily determined that issuance of the proposed rule qualifies to be categorically excluded from further NEPA review.

Information in the USACE Application and this document collectively provide the environmental information related to proposed issuance of these regulations and subsequent incidental take authorization for public review and comment. We will review all comments submitted in response to this notice of proposed rulemaking prior to concluding our NEPA process and prior to making a final decision on the request for incidental take authorization.

Summary of USACE Request

On October 18, 2023, NMFS received an Application from the USACE requesting authorization for take of marine mammals incidental to construction activities associated with the LCR DMMP in Oregon and Washington. After the applicant responded to our questions and redrafted the Application, we determined the Application was adequate and complete on April 25, 2024. On May 14, 2024, we published a notice of receipt of the USACE Application in the **Federal Register**, requesting comments and information related to the request for 30 days (89 FR 41941). We received no public comments.

The USACE requests authorization to take harbor seal (*Phoca vitulina*), Steller sea lion (*Eumetopias jubatus*), and California sea lion (*Zalophus californianus*) by Level B harassment and, for harbor seal only, by Level A harassment. The proposed regulations would be valid for 5 years (2027–2032).

Description of Proposed Activity

Overview

The USACE has developed a draft DMMP to support continued operation and maintenance of the LCR Federal Navigation Channel (FNC) for the next 20 years. The full DMMP includes proposed dredging and placement operations between river miles (mi) (RM) 3 and 105.5. However, the scope of this request for an LOA is limited to potential pile driving that would be associated with any new steel and timber piles installed between RM 23 and 36. Work on additional reaches of the LCR will likely occur in subsequent years. The USACE is anticipating up to 141 days of in-water work between November 2027 and February 2032 and is proposing to install 1,039 steel piles and 1,029 timber piles by vibratory and impact driving over the 5-year LOA period for a total of 2,068 piles. No concurrent driving of piles is proposed.

Dates and Duration

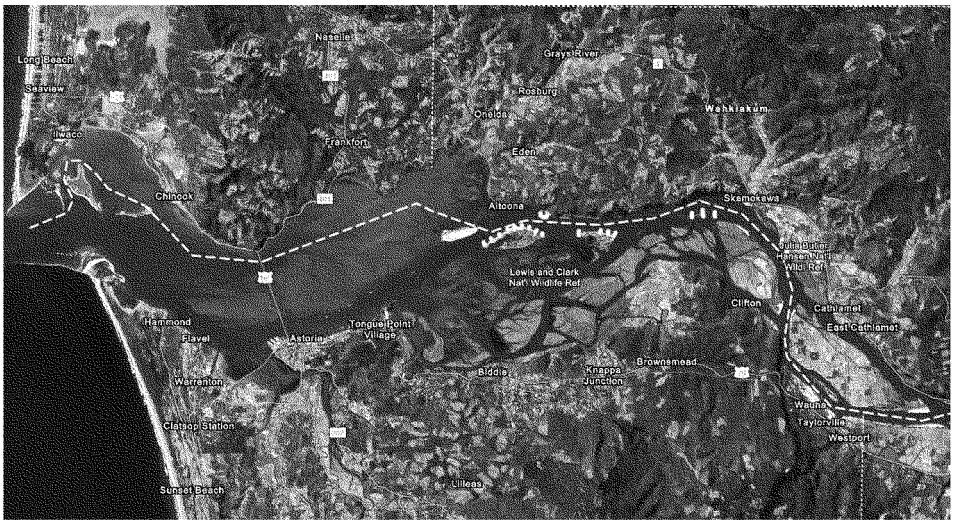
The proposed regulations would be valid for a period of 5 years from November 1, 2027, through February 29, 2032. Pile driving is expected to occur during the in-water work window of the LCR of November 1 through February 28. An estimated 141 in-water workdays would occur during this period, with a minimum of 1 day occurring in LOA year 2 (November 2028–February 2029) and a maximum of 51 days in LOA year 5 (November 2031–February 2032). The USACE estimated the number of in-water workdays based on the assumption that an average of 15 piles would be installed in a given day. However, contractors could install up to 20 piles in a day under favorable conditions, and thus the final total number of workdays may be less than anticipated.

Specific Geographic Region

The LCR flows 146 miles from Bonneville Dam to the Pacific Ocean. This reach of the river features fish and wildlife in the transition from fresh water to salt water, passing through major cities and towns, flowing through wildlife refuges, supporting ports and a

shipping channel, and providing valued recreation opportunities. The LCR features a meandering geometry composed of gradual bends with flows splitting around in-river islands. Several of these in-river islands were expanded or created entirely from dredged material that was placed to help maintain the dimensions of the FNC. Work will take place from RM 23 to RM 36 as shown in figure 1. The project area encompasses this section of the river, which features widely dispersed housing structures separated by stretches of undeveloped land to the north on the right bank and uninhabited islands and sand flats south of the navigation channel (hereinafter, the Project Area). Traveling from west to east these are Rice Island, Miller Sands, Snag Island, Pillar Rock Island, Jim Crowe Sands, Woody Island, Grassy Island, Fitzpatrick Island, and Welch Island, which are all part of the Lewis and Clark National Wildlife Refuge. Tenasillaha Island, which is part of the Julia Hanson Butler National Wildlife Refuge, is the easternmost island in the Project Area. The main navigation channel from RM 3 to RM 105.5 must be maintained at 48 feet (ft) deep and, generally, 600 ft wide.

Figure 1—Locations of Proposed Installation Sites on the Lower Columbia River



Detailed Description of the Specified Activity

There are a number of channel maintenance practices utilized by the USACE as part of the LCR DMMP. Channel deepening and widening requires regular maintenance dredging to remove shoals that form in the navigation channel. The standard of maintenance dredging has been to dredge material from areas in which navigation is affected, and to dispose of the dredged material in upland or shoreline placement sites or areas of the navigation channel where the channel is deeper, referred to as ''flow lane placement.'' Dredged materials have historically been placed between or adjacent to pile dike structures to supplement natural accretion of sediment. Hopper dredging, clamshell dredging, and pipeline dredging are all employed for channel deepening and widening and are employed as part of the DMMP. These operations are described in greater detail in the USACE Application. NMFS, however, has determined that dredging is not likely to result in harassment under the MMPA.

The USACE employs a number of river control structures to help maintain the dimensions of the FNC. For example, placing dredged material along the shallow water banks of an existing island serves to redirect flow back into the main navigation channel and narrow the width of the river, which mimics a natural scouring process of the riverbed. Dredged material has been used to build or expand channel training landforms such as in-river islands that reduce the river's cross-section and control channel alignment to aid in maintaining the navigation channel's dimensions. The purpose of reducing the river's cross-section is to increase and redirect flow velocities in localized areas back into the navigation channel to create natural scouring action. Piles are the most common channel training structure in the LCR and may or may not be associated with in-river islands. Such piles can be used along a shoreline, or as part of an island and are often installed perpendicular to the direction of river flow. The pile dike slows the velocity of the river along the shoreline which reduces erosion and redirects the flow such that the velocity of the river accelerates towards the navigation channel, allowing the river to naturally scour the bed and provide stable areas for placement of dredged material. Existing pile dikes are semi-permeable groins consisting of two rows (riverine) or three rows (estuary) of untreated timber pilings driven on 2.5 foot centers. These timber piles are alternately placed on each side of horizontal spreader piles, which are bolted in place. Pile dikes in the FNC average about 400 ft with hundreds of pilings. Pile dike systems consist of a series of timber pile dikes, spaced about 1,200 to 1,500 ft apart for optimum functional efficiency. The outer dolphin, known as a king pile, is a taller bundle of piles marking the end of the pile dike for better visibility for users of the channel. The USACE has not built any new pile dikes since the construction of the 40-ft channel (approximately 1969), though some existing dikes have been repaired or rebuilt. Many pile dikes are presently in varying degrees of deterioration.

Each pile structure will be composed of one or more piles. Proposed structures are slightly different from those typically found throughout the LCR. One main difference is that pile spacing within structures at confined aquatic placement sites needs to be smaller to slow river currents and prevent newly placed material from washing away. Because any pile structures would be buried to some degree by placed material, they include

only one row of piles that are not connected by a horizontal spreader.

The design of each pile structure is tailored to the site conditions. For current planning purposes, the pile spacing is assumed to increase as you move from the shore toward the FNC over four segments:

- Shore to ⅓ point of structure
- ⅓ point to ½ point of structure
- ½ point to ¾ point of structure
- ¾ point to end of structure (enrockment only, no piles)

Steel marker pile at riverward end of structure.

The pile spacing within the first three segments depends on whether piles are timber or steel. For planning purposes (subject to change during the design phase), all timber piles are assumed to be 12 inches (in) in diameter and all steel piles are assumed to be 24 in in diameter. These assumptions represent maximum pile widths, though smaller piles could ultimately be selected should more in-depth site assessments deem smaller pile widths acceptable. The permissible spacing for steel piles is twice the spacing of timber piles because the diameter of the steel piles is twice that of the timber piles. Both configurations would result in the same porosity.

The decision on what type of piles should be used will be made on a site-by-site basis depending on the site conditions (*e.g.,* water depth, currents, wave conditions, foundation conditions, *etc.*) along with the availability and cost of materials at the time of design and construction. Timber piles will most likely be installed in areas of shallow water with loose/soft to medium dense foundation. Steel piles will most likely be installed in deep water or in dense/hard foundations. The USACE has assumed that one-third of the piles will be timber and two-thirds will be steel. This conservative assumption ensures that sufficient numbers of steel piles and associated effects are accounted for should hard foundations be more prevalent. In the Application, the USACE noted that contractors expressed difficulties securing timber piles over the last 3–5 years. Therefore, this assumption also accounts for potential supply chain issues affecting the availability of timber pilings.

Table 1 summarizes the spacing assumptions for potential pile structures used at confined aquatic placement sites. For the first ¾ of each structure (from the shore), the bottom width of the enrockment is assumed to be 50 ft (based on a water depth of 30 ft). For the outer (riverward) ¼ of each structure, the bottom width of the enrockment increases to about 100 ft. The average width is about 65 ft. However, for site W–35.6–IW–D, the two structures will be primarily rock with steel marker piles; the average bottom width is assumed to be 100 ft.

