ADDRESSES: The meeting will be held at the Hilton New Orleans Riverside Hotel, located at Two Poydras Street, New Orleans, LA 70130; (504) 561–0500. Please visit the Gulf Council website (*www.gulfcouncil.org*) for agenda and meeting materials information.

Council address: Gulf of Mexico Fishery Management Council, 4107 W Spruce Street, Suite 200, Tampa, FL 33607; telephone: (813) 348–1630.

FOR FURTHER INFORMATION CONTACT: Dr. John Froeschke, Deputy Director, Gulf of Mexico Fishery Management Council; *john.froescke@gulfcouncil.org,* telephone: (813) 348–1630, and Mr. Steve VanderKooy, Inter-jurisdictional Fisheries (IJF) Coordinator, Gulf States Marine Fisheries Commission; *svanderkooy@gsmfc.org,* telephone: (228) 875–5912.

SUPPLEMENTARY INFORMATION: The following items of discussion are on the agenda, though agenda items may be addressed out of order and any changes will be noted on the Council's website when possible.

Joint Gulf Council's Law Enforcement Technical Committee (LETC) and Gulf States Marine Fisheries Commission's Law Enforcement Committee (LEC) Meeting Agenda, Wednesday, October 18, 2023; Beginning at 8:30 a.m.–12 p.m., CDT

The joint meeting will begin in a *CLOSED SESSION* from 7:30 a.m.–8:15 a.m. with introductions, case work discussions and any other business.

General session will begin at approximately 8:30 a.m. with introductions and adoption of agenda, and approval of minutes from the Joint LEC/LETC virtual meeting from March 2023 and election of Joint Committee Chair and Vice Chair.

The Gulf Council LETC will hold a discussion on Red Snapper Individual Fishing Quota (IFQ) advanced landing notifications from 2022 including a review of the Proportion of Inspected to Non-Inspected Red Snapper IFQ landings and Sale of Recreationally Caught Fish; and will review the Nomination Process for the 2023 Officer/Team of the Year Award.

The GSMFC LEC will review the IJF Program Activity for Gray (Mangrove) Snapper Profile Status and Commission Pubs.

The committee will present the State Report Highlights from Florida, Alabama, Mississippi, Louisiana, Texas, U.S. Coast Guard (USCG), NOAA Office of Law Enforcement (OLE), and U.S. Fish and Wildlife Service (USFWS); and will discuss any Other Business items.

— Meeting Adjourns

The Agenda is subject to change, and the latest version along with other meeting materials will be posted on *www.gulfcouncil.org.*

The Law Enforcement Technical Committee consists of principal law enforcement officers in each of the Gulf States, as well as the NOAA OLE, USFWS, the USCG, and the NOAA Office of General Counsel for Law Enforcement.

Although other non-emergency issues not on the agenda may come before this group for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal action during this meeting. Actions will be restricted to those issues specifically identified in the agenda and any issues arising after publication of this notice that require emergency action under Section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the Council's intent to take action to address the emergency.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: September 22, 2023.

Rey Israel Marquez,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2023–21057 Filed 9–26–23; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XC044]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to U.S. Coast Guard Construction in Astoria, Oregon

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

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from the United States Coast Guard (USCG) for authorization to take marine mammals incidental to the East Tongue Point (ETP) construction project in Astoria, Oregon. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than October 27, 2023.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to *ITP.harlacher@noaa.gov.* Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.* In case of problems accessing these documents, please call the contact listed below.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities* without change. All personal identifying information (*e.g.,* name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

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

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified

geographical region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

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

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.,* the issuance of an IHA) 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 the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On April 22, 2022, NMFS received a request from the USCG for an IHA to take marine mammals incidental to pile driving activity associated with the ETP construction in Astoria, Oregon. Following NMFS' review of the application, we received a revised version of the application on June 27, 2022. After finalizing construction details, the USCG submitted another revised version on May 26, 2023, followed by a final revised version on July 24, 2023, which was deemed adequate and complete on August 1, 2023. USCG's request is for take of harbor seal, California sea lion, Steller sea lion and harbor porpoise by Level B harassment and, for harbor seal and harbor porpoise, Level A harassment. Neither USCG nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

The USCG requested an IHA to homeport multiple new Fast Response Cutters (FRC) to support USCG District 13 at ETP in Astoria, OR (Figure 1). This three-phased project entails both onshore and in-water construction activities to remove old piles, construct and improve facilities necessary for the long-term support of the FRC's and USCG mission. Phase 1 includes pile removal and demolition, dredging and shoreline rock improvements, phase 2 includes all pile driving and in water construction, and phase 3 includes all overwater and upland construction. The USCG completed a Homeport feasibility study in 2015 to determine the best site for FRC and determined ETP was the most suitable site due to favorable currents and low exposure to wave action.

This overall project is needed to improve or construct waterside and landslide facilities that will meet homeporting requirements of the FRCs. This includes the availability of logistics and support amenities for personnel, the ability of the new FRC docks/floats to accommodate the FRCs with all necessary operations on the boat while it is stationary at the dock, and the ability of the facility to provide for a long-term USCG presence for the economic life of its assets. Facilities at ETP are aged, outdated, and will require improvements to meet homeporting requirements.

