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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XD459]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Pier Maintenance and Bank Stabilization at U.S. Coast Guard Air Station Port Angeles, Port Angeles, Washington

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

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an authorization to the U.S. Coast Guard (Coast Guard or USCG) to harass marine mammals incidental to construction activities associated with pier maintenance and bank stabilization at USCG Air Station Port Angeles, Port Angeles, Washington.

DATES: This authorization is effective from July 16, 2024 through July 15, 2025.

ADDRESSES: 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/action/incidental-take-authorization-us-coast-guard-air-station-port-angeles-pier-maintenance-and*. In case of problems accessing these documents, please call the contact listed below.

FOR FURTHER INFORMATION CONTACT: Cara Hotchkin, OPR, 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 incidental harassment authorization (IHA) is provided to the public for review.

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

Summary of Request

On August 9, 2022, NMFS received a request from Coast Guard for an IHA to take marine mammals incidental to construction during pier maintenance activities at USCG Air Station Port Angeles in Port Angeles, Washington. Following NMFS' review of the application, Coast Guard submitted revised versions on May 11, 2023 and July 14, 2023. The application was deemed adequate and complete on July 18, 2023. The notice of proposed IHA was published in the **Federal Register** on September 7, 2023 (88 FR

61549). Coast Guard's request is for take of five species of marine mammals by Level B harassment only. Neither Coast Guard nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Activity

Coast Guard plans to conduct pier maintenance and bank stabilization on a portion of the shoreline at USCG Air Station Port Angeles in Port Angeles, Washington. In-water work is expected to take approximately 15 days and will occur during daylight hours during the lowest possible tide conditions. USCG Air Station Port Angeles is located on the south-facing side of Ediz Hook, a peninsula that extends into the Strait of Juan de Fuca, encompassing approximately 8.73 square kilometers (km^2) (3.37 square miles (mi^2)), opening to the east. The U.S. Army Corps of Engineers has designated an in-water work window between July 16 and February 15 to protect anadromous fishes in the area. In-water work on this project may therefore occur between July 16, 2024 and February 15, 2025. The planned work may result in the incidental take of marine mammals by Level B harassment due to exposure to underwater sound produced during impact and vibratory pile driving.

The purpose of this project is to repair existing facilities and to protect vital mission support infrastructure from continued tidal action erosion and storm events. This project will repair up to 372 feet (ft) (113.4 meters (m)) of eroded riprap shoreline, replace 37 degraded timber piles with steel piles, repair up to 98 timber piles, permanently remove 11 abandoned timber piles and 3 steel camel barrier piles, and demolish 2 camels. Pile installation will be by vibratory and impact driving; pile removal methods would include direct pull and, if necessary, vibratory extraction. Impact and vibratory piling may occur on the same day, but the hammers would not operate simultaneously. Other components of this project include both in-water and upland activities, which are not expected to result in take of marine mammals. Pile repair (*i.e.,*

power washing, jacketing, and anti-fouling coating), deck repair and replacement, utility installation, and shoreline stabilization (*i.e.,* removal and replacement of riprap shoreline) are therefore not discussed further in this document.

A detailed description of the planned construction project is provided in the Federal Register notice for the proposed IHA (88 FR 61549, September 7, 2023). Since that time, no changes have been made to the planned activities. Therefore, a detailed description is not provided here. Please refer to that Federal Register notice for the description of the specific activity. Required mitigation, monitoring, and reporting measures are described in detail later in this document (please see **Mitigation** and **Monitoring and Reporting**).

Comments and Responses

A notice of NMFS' proposal to issue an IHA to Coast Guard was published in the Federal Register on September 7, 2023 (88 FR 61549). That notice described, in detail, Coast Guard's activities, the marine mammal species that may be affected by the activities, and the anticipated effects on marine mammals. In that notice, we requested public input on the request for authorization described therein, our analyses, the proposed authorization, and any other aspect of the notice of proposed IHA, and requested that interested persons submit relevant information, suggestions, and comments. This proposed notice was available for a 30-day public comment period. During the 30-day public comment period, NMFS did not receive any public comments.

