collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on April 7, 2023, during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Institute of Standards and Technology (NIST), Commerce.

Title: Manufacturing Extension Partnership (MEP) Client Impact Survey.

OMB Control Number 0693–0021.

Form Number(s): None.

Type of Request: Extension of current information collection.

Number of Respondents: 14,500.

Average Hours per Response: 12 minutes.

Burden Hours: 2,900 hours.

Needs and Uses: The objective of the NIST Manufacturing Extension Partnership Program (MEP) is to enhance productivity, technological performance, and strengthen the global competitiveness of small-and medium-sized U.S.-based manufacturing firms. Through this client impact survey, the MEP will collect data necessary for program accountability; analysis and research into the effectiveness of the MEP program; reports to stakeholders; GPRA; continuous improvement efforts; knowledge sharing across the MEP system; and identification of best practices. Collection of this data is needed in order to comply with the MEP charter, as mandated by Congress.

Affected Public: Private Sector.

Frequency: Annually.

Respondent's Obligation: Voluntary.

This information collection request may be viewed at *www.reginfo.gov.* Follow the instructions to view the Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be submitted within 30 days of the publication of this notice on the following website *www.reginfo.gov/public/do/PRAMain.* Find this particular information collection by selecting ''Currently under 30-day Review—Open for Public Comments'' or by using the search function and entering either the title of the collection or the OMB Control Number 0693–0021.

Sheleen Dumas,

Department PRA Clearance Officer, Office of the Under Secretary for Economic Affairs, Commerce Department.

[FR Doc. 2023–20933 Filed 9–25–23; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD278]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Maintenance and Rehabilitation of the Bellingham Shipping Terminal

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 Port of Bellingham for authorization to take marine mammals incidental to the maintenance and rehabilitation of the Bellingham Shipping Terminal in Bellingham, WA. 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 26, 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.cockrell@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 above.

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: Craig Cockrell, 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 May 5, 2023, NMFS received a request from the Port of Bellingham for an IHA to take marine mammals incidental to pile driving and removal. Following NMFS' review of the application, the Port of Bellingham submitted a two revised versions on June 16, 2023 and August 28, 2023. The application was deemed adequate and complete on September 6, 2023. The Port of Bellingham's request is for take of harbor seals (*Phoca vitulina*), California sea lions (*Zalophus californianus*), Steller sea lions (*Eumetopias jubatus*), and harbor porpoise (*Phocoena phocoena*) by Level B harassment and, for harbor seals, Level A harassment. Neither the Port of Bellingham nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

The Port of Bellingham would conduct construction activities to repair the wharf and pier structure of the Bellingham Shipping Terminal. The activity includes removal of existing piles and the installation of both temporary and permanent piles of various sizes. Takes of marine mammals by Level A and Level B harassment would occur due to both impact and vibratory pile driving and removal. The project would occur in Bellingham Bay in Northwest Washington within the city of Bellingham. The construction would occur for 87 non-consecutive days.

The Bellingham Shipping Terminal is located on the western shore of Bellingham Bay and is a major port that connects the Burlington Northern Santa Fe railway and Interstate 5 to commercial ships. The terminal is bordered by Port and heavy industrial properties, berths and industry, and Bellingham Bay. This project would replace aging components of the terminal to current maritime safety standards to handle cargo demands, including up-to-standards for modern electrical infrastructure.

Dates and Duration

This IHA would be valid from one year of the date of issuance. It is expected to take up to 87 non-consecutive days of in water work over a 4-month work window to complete the pile driving and removal activities. Pile driving would be completed intermittently throughout the daylight hours. All pile driving is expected to be completed during one phase of construction.

Specific Geographic Region

Bellingham bay is located in the northeast corner of the Salish Sea in northwest Washington. The bay is relatively shallow with the deepest depths around 30 meters (m) (100 feet (ft)). Bellingham bay is dominated by a sandy gravely bottom. The city of Bellingham adjacent to the bay is heavily industrialized. Floating log booms are located near the project site in an adjacent industrial pond (Farrer and Acevedo-Gutierrez 2010). Although the port is industrialized the mean ambient sound pressure levels Pile driving at the Bellingham Shipping Terminal would occur in waters less than 9 m (30 ft).