TABLE 1—PILE SPACING ASSUMPTIONS FOR TIMBER AND STEEL PIPE PILES

Pile dike segment	Pile spacing for 12-in timber (ft)	Pile spacing for 24-in steel pipe (ft)
Shore to ⅓ point of structure	1.5	3
⅓ point to ½ point of structure	2.5	5
½ point to ¾ point of structure	4	8

For planning purposes and the calculations included in this LOA, it is assumed that one-third of the piles will be timber and two-thirds will be steel. Timber piles will most likely be installed in areas of shallow water with loose/soft to medium dense foundation. Steel piles will most likely be installed in deep water or in dense/hard foundations. This is a conservative assumption to ensure sufficient numbers of steel piles and associated effects are accounted for should hard foundations be more prevalent. Prior contractors have also expressed difficulties securing timber piles over the last 3–5 years. Thus, this assumption also accounts for potential supply chain issues affecting the availability of timber pilings. For a structure with a total length of L, the formulas for computing the number of piles are as follows:

- Timber piles number of piles = 0.351 × L
- Steel piles number of piles = 0.176 × L

The total length of proposed structures is approximately 13,050 ft. However, excluding W–35.6–IW–D (only marker piles) and the 2 sites beyond the scope of this LOA (W–24.9–IW–S and O–26.7–IW–S) the total length for estimating the number of piles is 8,796 ft (table 2). Pile driving at the 2 out-of-scope locations is tentatively planned for 2032/2033 and 2033/2034, beyond the effective period of these proposed regulations. The assumed length of timber pile structures to be installed under this LOA is 2,932 ft (*i.e.,* one-third of the total length) and the assumed length of steel pile structures is 5,864 ft (*i.e.,* two-thirds of the total length). Using the equations above, the anticipated total number of timber piles will be 1,029 and the total number of steel piles will be 1,032 plus 6 additional marker piles for site W–35.6–IW–D. These total numbers of piles are for the 5 placement sites that will require pile driving under this LOA (see table 2).

TABLE 2—LOCATION AND PROPERTIES OF PROPOSED PILE STRUCTURES AT CONFINED AQUATIC PLACEMENT SITES

System name	Structures in system	Length of structure (ft)	Width of structure (ft)	Material	Anticipated LOA year(s)
O–23.5–BN–ADD2	4	1,544	50–100	Piles and enrockment	Year 1.
W–35.6–IW–D	2	1,555	100	Enrockment and 6 marker piles	Year 2.
O–23.5–BN–ADD1	5	2,119	50–100	Piles and enrockment	Year 3.
O–27.3–BN	3	1,906	50–100	Piles and enrockment	Year 4.
O–31.4–BN	3	3,227	50–100	Piles and enrockment	Year 5.

Note that the lower parts of the piles will be surrounded by enrockment (also referred to as stone or riprap). The thickness of the enrockment will be about one-third of the water depth in terms of low water. The volume of enrockment will depend on the elevation profile of the riverbed along the structure alignment. NMFS, however, has determined that enrockment installation is not likely to result in harassment under the MMPA.

Table 3 shows the locations, number and types of piles, as well as pile driving workdays anticipated to be required for the DMMP project spanning roughly 13 RM. These structures will support new confined aquatic placement sites in the LCR.

TABLE 3—IN-WATER WORK, PILE INSTALLATION, AND WORKDAY ASSUMPTIONS

In-water work location [1]	Timber piles	Steel pipe piles	Total piles	Anticipated pile driving workdays [2]
LOA YR-1 (Nov. 2027–Feb. 2028)				
Enrockment placement and pile installation to construct 4 structures at Site O–23.5–BN–ADD2	181	181	362	25
LOA YR-2 (Nov. 2028–Feb. 2029)				
Construction of 2 new structures at Site W–35.6–IW–D using enrockment and marker piles only	NA	6	6	1
LOA YR-3 (Nov. 2029–Feb. 2030)				
Enrockment placement and pile installation to construct 5 structures at Site O–23.5–BN–ADD1	248	249	497	34
LOA YR-4 (Nov. 2030–Feb. 2031)				
Enrockment placement and pile installation to construct 3 structures at Site O–27.3–BN	223	224	447	30
LOA YR-5 (Nov. 2031–Feb. 2032)				
Enrockment placement and pile installation to construct 3 structures at Site O–31.4–BN	377	379	756	51
Total	1,029	1,038	2,068	141

[1] Reference system name that denotes the side of the channel (*i.e.,* O for Oregon; W for Washington), river mile, type of placement (*i.e.,* BN for beach nourishment; IW–S for in-water shallow; IW–D for in-water deeper than 20 ft).

[2] Though up to 20 piles will be installed in a day, we estimate the total number of workdays based on an average of 15 piles being installed per day to account for potential delays due to equipment, weather, and other unforeseen circumstances.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (see Proposed Mitigation and Proposed Monitoring and Reporting).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the Application 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, instead of reprinting the information. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs) (see *https://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 at: *https://www.fisheries.noaa.gov/find-species.*

Table 4 lists all species or stocks for which take is expected and proposed to be authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and the 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 proposed to be authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks 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 managed stocks in this region are assessed in NMFS' U.S. Pacific and Alaska SARs. All values presented in table 4 are the most recent available at the time of publication (including from the draft 2023 SARs) and are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 4 — MARINE MAMMAL SPECIES [1] LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [2]	Stock abundance (CV, Nmin, most recent abundance survey) [3]	PBR	Annual M/SI [4]
Order Carnivora—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	>321
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-, -, N	36,308 [5] (N/A, 36,308, 2022)	2,178	93.2
Family Phocidae (earless seals):						
Harbor Seal	*Phoca vitulina*	OR/WA Coastal	-, -, N	24,731 [6] (1999)	UND	10.6

[1] Information on the classification of marine mammal species can be found on the web page for The Society for Marine Mammalogy's Committee on Taxonomy at: *https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies.*

[2] 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.

[3] NMFS marine mammal SARs online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region.* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[4] 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 M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

[5] Nest is best estimate of counts, which have not been corrected for animals at sea during abundance surveys. Estimates provided are for the U.S. only.

[6] There is no current estimate of abundance available for this stock. Value presented is the most recent available and based on 1999 data.

As indicated above, all 3 species (with 3 managed stocks) in table 4 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur.

California Sea Lion

California sea lions are the most frequently sighted sea lion found in Washington waters and use haulout sites along the outer coast, the Strait of Juan de Fuca, and in the Puget Sound. The U.S. stock of California sea lions breeds on islands off the southern California coast. They are commonly found in Oregon haul-out sites from September to May and during this period, adult and subadult males have been observed in bays, estuaries, and offshore rocks along the Oregon coast. In fact, a few males have reported in Oregon waters throughout the year (Mate 1973). The population breeds in the California Channel Islands and most females and young pups remain in that region year-around (Mate, 1973; Oregon Department of Fish and Wildlife (ODFW), 2023). California sea lions may occur in the project vicinity and often use that same haulout sites as Steller sea lions (ODFW, 2023, see figure 4–2 in the Application).

Steller Sea Lion

Steller sea lions that occur in the LCR, including the project vicinity, are members of the eastern Distinct Population Segment (DPS), ranging from Southeast Alaska to central California, including Washington (Jeffries *et al.,* 2000; Scordino, 2006; NMFS, 2013). Steller sea lions have been detected in the LCR and may occur in the vicinity of the project. All sea lions detected in the LCR are male and the nearest sea lion haulout sites are in Astoria and upriver near Rainier, Washington (USACE, 2024, see figure 4–2 in the Application). However, Steller sea lions will likely transit the Project Area during winter, depending on the timing of the eulachon spawning run which can attract large numbers of sea lions.

Harbor Seal

Harbor seals are the most common widely-distributed marine mammal found in Washington marine waters and are frequently observed in the nearshore marine environment. They can commonly be found on offshore rocks and islands, along shores, and on exposed flats in the estuary (Harvey, 1987). Note that the Oregon/Washington Coastal Stock was most recently estimated at 24,732 harbor seals in 1999 and more recent abundance data is not available. There is no current estimate of abundance for this stock (Carretta *et al.,* 2022).

Harbor seals in this population are typically non-migratory and reside year-round in the LCR, and generally remain in the same area throughout the year for breeding and feeding. Harbor seals in the LCR do exhibit some seasonal movement upriver, including into or through the Project Area of ensonification, to follow winter and spring runs of Pacific eulachon (*Thaleichthys pacificus*) and out-migrating juvenile salmon (*Oncorhynchus spp.*), and they are observed regularly in portions of the LCR including the Project Area. Within the LCR, they tend to congregate to feed at the mouths of tributary rivers, including the Cowlitz and Kalama rivers (RMs 68 and 73, respectively). There are several known haul-out sites within 5 of the stretch of river (*i.e.,* RM 23 to RM 36) proposed for new pile driving (see figure 4–1 in the Application) and highest utilization of these lower river sights has typically been observed in May/June (Wright and Riemer, 2023).

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. 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, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Subsequently, NMFS (2018, 2024) 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.

On May 3, 2024, NMFS published and solicited public comment on its draft Updated Technical Guidance (89 FR 36762), which includes updated hearing ranges and names for the marine mammal hearing groups and is intended to replace the 2018 Technical Guidance once finalized. The public comment period ended on June 17th, 2024. Because NMFS may finalize the Guidance prior to taking a final agency action on this proposed rulemaking, we considered both the 2018 and 2024 Technical Guidance in our effects and estimated take analysis below. Marine mammal hearing groups and their associated hearing ranges from NMFS (2018) and NMFS (2024) are provided in tables 5 and 6. In the draft Updated Technical Guidance, mid-frequency cetaceans have been re-classified as high-frequency cetaceans, and high-frequency cetaceans have been updated to very-high-frequency (VHF) cetaceans. Additionally, the draft Updated Technical Guidance includes in-air data for phocid (PA) and otariid (OA) pinnipeds.

TABLE 5—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, Cephalorhynchid, *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 pinniped (approximation).

TABLE 6—MARINE MAMMAL HEARING GROUPS

[NMFS, 2024]

Hearing group	Generalized hearing range *
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 36 kHz.
High-frequency (HF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
Very High-frequency (VHF) cetaceans (true porpoises, *Kogia,* river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*).	200 Hz to 165 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	40 Hz to 90 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 68 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 may not be as broad. Generalized hearing range chosen based on ~65 dB threshold from composite audiogram, previous analysis in NMFS 2018, and/or data from Southall *et al.* (2007); Southall *et al.* (2019). Additionally, animals are able to detect very loud sounds above and below that ''generalized'' hearing range.

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018, 2024) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. The Estimated Take of Marine Mammals section later in this document 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 of Marine Mammals section, and the Proposed 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.

Description of Sound Sources

The marine soundscape is comprised of both ambient and anthropogenic sounds. Ambient sound is defined as the all-encompassing sound in a given place and is usually a composite of sound from many sources both near and far. The sound level of an area is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.,* waves, wind, precipitation, earthquakes, ice, atmospheric sound), biological (*e.g.,* sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.,* vessels, dredging, aircraft, construction).