Changes from Proposed IHA to Final IHA

Between the publication of the proposed IHA (88 FR 61549, September 7, 2023) and this notice, Coast Guard requested that the effective dates of the authorization be shifted from November 15, 2023 through November 14, 2024 to July 16, 2024 through July 15, 2025 due to availability of funding and other logistical constraints. The analysis presented in the proposed IHA remains valid due to the consistent dates of the U.S. Army

Corps of Engineers in-water work window (July 16 through February 15 annually). The change to the effective dates of the authorization is reflected in the **Dates** section, above.

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the IHA 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; *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 1 lists all species or stocks for which take is expected and 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 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 SARs. All values presented in table 1 are the most recent available at the time of publication and are available online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*.

Table 1 -- Species Likely Impacted by the Specified Activities[1]

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N)[2]	Stock abundance (CV, N_{min}, most recent abundance survey)[3]	PBR	Annual M/SI[4]
Order Artiodactyla – Infraorder Cetacea – Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals)						
Humpback whale	*Megaptera novaeangliae*	Hawai'i	-, -, N	11,278 (0.56, 7,265, 2020)	127	27.09
		Mainland Mexico – CA/OR/WA	T, D, Y	3,477 (0.101, 3,185, 2022)	43	22
		Central America/ Southern Mexico - CA/OR/WA	E, D, Y	1,496 (0.171, 1,284, 2022)	5.2	14.9
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Killer whale	*Orcinus orca*	Eastern North Pacific Southern Resident	E, D, Y	74 (N/A, 74, 2021)	0.13	≥0.4
		West Coast Transient	-, -, N	349 (N/A, 349, 2018)	3.5	0.4
Family Phocoenidae (porpoises)						
Harbor porpoise	*Phocoena phocoena*	Washington Inland Waters	-, -, N	11,233 (0.37, 8,308, 2015)	66	≥7.2
Order Carnivora – Pinnipedia						
Family Otariidae (eared seals and sea lions)						
Steller sea lion	*Eumetopias jubatus*	Eastern	-, -, N	43,201 (N/A, 43,201, 2017)	2,592	112
California sea lion	*Zalophus californianus*	U.S.	-, -, N	257,606 (N/A, 233,515, 2014)	14,011	>321
Family Phocidae (earless seals)						
Harbor seal	*Phoca vitulina*	Washington Northern Inland Waters	-, -, N	UNK (UNK, UNK, 1999)	UND	9.8
Northern elephant seal	*Mirounga angustirostris*	CA Breeding	-, -, N	187,386 (N/A, 85,369, 2013)	5,122	13.7

[1]Information on the classification of marine mammal species can be found on the web page for The Society for Marine Mammalogy's Committee on Taxonomy (https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/; Committee on Taxonomy (2022)).

[2]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.

[3]NMFS marine mammal stock assessment reports online at: www.nmfs.noaa.gov/pr/sars/. CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

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

A detailed description of the of the species likely to be affected by the USCG Pier Maintenance and Bank Stabilization project, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the Federal Register notice for the proposed IHA (88 FR 61549, September 7, 2023); since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that Federal Register notice for these descriptions. Please also refer to NMFS' website (*https://www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. 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 2.

Table 2 -- 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 *et al.*, 2013). This division between phocid and otariid pinnipeds is now reflected in the updated hearing groups proposed in Southall *et al*. (2019).

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

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of underwater noise from Coast Guard's pile driving activities have the potential to result in behavioral harassment of marine mammals in the vicinity of the project area. The notice of the proposed IHA (88 FR 61549, September 7, 2023) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from Coast Guard's pile driving activities on marine mammals and their habitat. That information and analysis is incorporated by reference into this final IHA determination and is not repeated here; please refer to the notice of the proposed IHA (88 FR 61549, September 7, 2023).