BILLING CODE 3510–22–P

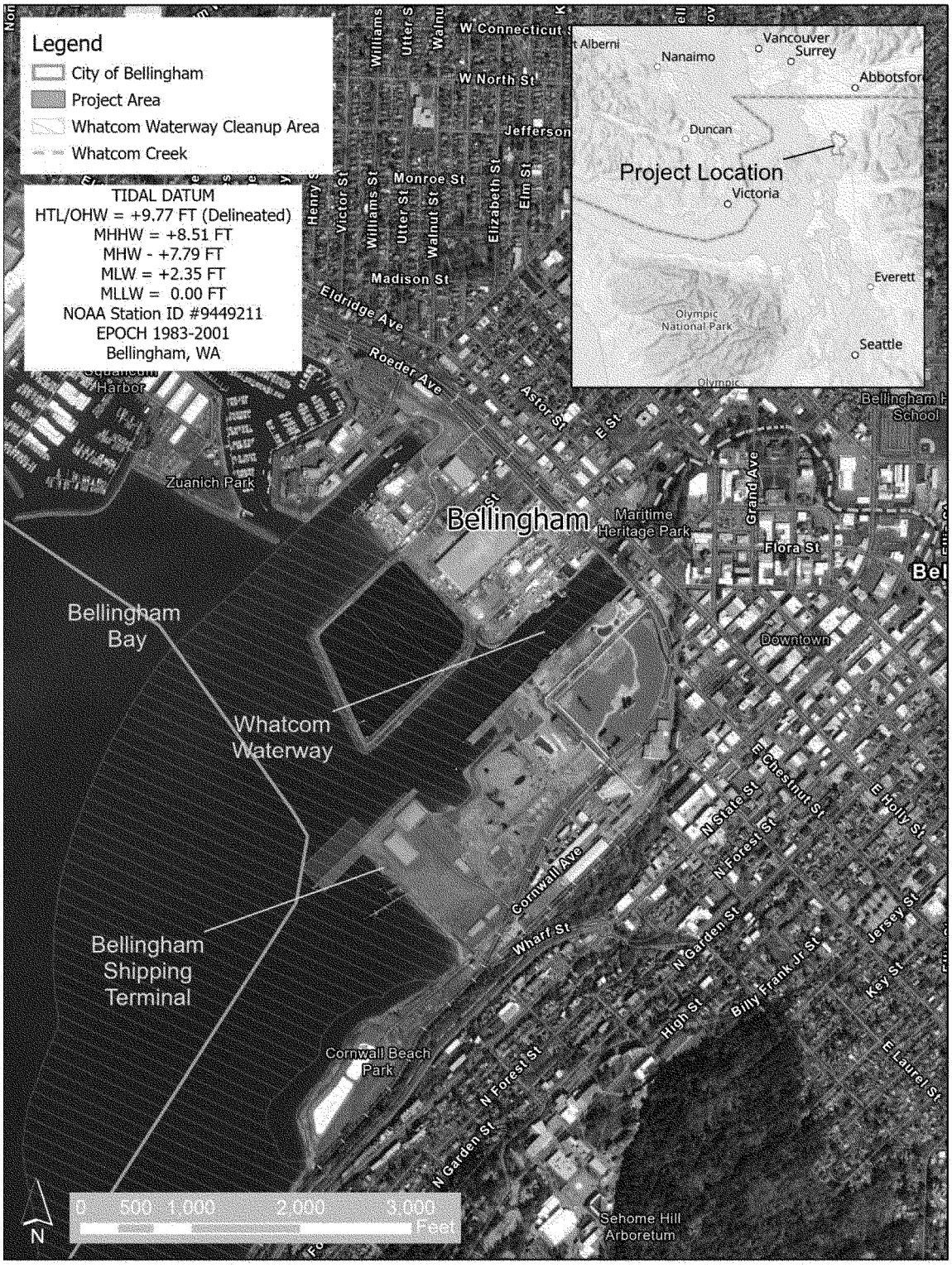

Figure 1. Project location in Bellingham Bay, WA.

BILLING CODE 3510–22–C

Detailed Description of the Specified Activity

The Bellingham Shipping Terminal rehabilitation project includes the removal of 36 existing 24-inch (in) diameter (61 centimeter (cm)) steel piles, 15 existing 14-in to 16-in (36 cm to 41 cm) timber fender piles, and 2 existing 18-in to 20-in (46 cm to 51 cm) timber piles. Fifty-six 24-in steel piles would be installed to support the main deck of the shipping terminal and in addition 14, 24-in steel piles would be installed behind the existing bulkhead. The existing fender piles would be replaced by 13 16-in steel H-piles. Two

18-in to 20-in timber piles would be installed on the south portion of the terminal. Vibratory and impact hammers would be used for the installation and removal of all piles (Table 1). Removal of piles would be conducted using a straight pull method or vibratory hammers. After new piles are set with a vibratory hammer, installed piles would be proofed with an impact hammer to verify the structural capacity of the pile embedment. The work would be completed at the existing Bellingham Shipping Terminal in Bellingham, Washington. Work on the terminal would be completed within 1-year.

TABLE 1—NUMBER AND TYPES OF PILES TO BE INSTALLED AND REMOVED

Pile diameter/type	Number of piles	Strikes per pile (impact)	Vibratory duration per pile (mins)	Piles per day	Days of Activity
Pile Installation					
24-in Steel Piles	56	1,725	90	1–2	67
16-in Steel Piles H-Piles	13	150	30	6	3
18 to 20-in Timber piles	2	800	N/A	2	2
Pile Removal					
24-in Steel Piles	36	.....	30	6	10
14 to 16-in Timber Fender Piles	15	.....	15	8	3
18 to 20-in Timber piles	2	.....	15	2	2
Total	124	.....	.....	.....	87

Dredging work is expected to take place in berths one and two of the shipping terminal to ensure sufficient draft for ships to use the berths in a safe manner. The expected depth at each berth after dredging is 35 ft (11 m) during mean lower low water. The dredging work proposed is not expected to produce in water noise that would cause take by Level A or Level B harassment, and therefore is not considered further in this document.

Above water construction would include replacement of the decking on the terminal, upgrading the utility systems to meet current standards, and addition of fill to the existing bulkhead of the terminal. This above-water work is not expected to result in any take. Noise generated above the water would not be transmitted into the water to the degree that resulting underwater noise would be expected to cause disturbance and, none of the pinniped haulouts are located close enough to the project area to cause disturbance, therefore airborne noise is not considered further in this document.

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 4 and 5 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. 2022 SARs. All values presented in Table 2 are the most recent available at the time of publication (including from the final 2022 SARs) 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 [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]
Odontoceti (toothed whales, dolphins, and porpoises)						
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):						
California Sea Lion	*Zalophus californianus*	U.S	-,-; N	257,606 (N/A,233,515, 2014)	14,011	>321
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-,-; N	43,201 (N/A, 43,201, 2017)	2,592	112
Family Phocidae (earless seals):						
Harbor Seal	*Phoca vitulina*	Washington Northern Inland Waters.	-, -; N	UNK (UNK, UNK, 1999)	UNK	9.8

[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://www.marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/;* Committee on Taxonomy (2022)).

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

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

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

As indicated above, all four species (with four managed stocks) in Table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. All species that could potentially occur in the proposed project area are included in Table 1 of the IHA application. While killer whales (*Orcincus orca*), humpback whales (*Megaptera novaeangilae*), gray whales (*Eschrichtius robustus*), and minke whales (*Balaenoptera acutorostrada*) have been sighted in the area, 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. The applicant and NMFS expect the occurrence of these species is infrequent for Bellingham Bay based on sightings data from Orca Network (2021). Furthermore, if these species are sighted approaching the Level B harassment zone construction activities would be shut down in order to avoid harassment. Therefore, take is not expected for killer whales, humpback whales, gray whales, or minke whales and are not discussed further in this document.

Harbor Porpoise

In the eastern North Pacific Ocean, harbor porpoise are found in coastal and inland waters from Point Barrow, along the Alaskan coast, and down the west coast of North America to Point Conception, California (Gaskin 1984). Harbor porpoise are known to occur year-round in the inland trans-boundary waters of Washington and British Columbia, Canada (Osborne *et al.,*1988), and along the Oregon/Washington coast (Barlow 1988; Barlow *et al.;* 1988, Green *et al.* 1992). There was a significant decline in harbor porpoise sightings within southern Puget Sound between the 1940s and 1990s but sightings have increased seasonally in the last 10 years (Carretta *et al.,* 2019).

