polarity test reports must be filed on the official records of Commerce for both this Agreement and the CVD Agreement. For clarity, sampling will be done in accordance with CBP standards (*e.g.,* CBP Directive No. 3820–001B), or its successor directive as agreed by Commerce and the Signatories, including the CBP requirement that the polarity level of an entry will be the average of the samples from that entry.

Commerce will request that CBP inform the importing public of the requirements for importation of Other Sugar set forth in this sub-section.

Section VII.C.7 is added as follows:

7. Penalties for Non-Compliance with Section VII.C.6:

a. Where Commerce finds that exporters and importers of record of Other Sugar are not complying with Section VII.C.6, Commerce may consider this a Violation under Section VIII.D of the Agreement.

b. If Commerce finds that issues with meeting the polarity requirements of the Agreement as required by Sections II.F, II.H, VII.C.6 and Appendix I continue to arise, Commerce can at any time terminate the Agreement under Section X.B. Apart from termination, Commerce may take additional steps to ensure compliance with the terms of this Agreement, including action under Section VIII.B.4 of the CVD Agreement.

Section VIII (''Violations of the Agreement'') is amended as follows:

Section VIII.D is amended by adding new paragraphs 3 and 4, and moving paragraph 3 to paragraph 5:

D.3 Failure by Signatories and Intermediary Customers to provide the required documentation specified in Section VII.C.5.

D.4 Failure by Signatories and importers of record to comply with the requirements under Section VII.C.6.

Appendix I is amended as follows:

At Appendix I, the following will be changed:

The FOB plant Reference Price for Refined Sugar is $0.2800 per pound commercial value (whether freely flowing or in totes weighing one (1) MT or greater as the sugar leaves the mill), as produced and measured on a dry basis.

The FOB plant Reference Price for Other Sugar is $0.2300 per pound commercial value (whether freely flowing or in totes weighing one (1) MT or greater as the sugar leaves the mill), as produced and measured on a dry basis.

In addition, the following clause will be added to Appendix I when referencing the Reference Prices.

Mexican Signatory producers/exporters must ensure that the delivered sales price for all Sugar from Mexico exported to the United States must include all expenses, *e.g.,* transportation, de-bagging, warehousing, handling, and packaging charges, in excess of the FOB plant Reference Price. As specified in Sections VII.B.1 and VII.B.2 of the Agreement, Commerce has the authority to request sales information, and to verify such information, which demonstrates compliance with the Reference Prices and terms of the Agreement.

Jeffrey I. Kessler,

Assistant Secretary for Enforcement and Compliance, U.S. Department of Commerce

Date

The following party hereby certifies that the members of the Mexican sugar industry agree to abide by all terms of the Amendment to the Agreement:

Juan Cortina Gallardo,

President of the Board, Cámara Nacional de Las Industrias Azucarera y Alcoholera (Mexican Sugar Chamber)

Date

[FR Doc. 2020–00970 Filed 1–21–20; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XR044]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Old Sitka Dock North Dolphins Expansion Project in Sitka, Alaska

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 Halibut Point Marine Services, LLC (HPMS) for authorization to take marine mammals incidental to the Old Sitka Dock North Dolphins Expansion Project in Sitka, Alaska. 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-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 authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than February 21, 2020.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.davis@noaa.gov.*

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 received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act* 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: Leah Davis, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

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

This action is consistent with categories of activities identified in Categorical Exclusion B4 (incidental harassment authorizations with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has 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 July 30, 2019, NMFS received a request from HPMS for an IHA to take marine mammals incidental to dock expansion activities. The application was deemed adequate and complete on October 21, 2019. HPMS's request is for take of a small number of seven species of marine mammals by Level B harassment and Level A harassment. Neither HPMS nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

HPMS is proposing to add two additional dolphin structures and modify two existing dolphin structures at their deep water dock facility in Sitka Sound. The cruise industry is a major sector of Sitka's economy, and the current HPMS facility currently does not meet the industry-required specifications for mooring newer, larger cruise vessels that are becoming increasingly more common. Construction at the dock facility will include vibratory pile installation and removal of temporary, template pile structures, vibratory and impact installation of permanent piles comprising the dolphins, and down-the-hole drilling to install bedrock anchors for the permanent piles. Vibratory pile removal and installation, impact pile installation, and drilling activity would introduce underwater sounds that may result in take, by Level A and Level B harassment, of marine mammals across approximately 55.9km^2 in Sitka sound.

Dates and Duration

The proposed IHA would be effective from October 1, 2020 to September 30, 2021. Construction is expected to occur over approximately 30 days, including 19 in-water work days, between October 2020 and February 2021. Pile driving, removal and drilling activity is expected to range from 126 minutes to 480 minutes each day and will occur during daylight hours. Construction between March 1 and June 15 is prohibited as a condition of a U.S. Corps of Engineers permit. Additionally, cruise ship activity will prevent work from occurring during from May 1 to October 1.

Specific Geographic Region

The HPMS deep water dock facility is located in Sitka Sound (Figure 1) approximately five miles north of downtown Sitka, Alaska at the north east end of Sitka Sound. Baseline ambient sound levels in Sitka Sound are unknown. However, the dock facility is an active marine industrial area that is frequented by ferries, fishing vessels, and tenders; barges and tugboats; and other commercial and recreational vessels that use the small-boat harbor north of the facility. HPMS operates a marine haulout facility that utilizes a Marine Travelift to haul approximately 200 vessels per year for maintenance work, and the dock facility will see 150 cruise ship dockings in 2019. Additionally, Alaska Marine Lines freight terminal is located adjacent to the HPMS facility, and the freight terminal receives twice-weekly freight container barges.

Marine mammals are present year round in the project vicinity. However, they are more common during spring and summer when herring and salmon are abundant in Sitka Sound.

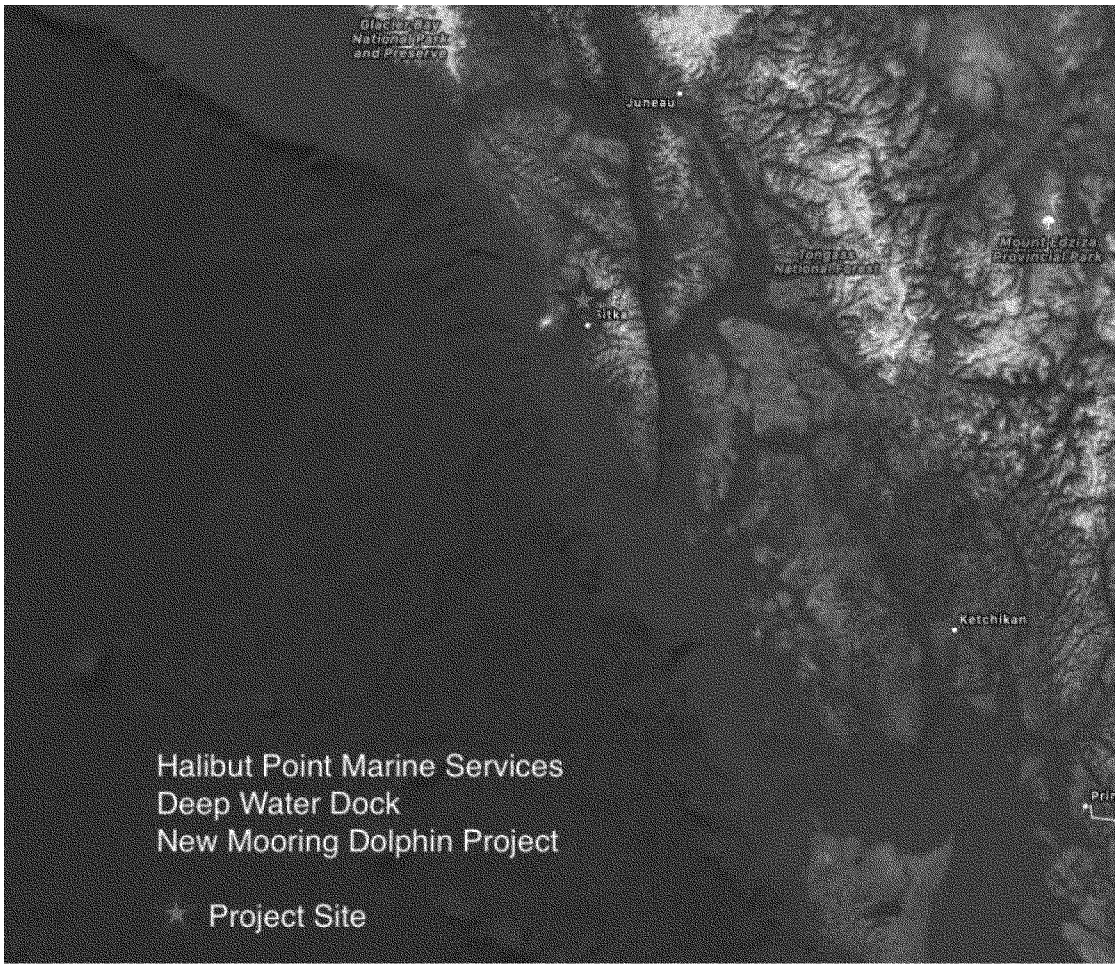

Figure 1: Project location in Sitka Sound, AK.