Of the stages of this project, the only part that may result in Level A and Level B harassment, and further analyzed in this notice is the in-water construction activities associated with impact pile driving (Phase 2). The USCG proposes installation of 30-inch (in) and 36-in steel pipe piles for their new facilities with an estimated 52 total days of impact pile driving. Pile driving will only occur within the Oregon Department of Fish and Wildlife (ODFW) approved in-water working window, however the proposed IHA will have a 1-year period of effectiveness. Phase 1 which includes dredging, pile removal and shoreline improvements and phase 3 involving only landside or over-water improvements, do not result in take based on the noise analysis and implementation of mitigation measures by the USCG and therefore will not be discussed further.

Dates and Duration

The ETP project is planned in a 3-phase approach with only phase 2 covered under this IHA. The IHA would be valid from November 1, 2023 to October 31, 2024; however, pile driving would only occur in the ODFW in-water work window from November 1, 2023 to February 29, 2024.

Specific Geographic Region

The project location is on the east side of the Tongue Point peninsula protruding into the Columbia River at approximately river mile 18. It lies in the northern portion of an industrial concrete pier area, formerly associated with a World War II-era U.S. Navy installation, just north of Highway 30 approximately 3 miles east of Astoria (Figure 1). The proposed project area is located within the Tongue Point Department of Labor Jobs Corps Center, which falls inside the urban growth boundary for Astoria. Various industrial and commercial uses, mostly for the marine industry, occur on the southern portion of the ETP site. To the north-northeast of the developed industrial area, the forested Tongue Point peninsula remains a designated natural area.

The project area is bound by the main stem of the Columbia River to the north and west and by Cathlamet Bay to the south and east. Mott Island is located approximately 0.5 miles east of the project area and Mill Creek flows into the Columbia River immediately south of the capped landfill. Further south and east up the John Day channel, Lois Island lies across from the John Day River mouth and a protected deep-water anchorage area is found. Moss and Lois Islands are part of the Lewis and Clark National Wildlife Refuge, which encompasses all islands approximately 27 miles upstream from the mouth of the Columbia River (USFWS 2020).