Annual winter aerial surveys conducted by the Washington Department of Fish and Wildlife from 1995 to 2015 revealed an increasing trend in harbor porpoise in Washington inland waters, including the return of harbor porpoise to Puget Sound. The data suggest that harbor porpoise were already present in Juan de Fuca, Georgia Straits, and the San Juan Islands from the mid-1990s to mid-2000s, and then expanded into Puget Sound and Hood Canal from the mid-2000s to 2015, areas they had used historically but abandoned. Changes in fishery-related entanglement was suspected as the cause of their previous decline and more recent recovery, including a return to Puget Sound (Evenson *et al.,* 2016). Seasonal surveys conducted in spring, summer, and fall 2013–2015 in Puget Sound and Hood Canal documented substantial numbers of harbor porpoise. Observed porpoise numbers were twice as high in spring as in fall or summer, indicating a seasonal shift in distribution of harbor porpoise (Smultea, 2015). The reasons for the seasonal shift and for the increase in sightings is unknown.

Monitors during a 2017 U.S. Navy construction project at the Coast Guard Air Station in Port Angeles, Washington (roughly 60 mi (97 km)) observed a total of six individual harbor porpoises within the Level B harassment zone during the project. No take observations of harbor porpoises within the Level A harassment zone occurred during the project.

California Sea Lions

The California sea lion is the most frequently sighted pinniped found in Washington waters and uses haul-out sites along the outer coast, Strait of Juan de Fuca, and in Puget Sound. Haul-out sites are located on jetties, offshore rocks and islands, log booms, marina docks, and navigation buoys. Only male California sea lions migrate into Pacific Northwest waters, with females remaining in waters near their breeding rookeries off the coast of California and Mexico. The California sea lion was considered rare in Washington waters prior to the 1950s. More recently, peak numbers of 3,000 to 5,000 animals move into the Salish Sea during the fall and remain until late spring, when most return to breeding rookeries in California and Mexico. There are no known haulouts in Bellingham Bay (Jeffries *et al.,* 2000). Infrequent

sightings of California sea lions by port staff have occurred in the fall and winter when prey is available in Bellingham Bay.

California sea lions feed primarily in coastal waters. They are opportunistic predators and eat a variety of prey including squid, anchovies, mackerel, rockfish and sardines (NMFS, 2019). California sea lion breeding areas are mostly in southern California and are not expected to spatially overlap with the project area. One California sea lion per day was seen in the vicinity of this project site by port staff.

Steller Sea Lions

Steller sea lions range along the North Pacific Rim from northern Japan to California (Loughlin *et al.,*1984). There are two separate stocks of Steller sea lions, the eastern U.S. stock, which occurs east of Cape Suckling, Alaska (long. 144° W), and the western U.S. stock, which occurs west of that point. Only the western stock of Steller sea lions, which is designated as the western distinct population segment (DPS) of Steller sea lions, is listed as endangered under the ESA (78 FR 66139; November 4, 2013). Unlike the western U.S. stock of Steller sea lions, there has been a sustained and robust increase in abundance of the eastern U.S. stock throughout its breeding range. The eastern stock of Steller sea lions has historically bred on rookeries located in Southeast Alaska, British Columbia, Oregon, and California. However, within the last several years a new rookery has become established on the outer Washington coast (at the Carroll Island and Sea Lion Rock complex), with more than 100 pups born there in 2015 (Muto *et al.,* 2020).

Steller sea lions use haul-out locations in Puget Sound, and may occur at the same haul-outs as California sea lions. Similar to California sea lions, there are no known Steller sea lion haulouts in Bellingham Bay. Sighting of Steller sea lions are infrequent by port staff in the fall and winter when prey is available in Bellingham Bay. One Steller sea lion per day was seen in the vicinity of this project site by port staff.

Steller sea lions are opportunistic predators, feeding primarily on a wide variety of fishes and cephalopods, including Pacific herring (*Clupea pallasi*), walleye pollock (*Gadus chalogramma*), capelin (*Mallotus villosus*), Pacific sand lance (*Ammodytes exapterus*), Pacific cod (*Gadus machrocephalus*), salmon (*Oncorhynchus spp.*), and squid (*Teuthida spp.*) (Jefferson *et al.,* 2008; Wynne *et al.,* 2011).

Harbor Seal

Harbor seals inhabit coastal and estuarine waters off Baja California, north along the western coasts of the continental U.S., British Columbia, and Southeast Alaska, west through the Gulf of Alaska and Aleutian Islands, and in the Bering Sea north to Cape Newenham and the Pribilof Islands (Carretta *et al.,* 2014). They haul out on rocks, reefs, beaches, and drifting glacial ice and feed in marine, estuarine, and occasionally fresh waters. Harbor seals generally are non-migratory, with local movements associated with such factors as tides, weather, season, food availability, and reproduction (Scheffer and Slipp 1944; Fisher, 1952; Bigg 1969, 1981). Within U.S. west coast waters, five stocks of harbor seals are recognized: (1) Southern Puget Sound (south of the Tacoma Narrows Bridge); (2) Washington Northern Inland Waters (including Puget Sound north of the Tacoma Narrows Bridge, the San Juan Islands, and the Strait of Juan de Fuca); (3) Hood Canal; (4) Oregon/Washington Coast; and (5) California. Harbor seals in the project areas would be from the Washington Northern Inland Waters stock.

Harbor seals are the only pinniped species that occurs year-round and breeds in Washington waters. Pupping seasons vary by geographic region, with pups born in coastal estuaries (Columbia River, Willapa Bay, and Grays Harbor) from mid-April through June; Olympic Peninsula coast from May through July; San Juan Islands and eastern bays of Puget Sound from June through August; southern Puget Sound from mid-July through September; and Hood Canal from August through January (Jeffries *et al.*, 2000). Recent line transect surveys have estimated the harbor seal stock size at 7,513 individuals for Washington Northern Inland Waters stock (Jefferson *et al.,* 2021). Pupping by harbor seals on haulouts located in Bellingham Bay has not been observed.