Detailed Description of Specific Activity

HPMS is proposing to install two new dolphins, and to modify two existing dolphins at their deep-water dock facility in Sitka Sound. Piles range in size from 30-inch to 48-inch in diameter. Sound source levels for in-water project activities are included in Table 1.

TABLE 1—SOUND SOURCE LEVELS FOR PROJECT ACTIVITIES

Pile size	Method	Source level (at 10m)			Literature source
		dB RMS	dB SEL	dB peak	
30-inch	Vibratory Pile Install/Remove	168			Denes *et al.* 2016.
48-inch	Vibratory Pile Install	[a] 168			Denes *et al.* 2016.
48-inch (and 30-inch as necessary).	Impact Pile Install	197.9	186.7	212	Austin *et al.* 2016.
	Down-the-hole Drilling	166.2			Denes *et al.* 2016.

[a] This sound source level was adopted from Denes *et al.,* 2016. Based on pile size, a sound source level was selected from Austin *et al.,* 2016; however, that source level was lower than most appropriate Denes *et al.,* 2016 source level selected for vibratory installation and removal of the 30-inch piles. Because of the deep water and substrate at the project site, NMFS determined that using 168dB root mean square (RMS) for vibratory installation of the 48-inch piles provided the most conservative sound source level estimate.

Installation of New Dolphins

Construction of each new dolphin will begin with installation of the template piles. Four temporary, 30-inch piles will be installed at the sites of each new dolphin to guide the installation of the 48-inch, permanent steel piles. The applicant expects that installation of the temporary piles will occur over two days per dolphin, and anticipates being able to use a vibratory hammer to install the full length of the piles through the overburden into the bedrock. The applicant notes that there is a chance that they may need to use an impact hammer if driving conditions require, however, because impact driving of the 30-inch piles is not expected, the applicant conservatively plans to use the Level A and Level B harassment zones calculated for impact installation of 48-inch piles, discussed below.

Each new dolphin will be comprised of four 48-inch piles. Using the template to guide their placement, the 48-inch, permanent piles will be driven into the overburden with the vibratory hammer operated at a reduced energy setting, with breaks in driving to splice piles together. The permanent piles will be seated into the bedrock with an impact hammer. No more than two permanent piles will be installed per day.

After the permanent piles are fully installed, the contractor will drill a 33-inch diameter shaft approximately 4.6 meters (m) (15 feet) within the driven pile (down-the-hole drilling) and into the bedrock below the pile. The exact depth of the shaft will be determined by the geotechnical engineer. A rebar cage will be installed in each drilled shaft and filled with concrete. Once the permanent piles are in place with the concrete anchors, and pile caps have been installed, the temporary, template piles will be removed using a vibratory hammer. No more than two 30-inch template piles will be installed or removed per day.

Modifications to Existing Dolphins

On the existing dolphins, construction will begin with removal of the existing catwalk and pile caps on the mooring dolphins. A 48-inch pile will be installed over one existing 36-inch diameter pile on each dolphin. Existing pile caps and catwalks will be reinstalled. No down-the-hole drilling is proposed for modifications to the existing dolphins.

A new catwalk will also be installed (between new mooring dolphins and floating dock) as will a floating dock between existing mooring dolphin No 1 and the existing concrete pontoon on the shore-side of the existing catwalk. The new components will be constructed off-site and installed once the piling construction is complete.

While Steller sea lions haul out on buoys and navigational markers in Sitka Sound and along the rocky shores of Sugarloaf south of the project site, these haulouts are far beyond in-water and in-air noise disturbance threshold for hauled-out otariids. There are no pinniped haul-out sites near the construction site, and no harassment from airborne sound is expected to result from project activities. Therefore, above-water construction activities, including the floating dock installation, will not be considered further in this document.

Materials and equipment would be transported to the project site by barge. While work is conducted in the water, anchored barges will be used to stage construction materials and equipment. The anchors will be kept below the surface and will not be a hazard to navigation.

TABLE 2—PROJECT COMPONENTS

Activity	Number of piles
30-inch Steel	[a] 8
48-inch Steel	10
Down-the-Hole Drilling	8

[a] These piles are installed as part of a template to guide installation of the permanent, 48-inch piles. Each pile will be installed and later removed.

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

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS's 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's website (*https://www.fisheries.noaa.gov/find-species*).

Table 3 lists all species with expected potential for occurrence in Sitka, AK and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2016). 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's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS's 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. 2018 SARs and draft 2019 SARs (*e.g.,* Muto *et al.* 2019). All values presented in Table 3 are the most recent available at the time of publication and are available in the 2018 and draft 2019 SARs (Muto *et al.,* 2019 and Carretta *et al.,* 2019).

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

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae:						
Gray whale	*Eschrichtius robustus*	Eastern North Pacific	-, -, N	26,960 (0.05, 25,849, 2016).	801	139
Family Balaenidae:						
North Pacific Right Whale	*Eubalaena japonica*	Eastern North Pacific	E, D, Y	31 (0.226, 26, 2015)	0.05	0
Family Balaenopteridae (rorquals):						
Humpback whale	*Megaptera novaeangliae*	Central North Pacific	-, -, Y	10,103 (0.300, 7,891, 2006).	83	26
Fin whale	*Balaenoptera physalus*	Northeast Pacific	E, D, Y	see SAR (see SAR, see SAR, 2013).	5.1	0.4

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

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Minke whale	*Balaenoptera acutorostra*	Alaska	-, -, N	N/A (N/A, N/A, see SAR)	UND	0
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Physeteridae:						
Sperm whale	*Physeter microcephalus*	North Pacific	E, D, Y	see SAR (see SAR, N/A, 2015).	see SAR	4.7
Family Delphinidae:						
Killer whale	*Orcinus orca*	Eastern North Pacific Alaska Resident.	-, -, N	2,347 (N/A, 2,347, 2012)	24	1
		Gulf of Alaska, Aleutian Islands, Bearing Sea Transient.	-, -, N	587 (N/A, 587, 2012)	5.87	1
		Eastern North Pacific Northern Resident.	-, -, N	302 c (N/A, 302, 2018)	2.2	0.2
		West Coast Transient	-, -, N	243 (N/A, 243, 2009)	2.4	0
Pacific white-sided dolphin	*Lagenorhynchus obliquidens*	North Pacific	-, -, N	26,880 (UNK, UNK, 1990).	UND	0
Family Phocoenidae (porpoises):						
Dall's porpoise	*Phocoenoides dalli*	Alaska	-, -, N	83,400 (0.097, NA, 1991)	UND	38
Harbor porpoise	*Phocoena phocoena*	Southeast Alaska	-, -, Y	see SAR (see SAR, see SAR, 2012).	8.9	34
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						
California sea lion	*Zalophus californianus*	U.S.	-, -, N	257,606 (N/A, 233,515, 2014).	14,011	≥321
Northern fur seal	*Callorhinus ursinus*	Eastern Pacific	-, D, Y	620,660 (0.2, 525,333, 2016).	11,295	399
Steller sea lion	*Eumetopias jubatus*	Eastern	-,-, N	43,201 a (see SAR, 43,201, 2017).	2592	113
Steller sea lion	*Eumetopias jubatus*	Western	E, D, Y	53,624 a (see SAR, 53,624, 2018).	322	247
Family Phocidae (earless seals):						
Harbor seal	*Phoca vitulina*	Sitka/Chatham Straight	-, -, N	13,289 (see SAR, 11,883, 2015).	356	77

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

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

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

[4] These values are the best estimate of pup and non-pup counts which have not been corrected to account for animals at sea during abundance surveys.

Note—Italicized species are not expected to be taken or proposed for authorization.

All species that could potentially occur in the proposed survey areas are included in Table 3. However, the temporal and/or spatial occurrence of western north Pacific gray whales, northern right whale, fin whale, sperm whale, pacific white-sided dolphin, Dall's porpoise, California sea lion, and Northern fur seal is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here.

Marine mammal monitoring reports are available for three recent construction projects in the Sitka area (Gary Paxton Industrial Park Dock Modification Project, 82 FR 47717, October 13, 2017; Biorka Island Dock Replacement Project, 82 FR 50397, October 31, 2017; O'Connell Bridge Lightering Float Pile Replacement Project, 84 FR 27288, June 12, 2019). These reports were referenced in determining marine mammals likely to be present within the Old Sitka Dock project area. NMFS acknowledges seasonal differences between the Old Sitka Dock project and available monitoring reports.

North Pacific Right Whale, fin whale, sperm whale, Dall's porpoise, and northern fur seal have not been reported in monitoring reports available for the recent Sitka-area, and were not observed during the Straley *et al.* (2017) surveys. Straley *et al.* (2017) only observed seven Pacific white-sided dolphins during eight years of surveys, however, no observations were reported in monitoring reports available for the recent Sitka-area. California sea lions are rarely sighted in southern Alaska. NMFS' anecdotal sighting database includes four sightings in Seward and Kachemak Bay, and they were also documented during the Apache 2012 seismic survey in Cook Inlet. However, California sea lions have not been reported in monitoring reports available for the recent Sitka-area construction projects.