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10 to 20 dB from day to day (Richardson *et al.,* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include vibratory pile removal, and impact and vibratory pile driving. The sounds produced by these activities fall into 1 of 2 general sound types: impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (American National Standards Institute (ANSI), 1986; National Institute for Occupational Safety and Health (NIOSH), 1998; ANSI, 2005; NMFS, 2018). Non-impulsive sounds (*e.g.,* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with raid rise/decay time that impulsive sounds do (ANSI, 1995; NIOSH, 1998; NMFS, 2018). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward, 1997 in Southall *et al.,* 2007).

Impact hammers operate by repeatedly dropping a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper, 2005). Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. The vibrations produced also cause liquefaction of the substrate surrounding the pile, enabling the pile to be extracted or driven into the ground more easily. Vibratory hammers produce significantly less sound than impact hammers. Peak sound pressure levels (SPLs) may be 180 dB or greater but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.,* 2009). Rise time is slower, reducing the probability and severity of injury, and sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.,* 2005).

The likely or possible impacts of the USACE's proposed activity on marine mammals could involve both non-acoustic and acoustic stressors. Potential non-acoustic stressors could result from the physical presence of the equipment and personnel; however, any impacts to marine mammals are expected to be primarily acoustic in nature. Acoustic stressors include effects of heavy equipment operation during pile installation and removal.

Acoustic Impacts

The introduction of anthropogenic noise into the aquatic environment from pile driving is the primary means by which marine mammals may be harassed from the proposed activity. In general, animals exposed to natural or anthropogenic sound may experience physical and psychological effects, ranging in magnitude from none to severe (Southall *et al.,* 2007). In general, exposure to pile driving noise has the potential to result in an auditory threshold shift (TS) and behavioral reactions (*e.g.,* avoidance, temporary cessation of foraging and vocalizing, changes in dive behavior). Exposure to anthropogenic noise can also lead to non-observable physiological responses, such as an increase in stress hormones. Additional noise in a marine mammal's habitat can mask acoustic cues used by marine mammals to carry out daily functions such as communication and predator and prey detection. The effects of pile driving noise on marine mammals are dependent on several factors, including, but not limited to, sound type (*e.g.,* impulsive vs. non-impulsive), the species, age and sex class (*e.g.,* adult male vs. mom with calf), duration of exposure, the distance between the pile and the animal, received levels, behavior at time of exposure, and previous history with exposure (Wartzok *et al.,* 2004; Southall *et al.,* 2007). Here we discuss physical auditory effects (TS) followed by behavioral effects and potential impacts on habitat.

NMFS defines a noise-induced TS as a change, usually an increase, in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018, 2024). The amount of TS is customarily expressed in dB. A TS can be permanent or temporary. As described in NMFS (2018, 2024), there are numerous factors to consider when examining the consequence of TS, including, but not limited to, the signal temporal pattern (*e.g.,* impulsive or non-impulsive), likelihood an individual would be exposed for a long enough duration or to a high enough level to induce a TS, the magnitude of the TS, time to recovery (seconds to minutes or hours to days), the frequency range of the exposure (*i.e.,* spectral content), the hearing frequency range of the exposed species relative to the signal's frequency spectrum (*i.e.,* how an animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.,* 2014), and the overlap between the animal and the source (*e.g.,* spatial, temporal, and spectral).

Auditory Injury and Permanent Threshold Shift (PTS)—NMFS defines auditory injury as ''damage to the inner ear that can result in destruction of tissue . . . which may or may not result in PTS'' (NMFS, 2024). NMFS defines PTS as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2024). PTS does not generally affect more than a limited frequency range, and an animal that has incurred PTS has incurred some level of hearing loss at the relevant frequencies; typically, animals with PTS are not functionally deaf (Au and Hastings, 2008; Finneran, 2016). Available data from humans and other terrestrial mammals indicate that a 40-dB threshold shift approximates PTS onset (see Ward *et al.,* 1958, 1959, 1960; Kryter *et al.,* 1966; Miller, 1974; Ahroon *et al.,* 1996; Henderson *et al.,* 2008). PTS levels for marine mammals are estimates, as with the exception of a single study unintentionally inducing PTS in a harbor seal (Kastak *et al.,* 2008), there are no empirical data measuring PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing PTS are not typically pursued or authorized (NMFS, 2018).

Temporary Threshold Shift (TTS)—TTS is a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018). Based on data from cetacean TTS measurements (Southall *et al.,* 2007, 2019), a TTS of 6 dB is considered the minimum TS clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Schlundt *et al.,* 2000; Finneran *et al.,* 2000, 2002). As described in Finneran (2015), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SEL_{cum}) in an accelerating fashion: At low exposures with lower SEL_{cum}, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SEL_{cum}, the growth curves become steeper and approach linear relationships with the noise SEL.

Depending on the degree (elevation of threshold in dB), duration (*i.e.,* recovery time), and frequency range of TTS, and

the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that takes place during a time when the animal is traveling through the open ocean, where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during a time when communication is critical for successful mother/calf interactions could have more serious impacts. We note that reduced hearing sensitivity as a simple function of aging has been observed in marine mammals, as well as humans and other taxa (Southall *et al.,* 2007), so we can infer that strategies exist for coping with this condition to some degree, though likely not without cost.

Many studies have examined noise-induced hearing loss in marine mammals (see Finneran (2015) and Southall *et al.* (2019) for summaries). TTS is the mildest form of hearing impairment that can occur during exposure to sound (Kryter, 2013). While experiencing TTS, the hearing threshold rises, and a sound must be at a higher level in order to be heard. In terrestrial and marine mammals, TTS can last from minutes or hours to days (in cases of strong TTS). In many cases, hearing sensitivity recovers rapidly after exposure to the sound ends. For pinnipeds in water, measurements of TTS are limited to harbor seals, elephant seals (*Mirounga angustirostris*), bearded seals (*Erignathus barbatus*) and California sea lions (Kastak *et al.,* 1999, 2007; Kastelein *et al.,* 2019b, 2019c, 2021, 2022a, 2022b; Reichmuth *et al.,* 2019; Sills *et al.,* 2020). These studies examined hearing thresholds measured in marine mammals before and after exposure to intense or long-duration sound exposures. The difference between the pre-exposure and post-exposure thresholds can be used to determine the amount of TS at various post-exposure times.

The amount and onset of TTS depends on the exposure frequency. Sounds at low frequencies, well below the region of best sensitivity for a species or hearing group, are less hazardous than those at higher frequencies, near the region of best sensitivity (Finneran and Schlundt, 2013). At low frequencies, onset-TTS exposure levels are higher compared to those in the region of best sensitivity (*i.e.,* a low frequency noise would need to be louder to cause TTS onset when TTS exposure level is higher), as shown for harbor porpoises and harbor seals (Kastelein *et al.,* 2019a, 2019c). Note that in general, harbor seals have a lower TTS onset than other measured pinniped species (Finneran, 2015). In addition, TTS can accumulate across multiple exposures, but the resulting TTS will be less than the TTS from a single, continuous exposure with the same SEL (Mooney *et al.,* 2009; Finneran *et al.,* 2010; Kastelein *et al.,* 2014, 2015). This means that TTS predictions based on the total, SEL_{cum} will overestimate the amount of TTS from intermittent exposures, such as sonars and impulsive sources. Nachtigall *et al.* (2018) describes measurements of hearing sensitivity of multiple odontocete species (*i.e.,* bottlenose dolphin, harbor porpoise, beluga, and false killer whale (*Pseudorca crassidens*)) when a relatively loud sound was preceded by a warning sound. These captive animals were shown to reduce hearing sensitivity when warned of an impending intense sound. Based on these experimental observations of captive animals, the authors suggest that wild animals may dampen their hearing during prolonged exposures or if conditioned to anticipate intense sounds. Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species.

Relationships between TTS and PTS thresholds have not been studied in marine mammals, but such relationships are assumed to be similar to those in humans and other terrestrial mammals. PTS typically occurs at exposure levels at least several dBs above that inducing mild TTS (*e.g.,* a 40-dB TS approximates PTS onset (Kryter *et al.,* 1966; Miller, 1974), while a 6-dB TS approximates TTS onset (Southall *et al.,* 2007, 2019). Based on data from terrestrial mammals, a precautionary assumption is that the PTS thresholds for impulsive sounds (such as impact pile driving pulses as received close to the source) are at least 6 dB higher than the TTS threshold on a peak-pressure basis and PTS SEL_{cum} thresholds are 15 to 20 dB higher than TTS SEL_{cum} thresholds (Southall *et al.,* 2007, 2019). Given the higher level of sound or longer exposure duration necessary to cause PTS as compared with TTS, it is considerably less likely that PTS could occur.

Installing piles for this project requires either impact pile driving or vibratory pile driving. For this project, these activities would not occur at the same time, and there would be pauses in activities producing the sound during each day. Given these pauses, and that many marine mammals are likely moving through the ensonified area and not remaining for extended periods of time, the potential for TS declines.

Behavioral Harassment—Exposure to noise from pile driving and removal also has the potential to behaviorally disturb marine mammals. Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal. If a marine mammal does react briefly to an underwater sound by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (*e.g.,* Lusseau and Bejder, 2007; Weilgart, 2007; National Research Council (NRC), 2005).

Disturbance may result in changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (*e.g.,* socializing or feeding); visible startle response or aggressive behavior (*e.g.,* tail/fluke slapping or jaw clapping); or avoidance of areas where sound sources are located. Pinnipeds may increase their haul out time, possibly to avoid in-water disturbance (Thorson and Reyff, 2006).

Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.,* 1995; Wartzok *et al.,* 2003; Southall *et al.,* 2007; Weilgart, 2007; Archer *et al.,* 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to

industrial sound than most cetaceans. Please see appendices B–C of Southall *et al.* (2007) and Gomez *et al.* (2016) for a review of studies involving marine mammal behavioral responses to sound.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (*e.g.,* bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (*e.g.,* Croll *et al.,* 2001; Nowacek *et al.,* 2004; Madsen *et al.,* 2006; Yazvenko *et al.,* 2007). A determination of whether foraging disruptions incur fitness consequences would require information on or estimates of the energetic requirements of the affected individuals and the relationship between prey availability, foraging effort and success, and the life history stage of the animal.

Stress Responses—An animal's perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses (*e.g.,* Seyle, 1950; Moberg, 2000). In many cases, an animal's first and sometimes most economical (in terms of energetic costs) response is behavioral avoidance of the potential stressor. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity. These responses have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

Neuroendocrine stress responses often involve the hypothalamus-pituitary-adrenal system. Virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in the secretion of pituitary hormones have been implicated in failed reproduction, altered metabolism, reduced immune competence, and behavioral disturbance (*e.g.,* Moberg, 1987; Blecha, 2000). Increases in the circulation of glucocorticoids are also equated with stress (Romano *et al.,* 2004).