There are three document haulouts in Bellingham Bay that range from 0.10 mile (mi) (0.16 kilometer (km)) to 1.75 mi (2.82 km) from the project area. Counts of harbor seals at the closest haulout (log pond and pier) to this project area were completed by Western Washington University students from 2017 to 2021. During that period an average of 7.7 seals per day were on the haulout during the month of August. August was the month with the highest average daily count of harbor seals compared to the rest of the year.

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.

TABLE 3—MARINE MAMMAL HEARING GROUPS—Continued

[NMFS, 2018]

Hearing group	Generalized hearing range *
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.

Description of Sounds Sources

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

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

In-water construction activities associated with the project would include impact pile driving, vibratory pile driving, and vibratory pile removal. 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, 2018). Non-impulsive sounds (*e.g.,* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with raid rise/decay time that impulsive sounds do (ANSI, 1995; NIOSH, 1998; NMFS, 2018). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward, 1997 and Southall, *et al.* 2007).

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

The likely or possible impacts of the Port of Bellingham's proposed activity on marine mammals could involve both non-acoustic and acoustic stressors. Potential non-acoustic stressors include the physical presence of the equipment and personnel; however, any impacts to marine mammals are expected to primarily be acoustic in nature.

Auditory Effects

The introduction of anthropogenic noise into the aquatic environment from pile driving and removal is the primary means by which marine mammals may be harassed from the Port of Bellingham's specified activity. In general, animals exposed to natural or anthropogenic sound may experience physical and behavioral effects, ranging in magnitude from none to severe (Southall *et al.,* 2007 and Southall *et al.* 2021). 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 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 threshold shift is customarily expressed in dB. A 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 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 (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)—A temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018). Based on data from cetacean TTS measurements (Southall *et al.,* 2007), 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 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 auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that takes place during a time when the animal is traveling through the open ocean, where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during 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.

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaeorientalis*)) and five species of pinnipeds exposed to a limited number of sound sources (*i.e.,* mostly tones and octave-band noise) in laboratory settings (Finneran, 2015). TTS was not observed in trained spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to impulsive noise at levels matching previous predictions of TTS onset (Reichmuth *et al.,* 2016). In general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Finneran, 2015). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. No data are available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.* (2007), Finneran and Jenkins (2012), Finneran (2015), and Table 5 in NMFS (2018).

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

Behavioral Effects

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, Southall et al., 2021).

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); 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, 2021; Weilgart, 2007; Archer *et al.,* 2010). Behavioral reactions can vary not only among individuals but also within exposures of an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012, Southall *et al.,* 2021), 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. For a review of studies involving marine mammal behavioral responses to sound, see Southall *et al.,* 2007; Gomez *et al.,* 2016; and Southall *et al.,* 2021 reviews.

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.

The area likely impacted by the project is relatively small compared to the available habitat in the surrounding waters of the Salish Sea.

In 2017, the U.S. Navy documented observations of marine mammals during construction activities (*i.e.,* pile driving) at the U.S. Coast Guard Air Station Sector Field Office, Port Angeles, Washington (81 FR 67985, October 3, 2016). This project was roughly 60 mi from the proposed project cite and features that are very similar (*i.e.* a shallow bay of the Salish Sea). In the marine mammal monitoring report for that project (Northwest Environmental Consulting, 2018), 261 harbor seals were observed within the behavioral disturbance zone during pile driving or drilling (*i.e.,* documented as Level B harassment take). Twelve California sea lions and 2 Steller sea lions were observed within the disturbance zone during pile driving activities. Six harbor porpoise were sighted in the Level B harassment zone during construction. No visible signs of disturbance were noted for any of these species that were present in the harassment zones. Given the similarities in activities and habitat and the fact the same species are involved, we expect similar behavioral responses of marine mammals to the specified activity. That is, disturbance, if any, is likely to be temporary and localized (*e.g.,* small area movements). Monitoring reports from other recent pile driving projects have observed similar behaviors.

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. Bellingham Bay is home to a busy industrial ports as well as large numbers small private vessels that transit the area on a regular basis; therefore, background sound levels in the bay are already elevated.

Airborne Acoustic Effects—Pinnipeds that occur near the project site could be exposed to airborne sounds associated with pile driving and removal that have the potential to cause behavioral harassment, depending on their distance from pile driving activities. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Airborne noise would primarily be an issue for pinnipeds that are swimming or hauled out near the project site within the range of noise levels exceeding the acoustic thresholds. We recognize that pinnipeds in the water could be exposed to airborne sound that may result in behavioral harassment when looking with their heads above water. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon the area and move further from the source. However, these animals would previously have been ''taken'' because of exposure to underwater sound above the behavioral harassment thresholds, which are in all cases larger than those associated with airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Therefore, we do not believe that authorization of incidental take resulting from airborne sound for pinnipeds is warranted, and airborne sound is not discussed further here.

Marine Mammal Habitat Effects

The Port of Bellingham's construction activities could have localized, temporary impacts on marine mammal habitat by increasing in-water sound pressure levels and slightly decreasing water quality. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater 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 pile driving, elevated levels of underwater noise would ensonifi

Bellingham Bay where both fish and mammals may occur and could affect foraging success.

In-water pile driving and pile removal would also cause short-term effects on water quality due to increased turbidity. Local currents are anticipated to disburse suspended sediments produced by project activities at moderate to rapid rates depending on tidal stage. The Port of Bellingham would employ standard construction best management practices (except for reduced Level A shutdown zones), thereby reducing any impacts. Considering the nature and duration of the effects, combined with the measures to reduce turbidity, the impact from increased turbidity levels is expected to be discountable.

Pile installation and removal may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. The Port of Bellingham must comply with state water quality standards during these operations by limiting the extent of turbidity to the immediate project area. In general, turbidity associated with pile installation is localized to about a 25-ft radius around the pile (Everitt *et al.,* 1980). Cetaceans are not expected to enter the harbor and be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds would likely be transiting the area and could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to be discountable to marine mammals. Furthermore, pile driving and removal at the project site would not obstruct movements or migration of marine mammals.

Effects on Prey

Construction activities would produce continuous (*i.e.,* vibratory pile driving) and impulsive (*i.e.* impact driving) sounds. Fish react to sounds that are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. 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). Sound pulses at received levels may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality.

Impacts on marine mammal prey (*i.e.,* fish or invertebrates) of the immediate area due to the acoustic disturbance are possible. The duration of fish or invertebrate avoidance or other disruption of behavioral patterns in this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Further, significantly large areas of fish and marine mammal foraging habitat are available in the nearby vicinity in the Salish Sea.