Estimated Take of Marine Mammals

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

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

Authorized takes are by Level B harassment only, in the form of disruption of behavioral patterns and/or TTS for individual marine mammals resulting from exposure to noise from impact and vibratory pile driving. Based on the nature of the activity and the anticipated effectiveness of the mitigation measures (*i.e.*, shutdown zones implemented at no less than the distance to the Level A isopleths) discussed in detail below in the **Mitigation** section, Level A harassment is neither anticipated nor authorized.

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

Acoustic Thresholds

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

Level B Harassment – Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.*, frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.*, bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.*, Southall *et al.,* 2007, 2021, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities,

NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μPa)) for continuous (*e.g.,* vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μPa for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

Coast Guard's planned activity includes the use of continuous (*e.g.,* vibratory pile installation and extraction) and impulsive (*e.g,* impact pile installation) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μPa are applicable.

Level A Harassment – NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (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). Coast Guard's planned construction activity includes the use of non-impulsive (*e.g.,* vibratory pile installation and extraction) and impulsive (*e.g,* impact pile installation) sources.

These thresholds are provided in table 3, below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018

Technical Guidance, which may be accessed at:

www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.

Table 3 -- Thresholds Identifying the Onset of Permanent Threshold Shift

	PTS Onset Acoustic Thresholds* (Received Level)	
Hearing Group	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 $L_{E,OW,24h}$: 203 dB	*Cell 10* $L_{E,OW,24h}$: 219 dB

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak 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.

The sound field in the project area is the existing background noise plus additional construction noise from the project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.*, impact pile driving and vibratory pile installation and removal). Calculation of the area ensonified by the planned action is dependent on source levels of the planned activities and the estimated transmission loss coefficients for the planned activities at the site. These factors are addressed below.

Sound Source Levels of Activities - The intensity of pile driving sounds is greatly influenced by factors such as the type of piles (material and diameter), hammer type, and the physical environment (*e.g.*, sediment type) in which the activity takes place. In order to calculate the distances to the Level A harassment and the Level B harassment thresholds for the methods and piles being used in this project, Coast Guard used acoustic monitoring data from sound source verification studies to develop proxy source levels for the various pile types, sizes and methods (table 4).

Table 4 -- Pile installation and extraction parameters

Pile type	Method	Total number	# per day	Strikes per pile OR hours per day	Proxy Levels (@ 10m)			Reference
					dB re 1 µPa Peak	dB re 1 µPa RMS	dB re 1 μPa^2s SEL_{ss}	
12-in steel	Impact	37	5	100 strikes	192	177	166	CALTRANS 2020
12-in steel	Vibratory installation	37	10	5 hrs	-	155	-	Greenbusch 2018
18-in steel	Vibratory installation	3	2	1 hr	-	158	-	CALTRANS 2020
12 – 14 -in timber	Vibratory extraction	48	16	8 hrs	-	160	-	Greenbusch 2018

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

$$TL = B * Log_{10} (R_1/R_2), \text{ where}$$

TL = transmission loss in dB

B = transmission loss coefficient

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

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

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

Site-specific transmission loss measurements are not available for Port Angeles Harbor. NMFS has therefore used the practical spreading loss model for both vibratory and impact pile driving in this analysis.

Estimated Harassment Isopleths - All Level B harassment isopleths are reported in table 5. Level B harassment isopleths from the project will be limited by the coastline along and across from the project site. The maximum attainable isopleth distance is 4,642 m during vibratory extraction of timber piles (see Figure 1 in the IHA application for further detail).

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources, including pile driving, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. Inputs used in the User Spreadsheet (*e.g.,* number of piles per day, duration and/or strikes per pile, source levels) are presented in table 4. The resulting isopleths and ensonified areas are reported in table 5 and table 6, respectively.