In addition, the northern sea otter may be found in Sitka. However, northern sea otters are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

Gray Whale

Gray whales occur exclusively in the North Pacific Ocean. The Eastern North Pacific stock of gray whales inhabit California and Mexico in the winter months, and the Chukchi, Beaufort, and Bering Seas in northern Alaska in the

summer and fall. Gray whales have also been observed feeding in waters off Southeast Alaska during the summer (NMFS 2019).

The migration pattern of gray whales appears to follow a route along the western coast of Southeast Alaska, traveling northward from British Columbia through Hecate Strait and Dixon Entrance, passing the west coast of Baranof Island from late March to May and then return south in October and November (Jones *et al.* 1984, Ford *et al.* 2013). The project area is well inside Sitka Sound on the west coast of Baranof Island.

During 8 years of observations in Sitka Sound, Straley *et al.* (2017) observed just one group of three gray whales. However, Sitka Sound is within a gray whale migratory corridor Biologically Important Area (BIA) (Ferguson *et al.,* 2015). Construction is expected to occur during the beginning of the period of highest density in the BIA during the southbound migration (November to January). The Sound is also within the Southeast Alaska BIA, an important area for gray whale feeding. Construction is expected to overlap with end of period with the highest gray whale densities in the Southeast Alaska BIA (May through November).

Since January 1, 2019, elevated gray whale strandings have occurred along the west coast of North America from Mexico through Alaska. This event has been declared an Unusual Mortality Event (UME), though a cause has not yet been determined. More information is available at *https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events.*

Humpback Whale

Humpback whales (*Megaptera novaeangilae*) are the most commonly observed baleen whale in Sitka Sound. They have been observed in Southeast Alaska in all months of the year (Baker *et al.* 1985, 1986), although they are most common in Sitka Sound's Eastern Channel in November, December, and January (Straley *et al.,* 2017). In late fall and winter, herring sometimes overwinter in deep fjords in Silver Bay and Eastern Channel, and humpback whales aggregate in these areas to feed on them. In the summer when prey is dispersed throughout Sitka Sound, humpback whales also disperse throughout the Sound (Straley *et al.,* 2017). Humpbacks in Sitka Sound are expected to be from the Central North Pacific stock.

Humpback whales have been frequently observed during construction projects in Sitka Sound, including the Biorka Island Dock Replacement Project (Turnagain Marine Construction, 2018) and the Sitka GPIP Multipurpose Dock Project (Turnagain Marine Construction, 2017). There is no recorded observation data from the immediate project area, however, HPMS staff work year-round at the project site and note that humpback whales are rarely observed during the months from October through mid-February. HPMS staff noted that humpback whale activity increases starting in late February and humpback whale observations are frequent from March to mid-April. (HPMS, pers. comm. 2019). This activity coincides with the migration of herring into Sitka sound for spawning.

According to Wade *et al.* 2016, Humpback whales in Southeast Alaska are most likely to be from the Hawaii DPS (distinct population segment, 93.9 percent probability), with a 6.1 percent probability of being from the threatened Mexico DPS. Critical habitat was recently proposed for the humpback whale in Southeast Alaska, including Sitka Sound (84 FR 54354, October 9, 2019), but it has not yet been finalized. However, Sitka Sound is within seasonal humpback whale feeding BIAs from March through November (Ferguson *et al.,* 2015). Construction is expected to occur during the tail end of the seasonally specific BIA.

Minke Whale

Minke whales are found throughout the northern hemisphere in polar, temperate, and tropical waters (Jefferson *et al.,* 2008). The International Whaling Commission has identified three minke whale stocks in the North Pacific: one near the Sea of Japan, a second in the rest of the western Pacific (west of 180° W), and a third, less concentrated stock throughout the eastern Pacific. NMFS further splits this third stock between Alaska whales and resident whales of California, Oregon, and Washington (Muto *et al.,* 2018). Minke whales are found in all Alaska waters, though there are no population estimates for minke whales in southeast Alaska.

In Alaska, minke whales feed primarily on euphausiids and walleye pollock. Minke whales are generally found in shallow, coastal waters within 200 m (656 ft) of shore (Zerbini *et al.,* 2006). Dedicated surveys for cetaceans in southeast Alaska found that minke whales were scattered throughout inland waters from Glacier Bay and Icy Strait to Clarence Strait, with small concentrations near the entrance of Glacier Bay. Surveys took place in spring, summer, and fall, and minke whales were present in low numbers in all seasons and years (Dahlheim *et al.,* 2009). Additionally, Minke whales were observed during the Biorka Island Dock Replacement Project at the mouth of Sitka Sound (Turnagain Marine Construction, 2018).

Killer Whale

Killer whales (*Orcinus orca*) have been observed in all oceans, but the highest densities occur in colder and more productive waters found at high latitudes. Killer whales occur along the entire coast of Alaska (Braham and Dahlheim, 1982), inland waterways of British Columbia and Washington (Bigg *et al.* 1990), and along the outer coasts of Washington, Oregon, and California (Green *et al.*1992; Barlow 1995,1997; Forney *et al.*1995). Eight stocks of killer whales are recognized within the Pacific U.S. Exclusive Economic Zone (Muto *et al.,* 2018). Of those, the Alaska Resident, Northern Resident, Gulf of Alaska, Aleutian Islands and Bering Sea Transient, and West Coast Transient may occur in the project area. Transient killer whales, primarily from the West Coast transient stock, occur most frequently in the project area.

Transient killer whales hunt and feed primarily on marine mammals, including harbor seals, Dall's porpoises, harbor porpoises, and sea lions. Resident killer whale populations in the eastern north Pacific feed mainly on salmonids, showing a strong preference for Chinook salmon (NMFS 2016).

The Alaska Resident stock occurs from southeast Alaska to the Aleutian Islands and Bering Sea. Photo-identification studies between 2005 and 2009 identified 2,347 individuals in this stock, including approximately 121 in southeast Alaska (Muto *et al.,* 2019). The Northern Resident stock occurs from Washington north through part of southeast Alaska and consists of 261 individuals. The Gulf of Alaska, Aleutian islands, and Bering Sea Transient stock occurs from the northern British Columbia coast to the Aleutian Islands and Bering Sea. The West Coast Transient stock occurs from California north through southeast Alaska (Muto *et al.,* 2019). Dahlheim *et al.,* (2009) noted a 5.2 percent annual decline in transient killer whales observed in southeast Alaska between 1991 and 2007.

Both resident and transient killer whales were observed in southeast Alaska during all seasons during surveys between 1991 and 2007, in a variety of habitats and in all major waterways, including Lynn Canal, Icy Strait, Stephens Passage, Frederick Sound, and upper Chatham Strait (Dahlheim *et al.,* 2009). There does not

appear to be strong seasonal variation in abundance or distribution of killer whales, but Dahlheim *et al.,* (2009) observed substantial variability among different years. HPMS staff have only observed killer whales on one occasion from the project site in the past five years (HPMS pers. comm. 2019).

Harbor Porpoise

Harbor porpoise (*Phocoena phocoena*) are common in coastal waters. They frequently occur in coastal waters of southeast Alaska and are observed most frequently in waters less than 350 ft (107 m) deep (Dahlheim *et al.* 2009). There are three harbor porpoise stocks in Alaska. The Southeast Alaska stock occurs from Dixon Entrance to Cape Suckling, Alaska and is the only stock that occurs in the action area (Muto *et al.* 2019).

Harbor porpoises commonly frequent nearshore waters, but are not common in the project area. Monthly tallies from observations from Sitka's Whale Park show harbor porpoises occurring infrequently in or near the action area in March, April, and October between 1994 to 2002 (Straley *et al.,* 2017). Protected Species Observers (PSO) did not observe harbor porpoises during monitoring for recent construction projects in the Sitka, AK area (Petro Marine Dock, Windward, 2017; GPIP dock, Turnagain Marine Construction, 2017; Biorka Island Dock Replacement, Turnagain Marine Construction, 2018; Sitka O'Connell Bridge Lightering Float Pile Replacement Project, CBS 2019). Additionally, Halibut Point Marine staff indicated that they have not seen a harbor porpoise near the project site during the past five years (HPMS, pers. com. 2019).

Harbor Seal

Harbor seals (*Phoca vitulina*) are common in the inside waters of southeastern Alaska, including in Sitka Sound. Harbor seals in southeast Alaska are typically non-migratory with local movements attributed to factors such as prey availability, weather, and reproduction (Scheffer and Slipp 1944; Fisher 1952; Bigg 1969, 1981; Hastings *et al.* 2004). Harbor seals haul out of the water periodically to rest, give birth, and nurse their pups. According to the Alaska Fisheries Science Center's list of harbor seal haul-out locations, the closest listed haulout (id CE49 name CE49C) is located in Sitka Sound approximately 6.4 km (3.98 mi) southwest, of the project site (AFSC, 2018).