The duration of the construction activities is relatively short, with pile driving and removal activities expected to take only 87 days. Each day, construction would occur for no more than 12 hours during the day and pile driving activities would be restricted to daylight hours. The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe for the project.

Construction activities, in the form of increased turbidity, have the potential to adversely affect fish in the project area. Increased turbidity is expected to occur in the immediate vicinity (on the order of 10 ft (3 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 fish are expected to be minor or negligible. In addition, best management practices would be in effect, which would limit the extent of turbidity to the immediate project area.

In summary, given the relatively short daily duration of sound associated with individual pile driving and 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. 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 construction (*i.e.,* pile driving) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, primarily for phocids. Auditory injury is unlikely to occur for other authorized species. 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 microPascal μPa)) for continuous (*e.g.,* vibratory pile driving) and above RMS SPL 160 dB re 1 μPa for non-explosive impulsive (*e.g.,* impact pile driving) 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.

The Port of Bellingham's proposed activity includes the use of continuous (vibratory driving and removal) and impulsive (impact pile driving), and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μPa are applicable. Originally the applicant had recommended a RMS SPL thresholds of 130 1 μPa to predict take by Level B harassment, based on ambient sound measurements in Bassett *et al.* (2010). After further review of measurements in the area, the mean underwater noise levels was 117 re 1 μPa and, therefore, NMFS determined the 120 RMS SPL threshold was more appropriate for calculating the level B harassment zone.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). The Port of Bellingham's proposed activity includes the use of (impact pile driving) and non-impulsive (vibratory pile driving and removal) 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 $L_{E,OW,24h}$: 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 proposed project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.,* impact pile driving, vibratory pile driving and removal). The maximum (underwater) area ensonified above the thresholds for behavioral harassment referenced above is 11.66 km^2 (7.25 mi^2), and would consist of the majority of Bellingham Bay (see Figure 10 in the IHA application). Additionally, vessel traffic and other commercial and industrial activities in the project area may contribute to elevated background noise levels which may mask sounds produced by the project.

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:

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

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 water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6-dB reduction in sound level for each doubling of distance from the source (20 * log[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[range]). A practical spreading value of 15 is often used under conditions, such as the project site, where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss is assumed here.

The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. In order to calculate the distances to the Level A harassment and the Level B harassment sound thresholds for the methods and piles being used in this project, NMFS used acoustic monitoring data from other locations to develop proxy source levels for the various pile types, sizes and methods. The project includes vibratory and impact pile installation of steel and timber piles and vibratory removal of steel and timber piles. Pile sizes range from 14-in to 24-in, and the applicant has decided to implement mitigation and monitoring measures and take estimates associated with 24-in. piles for all pile types and sizes. Source levels for the 24-in. pile size and driving methods are presented in Table 5. The source levels for vibratory and impact installation of 24-in. steel piles are based on the averaged source level of the same type of pile reported by California Department of Transportation (Caltrans) in pile driving source level compendium documents (Caltrans, 2015, 2020).

TABLE 5—PROXY SOUND SOURCE LEVELS FOR PILE SIZES AND DRIVING METHODS

Pile size	Method	Proxy source level			Literature source
		dB RMS re 1μPa	dB SEL re 1μPa^{2}sec	dB peak re 1μPa	
24 in	Vibratory	166	N/A	N/A	Caltrans 2020.
24 in	Impact	190	174	203	Caltrans 2015.

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources such as impact or vibratory pile driving and removal, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. Inputs used in the optional User Spreadsheet tool, and the resulting estimated isopleths, are reported below.

Although many different pile types and sizes are proposed to be used during the construction project, the Port of Bellingham is implementing mitigation and reporting measures and take estimates for the 24-in. steel pipe piles. Use of this pile size results in the largest Level A and Level B harassment zones and most conservative mitigation measures. Therefore the only calculations the applicant ran were using the 24-in. piles. The applicant also plans to limit the number of impact strikes per day for all piles to 1,725 and the vibratory install of all piles to 90 minutes per day and the vibratory removal of all piles to 30 minutes per day.

TABLE 6—USER SPREADSHEET INPUT PARAMETERS USED FOR CALCULATING LEVEL A HARASSMENT ISOPLETHS

Pile size and installation method	Spreadsheet tab used	Weighting factor adjustment (kHz)	Number of strikes per pile	Number of piles per day	Activity duration (minutes)
24-in vibratory installation	A.1 Vibratory pile driving	2.5	N/A	1	90
24-in vibratory removal	A.1 Vibratory pile driving	2.5	N/A	1	30
24-in impact installation	E.1 Impact pile driving	2	1,725	1	N/A

TABLE 7—CALCULATED LEVEL A AND LEVEL B HARASSMENT ISOPLETHS

Activity	Level A harassment zone (m)			Level B harassment zone (m)
	HF-cetaceans	Phocids	Otariids	
24-in vibratory installation	29	12	1	11,659
24-in vibratory removal (temporary)	14	6	1	
24-in impact installation (1 pile per day; 1,725 strikes per pile)	430	193	14	25

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.

When available, peer-reviewed scientific publications were used to estimate marine mammal abundance in the project area. Some data from monitoring reports from previous projects near Bellingham Bay were used. However, scientific surveys and resulting data, such as population estimates, densities, and other quantitative information, are lacking for some marine mammal populations. Therefore, the applicant gathered qualitative information from discussions with knowledgeable local people in the Bellingham Bay area.

Here we 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. Since reliable densities are not available, the applicant requests take based on the maximum number of animals that may occur in the harbor in a specified measure of time multiplied by the total duration of the activity.

Harbor Porpoise

The applicant did not initially request take of harbor porpoise for this project. Harbor porpoises are known to be an inconspicuous species and are challenging for protected species observers (PSOs) to sight, making any approach to a specific area potentially difficult to detect. Because harbor porpoises move quickly and elusively, it is possible that they may enter the Level B harassment zone during vibratory pile driving and removal. NMFS reviewed monitoring data from the 2017 U.S. Navy construction project at the Coast Guard Air Station in Port Angeles, Washington in order to determine a take estimate for harbor porpoise.