BILLING CODE 3510–22–P

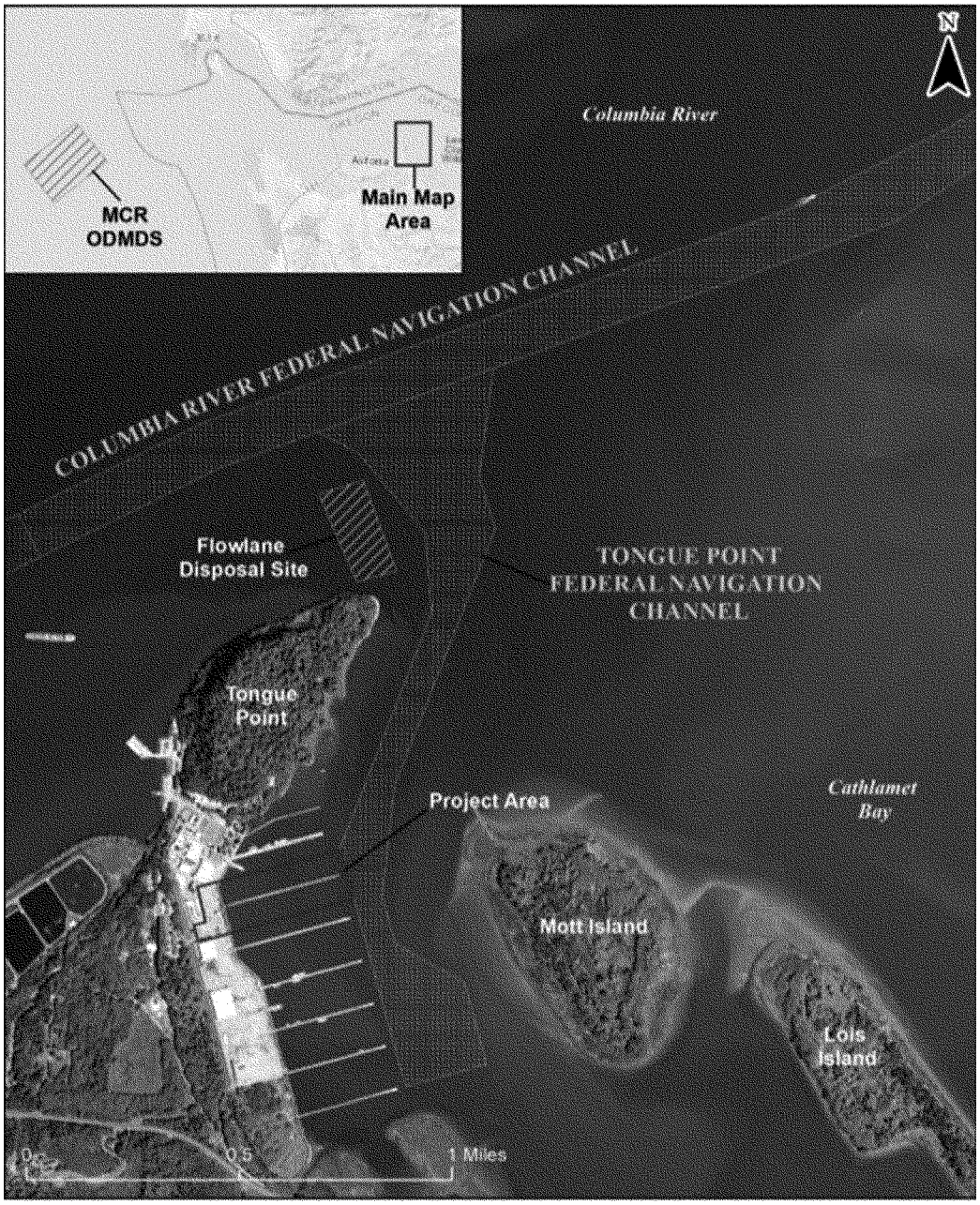

Figure 1 -- Project Location and Vicinity

BILLING CODE 3510–22–C

Detailed Description of the Specified Activity

Equipment and most materials needed to perform pier demolition and disposal, dredging, pile driving, pier, and floating dock construction will be mobilized via barges. It is anticipated that multiple barges may be present in the project or project staging areas at any time. The selected design-build contractor will mobilize equipment and materials based on the project phasing and task schedule to be determined once the project has been contracted. The overall project includes landslide improvements, waterside improvements, in-water construction, over-water construction, and upland construction. However, as previously stated this IHA only covers in-water construction associated with pile installation activities that could result in take of marine mammals.

Piles will be installed during the in-water work window from November 1, 2023, through February 29, 2024, using impact hammers, per Table 1–1 and Table 1–2 in USCG's application. USCG estimates up to three piles will be driven each 8 hour workday, and the actual driving time for each pile could be as high as approximately 30 minutes. An estimated 52 total days of pile driving (not all consecutive) will occur during the in-water work window from November through February.

Impact pile driving associated with the project is the only activity that could result in incidental take of marine mammals. Underwater noise generated during pile driving is dependent upon the impact energy produced by the pile driving hammer, the type and size of pile, water depth, and the substrate into

which the pile is being driven. Modeled pile driving scenarios accounted for the energy needed to drive the piles and utilized the two largest diameter pile sizes for the model as determined from engineering plans. A water depth of three meters was used, which is representative of the project area depths (Table 1).

TABLE 1—PROPOSED PILE DRIVING

Pile size and type	Method	Maximum piles per day	Activity duration	Estimated days of work
36-inch steel pipe	impact install	3	40–45 blows per minute for 9 minutes	52
30-inch steel pipe	impact install	3	40–45 blows per minute for 9 minutes	

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please 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; *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 (*https://www.fisheries.noaa.gov/find-species*).

Table 2 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 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 2 are the most recent available at the time of publication and are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 2—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Phocoenidae (porpoises):						
Harbor Porpoise	*Phocoena phocoena*	Northern Oregon/Washington Coast.	-,-,N	21,487 (0.44, 15,123, 2011).	151	≥3.0
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						
California Sea Lion	*Zalophus californianus*	US	-,-,N	257,606 (N/A, 233,515, 2014).	14,011	>321
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-,-,N	43,201 (N/A, 43,201, 2017).	2,592	112
Family Phocidae (earless seals)						
Harbor Seal	*Phoca vitulina*	Oregon/Washington Coast	-,-,N	UNK	UND	10.6

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

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

[3] These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike). Annual 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.

As indicated above, all four species in Table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. While killer whales (*Orcinus orca*), humpback whales (*Megaptera novaeangliae*), and

gray whales (*Eschrichtius robustus*) have been sighted off the Oregon coast, the USCG's project is located 23 km into the mouth of the Columbia River. Therefor the temporal and/or spatial occurrence of these species is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here and in the USCG's application.

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.*). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

TABLE 3—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).

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

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

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

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.

Acoustic effects on marine mammals during the specified activity can occur from impact pile driving. The effects of underwater noise from USCG's proposed activities have the potential to result in Level A or Level B harassment of marine mammals in the action area.

Description of Sound Source

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 10–20 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 one of two 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

(ANSI, 1986; NIOSH, 1998; ANSI, 2005; NMFS, 2018a). 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, 2018a). 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).

USCG propose to use impact pile driving to install new steel pipe piles associated with the ETP project. 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). 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 USCG'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 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 driving.

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 USCG's specified 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 auditory threshold shifts 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 (threshold shifts) followed by behavioral effects and potential impacts on habitat.

NMFS defines a noise-induced threshold shift (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). The amount of TS is customarily expressed in dB. TS can be permanent or temporary. As described in NMFS (2018), 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 and vocalization 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).

Permanent Threshold Shift (PTS)—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, 2018). Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (see Ward *et al.,* 1958, 1959; Ward, 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 (see Southall *et al.,* 2007), a TTS of 6 dB is considered the minimum threshold shift 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 (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, 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 *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). For cetaceans, published data on the onset of TTS are limited to the captive bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless

porpoise (*Neophocoena asiaeorientalis*), and for pinnipeds in water, measurements of TTS are limited to harbor seals, elephant seals (*Mirounga angustirostris*), and California sea lions. These studies examine hearing thresholds measured in marine mammals before and after exposure to intense sounds. The difference between the pre-exposure and post-exposure thresholds can be used to determine the amount of threshold shift 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, 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, 2019b, 2020a, 2020b). 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 (Finneran *et al.,* 2010; Kastelein *et al.,* 2014; Kastelein *et al.,* 2015a; Mooney *et al.,* 2009). This means that TTS predictions based on the total, cumulative SEL will overestimate the amount of TTS from intermittent exposures, such as sonars and impulsive sources. Nachtigall *et al.* (2018) and Finneran (2018) describe the measurements of hearing sensitivity of multiple odontocete species (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. Another study showed that echolocating animals (including odontocetes) might have anatomical specializations that might allow for conditioned hearing reduction and filtering of low-frequency ambient noise, including increased stiffness and control of middle ear structures and placement of inner ear structures (Ketten *et al.,* 2021). Data available on noise-induced hearing loss for mysticetes are currently lacking (NMFS, 2018).