Harbor seals in the project area are from the Sitka/Chatham Straight stock (Muto *et al.,* 2019). Harbor seal observations have been documented in monitoring reports for construction projects in the Sitka area. They were observed on 10 of 21 monitoring days for GPIP dock construction between October and November 2017 (Turnagain Marine Construction, 2017), two of eight days of monitoring for the Petro Marine dock in January 2017 (Windward 2017), one of three days at Sitka O'Connel Bridge Lightering Float Pile Replacement Project (CBS, 2019), and were the most commonly observed marine mammal species during monitoring for the Biorka Island Dock Replacement Project (Turnagain Marine Construction, 2018). Additionally, Straley *et al.,* (2017) observed harbor seals during most months of monitoring (September through May) from Whale Park between 1994 and 2002, except in December and May.

Observations during the original construction of the Halibut Point Marine Services dock facility did not record any harbor seals within the 200-meter shutdown zone during pile driving operations. Observers did indicate observing individual seals outside the 200-meter zone two to three times per week. (McGraw, pers. com., 2019).

Steller Sea Lion

Steller sea lions (*Eumetopias jubatus*) range extends from the North Pacific Rim from northern Japan to California with areas of abundance in the Gulf of Alaska and Aleutian Islands (Muto *et al.,* 2019). In 1997, based on demographic and genetic dissimilarities, NMFS identified two DPSs of Steller sea lions under the ESA: a western DPS (western stock) and an eastern DPS (eastern stock). The western DPS breeds on rookeries located west of 144°W in Alaska and Russia, whereas the eastern DPS breeds on rookeries in southeast Alaska through California.

Movement occurs between the western and eastern DPS of Steller sea lions, and increasing numbers of individuals from the western DPS have been seen in Southeast Alaska in recent years (NMFS 2013, Fritz *et al.* 2013, 2016; DeMaster 2014). This DPS-exchange is especially evident in the outer Southeast coast of Alaska, including Sitka Sound. The distribution of marked animals (along with other demographic data) indicates that movements of Steller sea lions during the breeding season result in a small net annual movement of animals from southeast Alaska (eastern DPS) to the western DPS (approximately 80 sea lions total) but a much larger inter-regional movement between the western DPS and the eastern DPS (approximately 1,000 sea lions per year; Fritz *et al.* 2016). According to Hastings *et al.* (2019), 3.1 percent of Steller sea lions in the Sitka area are from the western DPS.

Critical habitat has been defined in Southeast Alaska at major haulouts and major rookeries (50 CFR 226.202), but the project action area does not overlap with Steller sea lion critical habitat. The Biorka Island haulout is the closest designated critical habitat and is over 25 kilometers southwest of the project area.

Steller sea lions are common in the project area. They were observed during every month of monitoring (September to May) between 1994 and 2002 (Straley *et al.,* 2017). Individual sea lions were seen on 19 of 21 days during monitoring for GPIP dock construction between October and November 2017 (Turnagain Marine Construction, 2017), and three of eight days of monitoring for the Petro Marine dock in January 2017 (Windward 2017). Steller sea lions were also observed during the Sitka O'Connel Bridge Lightering Float Pile Replacement Project (CBS, 2019) and the Biorka Island Dock Replacement Project (Turnagain Marine Construction, 2018). During the original construction of the Halibut Point Marine Services dock facility, no Steller sea lions were recorded within the 200-meter shutdown zone during pile driving operations; however, observers indicated observing individual sea lions outside the 200-meter zone four to five times per week. (McGraw, 2019).

During the summer months, sea lions are seen in the project area daily. Two to three individual sea lions feed on fish carcasses dumped adjacent to the project site from fishing charter operations in a nearby private marina. However, during the proposed project timing of fall and winter, the charter fishing operations are not underway and the sea lions are not as active in the area. (McGraw, pers. com., 2019).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available

behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 4.

TABLE 4—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

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

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

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

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information. Seven marine mammal species (five cetacean and two pinniped (one otariid and one phocid) species) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 3. Of the cetacean species that may be present, three are classified as low-frequency cetaceans (*i.e.,* gray whale, humpback whale, minke whale), one is classified as mid-frequency cetaceans (*i.e.,* killer whale), and one is classified as high-frequency cetaceans (*i.e.,* harbor porpoise).

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* 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 by Incidental Harassment* 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 how those impacts on individuals are likely to impact marine mammal species or stocks.

Description of Sound Sources

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

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10–20 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, vibratory pile removal, and down-the-hole drilling. The sounds produced by these activities fall into one of two general sound types: Impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (ANSI 1986; NIOSH 1998; ANSI 2005; NMFS 2018a). Non-impulsive sounds (*e.g.* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with raid rise/decay time that impulsive sounds do (ANSI 1995; NIOSH 1998; NMFS 2018a). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward 1997 in Southall *et al.* 2007).

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

Acoustic Impacts

The introduction of anthropogenic noise into the aquatic environment from pile driving and removal and down-the-hole drilling is the primary means by which marine mammals may be harassed from HPMS's specified activity. In general, animals exposed to natural or anthropogenic sound may experience physical and psychological effects, ranging in magnitude from none to severe (Southall *et al.* 2007). In general, exposure to pile driving and removal and down-the-hole drilling 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 and removal and down-the-hole drilling 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 an animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.* 2014), and the overlap between the animal and the source (*e.g.,* spatial, temporal, and spectral).

Permanent Threshold Shift (PTS)—NMFS defines PTS as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (see Ward *et al.* 1958, 1959; Ward 1960; Kryter *et al.* 1966; Miller 1974; Ahroon *et al.* 1996; Henderson *et al.* 2008). PTS levels for marine mammals are estimates, as with the exception of a single study unintentionally inducing PTS in a harbor seal (Kastak *et al.* 2008), there are no empirical data measuring PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing PTS are not typically pursued or authorized (NMFS 2018).

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

Depending on the degree (elevation of threshold in dB), duration (*i.e.,* recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in 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 (*Phocoena phocoena*), 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, and in this project, down-the-hole drilling. 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 ensonified area and not remaining for extended periods of time, the potential for TS declines.

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

Disturbance may result in changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located. Pinnipeds may increase their haul out time, possibly to avoid in-water disturbance (Thorson and Reyff 2006). Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.* 1995; Wartzok *et al.* 2003; Southall *et al.* 2007; Weilgart 2007; Archer *et al.* 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.* 2012), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to industrial sound than most cetaceans. Please see Appendices B–C of Southall *et al.* (2007) for a review of studies involving marine mammal behavioral responses to sound.

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

In 2016, ADOT&PF documented observations of marine mammals during construction activities (*i.e.,* pile driving and down-hole drilling) at the Kodiak Ferry Dock (see *80 FR 60636* for Final IHA). In the marine mammal monitoring report for that project (ABR 2016), 1,281 Steller sea lions were observed within the behavioral disturbance zone during pile driving or drilling (*i.e.,* documented as Level B harassment take). Of these, 19 individuals demonstrated an alert behavior, 7 were fleeing, and 19 swam away from the project site. All other animals were engaged in activities such as milling, foraging, or fighting and did not change their behavior. In addition, two sea lions approached within 20 m of active vibratory pile driving activities. Three harbor seals were observed within the disturbance zone during pile driving activities; none of them displayed disturbance behaviors. Fifteen killer whales and three harbor porpoise were also observed within the Level B harassment zone during pile driving. The killer whales were travelling or milling while all harbor porpoises were travelling. No signs of disturbance were noted for either of these species. 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, including several projects near Sitka (CBS, 2019; Turnagain Marine Construction, 2017; Turnagain Marine Construction, 2018).

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

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

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

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

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

Airborne Acoustic Effects—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

HPMS'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 impact and vibratory pile driving, and down-the-hole drilling, elevated levels of underwater noise would ensonify the canal where both fish and mammals may occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction, however, displacement due to noise is expected to be temporary and is not expected to result in long-term effects to the individuals or populations.

In-Water Construction Effects on Potential Foraging Habitat

HPMS's project involves installing two new dolphins and modifying two existing dolphins. The total seafloor area affected from installing new piles is a very small area compared to the vast foraging area available to marine mammals in Sitka Sound. Additionally, the new pilings installed would provide substrate for invertebrate prey such to settle on.

Avoidance by potential prey (*i.e.,* fish) of the immediate area due to the temporary loss of this foraging habitat is also possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity in Sitka Sound.

A temporary and localized increase in turbidity near the seafloor would occur in the immediate area surrounding the area where piles are installed (and removed in the case of the temporary templates). The sediments on the sea floor will be disturbed during pile driving; however, suspension will be brief and localized and is unlikely to measurably affect marine mammals or their prey in the area. In general, turbidity associated with pile installation is localized to about a 25-foot radius around the pile (Everitt *et al.* 1980). Cetaceans are not expected to be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds 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.

Impacts to habitat and prey are expected to be temporary and minimal based on the short duration of activities.

In-Water Construction Effects on Potential Prey (Fish)

The action area supports marine habitat for prey species including large

populations of anadromous fish including Pacific salmon (five species), cutthroat and steelhead trout, and Dolly Varden (ADFG 2018); other species of marine fish such as halibut, lingcod, Pacific cod, greenling, herring, eulachon, and rockfish (ADFG 2018, NMFS 2012); and euphausiids (krill) (NMFS 2012). Many anadromous streams flow into nearby Sitka Sound including Granite Creek, No Name Creek, and Stargavin Creek however, there are no anadromous fish steams at the project site (ADFG 2018).