Table 5 -- Estimated isopleths by activity

Activity	Method	Underwater harassment isopleths [m]		Airborne Level B harassment isopleths [m]	
		Level A	Level B	Harbor	Other

		LF	MF	HF	PW	OW		Seals	Pinnipeds
12-in steel	Impact	46.0	1.6	55.0	25.0	2.0	136.0	150	47
12-in steel	Vibratory installation	8.0	0.7	11.8	4.8	0.3	2,154	19	6
18-in steel	Vibratory installation	4.3	0.4	6.4	2.6	0.2	3,415		
12 – 14-in timber	Vibratory extraction	23.4	2.1	34.6	14.2	1.0	4,642		

Table 6 -- Areas Ensonified (underwater)

Activity	Method	Level A harassment [km^2]					Level B harassment [km^2]
		LF	MF	HF	PW	OW	
12-in steel	Impact	0.02	< 0.01	0.02	0.01	< 0.01	0.07
12-in steel	Vibratory installation	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	7.74
18-in steel	Vibratory installation	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	14.52
12 – 14-in timber	Vibratory extraction	0.01	< 0.01	0.02	< 0.01	< 0.01	17.59

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations.

For marine mammal density information in the Port Angeles area we used data from the Pacific Navy Marine Species Density Database (U.S. Navy, 2019) to estimate take for marine mammals. The Marine Species Density Database incorporates analyzed literature and research for marine mammal density estimates per season for the Gulf of Alaska and the West Coast of the United States. Density estimates specific to the Strait of Juan de Fuca are not available for any of the species addressed here, and therefore takes were estimated based on the nearest available and most appropriate density estimates,

plus site-specific knowledge and professional judgement. Table 7 density estimates are calculated based on the in-water work window (July - February) and based on the highest seasonal density estimates for the relevant area.

Table 7 -- Seasonal Density of Species in the Project Area

Species	Densities (animals/ km^2)
Humpback whale	0.0027 (summer/fall)
Killer whale – Southern Resident	0.0012 (summer)
Killer whale - Transient	0.0208 (fall)
Harbor porpoise	2.16 (annual)
Harbor seal	0.76 (summer/fall)
Northern elephant seal	0.0029 (fall)
Steller sea lion	0.0027 (fall/winter)
California sea lion	0.300 (September)

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and authorized under the IHA.

Using the overall area of disturbance generated by pile removal and installation given calculated distances to attenuation below disturbance (Level B harassment) thresholds, incidental take for each activity is estimated by the following equation:

*Incidental take estimate = species density * ensonified area* days of pile-related activity*

This equation is a reasonable extrapolation for take estimates, which relies on the likelihood that a species is present within the ensonified area on a day where the planned activity is occurring. Take estimates were calculated with the conservative assumption that each activity (*i.e.,* vibratory extraction of steel piles, vibratory extraction of timber piles, vibratory installation, and impact installation) will occur on separate days, using a maximum of 23 days of in-water work. However, Coast Guard will perform some

activities on the same day, resulting in reduced numbers of overall take during the planned 15 days of pile driving.

No take by Level A harassment is authorized for any species of marine mammal due to the small zones, in conjunction with Coast Guard's required shutdown mitigation measure. Shutdown zones will be enforced at the extent of the estimated Level A harassment isopleth for all species groups except for large whales (i.e. baleen whales, including humpbacks, and killer whales). Coast Guard plans to shut down for killer whales upon observation regardless of location in order to prevent potential take of members of the Southern Resident stock, and shutdown zones for other large whale species will be enforced at the extent of the Level B harassment isopleths. Given the remote likelihood of large whale species entering Port Angeles Harbor during the 15 days of pile driving work (see calculated take estimates for humpback and killer whales in table 8) and the locations of Protected Species Observers (PSOs) described in the **Monitoring and Reporting** section, NMFS agrees that monitoring and shutdown measures are likely to be successful at avoiding take of these species. Therefore, no take of large whale species (including but not limited to humpback and killer whales) has been requested and none is authorized.

Based on sightings reported during the 2016-2017 Navy TPS Port Angeles project (Northwest Environmental Consulting, LLC 2018), Coast Guard anticipates the number of harbor seals present in the project area during the planned in-water activities may exceed calculated exposure estimates. During the 2016-2017 Navy TPS Port Angeles project, 275 harbor seals were observed in the estimated Level B harassment zone over approximately 45 days during which pile driving occurred (Northwest Environmental Consulting, LLC., 2018). Coast Guard project will have only 15 days of in-water pile driving. Therefore, Coast Guard has requested, and NMFS has authorized, 210 incidents of Level B harassment for harbor seals, approximately half the difference in sightings

between the 2016-2017 Navy TPS Port Angeles project and the calculated exposure estimate for this project.