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; 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 (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); and, 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) 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 near Astoria, we believe that incidents of take resulting solely from airborne sound are unlikely due to the sheltered proximity between the proposed project area and these haul-out sites which are at least 3 miles (4.8 kilometers) away and not in the acoustic zones that could be directly affect by noise disturbance. 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. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Marine Mammal Habitat Effects

The USCG's construction activities could have localized, temporary impacts on marine mammal habitat and their prey by increasing in-water sound pressure levels and slightly decreasing water quality. However, the proposed location is not heavily used by marine mammals and is in close proximity to a heavily trafficked industrial area. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater and airborne sound. 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 impact and vibratory pile driving, elevated levels of underwater noise would ensonify the project area where both fish and mammals occur and could affect foraging success.

Temporary and localized increase in turbidity near the seafloor would occur in the immediate area surrounding the area where piles are installed. In general, turbidity associated with pile installation is localized to about a 25 feet (ft) (7.6 meter) radius around the pile (Everitt *et al.,* 1980). The sediments of the project site will settle out rapidly when disturbed. Cetaceans are not expected to be close enough to the pile driving areas to experience effects of turbidity, and any pinnipeds could avoid localized areas of turbidity. Local strong currents are anticipated to disburse any additional suspended sediments produced by project activities at moderate to rapid rates depending on tidal stage. 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 result in a minor loss of habitat and potentially change underwater features for fish, but these changes are insignificant and limited to the area of redevelopment. The total seafloor area likely impacted by the project is relatively small compared to the available habitat in the Columbia River Gorge and on the Pacific Coast and does not include any Biologically Important Areas (BIA) or other habitat of known importance. The area is highly influenced by anthropogenic activities. Additionally, the total seafloor area affected by pile installation and removal is a small area compared to the vast foraging area available to marine mammals in the area. At best, the impact area provides marginal foraging habitat for marine mammals and fishes. Furthermore, pile driving at the project site would not obstruct movements or migration of marine mammals.

Avoidance by potential prey (*i.e.,* fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. 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.

Effects on Potential Prey

Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.,* crustaceans, cephalopods, fish, zooplankton, *etc.*). Marine mammal prey varies by species, season, and location.

However, impacts to prey will be limited to the construction window of November 1, 2023 through February 29, 2024 to reduce impacts to fish species in the area. 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 and Mann, 1999; Fay, 2009). Depending on their hearing anatomy and peripheral sensory structures, which vary among species, fishes 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 fishes 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 fishes may include behavioral responses, hearing damage, barotrauma (pressure-related injuries), and mortality.

Fish react to sounds that 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; Popper *et al.,* 2015).

SPLs of sufficient strength have been known to cause injury to fish and fish mortality. 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.,* (2012a) showed that a TTS of 4–6 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.,* 2012b; Casper *et al.,* 2013).

The most likely impact to fish from pile driving activities at the project areas would be temporary behavioral avoidance of the area. The duration of fish avoidance of an area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

Construction activities, in the form of increased turbidity, have the potential to adversely affect forage fish in the project area. Forage fish form a significant prey base for many marine mammal species that occur in the project area. Increased turbidity is expected to occur in the immediate vicinity (on the order of 10 ft (3 meters (m)) or less) of construction activities. However, suspended sediments and particulates are expected to dissipate quickly within a single tidal cycle. Given the limited area affected and high tidal dilution rates, any effects on forage fish are expected to be minor or negligible. Finally, exposure to turbid waters from construction activities is not expected to be different from the current exposure; fish and marine mammals in the Columbia River are routinely exposed to substantial levels of suspended sediment from natural and anthropogenic sources.

In summary, given the short-term and limited duration of sound associated with pile driving events and the relatively small areas being affected, pile driving activities associated with the proposed action are not likely to have a permanent adverse effect on any fish habitat, or populations of fish species. Any behavioral avoidance by fish of the disturbed area would be temporary and would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. Additionally, all in-water work will occur during the winter, when marine resident fish species are only present in limited numbers. Thus, we conclude that impacts of the specified activity are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts to marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations.

Estimated Take of Marine Mammals

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

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

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.,* impact 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. 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. Below we describe how the proposed take numbers are estimated.

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

USCG's proposed activity includes the use impulsive (impact pile driving) sources, and therefore the RMS SPL threshold of 160 dB re 1 µPa is applicable.