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and ''distress'' is the cost of the response. During a stress response, an animal uses glycogen stores that can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose serious fitness consequences. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other functions. This state of distress will last until the animal replenishes its energetic reserves sufficient to restore normal function.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well studied through controlled experiments and for both laboratory and free-ranging animals (*e.g.,* Holberton *et al.,* 1996; Hood *et al.,* 1998; Jessop *et al.,* 2003; Krausman *et al.,* 2004; Lankford *et al.,* 2005). Stress responses due to exposure to anthropogenic sounds or other stressors and their effects on marine mammals have also been reviewed (Fair and Becker, 2000; Romano *et al.,* 2002b) and, more rarely, studied in wild populations (*e.g.,* Romano *et al.,* 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as ''distress.'' In addition, any animal experiencing TTS would likely also experience stress responses (NRC, 2003), however distress is an unlikely result of this project based on observations of marine mammals during previous, similar projects in the area.

Masking—Sound can disrupt behavior through masking, or interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (*e.g.,* those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.,* 1995). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity and may occur whether the sound is natural (*e.g.,* snapping shrimp, wind, waves, precipitation) or anthropogenic (*e.g.,* pile driving, shipping, sonar, seismic exploration) in origin. The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (*e.g.,* signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (*e.g.,* sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age or TTS hearing loss), and existing ambient noise and propagation conditions. Masking of natural sounds can result when human activities produce high levels of background sound at frequencies important to marine mammals. Conversely, if the background level of underwater sound is high (*e.g.,* on a day with strong wind and high waves), an anthropogenic sound source would not be detectable as far away as would be possible under quieter conditions and would itself be masked.

Airborne Acoustic Effects—Although pinnipeds are known to haul out regularly on manmade objects, we believe that incidents of take resulting solely from airborne sound are unlikely because there are no known haulouts within the immediate project vicinity on the LCR. There is a possibility that an animal could surface in-water, but with head out, within the area in which airborne sound exceeds relevant thresholds and thereby be exposed to levels of airborne sound that we associate with harassment, but any such occurrence would likely be accounted for in our estimation of incidental take from underwater sound. Therefore, authorization of incidental take resulting from airborne sound for pinnipeds is not warranted, and airborne sound is not discussed further here.

Marine Mammal Habitat Effects

The USACE's construction activities could have localized, temporary impacts on marine mammal habitat by increasing in-water SPLs and slightly decreasing water quality. No net habitat loss is expected, as the dock will be reconstructed within its original footprint. Construction activities are localized and would likely have temporary impacts on marine mammal habitat through increases in underwater sounds. Increased noise levels may affect acoustic habitat (see masking discussion above) and adversely affect marine mammal prey in the vicinity of the Project Area (see discussion below). During pile driving activities, elevated levels of underwater noise would ensonify the Project Area where both fishes and marine mammals may occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction; however, displacement due to noise is expected to be temporary and is not

expected to result in long-term effects to the individuals or populations.

Temporary and localized reduction in water quality would occur because of in-water construction activities as well. Most of this effect would occur during the installation and removal of piles when bottom sediments are disturbed. The installation of piles would disturb bottom sediments and may cause a temporary increase in suspended sediment in the Project Area. In general, turbidity associated with pile installation is localized to about 25-ft (7.6-m) radius around the pile (Everitt *et al.,* 1980). Pinnipeds are not expected to be close enough to the pile driving areas to experience effects of turbidity and could avoid localized areas of turbidity. Therefore, we expect the impact from increased turbidity levels to be discountable to marine mammals and do not discuss it further.

In-Water Construction Effects on Potential Foraging Habitat

The proposed activities would not result in permanent impacts to habitats used directly by marine mammals. The total riverbed area affected by pile installation and removal is a very small area compared to the vast foraging area available to marine mammals in the LCR and Washington's outer coast and contains no habitat areas of particular importance. Pile installation may have impacts on benthic invertebrate species primarily associated with disturbance of sediments that may cover or displace some invertebrates. The impacts would be temporary and highly localized, and no habitat would be permanently displaced by construction. Therefore, it is not expected to have impacts on foraging opportunities for marine mammals.

It is possible that avoidance by potential prey (*i.e.,* fish) in the immediate area may occur due to temporary loss of this foraging habitat. The duration of fish avoidance of this area after pile driving stops is unknown, but we anticipate a rapid return to normal recruitment, distribution and behavior. Any behavioral avoidance by fish of the disturbed area would still leave large areas of fish and marine mammal foraging habitat in the nearby vicinity in the in the Project Area and LCR.

Effects on Potential Prey

Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*i.e.,* fish). Marine mammal prey varies by species, season, and location. Here, we describe studies regarding the effects of noise on known marine mammal prey.

Fish utilize the soundscape and components of sound in their environment to perform important functions such as foraging, predator avoidance, mating, and spawning (*e.g.,* Zelick *et al.,* 1999; Fay, 2009). Depending on their hearing anatomy and peripheral sensory structures, which vary among species, fish hear sounds using pressure and particle motion sensitivity capabilities and detect the motion of surrounding water (Fay *et al.,* 2008). The potential effects of noise on fish depends on the overlapping frequency range, distance from the sound source, water depth of exposure, and species-specific hearing sensitivity, anatomy, and physiology. Key impacts to fish may include behavioral responses, hearing damage, barotrauma (*i.e.,* pressure-related injuries), and mortality.

Fish react to sounds which are especially strong and/or intermittent low-frequency sounds, and behavioral responses, such as flight or avoidance are the most likely effects. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. The reaction of fish to noise depends on the physiological state of the fish, past exposures, motivation (*e.g.,* feeding, spawning, migration), and other environmental factors. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan, 2001, 2002; Popper and Hastings, 2009). Several studies have demonstrated that impulse sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (*e.g.,* Fewtrell and McCauley, 2012; Pearson *et al.,* 1992; Skalski *et al.,* 1992; Santulli *et al.,* 1999; Paxton *et al.,* 2017). However, some studies have shown no or slight reaction to impulse sounds (*e.g.,* Pena *et al.,* 2013; Wardle *et al.,* 2001; Jorgenson and Gyselman, 2009; Cott *et al.,* 2012).

SPLs of sufficient strength have been known to cause injury to fish and fish mortality (summarized in Popper *et al.,* 2014). However, in most fish species, hair cells in the ear continuously regenerate and loss of auditory function likely is restored when damaged cells are replaced with new cells. Halvorsen *et al.* (2012b) showed that a TTS of 4 to 6 dB was recoverable within 24 hours for one species. Impacts would be most severe when the individual fish is close to the source and when the duration of exposure is long. Injury caused by barotrauma can range from slight to severe and can cause death and is most likely for fish with swim bladders. Barotrauma injuries have been documented during controlled exposure to impact pile driving (Halvorsen *et al.,* 2012a; Casper *et al.,* 2013, 2017).

Fish populations in the proposed Project Area that serve as marine mammal prey could be temporarily affected by noise from pile installation and removal. The frequency range in which fishes generally perceive underwater sounds is 50 to 2,000 Hertz (Hz), with peak sensitivities below 800 Hz (Popper and Hastings, 2009). Fish behavior or distribution may change, especially with strong and/or intermittent sounds that could harm fishes. High underwater SPLs have been documented to alter behavior, cause hearing loss, and injure or kill individual fish by causing serious internal injury (Hastings and Popper, 2005).

The greatest potential impact to fishes during construction would occur during impact pile driving. However, the duration of impact pile driving would be limited to the final stage of installation (''proofing'') after the pile has been driven as close as practicable to the design depth with a vibratory driver. In-water construction activities would only occur during daylight hours, allowing fish to forage and transit the Project Area in the evening. Vibratory pile driving could elicit behavioral reactions from fishes such as temporary avoidance of the area but is unlikely to cause injuries to fishes or have persistent effects on local fish populations. Additionally, all pile installation would occur only during the USACE's and United States Fish and Wildlife Service designated in-water work window to minimize potential exposure of ESA-listed fish species migrating through the project site to noise from impact pile driving. Construction also would have minimal permanent and temporary impacts on benthic invertebrate species, a marine mammal prey source.

The area impacted by the project is relatively small compared to the available habitat in the remainder of the LCR, and there are no areas of particular importance that would be impacted by this project. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. As described in the preceding, the potential for the USACE's construction to affect the availability of

prey to marine mammals or to meaningfully impact the quality of physical or acoustic habitat is considered to be insignificant.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization through this proposed rule, which will inform NMFS' consideration of ''small numbers,'' the negligible impact determinations, and impacts on subsistence uses.

Harassment, defined previously in the Purpose and Need for Regulatory Action section, is the only type of take expected to result from these activities.

Authorized takes would primarily be by Level B harassment, as use of the acoustic source (*i.e.,* pile driving) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, primarily for phocids because predicted auditory injury zones are larger than for otariids. Auditory injury is unlikely to occur for otariids. The proposed 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 proposed to be authorized for this activity. We describe how the proposed take numbers are estimated below.

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 proposed 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 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 160 dB re 1 µPa for non-explosive impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (*e.g.,* conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

The USACE's proposed activity includes the use of continuous (vibratory pile driving) and impulsive (impact pile driving) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 µPa are applicable.

Level A Harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0; NMFS, 2018) and the draft Updated Technical Guidance (NMFS, 2024) identify 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). This proposed rule estimates Level A harassment using the existing Technical Guidance (NMFS, 2018) as well as the draft Updated Technical Guidance (NMFS, 2024) because at the time of the final agency decision on this request for incidental take, it's possible NMFS may have made a final agency decision on the draft Guidance.

These thresholds are provided in tables 7 and 8 below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance and NMFS' 2024 draft Updated Technical Guidance, both of which may be accessed at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

The USACE's proposed activity includes the use of impulsive (impact pile driving) and non-impulsive (vibratory driving) sources.

TABLE 7—NMFS' 2018 THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT (PTS)

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{pk,flat}$: 219 dB; $L_{E,LF,24h}$: 183 dB	*Cell 2:* $L_{E,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{pk,flat}$: 230 dB; $L_{E,MF,24h}$: 185 dB	*Cell 4:* $L_{E,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{pk,flat}$: 202 dB; $L_{E,HF,24h}$: 155 dB	*Cell 6:* $L_{E,HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{pk,flat}$: 218 dB; $L_{E,PW,24h}$: 185 dB	*Cell 8:* $L_{E,PW,24h}$: 201 dB.