Table 8 – Calculated and Authorized Amount of Taking and Percent of Stocks

Species	Stock	Take by Level A Harassment		Take by Level B Harassment		Total Take	Percent of Stock
		Calculated	Authorized	Calculated	Authorized		
Humpback whale	Hawai'i	0	0	0.51	0	0	0
	Mainland Mexico – CA/OR/WA						
	Central America/ Southern Mexico - CA/OR/WA						
Killer whale	Eastern North Pacific Southern Resident	0	0	0.23	0	0	0
	West Coast Transient	0	0	3.94	0	0	0
Harbor porpoise	Washington Inland Waters	0.73	0	408.9	409	409	4.92
Harbor seal	Washington Northern Inland Waters	0.13	0	143.9	210	210	NA[1]
Northern Elephant Seal	CA Breeding	0	0	0.55	1	1	< 0.01
Steller Sea Lion	Eastern	0	0	0.51	1	1	< 0.01
California Sea lion	U.S.	0.1	0	56.8	57	57	0.02

[1] Stock size for the Washington Northern Inland Waters stock of harbor seals is not available from the most recent SARs due to a lack of recent data.

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.

Shutdown Zones- 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). Construction supervisors and crews, Protected Species Observers (PSO), and relevant Coast Guard staff must avoid direct physical interaction with marine mammals during construction activities, which could include (but are not limited to) the following: (1) barge movement to the pile

location; (2) pile positioning on the substrate via a crane (*i.e.*, stabbing the pile); and (3) pile removal from the water column/substrate via a crane (*i.e.*, deadpull). If a marine mammal comes within 10 meters of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary to avoid direct physical interaction.

Further, Coast Guard must implement activity-specific shutdown zones as described in table 9. The shutdown zone for humpback whales or other non-authorized marine mammal species (except killer whales) will be the predicted Level B harassment isopleth. For these species, project activity may resume after the animal has not been observed for 15 minutes, or has been observed leaving the shutdown zone (i.e. the Level B harassment zone). As proposed by Coast Guard, killer whales will require a shutdown upon observation no matter location in order to prevent take of members of the Southern Resident stock. If killer whales are sighted, the project activity would resume only after the killer whale is not observed for 15 minutes.

Table 9 -- Required Shutdown Zones

Pile Type	Pile Driving Method	Shutdown Zone (m)						Monitoring zone (m) – all species
		Killer whales	LF	MF	HF	PW	OW	
Steel	Vibratory	Any sighting at any distance	3,415	12				3,415
	Impact		136	55				136
Timber	Vibratory		4,642	35				4,642

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. Coast Guard will employ three PSOs for vibratory installation and extraction of steel and timber piles. Two PSOs will be land-based, while one will be positioned on a vessel to ensure full monitoring coverage to the estimated Level B

harassment isopleth. For impact pile driving activities, Coast Guard will employ one PSO.

Pre and Post-Activity Monitoring- Monitoring must take place from 30 minutes prior to initiation of pile driving activity (*i.e.*, pre-start clearance monitoring) through 30 minutes post-completion of pile driving activity. 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 9 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. If a marine mammal is observed entering or within the shutdown zones, pile driving activity must be delayed or halted. If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal. If a marine mammal for which take by Level B harassment is authorized is present in the Level B harassment zone, activities will begin and Level B harassment take will be recorded.

Monitoring for Level B Harassment- PSOs will monitor the shutdown zones and beyond to the extent that PSOs can see. For this activity, the monitoring zone is defined as the largest predicted Level B harassment isopleth for a given activity (table 9). Monitoring beyond the shutdown zones enables 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. If weather or sea conditions restrict the observer's ability to observe the monitoring zone, pile driving activities must cease until conditions are favorable for observations to resume.

Soft Start- Soft-start procedures are used to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, 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.