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

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

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

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.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{pk,flat}$*:* 232 dB; $L_{EOW,24h}$*:* 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 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 1µPa^{2}s. 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 this 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

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

Underwater sound propagation modeling was completed by USCG using dBSea, a software developed by Marshall Day Acoustics for the modeling of underwater sound propagation in a variety of environments. The model was built by importing bathymetry data and placing noise sources in the environment. Each source can consist of equipment chosen from either the standard or the user-defined databases. Noise mitigation methods may also be included. The user has control over the seabed and water properties including sound speed profile, temperature, salinity, and current. Noise levels were calculated to the extent of the bathymetry area. To examine results in more detail, levels may be plotted in cross sections, or a detailed spectrum may be extracted at any point in the calculation area. Levels were calculated in third octave bands from 12.5 (hertz) Hz to 20 kHz. Please refer to Acoustic Assessment included in USCG's application for additional details on the modeling principles and assumptions.

The representative acoustic modeling scenarios were derived from descriptions of the expected construction activities through consultations between the USCG project design and engineering teams. The scenarios modeled were ones where potential underwater noise impacts of marine species were anticipated and included impact pile driving associated with pier installation. All modeling scenarios occur at a representative location. This location was selected so that the effects of sound propagation at the range of water column depths occurring within the project area could be evaluated.

The USCG opted to perform their own acoustic modeling for the Level A and Level B harassment isopleths as they had site specific information to input into the model, which may assist in

providing more accurate results Than, for example, use of NMFS' User Spreadsheet tool, which is a relatively simple tool that cannot incorporate site-specific environmental information. The modeling used by USCG takes into account bathymetry, geo-acoustic properties of sub-bottom sediments, and sound speed profile. NMFS has reviewed USCG's modeling and determined that it is acceptable for use here.

A summary of construction and operational scenarios included in the underwater acoustic modeling analysis is provided in the Acoustic Assessment and summarized in Table 5 below. The pile diameters selected for the impact pile driving modeling scenarios were based on maximum project design considerations approximated by USCG. The Level A and Level B harassment isopleths for the proposed activities are shown in Table 6.

TABLE 5—SOURCE LEVELS FOR IMPACT PILE INSTALLATION

Pile size	Peak SPLs (dB)	RMS SPLs (dB)	SELss (dB)	Source
36-in pile	208	190	180	Caltrans 2020.
30-in pile	210	190	177	Caltrans 2020.

TABLE 6—LEVEL A AND LEVEL B HARASSMENT ISOPLETHS FOR IMPACT PILE DRIVING

Activity	Level A harassment zones (m)			Level B harassment zone (m)
	HF cetaceans	Phocid pinnipeds	Otariid pinnipeds	
36-in pile	287	197	0	602
30-in pile	213	130	0	602

Marine Mammal Occurrence and Take Calculation and 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 USCG proposed using marine mammal species densities from the Pacific Navy Marine Species Density Database to estimate take for marine mammals. This database incorporates analyzed literature and research for marine mammal density estimates per season for regions throughout the U.S. and the USCG based their take estimates on regionally available population density estimates and site-specific knowledge. Although this database provides densities for all species present in the action area, the densities are based on offshore abundance and not directly relevant to occurrence within in the Columbia River. Following careful review of the analysis presented by the USCG in its application, including marine mammal occurrence data, NMFS has determined that different information inputs than those selected by the USCG represent the best available scientific information for marine mammal abundance in the action area. These selections are discussed in greater detail below.

Steller Sea Lion, California Sea Lion and Harbor Seal

For Steller sea lions, California sea lions, and harbor seals, the numbers of individuals were referenced from Washington Department of Fish and Wildlife's (WDFW) surveys from 2000–2014 at the South Jetty for the months of in water work (November through February) and averaged to get an estimated daily count (Table 7). While animals were surveyed at the prominent haul out site along the South Jetty, since the ETP site is close to the mouth of the river and the South Jetty, we assumed each of these estimates represents a good proxy for the total number of individuals that could be present in the project vicinity. We derived potential take estimates from the average abundance recorded over the specified period.

TABLE 7—PINNIPED COUNTS FROM THE SOUTH JETTY FROM 2000–2014

[WDFW 2014]

	Steller sea lion (monthly)	Steller sea lion (daily)	California Sea lion (monthly)	California sea lion (daily)	Harbor seal (monthly)	Harbor seal (daily)
November	1,663	55	1,214	40	0	0
December	1,112	36	725	23	57	2
January	249	8	10	0.3	0	0
February	259	9	28	1	1	0.04
Average (all months)	821	27	494	16	15	0.5

To calculate the total estimated takes, we multiplied the estimated days of activity by the associated average daily pinniped counts (monthly count/days of the month and averaged across all months) for each species (Table 8).

TABLE 8—ESTIMATED TAKE OF STELLER SEA LIONS, CALIFORNIA SEA LIONS, AND HARBOR SEALS

Pile type and method	Days of activity	Steller sea lion average count	Steller sea lion calculated take	California sea lion average count	California sea lion calculated take	Harbor seal average count	Harbor seal calculate take
36-in Steel Pile Impact Installation ..... 30-in Steel Pile Impact Installation	52	27	1,404	16	832	0.5	26

There is some potential for take by Level A harassment of harbor seals due to the largest zone being approximately 200 m and because of the cryptic nature and assumed lower detectability of harbor seals at this distance. Based on the relative proportion of the area expected to be ensonified above the Level A harassment threshold for phocid pinnipeds from impact pile driving (approximately 0.36 square kilometers (km^2)) to the area ensonified above the Level B harassment threshold (1.1 km^2 for impact pile driving), we estimated that of the total number of harbor seals that may be located within the greater Level B harassment zone, approximately 33 percent would approach the pile driving activities closer and enter the smaller Level A harassment zone (197 m). Thus, we assume that 33 percent of the total estimated takes of harbor seals (26 individuals; see Table 9) would be by Level A harassment. Therefore, we are proposing to authorize 9 takes of harbor seals by Level A harassment and 17 takes by Level B harassment (Table 10).