TABLE 7—NMFS' 2018 THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT (PTS)—Continued

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{pk,flat}$: 232 dB; $L_{E,OW,24h}$: 203 dB	*Cell 10:* $L_{E,OW,24h}$: 219 dB.

* Dual metric acoustic 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 SPL thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μPa, and SEL_{cum} level (L_E) has a reference value of 1μPa²s. In this table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI, 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for NMFS' 2018 Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with SEL_{cum} 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 SEL_{cum} 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 acoustic thresholds will be exceeded.

TABLE 8—NMFS' 2024 THRESHOLDS IDENTIFYING THE ONSET OF AUDITORY INJURY (AUD INJ)

Hearing group	AUD INJ acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Underwater		
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{p,0\text{-}pk,flat}$: 222 dB; $L_{E,p,\ LF,24h}$: 183 dB	*Cell 2:* $L_{E,p,\ LF,24h}$: 197 dB.
High-Frequency (HF) Cetaceans	*Cell 3:* $L_{p,0\text{-}pk,flat}$: 230 dB; $L_{E,p,\ HF,24h}$: 193 dB	*Cell 4:* $L_{E,p,\ HF,24h}$: 201 dB.
Very High-Frequency (VHF) Cetaceans	*Cell 5:* $L_{p,0\text{-}pk,flat}$: 202 dB; $L_{E,p,VHF,24h}$: 159 dB	*Cell 6:* $L_{E,p,\ VHF,24h}$: 181 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{p,0\text{-}pk,flat}$: 223 dB; $L_{E,p,PW,24h}$: 183 dB	*Cell 8:* $L_{E,p,PW,24h}$: 195 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{p,0\text{-}pk,flat}$: 230 dB; $L_{E,p,OW,24h}$: 185 dB	*Cell 10:* $L_{E,p,OW,24h}$: 199 dB.
In–Air		
Phocid Pinnipeds (PA) (In-Air)	*Cell 11:* $L_{p,0\text{-}pk,flat}$: 162 dB; $L_{E,p,PA,24h}$: 140 dB	*Cell 12:* $L_{E,p,PA,24h}$: 154 dB.
Otariid Pinnipeds (OA) (In-Air)	*Cell 13:* $L_{p,0\text{-}pk,flat}$: 177 dB; $L_{E,p,OA,24h}$: 163 dB	*Cell 14:* $L_{E,p,OA,24h}$: 177 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating AUD INJ onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μPa, and cumulative sound exposure level (L_E) has a reference value of 1μPa²s. In this table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI, 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for NMFS' 2018 Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. 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 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 acoustic thresholds will be exceeded.

Ensonified Area

This section describes the 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 (*TL*) coefficient.

The sound field in the Project Area is the existing background noise plus additional construction noise from the proposed project. Pile driving generates underwater noise that can potentially result in disturbance to marine mammals in the Project Area. The maximum (underwater) area ensonified is determined by the topography of the LCR, including intersecting land masses that will reduce the overall area of potential impact. Additionally, vessel traffic in the LCR during construction may contribute to elevated background noise levels, which may mask sounds produced by the project.

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:

$$TL = B \times \mathrm{Log}_{10}(R_1/R_2)$$

Where:

TL = transmission loss in dB;

B = transmission loss coefficient; for practical spreading equals 15;

R_1 = the distance of the modeled SPL from the driven pile; and,

R_2 = the distance from the driven pile of the initial measurement.

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6-dB reduction in sound level for each doubling of distance from the source ($20\times\log_{10}$[range]). Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source ($10\times\log_{10}$[range]). A practical spreading value of 15 is often used

under conditions, such as the project site, where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss is assumed here.

The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. In order to calculate the distances to the Level A harassment and the Level B harassment sound thresholds for the methods and piles being used in this project, NMFS used acoustic monitoring data from other locations to develop proxy source levels for the various pile types, sizes and methods (table 9). Generally, we choose source levels from similar pile types from locations (*e.g.,* geology, bathymetry) similar to the project.

TABLE 9—PROXY SOUND SOURCE LEVELS FOR PILE SIZES AND DRIVING METHODS

24-in Steel Pipe [1] Vibratory (unattenuated)	.....	159 dB_{RMS}.	
24-in Steel Pipe [1] [3] Impact (attenuated)	198 dB_{PEAK}	185 dB_{RMS}	171 dB_{SEL}.
12-in Timber [2] Vibratory (unattenuated)	.....	162 dB_{RMS}.	
12-in Timber [2] [3] Impact (attenuated)	175 dB_{PEAK}	165 dB_{RMS}	155 dB_{SEL}.

[1] Reference levels based on the Sand Island Test Piles project in the Columbia River (Robert Miner Dynamic Testing 2021). While the original study tested various pile tips for driving through existing enrockment, the DMMP will not use pile tips so we referenced sound levels solely for piles excluding tips during vibratory driving. For impact driving, all piles in the Sand Island study included tips so we used the average SPLs across all piles as a conservative estimate.

[2] All timber pile assumptions are based on Caltrans (2020).

[3] We assume bubble curtains will be employed for all piles installed with an impact hammer under this LOA, thus, SPLs in this table reflect reference noise estimates reduced by 5 dB.

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, the optional User Spreadsheet 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 driving, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. Inputs used in the optional User Spreadsheet tool, and the resulting estimated isopleths, are reported in table 10 below. The calculated Level A and Level B harassment isopleths are shown in table 11 and table 12.

TABLE 10—NMFS USER SPREADSHEET INPUTS

Pile size and type	Spreadsheet tab used	Weighting factor adjustment (kHz)	Number of piles per day	Duration to drive a single pile (min)	Number of strikes per pile
Vibratory pile driving and removal					
24-in steel pile (Vibratory)	A.1) Vibratory pile driving	2.5	20	25	NA
12-in Timber (Vibratory)	A.1) Vibratory pile driving	2.5	20	25	NA
Impact pile driving					
24-in steel pile (Impact attenuated)	E.1) Impact pile driving	2	20	NA	45
12-in Timber (Impact attenuated)	E.1) Impact pile driving	2	20	NA	45

TABLE 11—CALCULATED DISTANCE OF LEVEL A (BASED ON NMFS' 2018 TECHNICAL GUIDANCE) AND LEVEL B HARASSMENT BY PILE TYPE AND PILE DRIVING METHOD

Pile size and type	Level A harassment (m)		Level B harassment (m)
	Phocid	Otariid	
Vibratory pile driving			
24-in steel pile	12.63	0.9	3,981.1
12-in timber pile	19.9	1.4	6,309.6
Impact pile driving			
24-in steel pile	79.0	5.7	464.2
12-in timber pile	6.8	0.5	21.5

TABLE 12—CALCULATED DISTANCE OF LEVEL A (BASED ON NMFS' PROPOSED 2024 UPDATE TO THE 2018 TECHNICAL GUIDANCE) AND LEVEL B HARASSMENT BY PILE TYPE AND PILE DRIVING METHOD

Pile size and type	Level A harassment (m)		Level B harassment (m)
	Phocid	Otariid	
Vibratory pile driving			
24-in steel pile	35.9	12.1	3,981.1
12-in timber pile	56.9	19.1	6,309.6
Impact pile driving			
24-in steel pile	130.6	48.7	464.2
12-in timber pile	11.2	4.2	21.5

Marine Mammal Occurrence and Take Estimation

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations and describe how the information provided is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization. The USACE referenced data provided by the Oregon Department of Fish and Wildlife (ODFW) and the Washington Department of Fish and Wildlife (WDFW) to support assumptions regarding marine mammal occurrence in the Project Area. The ODFW conducts periodic counts of pinnipeds at haul out sites along the Oregon coast and in the LCR. The WDFW has collected recent anecdotal evidence of pinniped abundance at haul out sites in the LCR near the confluence of the Cowlitz River at RM 67.5. While the confluence of the two rivers is located approximately 31.5 river miles upstream from the Project Area, it is the closest site that features data on pinniped activity. The USACE used the proximal count estimates from ODFW and WDFW to estimate the number of harbor seals, Steller sea lions, and California sea lions that could transit or occupy the Project Area during proposed pile driving in winter (*i.e.,* November through February). For sea lions, the USACE estimated the maximum number of animals likely to be encountered in a single day based on the maximum number of animals detected at haul out sites within 5- of proposed pile driving, as well as the closest haul out sites upstream or downstream. For harbor seals, the USACE estimated the harbor seal density using the approximate span of river where they have been observed at haul out sites.

Harbor Seal

The most recent harbor seal aerial surveys were conducted by ODFW during the 2021 summer pupping season. The average, maximum daily count of harbor seals counted across all haulout sites in the project vicinity in May and June was 837 (pups and non-pups combined) (USACE, 2024). After applying the Huber *et al.* (2001) correction factor of 1.53, used to account for likely imperfect detection during surveys, the adjusted number of harbor seals that may have been present during the 2021 surveys was 1,281 individuals. However, that estimate is not necessarily representative of the number of harbor seals that may be present in winter.

Jeffries *et al.* (1984) synthesized survey data collected by the state of Washington to document pinniped abundance and distribution in the LCR between 1980 and 1983. Table 13 summarizes the harbor seal count by month detected over that roughly 3-year study period (Jeffries *et al.,* 1984). The USACE used this data to calculate the average, maximum total count observed across all haulout sites in the project vicinity to estimate the proportion of animals present from November through February relative to counts observed from May to June. The average harbor seal count observed between November and February was approximately 618 animals, whereas the average count for May and June was roughly 464. The count of harbor seals in winter was 1.33 times the number counted in May and June. To account for this seasonality, the most recent estimate of 1,281 harbor seals in the project vicinity during the pupping season, based on ODFW counts, could equate to a maximum of 1,706 harbor seals in the project vicinity each day in winter. While the USACE and NMFS acknowledge that the seasonal correction factor is based on data that is over 40 years old, all recent surveys have focused solely on the summer pupping season and there is no winter data corresponding to those counts. Therefore, the USACE, with NMFS' concurrence, relied on available data from a historic study that included counts for multiple seasons in the same year.

The USACE assumed the maximum winter abundance of 1,706 individuals and an even distribution of animals throughout the span of river between the river mouth and the upstream end of Tenasillahe Island (figure 6–21 in the Application). The hatched area in the figure is roughly 377 square kilometers (km^2) which yielded an approximate daily harbor seal density of 5 individuals per km^2 in the Project Area. The calculated take by Level A harassment is likely an overestimate because the likelihood of a harbor seal coming within a specified Level A harassment isopleth of the pile and remaining long enough to experience PTS during the brief period of potential impact driving that could be needed to reach the last ~5 ft of embedment depth is fairly low. In addition, the USACE utilized the Level A harassment isopleth area of the longest pile dike at each site, when in actuality, some sites have shorter structures, and a pile dike is composed of multiple individual piles with much smaller noise isopleths.