Construction activities would produce continuous (*i.e.,* vibratory pile driving, down-the-hole drilling) and pulsed (*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 of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB 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.

The most likely impact to fish from pile driving and drilling activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe for the project.

In summary, given the short daily duration of sound associated with individual pile driving and drilling events, the relatively small areas being affected, and the relatively small number of overall days on which pile driving activities will occur, 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

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 determination.

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

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.* pile driving and removal, down-the-hole drilling) 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 high frequency species and phocids because predicted auditory injury zones are larger than for mid-frequency species and otariids. Auditory injury is unlikely to occur for other species/groups. The proposed mitigation and monitoring measures are expected to minimize the severity of such taking to the extent practicable.

As described previously, no mortality is anticipated or proposed to be authorized for this activity. Below we describe how the take is estimated.

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) and the number of days of activities. We note that while these basic factors can contribute to a basic calculation to provide an initial prediction of 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 estimate.

Acoustic Thresholds

Using the best available science, NMFS has developed 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 for non-explosive sources—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 (*e.g.,* frequency, predictability, duty cycle), the environment (*e.g.,* bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.,* 2007, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a factor that is both predictable and measurable for most activities, NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 120 dB re 1 microPascal (μPa) root mean square (rms) for continuous (*e.g.,* vibratory pile-driving, drilling) and above 160 dB re 1 μPa (rms) for non-explosive impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources.

HPMS's proposed activity includes the use of continuous (vibratory pile driving and removal, down-the-hole drilling) and impulsive (impact pile driving) sources, and therefore the 120 and 160 dB re 1 μPa (rms) are applicable.

Level A harassment for non-explosive sources—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). HPMS's proposed activity includes the use of impulsive (impact pile driving) and non-impulsive

(vibratory pile driving and removal, down-the-hole drilling) 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 5—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 will feed into identifying the area ensonified above the acoustic thresholds, which include 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, down-the-hole drilling). The maximum (underwater) area ensonified above the thresholds for behavioral harassment referenced above is 55.9km^2 (21.6mi^2), and the calculated distance to the farthest behavioral harassment isopleth is approximately15.8km (9.8mi). Both are governed by landmasses in the Sound.

The project includes vibratory and impact pile installation of steel pipe piles, vibratory removal of steel pipe piles, and down-the-hole drilling. Source levels of pile installation and removal activities are based on reviews of measurements of the same or similar types and dimensions of piles available in the literature. Source levels for each pile size and activity are presented in Table 6. Source levels for vibratory installation and removal of piles of the same diameter are assumed to be the same.

TABLE 6—SOUND SOURCE LEVELS FOR PILE DRIVING METHODS AND DOWN-THE-HOLE DRILLING

Pile size and method	Source level (SPL at 10m)			Literature source
	dB SEL [b]	dB RMS	dB peak	
30-inch steel vibratory installation/removal	[a] 168.0	.....	.....	Denes *et al.,* 2016.
48-inch steel vibratory installation	[a] 168.0	.....	.....	Denes *et al.,* 2016.
33-inch drilled anchor shaft (down-the-hole drilling)	166.2	.....	.....	Denes *et al.,* 2016.
48-inch steel impact installation *(and 30-inch steel impact installation, as necessary)* [c].	197.9	186.7	212.0	Austin *et al.,* 2016

[a] Source levels used for the impact analyses of vibratory installation/removal of 30-inch and 48-inch piles are the same. The most reasonable proxy source level for the 30-inch pile (including comparison of water depth and substrate) was 168.0 dB RMS, the median vibratory summary value from the Auke Bay site in Denes *et al.* (2016). For the 48-inch piles, NMFS determined that the median value from pile IP5 in Table 11 of Austin *et al.* (2016), 166.8 dB RMS, was the most appropriate proxy source level; however, this source level was lower than the proxy source level for the 30-inch pile. Typically, pile driving source levels are louder for installation/removal of larger piles. In effort to conduct a conservative analysis of the effects, NMFS adopted 168.0 dB RMS as a proxy source level for vibratory installation of the 48-inch piles as well.

[b] Sound exposure level (dB re 1 µPa^2-sec).

[c] As previously noted, the applicant does not expect impact pile driving of the 30-inch piles to be necessary. However, if it is, the applicant will conservatively use source levels and Level A and Level B harassment zone calculations, and monitoring zones for impact pile driving of 48-inch steel piles.

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:

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

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

Absent site-specific acoustical monitoring with differing measured transmission loss, a practical spreading value of 15 is used as the transmission loss coefficient in the above formula. Site-specific transmission loss data for Old Sitka Dock are not available, therefore the default coefficient of 15 is used to determine the distances to the Level A and Level B harassment thresholds.

TABLE 7—PILE DRIVING SOURCE LEVELS AND DISTANCES TO LEVEL B HARASSMENT THRESHOLDS

Pile size and method	Source level at 10m (dB re 1 μPa rms)	Level B threshold (dB re 1 μPa rms)	Propagation (xLogR)	Distance to Level B threshold (m)
30-inch steel vibratory installation/removal	[a] 168.0	120	15	15,849
48-inch steel vibratory installation	[a] 168.0	120	15	15,849
33-inch drilled anchor shaft (down-the-hole drilling)	166.2	120	15	12,023
48-inch steel impact installation *(and 30-inch steel impact installation, as necessary)*	197.9	160	15	3,363

[a] As noted in Table 6, source levels for the 30-inch and 48-inch steel pipe piles are the same.

When the NMFS Technical Guidance (2016) was published, in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a User Spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the assumptions included in the methods used for these tools, we anticipate that isopleths produced are typically going to be overestimates of some degree, which may result in some degree of overestimate of Level A harassment take. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools, and will qualitatively address the output where appropriate. For stationary sources such as pile driving, NMFS User Spreadsheet predicts the distance at which, if a marine mammal remained at that distance the whole duration of the activity, it would incur PTS. Inputs used in the User Spreadsheet, and the resulting isopleths are reported below.

TABLE 8—USER SPREADSHEET INPUT PARAMETERS USED FOR CALCULATING LEVEL A HARASSMENT ISOPLETHS

Pile size and installation method	48-inch pile vibratory installation	30-inch pile vibratory installation/removal	33-inch drilled anchor shaft (down-the-hole drilling)	48-inch pile impact installation (and 30-inch steel impact installation, as necessary) (SEL_{cum})	48-inch pile impact installation (PK)
Spreadsheet Tab Used.	A.1) Vibratory pile driving.	A.1) Vibratory pile driving.	A.1) Vibratory pile driving.	E.1) Impact pile driving.	E.1) Impact pile driving
Weighting Factor Adjustment (kHz).	2.5	2.5	2.5	2	2.
Source Level (SPL@ 10m).	168.0 dB rms	168.0 dB rms	166.2 dB rms	186.7 dB SEL	212 dB peak.
Number of piles within 24-h period.	2	2	2	2.	
Duration to drive a single pile (minutes).	60	30	240.		
Strike Duration (seconds).					
Number of strikes per pile.				135.	
Activity Duration (seconds) within 24-h period.	7,200	3,600	28,800.		
Propagation (xLogR)	15	15	15	15.	
Distance from source level measurement (meters).	10	10	10	10	10.

TABLE 9—CALCULATED DISTANCES TO LEVEL A HARASSMENT ISOPLETHS

Activity	Level A harassment zone (m)				
	Low-frequency cetaceans	Mid-frequency cetaceans	High-frequency cetaceans	Phocid pinnipeds	Otariid pinnipeds
30-inch Pile Vibratory Installation/Removal	20.0	1.8	29.6	12.2	0.9
48-inch Pile Vibratory Installation	31.8	2.8	46.9	19.3	1.4

TABLE 9—CALCULATED DISTANCES TO LEVEL A HARASSMENT ISOPLETHS—Continued

Activity	Level A harassment zone (m)				
	Low-frequency cetaceans	Mid-frequency cetaceans	High-frequency cetaceans	Phocid pinnipeds	Otariid pinnipeds
33-inch drilled anchor shaft (down-the-hole drilling)	60.7	5.4	89.7	36.9	2.6
48-inch Pile Impact Installation *(and 30-inch steel impact installation, as necessary)* (SEL_{cum})	736.2	26.2	876.9	394.0	28.7
48-inch Pile Impact Installation *(and 30-inch steel impact installation, as necessary)* (PK)	3.4		46.4	4.0	

Marine Mammal Occurrence and Take Calculation and Estimation

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations. We describe how the information provided above is brought together to produce a quantitative take estimate.

Gray Whale

Straley *et al.,* 2017 documented a group of three gray whales duringsurveys between 2002 and 2015, however, no gray whales were observed duringmonitoring for other recent construction projects in the area (CBS, 2019; TurnagainMarine Construction, 2017; Turnagain Marine Construction, 2018). NMFS estimates, that one group of three gray whales may occur within the Level B harassment zone during construction (3 animals × 1 group × 1 month = 3 Level B harassment takes) and therefore, requests three Level B harassment takes of gray whale.