If unsafe working conditions during ramp ups are reported (*e.g.*, crane failure from excess wear due to the ramp up procedure) by the contractor and verified by an independent safety inspection, Coast Guard may elect to discontinue impact driver ramp ups. Coast Guard will inform NMFS if the ramp up procedure is discontinued. If use of a variable moment driver is infeasible and the model of impact driver was not specifically designed for ramp up procedures, then Coast Guard will not employ impact ramp up procedures due to personnel safety concerns.

In-water Work Window – To reduce impacts to marine fishes, Coast Guard will follow the in-water work window designated for the Strait of Juan de Fuca and associated bays and inlets by the U.S. Army Corps of Engineers. The work window extends from July 16 to February 15; no in-water work will be conducted outside of that date range unless a modification is negotiated with the relevant regulatory agencies, including the U.S. Army Corps of Engineers.

NMFS and Coast Guard considered the use of bubble curtains as a mitigation measure during this project. However, based on the limited amount of impact driving expected, the relatively small estimated Level A harassment isopleths, and the potential for increased turbidity during bubble curtain use, NMFS has determined that use of a bubble curtain would not further reduce take of marine mammals during this project and they are not included in the required mitigation methods.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has determined that the described mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

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 Marine Mammal Monitoring Plan, dated July 2023, available online at *https://www.fisheries.noaa.gov/action/incidental-take-authorization-us-coast-guard-air-station-port-angeles-pier-maintenance-and*. Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods;
- At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;
- Other PSOs may substitute other relevant experience, education (degree in biological science or related field) or training for experience performing the duties of a PSO during construction activities pursuant to a NMFS-issued incidental take authorization;

- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization; and
- PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.

PSOs should have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including but not limited to 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.

A team of one to two land based PSOs will be deployed to observe the monitoring zones for vibratory and impact pile driving during this project. PSOs will be located at the best vantage points to see the entirety of the active zone. One PSO will have an unobstructed view of all water within the shutdown zones, and will be stationed at or near the project activity. While the exact monitoring stations have not yet been determined,

Coast Guard provided potential locations in Figure 1 of its Marine Mammal Monitoring and Mitigation Plan. Additionally, a PSO will be stationed for monitoring on an observation vessel in order to ensure the entire monitoring zone to the extent of the relevant predicted Level B harassment isopleth can be observed during vibratory pile installation and removal.

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.

Reporting

Coast Guard will submit a draft report to NMFS within 90 calendar days of the completion of monitoring or 60 calendar days prior to the requested issuance of any subsequent IHA for construction activity at the same location, whichever comes first. The marine mammal monitoring report will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report would include:

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including: (1) The number and type of piles that were driven and the method (*e.g.*, impact or vibratory); and (2) Total duration of driving time for each pile (vibratory driving) and 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: (1) Name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; (2) Time of sighting; (3) Identification of the animal(s) (*e.g.*, genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species; (4) Distance and location of each observed marine mammal relative to the pile being driven for each sighting; (5) Estimated number of animals (min/max/best estimate); (6) Estimated number of animals by cohort (adults, juveniles, neonates, group composition, *etc.*); (7) Animal's closest point of approach and estimated time spent within the harassment zone; (8) Description of any marine mammal behavioral observations (*e.g.*, observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.*, no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);
- Number of marine mammals detected within the harassment zones, by species; and
- Detailed information about implementation of any mitigation (*e.g.*, shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

A final report must be prepared and submitted within 30 calendar days following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final.

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, Coast Guard must report the incident to the OPR, NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *itp.hotchkin@noaa.gov*) and to the West Coast regional stranding network (866-767-6114) as soon as feasible. If the death or injury was clearly caused by the specified activity, Coast Guard must immediately cease the activities until NMFS OPR is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of this IHA. Coast Guard must not resume their activities until notified by NMFS. The report must include the following information:

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

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.*, intensity, duration), the context of any

impacts or responses (*e.g.*, critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the majority of our analysis applies to all the species listed in table 8, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively 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, they are described independently in the analysis below.