TABLE 13—MAXIMUM MONTHLY COUNTS OF HARBOR SEALS DETECTED DURING LOW-TIDE AERIAL SURVEYS AT HAULOUT LOCATIONS IN THE LOWER COLUMBIA RIVER ESTUARY BETWEEN 1980 AND 1983

[Adapted from Jeffries *et al.,* 1984]

Month	South Jetty	Baker Bay	Desdemona Sands	Taylor Sands	Grays Bay	Miller Sands	Green Island	N of Woody Island	Total
January	0	0	566	444	1	381	0	72	1,464
February	0	NS	NS	NS	NS	*200	NS	55	255
March	1	0	*650	548	0	82	0	3	1,284
April	0	*20	884	260	*20	137	0	18	1,339
May	0	1	568	4	4	0	16	0	593
June	1	0	273	22	11	1	*26	*0	334
July	0	0	525	21	10	0	38	0	594
August	3	7	378	0	0	32	35	0	455
September	4	11	563	7	12	0	26	0	623
October	0	*25	223	59	0	6	0	0	313
November	NS	NS	*230	NS	NS	NS	NS	NS	230
December	0	0	301	174	0	46	0	0	521

NS = Not Surveyed.
*Count based on visual estimate from airplane, boat, or jetty.

For harbor seals only, take by Level A and Level B harassment was calculated based on the following equations, which were performed for Level A and Level B harassment and for steel and timber piles:

Harassment = Harbor seal density * ensonified area * pile driving workdays

The estimated isopleth areas associated with the longest pile dike at each site are presented in table 14. These inputs were used in the equation above to estimate the number of harbor seals possible within those isopleths each day (table 15) and then calculate the overall level of take based on the number of workdays projected in each year (table 16). The number of takes requested by Level A and Level B harassment by the USACE for Year 1 through Year 5 are shown in table 16. NMFS concurs with this assessment and is proposing to authorize harbor seal take according to the totals contained in table 16.

TABLE 14—PILE DIKE LENGTHS (m) AND CORRESPONDING LEVEL A AND LEVEL B HARASSMENT AREAS (KM^2)

Site	Pile dike length (m)	Phocids level A (km^2) 24-in Steel Impact	All Marine Mammals level B (km^2) 24-in steel impact	All Marine Mammals level B (km^2) 24-in steel vibratory	All Marine Mammals level B (km^2) 12-in timber vibratory
O–23.5–BN–ADD1	22.40	0.213	0.74	37.29	81.45
O–23.5–BN–ADD2	25.00	0.180	0.58	18.06	30.79
O–27.3–BN	27.86	0.162	0.68	13.52	22.97
O–31.4–BN	31.46	0.293	1.05	17.97	26.33
O–35.6–IW–D	35.41	0.135	0.63	10.70	16.51

TABLE 15—ESTIMATED HARBOR SEALS IN LEVEL A AND LEVEL B HARASSMENT ZONES PER DAY

Site	Installation time-frame	HS* in Level A isopleth area 24-in steel impact	HS in Level B isopleth area 24-in steel impact	HS in Level B isopleth area 24-in steel vibratory	HS in Level B isopleth area 12-in timber vibratory
O–23.5–BN- ADD1	LOA YR–3	2	4	187	408
O–23.5–BN- ADD2	LOA YR–1	1	3	91	154
O–27.3–BN	LOA YR–4	1	4	68	115
O–31.4–BN	LOA YR–5	2	6	90	132
O–35.6–IW–D	LOA YR–2	1	4	54	83

TABLE 16—CALCULATED LEVEL A AND LEVEL B HARASSMENT TAKE FOR HARBOR SEALS DURING PILE DRIVING ACTIVITIES EACH YEAR

	Site	Steel pile driving workdays	Timber pile driving workdays	Level A (steel piles)	Level B (steel piles)	Level B (timber piles)
YR–1	O–23.5–BN–ADD2	13	12	26	2,405	4,896
YR–2	O–35.6–IW–D	1	0	1	90	0
YR–3	O–23.5–BN–ADD1	17	17	17	1,139	1,955
YR–4	O–27.3–BN	15	15	30	1,320	1,980
YR–5	O–31.4–BN	26	25	26	1,378	2,075

California and Steller Sea Lions

Take estimates for California and Steller sea lions were based on assumed daily abundances in the Project Area rather than the estimated densities. The ODFW counted sea lions during recent aerial surveys of three key haulout locations in the LCR. All sea lions detected in winter are non-pup males and average counts of both California and Steller sea lions observed during surveys between 2019 and 2022 are shown in table 17. The haulout at East Mooring Basin (EMB) is just south of the Project Area and likely downstream of pile driving harassment isopleths. The USACE used the average counts observed at EMB (RM 15 from there) as a proxy for sea lions that may be present during pile driving and used the average across all winter months as a proxy for the number of sea lions in the Project Area since that haulout is closer to the Project Area (RM 23 to RM 36) compared to the Rainer (RM 67) and Coffin Rock (RM 72) locations. Based on counts of sea lions at the EMB site (table 17), the USACE estimated 182 California sea lions and 3 Steller sea lions by Level B harassment per day in the project vicinity. Level A harassment is not likely since the Level A harassment zones for otariids are smaller than the shutdown zone proposed (15–20 m) for all pile driving scenarios as shown in table 12, and no such take is proposed for authorization.

TABLE 17—AVERAGE COUNTS OF CALIFORNIA AND STELLER SEA LIONS DETECTED AT HAULOUT LOCATIONS DEPICTED IN FIGURE 4–2 DURING ODFW WINTER AERIAL SURVEYS, 2019–2022

[USACE, 2024]

Haulout site	Month	Average of CSL	Average of SSL
East Mooring Basin (EMB)	November	128	0
	December	234	3
	January	166	4
	February	197	5

Take estimates for California and Steller sea lions were calculated based on the equation below and number of workdays shown in table 18:

Level B exposure = N animals/day * total driving days

There could be 25 total days of noise exposure from pile driving during year 1 (YR–1); 34 days in YR–3; 30 days in YR–4, and up to 51 days in YR–5.

TABLE 18—PROPOSED TAKE BY LEVEL B HARASSMENT FOR CALIFORNIA AND STELLER SEA LIONS LIKELY TO BE IN THE PROJECT VICINITY

	Total pile driving Workdays	Level B harassment CSL	Level B harassment SSL
YR–1	25	4,550	75
YR–2	1	182	3
YR–3	34	6,188	102
YR–4	30	5,460	90
YR–5	51	9,282	153

The annual and total number of takes of marine mammal species requested by the USACE and proposed for authorization by NMFS are shown in table 19.

TABLE 19—PROPOSED TAKES BY LEVEL A HARASSMENT AND LEVEL B HARASSMENT ANNUALLY OVER 5 YEARS

Species	Stock	Yr 1		Yr 2		Yr 3		Yr 4		Yr 5		5-Yr total	
		Level A	Level B	Level A	Level B	Level A	Level B	Level A	Level B	Level A	Level B	Level A	Level B
Harbor Seal	OR/WA Coastal	26	7,301	1	90	17	3,094	30	3,300	26	3,453	87	17,238
California sea lion	U.S	.....	4,550	.....	182	.....	6,188	.....	5,460	.....	9,282	.....	25,662
Steller sea lion	Eastern	.....	75	.....	3	.....	102	.....	90	.....	153	.....	423

To inform both the negligible impact analysis and the small numbers determination, NMFS assesses the maximum number of takes of marine mammals that could occur within any given year during the effective LOA period. In this calculation, the maximum estimated number of Level A harassment takes in any one year is summed with the maximum estimated number of Level B harassment takes in any 1 year for each species to yield the highest number of estimated take that could occur in any year (table 20). Table 20 also depicts the number of takes proposed relative to the abundance of each stock.

TABLE 20—MAXIMUM NUMBER OF PROPOSED TAKES (BY LEVEL A HARASSMENT AND LEVEL B HARASSMENT) THAT COULD OCCUR IN ANY ONE YEAR OF THE PROJECT RELATIVE TO STOCK POPULATION SIZE

Species	NMFS stock abundance	Maximum Level A harassment	Maximum Level B harassment	Maximum annual take [1]	Total percent stock taken based on maximum annual take
Harbor seal	[2] 24,732	30	7,301	7,331	29.6
California sea lion	257,606	.....	9,282	9,282	3.6
Steller sea lion	36,308	.....	153	153	<0.01

[1] Calculations of the maximum annual take are based on the maximum requested Level A harassment take in any one year + the total requested Level B harassment take in any one year.
[2] The Oregon/Washington Coastal Stock was most recently estimated at 24,732 harbor seals in 1999 and more recent abundance data is not available (Carretta *et al.,* 2022).

Proposed Mitigation

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 2 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 (*e.g.,* likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (*i.e.,* probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (*i.e.,* probability implemented as planned); and

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

The mitigation measures described in the following sections would apply to the USACE in-water construction activities.

Proposed Shutdown and Monitoring Zones

In most impact and pile driving scenarios, the proposed shutdown zones exceed the calculated Level A isopleths; an exception occurs during impact pile driving of 24-in steel piles for phocids (*e.g.* harbor seals) when the calculated Level A harassment isopleth (130.6 m) exceeds the proposed shutdown zone of 50 m. There was concern that the potential for seals to enter into a shutdown zone of 130 m would result in frequent delays and could impede the project's schedule. Therefore, the shutdown zone will be established at 50 m for phocid pinnipeds during impact driving of 24-in steel piles.

TABLE 21—PROPOSED SHUTDOWN ZONE AND LEVEL B MONITORING ZONES BY ACTIVITY

Pile size and type	Shutdown zone (m)		Level B harassment (m)
	Phocid	Otariid	
Vibratory pile driving			
24-in steel pile	50	15	3,981.1
12-in timber pile	60	20	6,309.6
Impact pile driving			
24-in steel pile	50	50	464.2
12-in timber pile	15	15	21.5

Prior to pile driving, protected species observers (PSOs) would survey the shutdown zones shown in table 21 and surrounding areas for at least 30 minutes before pile driving activities start. If marine mammals are found

within the shutdown zone, pile driving would be delayed until the animal has moved out of the shutdown zone, either verified by a PSO or by waiting until 15 minutes has elapsed without a sighting. If a marine mammal approaches or enters the shutdown zone during pile driving, the activity would be halted. Pile driving may resume after the animal has moved out of the shutdown zone or after at least 15 minutes has passed since the last observation of the animal.

All marine mammals would be monitored in the Level B harassment zone to the extent of visibility for the on-duty PSOs. If a marine mammal for which take is authorized enters the Level B harassment zone, in-water activities would continue and PSOs would document the animal's presence within the estimated harassment zone.