The largest Level A harassment zone for low-frequency cetaceans extends 736.2m from the source during impact pile driving of 48-inch piles (or impact pile driving of 30-inch steel piles, as necessary) (Table 9). HPMS is planning to implement activity-specific shutdown zones (Table 11), which, especially in combination with the already low likelihood of grey whales entering the area, are expected to eliminate the potential for Level A harassment take of gray whale. Therefore, takes of gray whale by Level A harassment have not been requested, and are not proposed to be authorized.

Minke Whale

Two minke whales were taken during the Biorka Island Dock Replacement project at the mouth of Sitka Sound (Turnagain Marine Construction, 2018). Based on monitoring data from Biorka Island, three Level B minke whale takes were authorized for the Sitka O'Connel Bridge project, however, no minke whale takes were reported. Both projects occurred in the month of June. Straley *et al.,* (2017) did not report any observations of minke whales. However, because they were observed during the Biorka Island Dock Replacement project, NMFS estimates, that one group of three minke whales may occur within the Level B harassment zone during the project, and therefore, requests three Level B harassment takes of minke whale (3 animals × 1 group × 1 month = 3 Level B harassment takes).

The largest Level A harassment zone for low-frequency cetaceans extends 736.2m from the source during impact pile driving of 48-inch piles (or impact pile driving of 30-inch steel piles, as necessary) (Table 9). HPMS is planning to implement activity-specific shutdown zones (Table 11), which, especially in combination with the already low likelihood of minke whales entering the area, are expected to eliminate the potential for Level A harassment take of minke whale. Therefore, takes of minke whale by Level A harassment have not been requested, and are not proposed to be authorized.

Humpback Whale

Humpback whales frequent the action area and are likely to enter the Level B harassment zone during construction. Humpback whales typically occur in groups of two to four animals in the area (Straley *et al.,* 2017). Given the large Level B harassment zone, HPMS estimates, and NMFS preliminarily concurs, that four groups of two humpback whales may occur within the Level B harassment zone on each of the 19 days of in-water construction (2 animals in a group × 4 groups each day × 19 days = 152 Level B harassment takes). Therefore, the HPMS requests authorization for 152 Level B takes of humpback whales.

For ESA Section 7 consultation purposes, NMFS estimates that 93.9 percent of humpback whales in the project area are from the non-listed Hawaii DPS, and 6.1 percent of humpback whales in the project area are from the threatened Mexico DPS (Wade *et al.,* 2016). Therefore, of the 152 Level B harassment takes requested, 143 takes are expected to be of humpback whales from the Hawaii DPS and 9 takes are expected to be of humpbacks from the Mexico DPS.

The largest Level A harassment zone for humpback whale extends 736.2m from the source during impact pile driving of 48-inch piles (Table 9). HPMS is planning to implement activity-specific shutdown zones (Table 11), which, given the behavior and visibility of humpback whales, are expected to eliminate the potential for Level A harassment take of humpback whale. Therefore, takes of humpback whale by Level A harassment have not been requested, and are not proposed to be authorized.

Killer Whale

Forty-four (44) killer whales were observed during 190 hours of observation from Whale Point between September and May from 1994 to 2002 (Straley *et al.,* 2017). Three killer whales were documented in Sitka Channel on one day in January 2017 during the Petro Marine Dock construction (Windward 2017). Seven killer whales were observed in June, but no killer whales were seen in July, August, or September in 2018 at Biorka Island (Turnagain Marine Construction, 2018). No killer whales were observed in October or November 2017 on the western side of Eastern Channel or Silver Bay (Turnagain Marine Construction, 2017).

During work on GPIP Dock, groups of five and 10 individuals were seen a few times, but, typically, single whales were observed near the mouth of Silver Bay (Turnagain Marine Construction, 2017). Straley *et al.*'s (2017) survey data indicates a typical killer whale group size between 4 and 8 individuals in Sitka Sound. Therefore, taking all of this information into consideration, HPMS estimates, and NMFS preliminarily concurs, that one group of eight killer whales may enter the Level B harassment zone each week (8 animals in a group × 1 group per week × 3 weeks of activity = 24 Level B harassment takes) and has therefore, requested a total of 24 Level B harassment takes of

killer whales. Killer whales from all four stocks listed in Table 3 have the potential to be taken by Level B harassment.

The largest Level A harassment zone for mid-frequency cetaceans extends 26.2m from the source during impact installation of the 48-inch piles (or impact pile driving of 30-inch steel piles, as necessary) (Table 9). HPMS is planning to implement activity-specific shutdown zones (Table 11), which, given the small size of the zone and the visibility of killer whales, are expected to eliminate the potential for Level A harassment take of killer whale. Therefore, takes of killer whale by Level A harassment have not been requested, and are not proposed to be authorized.

Harbor Porpoise

Harbor porpoises commonly frequent nearshore waters, but are not common in the project vicinity. Monthly tallies from observations from Sitka's Whale Park show harbor porpoises occurring infrequently in or near the action area in March, April, and October between 1994 to 2002 (Straley *et al.,* 2017). However, no harbor porpoises have been observed more recently during monitoring. No harbor porpoises were seen during the Petro Marine Dock construction monitoring in January 2017 (Windward, 2017), during monitoring for the GPIP dock between October of November of 2017 (Turnagain Marine Construction, 2017), or during monitoring for the Sitka O'Connel Bridge project in 2019 (CBS, 2019). Halibut Point Marine staff indicated that they have not seen a harbor porpoise near the project site during the past 5 years (HPMS 2019).

The mean group size of harbor porpoise in Southeast Alaska is estimated at two to three individuals (Dahlheim *et al.* 2009), however, in Straley *et al.* (2017) found that typical group size in the project area is five animals. HPMS conservatively estimates, and NMFS concurs that one group of five harbor porpoises may enter the Level B harassment zone on each project day (5 animals in a group × 1 group per day × 19 project days = 95 Level B harassment takes) and has therefore, requested a total of 95 Level B harassment takes of harbor porpoise.

Given the size of the Level A harassment zone and the relative expected frequency of harbor porpoises entering the zone, we are proposing to require a shutdown zone that is smaller than the area within which Level A harassment could occur in order to ensure that pile driving is not interrupted to the degree that the activities are extended over additional days. Therefore, there is a small chance that Level A harassment could occur and NMFS is proposing to authorize Level A harassment take of one harbor porpoise on each day that impact pile driving is expected occur (see *Description of Proposed Activity*) for a total of five Level A harassment takes (1 Level A harassment take × 5 impact pile driving days = 5 Level A harassment takes). NMFS recognizes that HPMS may install the piles at a slightly slower rate resulting in more impact pile driving days; however, given the extremely short duration of impact pile driving on each pile, NMFS still would not expect that Level A harassment would exceed five takes. No Level A harassment takes of harbor porpoise were recorded in the Sitka GPIP Dock project (Turnagain Marine Construction, 2017) despite Level A harassment takes included in the authorizations. However, the Old Sitka Dock project has a longer work period and larger Level A harassment zones than the Sitka GPIP Dock project.

Harbor Seal

Harbor seals are common in the inside waters of southeastern Alaska, including in Sitka Sound and within the project action area. The species were seen during most months of monitoring (September through May) from Whale Park between 1994 and 2002, except in December and May (Straley *et al.,* 2017). Harbor seals were seen on 10 out of the 21 days of monitoring for GPIP dock construction between October and November 2017, and two out of eight days of monitoring for the Petro Marine dock in January 2017 (Turnagain Marine Construction, 2017 and Windward 2017).

Straley *et al.*'s (2017) data indicates a typical group size between one and two harbor seals. Observations during the original construction of the Halibut Point Marine Services dock facility recorded zero harbor seals within the 200-meter shutdown zone during pile driving operations. Observers indicated only observing individual seals outside the 200-meter zone two to three times per week. (McGraw, pers. com., 2019).

Harbor seals haul out of the water periodically to rest, give birth, and nurse their pups. According to the Alaska Fisheries Science Center's list of harbor seal haul-out locations, the closest listed haulout (id CE49) is located in Sitka Sound approximately 6.4 km (3.5 nmi) southwest, of the project site (AFSC, 2019).

HMPS estimates, and NMFS preliminarily concurs, that three groups of three harbor seals may enter the Level B harassment zone on each project day and has, therefore, requested a total of 171 Level B harassment takes of harbor seal (3 animals in a group × 3 groups per day × 19 days = 171 Level B harassment takes).

Given the size of the zone and the relative expected frequency of harbor seals entering the zone, we are proposing a to require a shutdown zone that is smaller than the area within which Level A harassment could occur in order to ensure that pile driving is not interrupted to the degree that the activities are extended over additional days. Therefore, there is a small chance that Level A harassment could occur, and NMFS is proposing to authorize Level A harassment take of one harbor seal on each day that impact pile driving is expected occur (see *Description of Proposed Activity*) for a total of five Level A harassment takes (1 Level A harassment take × 5 impact pile driving days = 5 Level A harassment takes). NMFS recognizes that HPMS may install the piles at a slightly slower rate resulting in more impact pile driving days; however, given the extremely short duration of impact pile driving on each pile, NMFS still would not expect that Level A harassment would exceed five takes. No Level A harassment takes of harbor seal were recorded for either the Sitka O'Connel Bridge project (CBS, 2019), the Sitka GPIP Dock project (Turnagain Marine Construction, 2017), however, the Old Sitka Dock project has a longer work period, and larger Level A harassment zones than the Sitka GPIP Dock project.