The Level A harassment zone for otariid pinnipeds is 0 m. The USCG would be required to enforce a minimum shutdown zone of 10 m for these species. At that close range, the USCG would be able to detect California sea lions and Steller sea lions and implement the required shutdown measures before any sea lions could enter the Level A harassment zone. Therefore, no takes of California sea lions or Steller sea lions by Level A harassment are requested or proposed to be authorized.

Harbor Porpoise

Harbor porpoises are regularly observed in the coastal waters near the mouth of the Columbia River and are known to occur year-round, although this project occurs farther upstream in the Columbia River. Their nearshore abundance peaks with anchovy presence, which is generally June through October. However, there was one recorded sighting of a harbor porpoise in the project area east of the jetties in the September–November timeframe (OBIS–SEAMAP 2019). During monitoring for pile driving at the Columbia River Jetty System which is at the mouth of the Columbia River approximately 23 km from the USCG's proposed action area, over the course of a 5 day monitoring period, observers detected 5 harbor porpoises (Grette Associates 2016). Additionally we reviewed monitoring reports from four recent projects in the nearby area (Army Corps of Engineers King Pile Markers and Sand Island Pile Dike Test Piles, and Phase 1 and 2 of the City of Astoria Bridge Replacement which can be found at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities#active-authorizations*). Only one project with activities occurring over 15 days had eight sightings of harbor porpoise at Sand Island Dike.

Given that, there is some potential for harbor porpoise to be present near the project area, and based on the previously mentioned monitoring reports sighting data, we calculated that harbor porpoise could enter the Level B harassment zone every other day of pile driving (or 0.5/day). To calculate the total estimated takes by Level B harassment, we multiplied the estimated days of activity by the associated daily harbor porpoise rate (Table 10).

There is also some potential for take by Level A harassment of harbor porpoise due to the largest zone being approximately 300 m and because of the cryptic nature and assumed lower detectability of harbor porpoise at this distance. The USCG anticipates that 12 harbor porpoises during impact driving could be taken by Level A harassment. Take by Level A harassment for harbor porpoise was calculated in the same way it was for harbor seals. In total, we are proposing to authorize take of 26 harbor porpoises (Table 10).

TABLE 10—PROPOSED TAKE OF MARINE MAMMALS BY LEVEL A AND LEVEL B HARASSMENT BY SPECIES, STOCK AND PERCENT OF TAKE BY STOCK

Species	Stock	Proposed take by Level A harassment	Proposed take by Level B harassment	Total proposed take	Stock abundance	Percent of stock
Harbor Porpoise	Northern Oregon/Washington Coast	12	14	26	21,487	0.1
California sea lion	U.S	0	832	832	257,606	0.3
Steller sea lion	Eastern	0	1,404	1,404	43,201	3.2
Harbor seal	Oregon/Washington Coast	9	17	26	24,732	0.1

Proposed Mitigation

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

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

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

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

Time Restrictions

The USCG has proposed in its description of the project that pile driving would occur only during daylight hours (no sooner than 30 minutes after sunrise through no later than 30 minutes before sunset), when visual monitoring of marine mammals can be conducted. In addition, ODFW requires all in-water construction be limited to the months of November through February to minimize impacts to ESA listed fish species.

Mitigation Measures

USCG must follow mitigation measures as specified below:

- Ensure that construction supervisors and crews, the monitoring team, and relevant USCG staff are trained prior to the start of all pile driving activity, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work;
- Employ Protected Species Observers (PSOs) and establish monitoring locations as described in the application and the IHA. USCG must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions. For all pile driving, at least one PSO must be used. The PSO will be stationed as close to the activity as possible;
- The placement of the PSOs during all pile driving activity will ensure that the entire shutdown zone, see Table 11, is visible during pile driving activities. Should environmental conditions deteriorate such that marine mammals within the entire shutdown zone will not be visible (*e.g.,* fog, heavy rain), pile driving and removal must be delayed until the PSO is confident marine mammals within the shutdown zone could be detected;
- Monitoring must take place from 30 minutes prior to initiation of pile driving activity (*i.e.,* pre-clearance monitoring) through 30 minutes post-completion of pile driving activity;
- Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones indicated in Table 11 are clear of marine mammals. Pile driving may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals;
- USCG must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of three strikes at reduced energy, followed by a 30 second waiting period, then two subsequent reduced-energy strike sets. 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; and
- If a marine mammal is observed entering or within the shutdown zones indicated in Table 11, pile driving must be delayed or halted. 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 (Table 11) or 15 minutes have passed without re-detection of the animal.

Shutdown Zones

USCG will establish shutdown zones for all pile driving activities. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones would be based upon the Level A harassment zone for each pile size/type where applicable, as shown in Table 11.