If a species for which authorization has not been granted, or for which the authorized takes are met, is observed approaching or within the Level B harassment zone, pile driving activities would be shut down immediately. Activities would not resume until the animal has been confirmed to have left the area or 15 minutes has elapsed with no sighting of the animal. If a shutdown zone is obscured by fog or other weather/sea conditions that restrict the observers' ability to observe, pile driving would not be initiated or would cease until the entire shutdown zone is visible so that monitoring may resume.

PSOs

The placement of PSOs during all pile driving and removal activities (described in detail in the Proposed Monitoring and Reporting section and Marine Mammal Monitoring Plan) will ensure that the Project Area is monitored to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions.

Pre- and Post-Activity Monitoring

Monitoring must take place from 30 minutes prior to initiation of pile driving activities (*i.e.,* pre-clearance monitoring) through 30 minutes post-completion of pile driving. Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, PSOs would observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone would be considered cleared when a marine mammal has not been observed within the zone for a 30-minute period. If a marine mammal is observed within the shutdown zones, pile driving activity would be delayed or halted. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones would 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).

Bubble Curtain

A bubble curtain must be employed during all impact pile driving activities. The bubble curtain must distribute air bubbles around 100 percent of the piling circumference for the full depth of the water column. 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 substrate contact. No parts of the ring or other objects may prevent full substrate contact. Air flow to the bubblers must be balanced around the circumference of the pile.

Soft Start

Soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the impact hammer operating at full capacity. For impact driving, an initial set of three strikes will be made by the hammer at reduced energy, followed by a 30-second waiting period, then 2 subsequent 3-strike sets before initiating continuous driving. Soft start will 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.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed 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.

Proposed Monitoring and Reporting

In order to issue an LOA for an activity, section 101(a)(5)(A) 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 activity; 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 and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- PSOs must be independent of the activity contractor (*e.g.,* employed by a subcontractor) and have no other assigned tasks during monitoring periods;
- At least 1 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 (*i.e.,* degree in biological science or related field) or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.

• Where a team of 3 or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.
• PSOs must record all observations of marine mammals as described in the Marine Mammal Monitoring Plan, regardless of distance from the pile being driven. PSOs shall document any behavioral reactions in concert with distance from piles being driven or removed.

PSOs should 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: (1) the number and species of marine mammals observed; (2) dates and times when in-water construction activities were conducted; (3) dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and (4) 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 USACE must employ a minimum of 2 PSOs. PSO locations will provide an unobstructed view of all water within the shutdown zone(s), and as much of the Level A harassment and Level B harassment zones as possible. PSOs would be stationed along the shore of the LCR. One would be located on the closest shoreline or construction barge adjacent to proposed pile driving and another observer could be stationed on a publicly accessible shoreline with a different vantage point of the disturbance area or be boat-based.

The USACE would ensure that construction supervisors and crews, the monitoring team, and relevant USACE staff are trained prior to the start of activities subject to the proposed LOA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project would be trained prior to commencing work. Monitoring would occur for all in-water pile driving activities during the pile installation work window (November 1 to February 15).

Data Collection

PSOs would use approved data forms to record the following information:
• Dates and times (beginning and end) of all marine mammal monitoring;
• PSO locations during marine mammal monitoring;
• Construction activities occurring during each daily observation period, including how many and what type of piles were driven or removed and by what method (*i.e.,* vibratory, impact);
• Weather parameters and water conditions;
• The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal was occurring at time of sighting;
• Distance and bearings of each marine mammal observed to the pile being driven or removed;
• Description of marine mammal behavior patterns, including direction of travel;
• Age and sex class, if possible, of all marine mammals observed; and
• Detailed information about implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal if any.

Reporting

The USACE must submit a draft monitoring report to NMFS within 90 calendar days of the completion of each construction year. A draft comprehensive 5-year summary report must also be submitted to NMFS within 90 days of the end of the effective period of the LOA. The reports must detail the monitoring protocol and summarize the data recorded during monitoring. Final annual reports and the final comprehensive report must be prepared and submitted within 30 days following resolution of any NMFS comments on the draft report. If no comments are received from NMFS within 30 days of receipt of the draft report, the report must be considered final. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments. The marine mammal report would 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 the number and type of piles driven or removed and by what method (*i.e.,* vibratory driving) and the total equipment duration for cutting for each pile;
• PSO locations during marine mammal monitoring;
• 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;
• Upon observation of a marine mammal, the following information: (1) name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; (2) time of sighting; (3) 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; (4) distance and bearing of each marine mammal observed relative to the pile being driven for each sighting (if pile driving was occurring at time of sighting); (5) estimated number of animals (min/max/best estimate); (6) estimated number of animals by cohort (*e.g.,* adults, juveniles, neonates, group composition, *etc.*); (7) animal's closest point of approach and estimated time spent within the harassment zone; and (8) 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 any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific 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 final report would constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover

an injured or dead marine mammal, the USACE shall report the incident to the Office of Protected Resources (OPR), NMFS, and to the west coast regional stranding network as soon as feasible. If the death or injury was clearly caused by the specified activity, the USACE 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 LOA. The USACE must not resume their activities until notified by NMFS. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- 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).

To avoid repetition, the discussion of our analysis applies to California sea lions, Steller sea lions, and harbor seals, given that the anticipated effects of this activity on these different marine mammal stocks are expected to be similar since they have comparable behavioral sensitivities and, therefore, no meaningful differences in terms of likely impacts. There is little information about the nature or severity of the impacts, or the size, status, or structure of any of these species or stocks that would lead to a different analysis for this activity.

Vibratory and impact pile driving activities have the potential to disturb or displace marine mammals. Specifically, the project activities may result in take, in the form of Level A harassment and Level B harassment from underwater sounds generated from pile driving and removal. Potential takes could occur if individuals are present in the ensonified zone when these activities are underway.

The takes from Level B harassment would be due to potential behavioral disturbance, and TTS. Level A harassment takes would be due to auditory injury. No mortality or serious injury is anticipated given the nature of the activity, even in the absence of the required mitigation. The potential for harassment is minimized through the construction method and the implementation of the proposed mitigation measures (see Proposed Mitigation section).

Take would occur within a limited, confined area (the LCR) of the stocks' ranges. The duration and intensity of authorized harassment events would be minimized through use of mitigation measures described herein. Further, the amount of take proposed to be authorized is small when compared to stock abundance, and the project is not anticipated to impact any known important habitat areas for any marine mammal species.

Take by Level A harassment is proposed for a single species (harbor seal) to account for the potential that an animal could enter and remain within the area between a Level A harassment zone and the shutdown zone for a duration long enough to be taken by Level A harassment. Limited take by Level A harassment is expected to arise from, at most, a small degree of auditory injury (AUD INJ) during impact driving, which will only be used briefly to achieve the final 5-ft of embedment depth for a given pile. Animals would need to be exposed to higher levels and/or longer duration in order to incur any more than a small degree of AUD INJ. 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. Because of the small degree anticipated, though, any AUD INJ or TTS potentially incurred here would not be expected to adversely impact individual fitness, let alone annual rates of recruitment or survival.

Marine mammal behavioral responses to pile driving, if any, are expected to be mild and temporary. Marine mammals found within the Level B harassment zone may not show any visual cues they are disturbed by activities or they could become alert, avoid the area, leave the area, or display other mild responses that are not observable such as changes in vocalization patterns. Given the limited number of piles to be installed per day and that pile driving would occur across a range of 1 to 51 days between November 1 and February 15 each year over the 5-year effective period of the LOA, the effects of any harassment would be temporary.

Impacts on marine mammal prey that would occur during the USACE's proposed activity would have, at most, short-term effects on foraging of individual marine mammals, and likely no effect on the populations of marine mammals as a whole. Indirect effects on marine mammal prey during the construction are expected to be minor, and these effects are unlikely to cause substantial effects on marine mammals at the individual level, with no expected effect on annual rates of recruitment or survival.

In addition, it is unlikely that minor noise effects in a small, localized area of habitat would have any effect on the stocks' annual rates of recruitment or survival. In combination, we believe that these factors, as well as the available body of evidence from other similar activities, demonstrate that the potential effects of the specified activities will have only minor, short-term effects on individuals. The specified activities are not expected to impact rates of recruitment or survival and will therefore not result in population-level impacts.

In summary and as described above, the following factors primarily support our preliminary 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 serious injury or mortality is anticipated or authorized;
- The intensity of anticipated takes by Level B harassment is relatively low for all stocks and would not be of a duration or intensity expected to result in impacts on reproduction or survival;
- No important habitat areas have been identified within the Project Area;
- For species proposed for authorization, the Project Area is a very small and peripheral part of their range and anticipated habitat impacts are minor;
- The USACE would implement mitigation measures, such as bubble curtains and soft-starts for impact pile driving; and
- Monitoring and shutdowns would minimize the numbers of marine mammals exposed to injurious levels of sound to ensure that take by Level A harassment would result, at most, in a small degree of AUD INJ.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, only take of small numbers of marine mammals 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 maximum number of individuals taken in any year 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 maximum annual 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.

Table 20 demonstrates the maximum number of Level A and Level B harassment events per year. Our analysis shows that no more than 29.6 percent of harbor seals, 3.6 percent of California sea lions and less than 0.01 percent of Steller sea lions could be taken by Level A and Level B harassment. The numbers of animals proposed to be taken for these stocks would be considered small relative to the relevant stock's abundances, even if each estimated taking occurred to a new individual—an extremely unlikely scenario.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks.

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.

Adaptive Management

The regulations governing the take of marine mammals incidental to the USACE's construction activities would contain an adaptive management component. The reporting requirements associated with this proposed rule are designed to provide NMFS with monitoring data from completed projects to allow consideration of whether any changes are appropriate. The use of adaptive management allows NMFS to consider new information from different sources to determine (with input from the USACE regarding practicability) on an annual or biennial basis if mitigation or monitoring measures should be modified (including additions or deletions). Mitigation measures could be modified if new data suggests that such modifications would have a reasonable likelihood of reducing adverse effects to marine mammals and if the measures are practicable.

The following are some of the possible sources of applicable data to be considered through the adaptive management process: (1) results from monitoring reports, as required by MMPA authorizations; (2) results from general marine mammal and sound research; and (3) any information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by these regulations or LOAs issues pursuant to these regulations.

Endangered Species Act

Section 7(a)(2) of the ESA of 1973 (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 proposed rules, NMFS consults internally whenever we propose to authorize take for endangered or threatened species.