Steller Sea Lion

Steller sea lions are common in the project area. They were observed during every month of monitoring (September to May) between 1994 and 2002 (Straley *et al.,* 2017). Steller sea lions were also observed on 19 of 21 days in Silver Bay and Easter Channel during monitoring for GPIP dock construction between October and November 2017 (Turnagain Marine Construction, 2017). During eight days of monitoring for the Petro Marine dock in January 2017, Steller sea lions were seen on three days (Windward, 2017).

During Straley *et al.*'s (2017) surveys, sea lions typically occurred in groups of two to three; however, a group of more than 100 was sighted on at least one occasion. Steller sea lions in groups of one to eight individuals were observed around Sitka GPIP dock construction (Turnagain Marine Construction, 2017), while all Steller sea lions were observed individually in Sitka Channel during Petro Marine Dock construction monitoring (Windward, 2017). Observations during the original

construction of the Halibut Point Marine Services dock facility recorded zero Steller sea lions within the 200-meter shutdown zone during pile driving operations. Observers indicated observing individual sea lions outside the 200-meter zone four to five times per week. (McGraw, pers. comm., 2019).

During the summer months, sea lions are seen in the project area daily. Two to three individual sea lions feed on fish carcasses dumped adjacent to the project site from fishing charter operations in a nearby private marina. However, during the proposed project timing of fall and winter, the charter fishing operations are not underway and the sea lions are not as active in the area (McGraw, pers. comm., 2019).

HPMS conservatively estimates, and NMFS preliminarily concurs, that two groups of eight Steller sea lions (maximum group size observed during the Sitka GPIP dock construction (Turnagain Marine Construction, 2017)) may occur within the Level B harassment zone on each of the 19 days of in-water construction (8 animals in a group × 2 groups each day × 19 days = 304 Level B harassment takes). Therefore, HPMS requests authorization for 304 Level B harassment takes of Steller sea lions.

The largest Level A harassment zone for otariids extends 28.7m from the source during impact pile driving of 48-inch piles (Table 9). HPMS is planning to implement activity-specific shutdown zones (Table 11), which, given the small size of the Level A harassment zones, are expected to eliminate the potential for Level A harassment take of Steller sea lion. Therefore, takes of Steller sea lion by Level A harassment have not been requested, and are not proposed to be authorized.

Sea lions from both the Eastern DPS and Western DPS are present in Sitka Sound. According to Hastings *et al.* (*in press*), 3.1 percent of Steller sea lions in the project area are expected to be from the ESA-listed Western DPS, with the remaining 96.9 percent expected to be from the Eastern DPS. Therefore, of the 304 Level B harassment takes requested, 9 takes are expected to be of Steller sea lions from the ESA-listed Western DPS (western stock) and 295 are expected to be of Steller sea lions from the Eastern DPS (eastern stock).

TABLE 10—ESTIMATED TAKE BY LEVEL A AND LEVEL B HARASSMENT, BY SPECIES AND STOCK

Common name	Stock	Level A harassment take	Level B harassment take	Total take	Stock abundance	Percent of stock
Gray Whale	Eastern North Pacific	0	3	3	26,960	0.01
Minke Whale	Alaska	0	3	3	NA	NA
Humpback Whale	Central North Pacific	0	152	[a] 152	10,103	1.5
Killer Whale	Eastern North Pacific Alaska Resident.	0	24	[b] 24	2,347	1.0
	Gulf of Alaska, Aleutian Islands, Bering Sea Transient.				587	4.1
	Eastern North Pacific Northern Resident.				302	7.9
	West Coast Transient.				243	9.9
Harbor Porpoise	Southeast Alaska	5	95	100	975	10.3
Steller Sea Lion [c]	Eastern U.S	0	295	295	43,201	0.7
	Western U.S	.....	9	9	53,624	0.02
Harbor Seal	Sitka/Chatham Strait	5	171	176	13,289	1.3

[a] Of the proposed 152 Level B harassment takes, 143 takes are expected to be of humpback whales from the Hawaii DPS and 9 takes are expected to be of humpbacks from the Mexico DPS.

[b] It is unknown what stock taken individuals may belong to. Therefore, for purposes of calculating the percent of each stock that may be taken, it is assumed that up to 24 takes could occur to individuals of any of the stocks that occur in the project area.

[c] Eastern U.S. and Western U.S. stocks correspond to the Eastern DPS and Western DPS, respectively.

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 such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such 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, we carefully consider 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, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

In addition to the measures described later in this section, HPMS will employ the following standard mitigation measures:

- Conduct briefings between construction supervisors and crews and the marine mammal monitoring team prior to the start of all pile driving activity and when new personnel join the work, to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures;
- No in-water construction will take place between March 1 and October 1 to minimize disruption to the Sitka Sound herring spawning and impacts to marine mammals that congregate in Sitka Sound during the herring spawning and summer months to feed on prey.
- For in-water heavy machinery work other than pile driving (*e.g.,* standard barges, *etc.*), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions. This type of work could include the following activities: (1) Movement of the barge to the pile location; or (2) positioning of the pile on the substrate via a crane (*i.e.,* stabbing the pile);
- HPMS will drive all piles with a vibratory hammer until achieving a desired depth or refusal prior to using an impact hammer;
- For those marine mammals for which Level B harassment take has not been requested, in-water pile installation/removal will shut down immediately if such species are observed within or on a path towards the Level B harassment zone; and
- If take reaches the authorized limit for an authorized species, pile installation will be stopped as these species approach the Level B harassment zone to avoid additional take.

The following mitigation measures would apply to HPMS's in-water construction activities.

Additionally, HPMS is required to implement all mitigation measures described in the biological opinion (not yet issued).

Establishment of Shutdown Zones- HPMS will establish shutdown zones for all pile driving/removal and drilling activities. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones will vary based on the activity type and marine mammal hearing group (see Table 11). The largest shutdown zones are generally for low frequency and high frequency cetaceans as shown in Table 11. For low-frequency cetaceans, the shutdown zones contain the entire Level A harassment zones to help prevent Level A harassment takes, as the project area overlaps with humpback and gray whale BIAs as previously discussed.

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

TABLE 11—SHUTDOWN ZONES DURING PILE INSTALLATION AND REMOVAL, AND DOWN-THE-HOLE DRILLING

Activity	Shutdown zone (m)				
	LF cetaceans	MF cetaceans	HF cetaceans	Phocids	Otariids
30-inch Vibratory Pile Driving/Removal	50	10	50	25	10
48-inch Vibratory Pile Driving	50	10	50	25	10
Down-the-hole Drilling	150	10	100	100	10
48-inch Impact Pile Driving (and 30-inch impact pile driving, as necessary)	750	50	100	100	50

Monitoring for Level A and Level B Harassment—HPMS will monitor the Level B harassment zones (areas where SPLs are equal to or exceed the 160 dB rms threshold for impact driving and the 120 dB rms threshold during vibratory driving and drilling) and Level A harassment zones. 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. Placement of PSOs on the shorelines around Sitka Channel allow PSOs to observe marine mammals within the Level A and Level B harassment zones. Due to the large Level B harassment zones (Table 7), PSOs will not be able to effectively observe the entire zone. Therefore, Level B harassment exposures will be recorded and extrapolated based upon the number of observed takes and the percentage of the Level B harassment zone that was not visible.

Soft Start—Soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors would be required to provide an initial set of three strikes from the hammer at forty-percent energy, followed by a one-minute 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 thirty minutes or longer.

Pre-activity Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving/removal or drilling of 30 minutes or longer occurs, PSOs will observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will 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 it is a pinniped or small cetacean, or 30 minutes if it is a large cetacean. If the Level B harassment zone has been observed for 30 minutes and no species for which take is not authorized are present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the Level B harassment monitoring zone. When a marine mammal for which Level B harassment take is authorized is present in the Level B harassment zone, activities may begin and Level B harassment take will be recorded. If the entire Level B harassment zone is not visible at the start of construction, piling or drilling activities can begin. If work ceases for more than 30 minutes, the pre-activity monitoring of both the Level B harassment zone and shutdown zones will commence.

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

Proposed Monitoring and Reporting

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

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

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

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring Plan, dated December 2019. Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- Independent PSOs (*i.e.,* not construction personnel) who have no other assigned tasks during monitoring periods must be used;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience;
- Where a team of three or more PSOs are required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience working as a marine mammal observer during construction;
- HPMS must submit PSO CVs for approval by NMFS prior to the onset of pile driving.

PSOs must have the following additional qualifications:

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

Three PSOs will be employed during all pile driving/removal and drilling activities. PSO locations will provide an unobstructed view of all water within the shutdown zone, and as much of the Level A and Level B harassment zones as possible. PSO locations are as follows:

(1) At or near the site of pile driving;

(2) Big Gavanski Island—During vibratory pile driving and down-the-hole drilling, this PSO will be stationed on the north end of the island, and positioned to view north into Olga Straight and southeast toward the project area. For impact pile driving, this PSO will be stationed on the east side of the island, and positioned to be able to view north into Olga Straight and south toward the project area; and

(3) Middle Island—During vibratory pile driving and down-the-hole drilling, this PSO will be stationed on the north end of the island and positioned to be able to view west toward Kruzoff Island and east toward the project area. During impact pile driving, this PSO will be stationed on the east side of the island and positioned to view south toward Sitka Channel and east toward the project area.