During that project the Level B harassment zone was 13.6 km (8.6 mi) which could only partially be observed by monitors during the project. Therefore, take estimates were extrapolated from the observations to account for unobserved area where take may have occurred. It was assumed that 87 takes by Level B harassment may have occurred in the unobserved area, for a total of 93 takes during the project. Given 93 total takes it was expected that 3 harbor porpoise were taken per day during the construction project (Northwest Environmental Consulting, 2018). Thus, NMFS recommended 3 animals per day for a total of 261 takes by Level B harassment.

The largest Level A harassment zone results from impact driving of 24-in piles, and extends 430 m from the source for high frequency cetaceans (Table 7). The Port of Bellingham would implement a shutdown zone for harbor porpoises that encompasses the largest Level A harassment zone (see Proposed Mitigation section). Although harbor porpoises can be challenging to observe, given the relatively confined and observable ensonified area combined with the fact that harbor porpoises are generally considered more likely than some other species to avoid louder areas of higher activity, takes by Level A harassment has not been proposed to be authorized.

California Sea Lion

California sea lions are infrequent visitors to Bellingham Bay. It is expected that the occasional presence of California sea lions would occur during the fall and winter following forage (fish runs) into the bay. Based on anecdotal evidence from port staff sightings, the applicants estimated that one California sea lion per day may enter the Level B harassment zone during vibratory pile driving and removal. The total number of takes by Level B harassment would be 87 California sea lions.

The largest Level A harassment zone for otariid pinnipeds extends 14 m from the source (Table 7). The Port of Bellingham is planning to implement larger shutdown zones than the Level A harassment zones during all pile installation and removal activities (see Proposed Mitigation section), which is expected to eliminate the potential for take by Level A harassment of California sea lions. Therefore, no takes of California sea lions by Level A harassment were requested or are proposed to be authorized.

Steller Sea Lions

Steller sea lions from the eastern DPS, are also rare visitors to Bellingham Bay that typically occur during the fall and winter following prey into the bay. Based on anecdotal evidence from port staff sightings, the applicants estimated that one Steller sea lion per day may enter the Level B harassment zone during vibratory pile driving and removal. The total number of takes by Level B harassment would be 87 Steller sea lions.

Similar to California sea lions, the largest Level A harassment zone for otariid pinnipeds extends 14 m from the source (Table 7). The Port of Bellingham is planning to implement larger shutdown zones than the Level A harassment zones during all pile installation and removal activities (see Proposed Mitigation section), which is expected to eliminate the potential for take by Level A harassment of Steller sea lions. Therefore, no takes of Steller sea lions by Level A harassment were requested or are proposed to be authorized.

Harbor Seal

The applicant originally estimated that up to 15 harbor seals per day could be taken by Level A harassment during impact driving and 20 harbor seals per day could be taken by Level B harassment during vibratory pile driving and removal. The applicant expected to take 275 harbor seals by Level A harassment and 2,000 seals by Level B harassment.

After further analysis of the survey data provided by the applicant the NMFS recommended a daily rate of 7.7 harbor seals per day in the project area per haulout. The Level B harassment zone encompasses three haulouts and it is expected that roughly the same amount of seals haulout at each location per day. It is expected that up to 23 harbor seals per day could be present in the Level B harassment zone during vibratory pile driving and removal.

Therefore, NMFS expects that 2,029 harbor seal takes by Level B harassment over the course of constructions.

The largest Level A harassment zone for phocid pinnipeds extends 193 m from the source (Table 7). The Port of Bellingham expressed concern with the ability to complete work in an efficient manner with the common occurence of harbor seals in the project area. The applicant and NMFS agreed on the implementation of a 50 m shutdown zone in order to shutdown for those animals closest to the pile driving activity but allow for pile driving to continue for animals that may beyond 50 m (see Proposed Mitigation section). It is expected that 7.7 harbor seals per day may be subject to Level A harassment during 17 days of impact pile driving for a total of 264 takes by Level A harassment.

TABLE 8—ESTIMATED TAKE BY LEVEL A AND LEVEL B HARASSMENT, BY SPECIES AND STOCK

Common name	Stock	Stock abundance [a]	Level A	Level B	Total proposed take	Proposed take as percentage of stock
Harbor porpoise	Washington Inland Waters	11,233	0	261	261	2.3
Steller sea lion	Eastern U.S	43,201	0	87	87	.2
California sea lion	U.S	257,606	0	87	87	<0.1
Harbor seal	Lynn Canal/Stephens Passage.	[b] 7,513	264	2,029	3,050	30.5

[a] Stock or DPS size is Nbest according to NMFS 2022 Final Stock Assessment Reports.
[b] Stock abundance estimate derived from Jefferson *et al.* 2021.

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. 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, impact on operations.

The following measures would apply to the Port of Bellingham's mitigation requirements:

Implementation of Shutdown Zones for Level A Harassment—For all pile driving/removal activities, the Port of Bellingham would implement shutdowns within designated zones. The purpose of a shutdown zone is generally to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Implementation of shutdowns would be used to avoid or minimize incidental Level A harassment exposures from vibratory and impact pile driving for all four species for which take may occur (see Table 8). Shutdown zones for impact and vibratory pile driving activities are based on the Level A harassment zones for the 24-in steel piles, strikes (impact) or duration (vibratory) per day, and marine mammal hearing group (Table 9). The shutdown zone for harbor seals during impact pile driving is less that the Level A harassment zone in order to facilitate efficient work operations during the project. The placement of PSOs during all pile driving activities (described in detail in the Monitoring and Reporting Section) would ensure the full extent of shutdown zones are visible to PSOs.

TABLE 9—SHUTDOWN ZONES DURING PILE INSTALLATION AND REMOVAL

Activity	Shutdown zones (m)		
	HF cetaceans	Phocids	Otariids
Vibratory installation (90 minutes)	30	20	10
Vibratory removal (30 minutes)	20	10	10
Impact installation (1,725 strikes)	430	50	20

Establishment of Monitoring Zones—The Port of Bellingham has identified monitoring zones that would be in effect for all pile driving activities. Vibratory installation and removal is expected to occur on all day of construction and the zone for 24-in steel piles would be implemented at all times (Table 10) 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 area outside the

shutdown zone and thus prepare for a potential cease of activity should the animal enter the shutdown zone. PSOs would monitor the entire visible area to maintain the best sense of where animals are moving relative to the zone boundaries defined in Tables 9 and 10. Placement of PSOs on the Port of Bellingham facility or in a small boat in the Bellingham Bay would allow PSOs to observe marine mammals within and near the bay.