For in-water heavy machinery activities other than pile driving, if a marine mammal comes within 10 m, work will stop and vessels will reduce speed to the minimum level required to maintain steerage and safe working conditions. A 10 m shutdown zone would also serve to protect marine mammals from physical interactions with project vessels during pile driving and other construction activities, such as barge positioning or drilling. If an activity 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 indicated in Table 11 or 15 minutes have passed without re-detection of the animal. Construction activities must be halted upon observation of 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.

All marine mammals will be monitored in the Level B harassment zones and throughout the area as far as visual monitoring can take place. If a marine mammal enters the Level B harassment zone, in-water activities will continue and the animal's presence within the estimated harassment zone will be documented.

USCG will also establish shutdown zones for all marine mammals for which take has not been authorized or for which incidental take has been authorized but the authorized number of takes has been met. These zones are equivalent to the Level B harassment zones for each activity. If a marine mammal species not covered under this IHA enters the shutdown zone, all in-water activities will cease until the animal leaves the zone or has not been observed for at least 15 minutes, and NMFS will be notified about species and precautions taken. Pile driving will proceed if the non-IHA species is observed to leave the Level B harassment zone or if 15 minutes have passed since the last observation.

If shutdown and/or clearance procedures would result in an imminent safety concern, as determined by USCG or its designated officials, the in-water activity will be allowed to continue until the safety concern has been addressed, and the animal will be continuously monitored.

TABLE 11—SHUTDOWN ZONES AND MONITORING ZONES

Activity	Minimum shutdown zone (m)			Harassment zone (m)
	HF cetaceans	Phocid	Otariid	
36-in Impact Installation	300	50	10	610
30-in Impact Installation	220	50	10	610

Protected Species Observers

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

PSOs will monitor the full shutdown zones and the Level B harassment zones to the extent practicable. Monitoring zones provide utility for observing by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring zones enable observers to be aware of and communicate the presence of marine mammals in the project areas outside the shutdown zones and thus prepare for a potential cessation of activity should the animal enter the shutdown zone.

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

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

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.,* source characterization, propagation, ambient noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the 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 must be conducted in accordance with the conditions in this section and the IHA. Marine mammal monitoring during pile driving activities will be conducted by PSOs meeting the following requirements:

- PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods;
- At least one PSO will have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience; and
- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator will be designated. The lead observer will be required to have prior experience working as a marine mammal observer during construction.

PSOs must have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.
- USCG must employ three PSOs during all pile driving activities depending on the size of the monitoring and shutdown zones. A minimum of one PSO must be assigned to monitor waters surrounding the active pile driving location.
- USCG must establish the following monitoring locations with the best views of monitoring zones as described below, in the IHA, and USCG's application.
- PSOs would be deployed in strategic locations around the harassment zone at all times during in-water pile driving. PSOs will be positioned at locations that provide full views of the impact hammering monitoring zones and the shutdown zones. PSOs will be stationed on the staging barges, on shore at the project site, and at the entrance to the commercial dock area at ETP. All PSOs will have access to high-quality

binoculars, range finders to monitor distances, and a compass to record bearing to animals as well as radios or cells phones for maintaining contact with work crews.

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

USCG shall conduct briefings between construction supervisors and crews, PSOs, USCG staff prior to the start of all pile driving activities and when new personnel join the work. These briefings will explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

Reporting

A draft marine mammal monitoring report will be submitted to NMFS within 90 days after the completion of pile driving and removal activities, or 60 days prior to a requested date of issuance from any future IHAs for projects at the same location, whichever comes first. The report will 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.,* impact) and the total equipment duration for vibratory removal for each pile or total number of strikes for each pile (impact driving);
- 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:
- Name of PSO who sighted the animal(s) and PSO location and activity at the time of sighting;
- Time of sighting;
- Identification of the animal(s) (*e.g.,* genus/species, lowest possible taxonomic level, or unidentifiable), PSO confidence in identification, and the composition of the group if there is a mix of species;
- Distance and bearing of each marine mammal observed relative to the pile being driven for each sightings (if pile driving was occurring at time of sighting);
- Estimated number of animals (min/max/best estimate);
- Estimated number of animals by cohort (adults, juveniles, neonates, group composition, sex class, *etc.*);
- Animal's closest point of approach and estimated time spent within the harassment zone;
- 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 and shutdown zones; by species;
- Detailed information about any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensured, and resulting changes in behavior of the animal(s), if any; and

If no comments are received from NMFS within 30 days, the draft final report will 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 USCG must immediately cease the specified activities and report the incident to the Office of Protected Resources (OPR) (*PR.ITP.MonitoringReports@noaa.gov*), NMFS and to the West Coast Regional Stranding Coordinator as soon as feasible. If the death or injury was clearly caused by the specified activity, USCG 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 IHA. The USCG 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, our analysis applies to all species listed in Table 2 for which take could occur, given that NMFS expects the anticipated effects of the proposed pile driving/removal on different marine mammal stocks to be similar in nature. Where there are meaningful differences between species

or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, NMFS has identified species-specific factors to inform the analysis.