Monitoring would be conducted 30 minutes before, during, and 30 minutes after pile driving/removal and drilling 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 or anchor shafts being drilled. Pile driving and drilling activities include the time to install, remove, or drill inside a single pile or series of piles, as long as the time elapsed between uses of the pile driving or drilling equipment is no more than thirty minutes.

Reporting

A draft marine mammal monitoring report would be submitted to NMFS within 90 days after the completion of pile driving and removal activities. The report will include an overall description of work completed, a narrative regarding marine mammal

sightings, and associated PSO data sheets. Specifically, the report must include:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;
- Weather parameters (*e.g.,* percent cover, visibility);
- Water conditions (*e.g.,* sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Locations of all marine mammal observations;
- Detailed information about any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any.
- Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals.
- An extrapolation of the estimated takes by Level B harassment based on the number of observed exposures within the Level B harassment zone and the percentage of the Level B harassment zone that was not visible; and
- Other human activity in the area.

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

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the IHA-holder shall report the incident to the Office of Protected Resources (OPR) (301–427–8401), NMFS and to the Alaska regional stranding coordinator (*907–586–7209*) as soon as feasible. The report must include the following information:

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

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), 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's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental 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 analyses apply to all of the species listed in Table 10, 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 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/removal and drilling 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 and Level B harassment, from underwater sounds generated from pile driving/removal and down-the-hole drilling. 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.

The takes from Level A and Level B harassment would be due to potential behavioral disturbance, TTS and PTS. No mortality or serious injury is anticipated given the nature of the activity. Level A harassment is only anticipated for harbor seal and harbor porpoise. The potential for Level A harassment is minimized through the construction method and the implementation of the planned mitigation measures (see *Proposed Mitigation* section).

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will 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 and down-the-hole drilling, individuals will simply move away from the sound source and be temporarily displaced from the areas of pile driving and drilling, although even this reaction has been observed primarily only in association with impact pile driving. Level B harassment will be reduced to the level of least practicable adverse impact through use of mitigation measures described herein. 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, the project site itself is located in an active marine industrial area, as previously described. Therefore, we expect that animals annoyed by project sound would simply avoid the area and use more-preferred habitats, particularly as the project is expected to occur over just 19 in-water work days, with a maximum of eight hours of work per day, though less on most work days.

In addition to the expected effects resulting from authorized Level B harassment, we anticipate that harbor porpoises and harbor seals may sustain some limited Level A harassment in the form of auditory injury. However, animals 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 frequency range of

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.

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

Steller sea lion critical habitat has been defined in Southeast Alaska at major haulouts and major rookeries (50 CFR 226.202), however, the action area does not overlap with any Steller sea lion critical habitat. The closest Steller sea lion critical habitat to the project area is Kaiuchali Island, a three-acre rocky islet located slightly less than one mile southwest of Biorka Island. It is listed as ''Biorka Island'' in the critical habitat descriptions, and is over 25 km (13.5 nmi) southwest of the project area.

Critical habitat was recently proposed for the humpback whale in Southeast Alaska, including Sitka Sound (84 FR 54354, October 9, 2019), but it has not yet been finalized. Additionally, Sitka Sound is within the seasonal southeast Alaska humpback whale feeding BIA from March through November (Ferguson *et al.,* 2015). Construction is expected to occur during the tail end of the season specified for the BIA; however, project activities would only overlap with the BIA for approximately one to two months, and the project is expected to occur over just 19 in-water work days, further reducing the temporal overlap with the BIA. Additionally, the area of the BIA that may be affected by the planned project is small relative to both the overall area of the BIA and the overall area of suitable humpback whale habitat outside of this BIA. Therefore, take of humpback whales using the southeast Alaska humpback whale feeding BIA is not expected to impact reproduction or survivorship.

Sitka Sound is also within a gray whale migratory corridor BIA (Ferguson *et al.,* 2015). Construction is expected to occur during the beginning of the period of highest density in the BIA during the southbound migration (November to January). The Sound is also within the southeast Alaska BIA, an important area for gray whale feeding. Construction is expected to overlap with the end of the period with the highest gray whale densities in the southeast Alaska BIA (May through November). However, as noted for humpback whales, project activities would only overlap with high animal densities in the gray whale migratory and feeding BIAs for approximately one to two months, and the project is expected to occur over just 19 in-water workdays, further reducing the temporal overlap with the BIAs. Additionally, the area of the feeding BIA in which impacts of the planned project may occur is small relative to both the overall area of the BIA and the overall area of suitable gray whale habitat outside of this BIA. The area of Sitka Sound affected is also small relative to the rest of the Sound, such that it allows animals within the migratory corridor to still utilize Sitka Sound without necessarily being disturbed by the construction. Therefore, take of gray whales using the feeding and migratory BIAs is not expected to impact reproduction or survivorship.

As noted previously, since January 1, 2019, elevated gray whale strandings have occurred along the west coast of North America from Mexico through Alaska. The event has been declared an UME, though a cause has not yet been determined. While three Level B harassment takes of gray whale are proposed to be authorized, this is an extremely small portion of the stock (0.01 percent), and HPMS would be required to implement a shutdown zone that includes the entire Level A harassment zone for low-frequency cetaceans such as gray whales.

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 the species or stock through effects on annual rates of recruitment or survival:

- No mortality or serious injury is anticipated or authorized;
- The relatively small number of Level A harassment exposures are anticipated to result only in slight PTS 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 area impacted by the specified activity is very small relative to the overall habitat ranges of all species, BIAs, and proposed humpback whale critical habitat; and
- The activity is expected to occur over 19 in-water workdays with a maximum of eight hours of work per day, though less on most days.

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

The number of takes for each species proposed to be taken as a result of this project is included in Table 10. Our analysis shows that less than 11 percent of each stock could be taken by harassment. Furthermore, these percentages conservatively assume that all takes of killer whale will be accrued to a single stock, when multiple stocks are known to occur in the project area. For the Alaska stock of minke whale, a lack of an accepted stock abundance value did not allow for the calculation of an expected percentage of the population that would be affected. The most relevant estimate of partial stock abundance is 1,233 minke whales for a portion of the Gulf of Alaska (Zerbini *et al.* 2006). Given three proposed takes by Level B harassment for the stock, comparison to the best estimate of stock abundance shows less than one percent of the stock is expected to be impacted. The number 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, which is an 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 will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

In order to issue an IHA, NMFS must find that the specified activity will not have an ''unmitigable adverse impact'' on the subsistence uses of the affected marine mammal species or stocks by Alaskan Natives. NMFS has defined ''unmitigable adverse impact'' in 50 CFR 216.103 as an impact resulting from the specified activity: (1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) Causing the marine mammals to abandon or avoid hunting areas; (ii) Directly displacing subsistence users; or (iii) Placing physical barriers between the marine mammals and the subsistence hunters; and (2) That cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

The proposed Project is in an area where subsistence hunting for harbor seals or sea lions could occur (Wolfe *et al.* 2013). Peak hunting season in southeast Alaska occurs during the month of November and again during March and April. During this time, seals are aggregated in shoal areas as they prey on forage species such as herring, making them easier to find and hunt (Wolfe *et al.* 2013). However, the project location is not preferred for hunting. There is little-to-no hunting documented in the vicinity and there are no harvest quotas for non-listed marine mammals. As such, the Old Sitka Dock North Dolphins Expansion Project is not expected to have impacts on the ability of hunters from southeast Alaska subsistence communities to harvest marine mammals. Additionally, HPMS contacted the Sitka Tribe of Alaska, but they did not raise any concerns regarding subsistence impacts. Therefore, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from HPMS's proposed activities.

Endangered Species Act (ESA)

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

NMFS is proposing to authorize take of Mexico DPS humpback whales and Western DPS Steller sea lions, which are listed under the ESA. The Permit and Conservation Division has requested initiation of Section 7 consultation with the Alaska Region for the issuance of this IHA. NMFS will conclude the ESA consultation prior to reaching a determination regarding the proposed issuance of the authorization.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to Halibut Point Marine Services LLC for conducting pile driving and removal and down-the-hole drilling activities in Sitka, AK in fall 2020 to winter 2021, 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/permit/incidental-take-authorizations-under-marine-mammal-protection-act.*

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 project. We also request at this time 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-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, or nearly identical, activities as described in the Specified Activities section of this notice is planned or (2) the activities as described in the Specified Activities 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 one 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); and

(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; and

- 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: January 16, 2020.

Donna S. Wieting,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XA015]

Western Pacific Fishery Management Council; Public Meeting

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

ACTION: Notice of a public meeting and hearing.

SUMMARY: The Western Pacific Fishery Management Council (Council) will hold public meetings and scoping sessions to discuss management of small-boat pelagic fisheries in Hawaii.