TABLE 10—MARINE MAMMAL MONITORING ZONE

Activity	Monitoring zone (m)
24-in vibratory installation and removal	11,660

Soft Start—The use of soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors would be required to provide an initial set of strikes from the hammer at reduced energy, with each strike followed by a 30-second waiting period. This procedure would be conducted a total of three times before impact pile driving begins. Soft start would 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. Soft start is not required during vibratory pile driving and removal activities.

Pre-Activity Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving/removal of 30 minutes or longer occurs, PSOs would observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone would be considered cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start cannot proceed until the animal has left the zone or has not been observed for 15 minutes. If the monitoring zone has been observed for 30 minutes and marine mammals are not present within the zone, soft-start procedures can commence and work can continue. When a marine mammal permitted for take by Level B harassment is present in the Level B harassment zone, activities may begin. No work may begin unless the entire shutdown zone is visible to the PSOs. If work ceases for more than 30 minutes, the pre-activity monitoring of both the monitoring zone and shutdown zone would commence.

Bubble Curtain—A bubble curtain would be employed during impact installation or proofing of steel piles. A noise attenuation device would not be required during vibratory pile driving. If a bubble curtain or similar measure is used, it would distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column. Any other attenuation measure would be required to provide 100 percent coverage in the water column for the full depth of the pile. The lowest bubble ring would be in contact with the mudline for the full circumference of the ring. The weights attached to the bottom ring would ensure 100 percent mudline contact. No parts of the ring or other objects would prevent full mudline contact.

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

Proposed Monitoring and Reporting

In order to issue an 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

Monitoring shall be conducted by NMFS-approved observers in accordance with section 13.2 of the application. Trained observers shall be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Observer training must be provided prior to project start, and shall include instruction on species identification (sufficient to distinguish the species in the project area), description and categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible).

Monitoring would be conducted 30 minutes before, during, and 30 minutes after pile driving/removal activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving/removal 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.

A minimum of one PSO would be on duty during impact pile driving activities and a minimum of two PSOs during vibratory installation/removal. Locations from which PSOs would be able to monitor for marine mammals are readily available from the Port of Bellingham property and, if necessary, on small boats in Bellingham Bay. PSOs would monitor for marine mammals entering the Level B harassment zones; the position(s) may vary based on construction activity and location of piles or equipment.

PSOs would scan the waters using binoculars and would use a handheld range-finder device to verify the distance to each sighting from the project site. All PSOs would be trained in marine mammal identification and behaviors and are required to have no other project-related tasks while conducting monitoring. In addition, monitoring would be conducted by qualified observers, who would be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator via a radio. The Port of Bellingham would adhere to the following observer qualifications:

(i) Independent observers (*i.e.,* not construction personnel) are required;

(ii) One PSO would be designated as the lead PSO or monitoring coordinator and that observer must have prior experience working as an observer;

(iii) Other observers may substitute education (degree in biological science or related field) or training for experience; and

(iv) The applicant must submit observer Curriculum Vitaes for approval by NMFS.

Additional standard observer qualifications include:

- 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 and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; 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.

Reporting

A draft marine mammal monitoring report would be submitted to NMFS within 90 days after the completion of pile driving and removal activities. It would include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

- Dates and times (begin and end) of all marine mammal monitoring.
- Construction activities occurring during each daily observation period, including the number and type of piles driven or removed and by what method (*i.e.,* impact driving) and the total equipment duration for cutting 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 time of sighting; Time of sighting; Identification of the animal(s) (*e.g.,* genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species; Distance and bearing of each marine mammal observed relative to the pile being driven for each sighting (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, *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, by species.
- Detailed information about any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

If no comments are received from NMFS within 30 days, the draft final report would constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

Reporting Injured or Dead Marine Mammals

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury, serious injury or mortality, the Port of Bellingham would immediately cease the specified activities and report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinator. The report would include the following information:

- Description of the incident;
- Environmental conditions (*e.g.,* Beaufort sea state, visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the Port of Bellingham to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Port of Bellingham would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the Port of Bellingham discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.,* in less than a moderate state of decomposition as described in the next paragraph), the Port of Bellingham would immediately report the incident to the Office of Protected Resources (*PR.ITP.MonitoringReports@noaa.gov*), NMFS and to the West Coast Region regional stranding coordinator as soon

as feasible. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the Port of Bellingham to determine whether modifications in the activities are appropriate.

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 4033; 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 A harassment and 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 A or Level B harassment identified above when these activities are underway.

Take by Level A and Level B harassment would be due to potential behavioral disturbance, TTS, and PTS. No serious injury or mortality is anticipated or proposed for authorization given the nature of the activity and measures designed to minimize the possibility of injury to marine mammals. Take by Level A harassment is only anticipated for harbor seal. The potential for harassment is minimized through the construction method and the implementation of the planned mitigation measures (see Proposed Mitigation section).

Based on reports in the literature as well as monitoring from other similar activities, behavioral disturbance (*i.e.,* Level B harassment) 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 for pile driving, individuals would simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. The pile driving activities analyzed here are similar to, or less impactful than, numerous other construction activities conducted in Washington, which have taken place with no observed severe responses of any individuals or known long-term adverse consequences. Level B harassment would be reduced to the level of least practicable adverse impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activity is occurring. While vibratory driving associated with the proposed project may produce sound at distances of many kilometers from the project site, thus overlapping with some likely less-disturbed habitat, the project site itself is located in a busy harbor and the majority of sound fields produced by the specified activities are close to the harbor. Animals disturbed by project sound would be expected to avoid the area and use nearby higher-quality habitats.

In addition to the expected effects resulting from authorized Level B harassment, we anticipate that harbor seals may sustain some limited Level A harassment in the form of auditory injury. However, animals in these locations that experience PTS would likely only receive slight PTS, *i.e.,* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by pile driving, *i.e.,* the low-frequency region below 2 kHz, not severe hearing impairment or impairment in the regions of greatest hearing sensitivity. If hearing impairment occurs, it is most likely that the affected animal would lose a few decibels in its hearing sensitivity, which in most cases is not likely to meaningfully affect its ability to forage and communicate with conspecifics. As described above, we expect that marine mammals would be likely to move away from a sound source that represents an aversive stimulus, especially at levels that would be expected to result in PTS, given sufficient notice through use of soft start.