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

Request for Information

NMFS requests interested persons to submit comments, information, and suggestions concerning the USACE's request and the proposed regulations (see **ADDRESSES**). All comments germane to this rulemaking will be reviewed and evaluated as we prepare a final rule and make final determinations on whether to issue the requested authorization. This proposed rule and referenced documents provide all environmental information relating to our proposed action for public review.

Classification

The Office of Management and Budget has determined that this proposed rule is not significant for purposes of Executive Order 12866.

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. The USACE is the sole entity that would be subject to the requirements in these proposed regulations, and the USACE is not a small governmental jurisdiction, small organization, or small business, as defined by the RFA. Therefore, a regulatory flexibility analysis is not required and none has been prepared.

This proposed rule does not contain a collection-of-information requirement subject to the provisions of the Paperwork Reduction Act (PRA) because the applicant is a Federal agency.

List of Subjects in 50 CFR Part 217

Administrative practice and procedure, Exports, Fish, Imports,

Marine mammals, Penalties, Reporting and recordkeeping requirements, Transportation, Wildlife.

Dated: November 4, 2024.

Samuel D. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set forth in the preamble, NMFS proposes to amend 50 CFR part 217 as follows:

PART 217—REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS INCIDENTAL TO SPECIFIED ACTIVITIES

■ 1. The authority citation for part 217 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.,* unless otherwise noted.

■ 2. Add subpart H to read as follows:

Subpart H—Taking Marine Mammals Incidental to the Lower Columbia River Dredged Material Management Plan, Oregon and Washington

Sec.

§ 217.70 Specified activity and geographical region.

(a) Regulations in this subpart apply only to the United States Army Corps of Engineers (USACE) and those persons it authorizes or funds to conduct activities on its behalf for the taking of marine mammals that occur in the areas outlined in paragraph (b) of this section and that occur incidental to construction activities, including maintenance and replacement of piles, as designated in the Lower Columbia River Dredged Material Management Plan, Oregon and Washington. Requirements imposed on the USACE pursuant to this subpart must be implemented by those persons it authorizes or funds to conduct activities on its behalf.

(b) The taking of marine mammals by the USACE may be authorized in a Letter of Authorization (LOA) only if it occurs near the Mouth of the Columbia River in Oregon and Washington.

§ 217.71 Effective dates.

Regulations in this subpart are effective from November 1, 2027, through February 29, 2032.

§ 217.72 Permissible methods of taking.

Under an LOA issued pursuant to § 216.106 of this chapter and § 217.76, the Holder of the LOA (hereinafter ''USACE'') may incidentally, but not intentionally, take marine mammals within the area described in § 217.70(b) by harassment associated with construction activities, provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the applicable LOA.

§ 217.73 Prohibitions.

Except for the takings contemplated in § 217.72 and authorized by an LOA issued under this subpart, it is unlawful for any person to do any of the following in connection with the activities described in § 217.70:

(1) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or an LOA issued under this subpart;

(2) Take of any marine mammal not specified in such LOA;

(3) Take any marine mammal specified in such LOA in any manner other than as specified;

(4) Take a marine mammal specified in such LOA if NMFS determines such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

(5) Take a marine mammal specified in such LOA after NMFS determines such taking results in an unmitigable adverse impact on the species or stock of such marine mammal for taking for subsistence uses.

§ 217.74 Mitigation requirements.

When conducting the activities identified in § 217.70(a), the mitigation measures contained in any LOA issued under this subpart must be implemented. These mitigation measures include but are not limited to:

(1) A copy of the LOA must be in the possession of the USACE, supervisory construction personnel, lead protected species observers (PSOs), and any other relevant designees of the USACE operating under the authority of the LOA at all times that activities subject to the LOA are being conducted.

(2) The USACE shall conduct training between supervisors and crews, the PSO team, and relevant USACE staff are trained prior to the start of construction activity subject to this subpart, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained in the aforementioned matters prior to commencing work.

(3) The USACE must employ PSOs and establish monitoring locations as described in the Marine Mammal Monitoring Plan (see § 217.75). The USACE must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions.

(4) Monitoring must take place from 30 minutes prior to initiation of pile driving activity (*i.e.,* pre-start clearance monitoring) through 30 minutes post-completion of pile driving activity.

(5) Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones are clear of marine mammals. Pile driving may commence following 30 minutes of observation when the shutdown zones are clear of marine mammals.

(6) For all pile driving activity, the USACE must implement shutdown zones with radial distances as identified in an LOA issued under this subpart.

(7) If a marine mammal is observed entering or within the shutdown zones, pile driving activity must be delayed or halted. Pile driving must be commenced or resumed as described in paragraph (a)(9) of this section.

(8) If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal.

(9) The USACE must avoid direct physical interaction with marine mammals during construction activity. If a marine mammal comes within 15 m of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary, to avoid direct physical interaction.

(10) The USACE must use soft start techniques when impact pile driving. Soft start requires contractors to 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 would occur. A 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.

(11) The USACE must deploy PSOs as indicated in an NMFS-approved Marine Mammal Monitoring Plan.

(12) The USACE must employ bubble curtain systems during all impact driving except under conditions where the water depth is less than 0.67 m (2 ft) in depth. Bubble curtains must meet the following requirements:

(i) The bubble curtain must distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column.

(ii) The lowest bubble ring must be in contact with the mudline and/or rock bottom for the full circumference of the ring, and the weights attached to the bottom ring shall ensure 100 percent mudline and/or rock bottom contact. No parts of the ring or other objects shall prevent full mudline and/or rock bottom contact.

(iii) The bubble curtain must be operated such that there is equal balancing of air flow to all bubblers.

(13) For all pile driving activities, land-based PSOs must be stationed at the best vantage points practicable to monitor for marine mammals and implement shutdown/delay procedures.

(14) Pile driving activity must be halted upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the harassment zone.

§ 217.75 Requirements for monitoring and reporting.

(a) The USACE must submit a Marine Mammal Monitoring Plan to NMFS for approval at least 90 days in advance of construction. Marine mammal monitoring must be conducted in accordance with the conditions in this section and the approved Monitoring Plan.

(b) Monitoring must be conducted by qualified, NMFS-approved PSOs, in accordance with the following conditions:

(1) PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods.

(2) 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.

(3) Other PSOs may substitute other relevant experience, education (*i.e.,* degree in biological science or related field), or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.

(4) Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization.

(5) PSOs must record all observations of marine mammals as described in the Marine Mammal Monitoring Plan, regardless of distance from the pile being driven. PSOs shall document any behavioral reactions in concert with distance from piles being driven or removed.

(c) The USACE must establish monitoring locations as described in the Monitoring Plan. For all pile driving activities, a minimum of 1 PSO must be assigned to each active pile driving location to monitor the shutdown zones.

(d) The USACE must submit a draft monitoring report to NMFS within 90 calendar days of the completion of each construction year. A draft comprehensive 5-year summary report must also be submitted to NMFS within 90 days of the end of the project. The reports must detail the monitoring protocol and summarize the data recorded during monitoring. Final annual reports and the final comprehensive report must be prepared and submitted within 30 days following resolution of any NMFS comments on the draft report. If no comments are received from NMFS within 30 days of receipt of the draft report, the report must be considered final. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments. The reports must contain the informational elements described in paragraphs (d)(1) through (5) of this section at minimum:

(1) Dates and times (beginning and end) of all marine mammal monitoring;

(2) Construction activities occurring during each daily observation period, including how many and what type of piles were driven or removed, by what method (*i.e.,* impact or vibratory), the total duration of driving time for each pile (vibratory driving), and number of strikes for each pile (impact driving);

(3) PSO locations during marine mammal monitoring.

(4) Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), 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 (if less than the harassment zone distance); and

(5) Upon observation of a marine mammal, the following information should be collected:

(i) PSO who sighted the animal, observer location, and activity at time of sighting:

(ii) Time of sighting;

(iii) Identification of the animal (*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;

(iv) Distances and bearings of each marine mammal observed in relation to the pile being driven for each sighting (if pile driving was occurring at time of sighting);

(v) Estimated number of animals (min/max/best);

(vi) Estimated number of animals by cohort (adults, juveniles, neonates, group composition, *etc.*);

(vii) Animal's closest point of approach and estimated time spent within the harassment zone;

(viii) Description of any marine mammal behavioral observations (*e.g.,* observed behaviors such as feeding or traveling), including an assessment of behavioral responses to the activity (*e.g.,* no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);

(ix) Number of marine mammals detected within the harassment zones, by species;

(x) Detailed information about any implementation of any mitigation (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting changes in the behavior of the animal, if any; and

(xi) All PSO datasheets and/or raw sightings data.

(e) In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the USACE must report the incident to NMFS Office of Protected Resources (OPR), and to the West Coast Regional Stranding Coordinator, as soon as feasible. If the death or injury was caused by the specified activity, the USACE must immediately cease the specified activities until NMFS OPR 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 this subpart and the LOA issued under § 216.106 of this chapter and §217.76. The USACE 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.

§ 217.76 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to this subpart, the USACE must apply for and obtain an LOA.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed February 29, 2032.

(c) If an LOA expires prior to February 29, 2032, the USACE may apply for and obtain a renewal of the LOA.

(d) In the event of projected changes to the activity or to mitigation and monitoring measures required by an LOA, the USACE must apply for and obtain a modification of the LOA as described in § 217.77.

(e) The LOA must set forth the following information:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact (*i.e.,* mitigation) on the species, its habitat, and on the availability of the species for subsistence uses; and

(3) Requirements for monitoring and reporting.

(f) Issuance of the LOA must be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under this subpart.

(g) Notice of issuance or denial of an LOA must be published in the **Federal Register** within 30 days of a determination.

§ 217.77 Renewals and modifications of Letters of Authorization.

(a) An LOA issued under § 216.106 of this chapter and § 217.76 for the activity identified in § 217.70(a) may be renewed or modified upon request by the applicant, provided that:

(1) The proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for this subpart; and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA under this subpart were implemented.

(b) For LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting that do not change the findings made for this subpart or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed LOA in the **Federal Register**, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) An LOA issued under § 216.106 of this chapter and § 217.76 for the activity identified in § 217.70(a) may be modified by NMFS under the following circumstances:

(1) NMFS may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with USACE regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in this subpart;

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA:

(A) Results from USACE's monitoring from previous years;

(B) Results from other marine mammal and/or sound research or studies; and

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by this subpart or subsequent LOAs; and

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS must publish a notice of proposed LOA in the **Federal Register** and solicit public comment; and

(2) If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in an LOA issued pursuant to § 216.106 of this chapter and § 217.76, an LOA may be modified without prior notice or opportunity for public comment. Notification would be published in the **Federal Register** within 30 days of the action.

§§ 217.78–217.79 [Reserved]

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