Pile driving and removal activities associated with the project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment, from underwater sounds generated from pile driving and removal. Potential takes could occur if individuals of these species are present in zones ensonified above the thresholds for Level B harassment, identified above, when these activities are underway.

The takes by Level B harassment would be due to potential behavioral disturbance. No mortality or serious injury is anticipated given the nature of the activity, and no Level A harassment is anticipated due to Coast Guard's construction method and the required mitigation measures (see **Mitigation** section).

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, would likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring; *e.g.*, Thorson and Reyff 2006; HDR, Inc. 2012; Lerma 2014; ABR 2016). Most likely, individuals would simply move away from the sound source and be temporarily displaced from the areas of pile driving and removal, although even this reaction has been observed primarily only in association with impact pile driving, which Coast Guard anticipates using for only 10 percent of pile driving. If sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activity is occurring, particularly as the project is expected to occur over just 15 in-water pile driving days.

The project is also not expected to have significant adverse effects on affected marine mammals' habitats. The project activities would not modify existing marine mammal habitat for a significant amount of time. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range. Given the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat, including fish, are not expected to cause significant or long-term negative consequences.

There are two known harbor seal haulouts close to the project site. The first haulout site is directly across Port Angeles Harbor from the USCG Air Station, approximately 2.4 km away. Seals swimming to and from this haulout have the potential to experience Level B harassment due to underwater sound exposure during vibratory or impact pile driving activities. However, the project activities are not expected to occur during any particularly sensitive time (*e.g.,* molting or pupping season), and the project duration is short, with approximately 15 days of in-water work. Given the availability of

a second haulout close by (3.5 km (2.17 mi) from the project site on the opposite side of Ediz Hook) which is not expected to be exposed to noise from pile driving, and the short duration of the project, there are no anticipated significant or long-term negative consequences to harbor seals in the project area.

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

- No serious injury or mortality is anticipated or authorized;
- The anticipated incidents of Level B harassment would consist of, at worst, temporary modifications in behavior that would not result in fitness impacts to individuals;
- Take estimates were calculated assuming that no activities would occur on the same day. However, in reality, vibratory and impact driving are likely to occur on the same day, reducing the overall impact to marine mammal species;
- The area impacted by the specified activity is very small relative to the overall habitat ranges of all species;
- While impacts will occur within areas that are important for feeding or resting for multiple stocks, because of the small footprint of the activity relative to the area of these important use areas, and the scope and nature of the anticipated impacts of pile driving exposure, we do not expect impacts to the reproduction or survival of any individuals.

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 described monitoring and mitigation measures, NMFS finds that

the total marine mammal take from the planned activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

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

The number of instances of take for each species or stock authorized to be taken as a result of this project is included in table 8. Our analysis shows that less than one-third of the best available population abundance estimate of each stock could be taken by harassment. The number of animals authorized to be taken for all stocks would be considered small relative to the relevant stock's abundances even if each estimated taking occurred to a new individual, which is an unlikely scenario.

A lack of an accepted stock abundance value for the Washington Northern Inland Waters stock of harbor seal did not allow for the calculation of an expected percentage of the population that would be affected. The most relevant estimate of partial stock abundance is 7,513 seals (CV = 11.5%) (Jefferson *et al*. 2021). Given 210 authorized takes by Level B harassment for the stock, comparison to the best estimate of stock abundance shows, at most, 2.8 percent of the stock would be expected to be impacted.

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

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

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

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq*.) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our 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 NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that the issuance of the IHA qualifies to be categorically excluded from further NEPA review.

Authorization

NMFS has issued an IHA to Coast Guard for the potential harassment of small numbers of five marine mammal species incidental to the Pier Maintenance and Bank Stabilization project in Port Angeles, Washington, that includes the previously explained mitigation, monitoring and reporting requirements. The IHA can be found at: *https://www.fisheries.noaa.gov/action/incidental-take-authorization-us-coast-guard-air-station-port-angeles-pier-maintenance-and*.

Dated: October 25, 2023.

Catherin Marzin,

Acting Director, Office of Protected Resources,

National Marine Fisheries Service.

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