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

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

- No serious injury or mortality is anticipated or authorized;
- Any Level A harassment exposures (*i.e.,* to harbor seals, only) are anticipated to result in slight PTS (*i.e.,* of a few decibels), within the lower frequencies associated with pile driving;
- 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;

- The ensonifed areas from the project is very small relative to the overall habitat ranges of all species and stocks
- or any other areas of known biological importance; with the exception of three haulout locations in Bellingham Bay that would be affected by the project. Currently those haulout locations are not known to be pupping locations for harbor seals but are important areas throughout the year. Harbor seals at these haulouts would likely result in repeated exposure of the same animals. Repeated exposures of individuals to this pile driving activity could cause Level A and Level B harassment but are unlikely to considerably disrupt foraging behavior or result in significant decrease in fitness, reproduction, or survival for the affected individuals. In all, there would be no adverse impacts to the stock as a whole.
- The proposed mitigation measures are expected to reduce the effects of the specified activity to the level of least practicable adverse impact.

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

Small Numbers

As noted previously, only take of small numbers of marine mammals may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the 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.

Table 8 demonstrates the number of instances in which individuals of a given species could be exposed to receive noise levels that could cause Level A and Level B harassment for the proposed work in Bellingham Bay. Our analysis shows that less than 3 percent of all but one stock could be taken by harassment, and less than 30 percent of harbor seals, noting that the percentage of individual harbor seals is likely notably lower because some portion of the estimated instances of take are expected to represent repeated takes of the same individuals on multiple days. The numbers of animals proposed to be taken for these stocks would be considered small relative to the relevant stock's abundances, even if each estimated taking occurred to a new individual—an extremely unlikely scenario.

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

Unmitigable Adverse Impact Analysis and Determination

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

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act 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 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 Port of Bellingham for conducting pile driving at the Port of Bellingham from one year of the date of issuance, 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 pile driving by the Port of Bellingham. 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 20, 2023.

Kimberly Damon-Randall,

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

[FR Doc. 2023–20752 Filed 9–25–23; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD352]

Pacific Fishery Management Council; Public Meeting

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

ACTION: Notice of public meeting.

SUMMARY: The Pacific Fishery Management Council's (Pacific Council) Groundfish Management Team (GMT) will hold a weeklong online work session that is open to the public. The purpose of the meeting is to prepare materials for the 2025–2026 harvest specifications and management measures and discuss other items on the Pacific Council's November 2023 meeting agenda.

DATES: The online webinar meeting for the work session will be held Monday, October 16, 2023, from 1 p.m., Pacific time until business is completed for the day. The GMT will reconvene on Tuesday, October 17 through Friday, October 20, 2023, from 8:30 a.m., Pacific time until business for each day has been completed.

ADDRESSES: This meeting will be held online. Specific meeting information, including directions on how to join the meeting and system requirements, will be provided in the meeting announcement on the Pacific Council's website (see *www.pcouncil.org*). You may send an email to Mr. Kris Kleinschmidt (*kris.kleinschmidt@noaa.gov*) or contact him at (503) 820–2412 for technical assistance.

Council address: Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, OR 97220–1384.

FOR FURTHER INFORMATION CONTACT: Todd Phillips, Staff Officer, Pacific Council; telephone: (503) 820–2426.

SUPPLEMENTARY INFORMATION: The primary purpose of the GMT meeting is to develop recommendations on the development of the 2025–2026 harvest specifications and management measures for consideration by the Pacific Council at its November 2023 meeting. The GMT will also consider new management measures proposed by the Pacific Council at their September meeting.

The GMT will dedicate their session on Friday, October 20, 2023, from 8:30 a.m. to 12:30 p.m. Pacific time to specifically discuss items on the Pacific Council's November meeting. The primary purpose of this dedicated session is to prepare for the Pacific Council's November 2023 meeting agenda items. The GMT will discuss items related to groundfish management and administrative matters on the Pacific Council's agenda. The GMT may also address other assignments relating to groundfish management. No management actions will be decided by the GMT. A detailed agenda for this weeklong webinar will be available on the Pacific Council's website prior to the meeting.

Although non-emergency issues not contained in the meeting agenda may be discussed, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically listed in this document and any issues arising after publication of this document 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 intent to take final action to address the emergency.

Special Accommodations

Requests for sign language interpretation or other auxiliary aids should be directed to Mr. Kris Kleinschmidt (*kris.kleinschmidt@noaa.gov;* (503) 820–2412) at least 10 days prior to the meeting date.

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

Dated: September 21, 2023.

Rey Israel Marquez,

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

[FR Doc. 2023–20927 Filed 9–25–23; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD389]

New England Fishery Management Council; Public Meeting

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

ACTION: Notice of public meeting.

SUMMARY: The New England Fishery Management Council's is convening its Scientific and Statistical Committee (SSC) to consider actions affecting New England fisheries in the exclusive economic zone (EEZ). Recommendations from this group will be brought to the full Council for formal consideration and action, if appropriate.

DATES: This hybrid meeting will be held on Wednesday, October 11, 2023, beginning at 9:30 a.m.

ADDRESSES: *Meeting address:* The meeting will be held at the DoubleTree by Hilton, 363 Maine Mall Road, South Portland, ME 04106.

Webinar Registration information: https://attendee.gotowebinar.com/register/8548092010829152606. Call in information: +1 (631) 992–3221, Access Code: 434–460–639.

Council address: New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: Cate O'Keefe, Executive Director, New England Fishery Management Council; telephone: (978) 465–0492.

SUPPLEMENTARY INFORMATION:

Agenda

The Scientific and Statistical Committee will meet to: review the information provided by the Council's Plan Development Teams, and stock assessment information where appropriate, and recommend the overfishing limits (OFL) and acceptable biological catches (ABC) for: Atlantic sea scallops for fishing year (FY) 2024 and the default for FY 2025; Gulf of Maine haddock for FY 2024 and 2025 and Northeast skate complex for FY 2024–2025. They will discuss other business as necessary.

Although non-emergency issues not contained on the agenda may come before this Council for discussion, those issues may not be the subject of formal action during this meeting. Council action will be restricted to those issues specifically listed in this notice and any issues arising after publication of this