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

No serious injury or mortality would be expected, even in the absence of required mitigation measures, given the nature of the activities. Further, limited take by Level A harassment is proposed for two species, but the potential for harassment would be minimized through the construction method and the implementation of the planned mitigation measures (see Proposed Mitigation section).

Take by Level A harassment is proposed for harbor seals and harbor porpoise to account for the possibility that an animal could enter a Level A harassment zone prior to detection, and remain within that zone for a duration long enough to incur PTS before being observed and the USCG shutting down pile driving activity. Any take by Level A harassment is expected to arise from, at most, a small degree of PTS, *i.e.,* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by impact pile driving (*i.e.,* the low-frequency region below 2 kHz), not severe hearing impairment or impairment within the ranges of greatest hearing sensitivity. Animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of PTS.

Further, the amount of authorized take by Level A harassment is very low for both marine mammal species. If hearing impairment occurs, it is most likely that the affected animal would lose only a few decibels in its hearing sensitivity. Due to the small degree anticipated, any PTS potential incurred would not be expected to affect the reproductive success or survival of any individuals, much less result in adverse impacts on the species or stock.

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

The Level A harassment zones identified in Table 5 are based upon an animal's exposure to pile driving of up to three steel piles per day. Given the short duration to impact drive each pile and break between pile installations (to reset equipment and move piles into place), an animal would have to remain within the area estimated to be ensonified above the Level A harassment threshold for multiple hours. This is highly unlikely given marine mammal movement in the area. If an animal was exposed to accumulated sound energy, the resulting PTS would likely be small (*e.g.,* PTS onset) at lower frequencies where pile driving energy is concentrated, and unlikely to result in impacts to individual fitness, reproduction, or survival.

The nature of the pile driving project precludes the likelihood of serious injury or mortality. For all species and stocks, take would occur within a limited, confined area (adjacent to the project site) of the stock's range. Level A and Level B harassment will be reduced to the level of least practicable adverse impact through use of mitigation measures described herein. Further, the amount of take proposed to be authorized is small when compared to stock abundance.

Behavioral responses of marine mammals to pile driving in the Columbia River are expected to be mild, short term, and temporary. Marine mammals within the Level B harassment zones 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 that pile driving would occur for only a portion of the project's duration, any harassment occurring would be temporary. Additionally, many of the species present in region would only be present temporarily based on seasonal patterns or during transit between other habitats. These temporarily present species would be exposed to even smaller periods of noise-generating activity, further decreasing the impacts.

For all species, there are no known BIA near the project area that would be impacted by USCG's planned activities. While California sea lions and harbor seals are the species most likely to occur within the immediate project area the nearest haul out for both species is approximately 3 miles (4.8 km) away. There are three known haul out sites for both species near the project area including Tongue Point Sands, Taylor Sands, and Green Island/Sanborn Slough, the closest being Tongue Point Sands 3 miles (4.8 km) from the project area. Additionally, there is a Steller sea lion haul out in the Columbia River; it is approximately 15 miles (24.1 km) away from the project site at the south jetty off the western shoreline of Fort Stevens State Park. None of these haul outs are in the immediate project vicinity.

In addition, it is unlikely that minor noise effects in a small, localized area of habitat would have any effect on each stock's continued 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 proposed to be authorized;
- Authorized Level A harassment would be very small amounts and of low degree;
- For all species, the mouth of the Columbia River is a very small and peripheral part of their range;
- The intensity of anticipated takes by Level B harassment is relatively low for all stocks. Level B harassment would be primarily in the form of behavioral disturbance, resulting in avoidance of the project areas around where impact or vibratory pile driving is occurring, with some low-level TTS that may limit the detection of acoustic cues for relatively brief amounts of time in relatively confined footprints of the activities;
- Effects on species that serve as prey for marine mammals from the activities are expected to be short-term and, therefore, any associated impacts on marine mammal feeding are not

expected to result in significant or long-term consequences for individuals, or to accrue to adverse impacts on their populations;

• The ensonified areas are very small relative to the overall habitat ranges of all species and stocks;

• The lack of anticipated significant or long-term negative effects to marine mammal habitat; and

• USCG would implement mitigation measures including soft starts and shutdown zones to minimize the numbers of marine mammals exposed to injurious levels of sound, and to ensure that take by Level A harassment is, at most, a small degree of PTS.

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 activities 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 number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities. For all species, the proposed take is below one third of the population for all marine mammal stocks (Table 10).

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.

Endangered Species Act

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

No incidental take of ESA-listed species is 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.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the USCG for conducting impact pile driving associated with the ETP project in Astoria, Oregon, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.*

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this notice of proposed IHA for the proposed construction project. We also request comment on the potential renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for this IHA or a subsequent renewal IHA.

On a case-by-case basis, NMFS may issue a one-time, 1 year renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical activities as described in the Description of Proposed Activity section of this notice is planned or (2) the activities as described in the Description of Proposed Activity section of this notice would not be completed by the time the IHA expires and a renewal would allow for completion of the activities beyond that described in the *Dates and Duration* section of this notice, provided all of the following conditions are met:

• A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond 1 year from expiration of the initial IHA).

• The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.,* reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: September 18, 2023.

Catherine Marzin,

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

[FR Doc. 2023–20534 Filed 9–26–23; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD193]

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Geophysical Surveys Related to Oil and Gas Activities in the Gulf of Mexico

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