initial issuance application package will be considered incomplete until the required information is submitted. NMFS will decline to act on an incomplete application.

NMFS will issue LE DSBG permits to approved applicants under tier 9 on a first come, first served basis, according to the date and time that their application was submitted through the National Permits System. NMFS will issue up to 25 permits each year. If NMFS approves more than 25 applications in a single year, the approved applicants above 25 (who were not issued a permit) will receive priority for permit issuance the following year, according to the date and time that their complete applications were received.

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

Dated: December 17, 2024.

Kelly Denit,

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

[FR Doc. 2024–30443 Filed 1–6–25; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XE481]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the City of Hoonah's Cargo Dock Project, Hoonah, 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 the City of Hoonah (Hoonah) for authorization to take marine mammals incidental to pile driving and removal activities associated with the Hoonah Cargo Dock project in Hoonah, 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-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than February 6, 2025.

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

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/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: Rachel Wachtendonk, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

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

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ''means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as ''mitigation''); and requirements pertaining to the monitoring and reporting of the takings. The definitions of all applicable MMPA statutory terms used above are included in the relevant sections below and can be found in section 3 of the MMPA (16 U.S.C. 1362) and NMFS regulations at 50 CFR 216.103.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.,* the issuance of an IHA) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NAO 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

Summary of Request

May 10, 2024, NMFS received a request from Hoonah for an IHA to take marine mammals incidental to pile driving and removal activities associated with the Hoonah Cargo Dock project in Hoonah, Alaska. Following NMFS' review of the application, Hoonah submitted a revised versions on September 10, 2024 and October 15, 2024. The application was deemed adequate and complete on October 22, 2024. Hoonah's request is for take of 8 species of marine mammals by Level B harassment and, for a subset of these species, Level A harassment. Neither Hoonah nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued an IHA to Hoonah for the Hoonah Cargo Dock project (86 FR 27410, May 20, 2021), and later changed the effective dates of the IHA in a re-issuance (87 FR 27571, May 9, 2022). However, due to COVID and inflation no work under the IHA was conducted. Since then, Hoonah has made several changes to their project plan and, therefore, a new IHA is appropriate.

Description of Proposed Activity

Overview

Hoonah is proposing to install a cargo dock at the Hoonah Marine Industrial Center (HMIC) in Hoonah, Alaska (figure 1). The purpose of this project is to install a dock that will enable barges to land, unload, and load during all tidal conditions and seasons. The project is needed to allow for the safe, reliable, and economical transport of freight to and from Hoonah, which is only accessible by air and sea. The construction of the sheet pile cargo dock, barge ramp, and breasting dolphins will require impact and vibratory pile installation and down-the-hole (DTH) drilling (referred to as tension anchoring).

Sounds resulting from pile driving, pile removal, and tension anchoring may result in the incidental take of marine mammals by Level A and Level B harassment in the form of auditory injury or behavioral harassment. Underwater sound would be constrained to Port Fredrick and would be truncated by land masses in the inlet. Construction activities would start in September 2025 and last 5 months.

Dates and Duration

The proposed IHA would be effective from September 1, 2025 through August 31, 2026. Vibratory and impact pile driving and tension anchoring are expected to start in September 2025 and take 107 days over a span of 5 months. All pile driving and removal would be completed during daylight hours.

Specific Geographic Region

The project would take place at the HMIC in Hoonah, Alaska, which is located within Port Fredrick on Icy Strait. The proposed dock would be constructed at an existing barge ramp, adjacent to the Hoonah ferry terminal and tank farm.

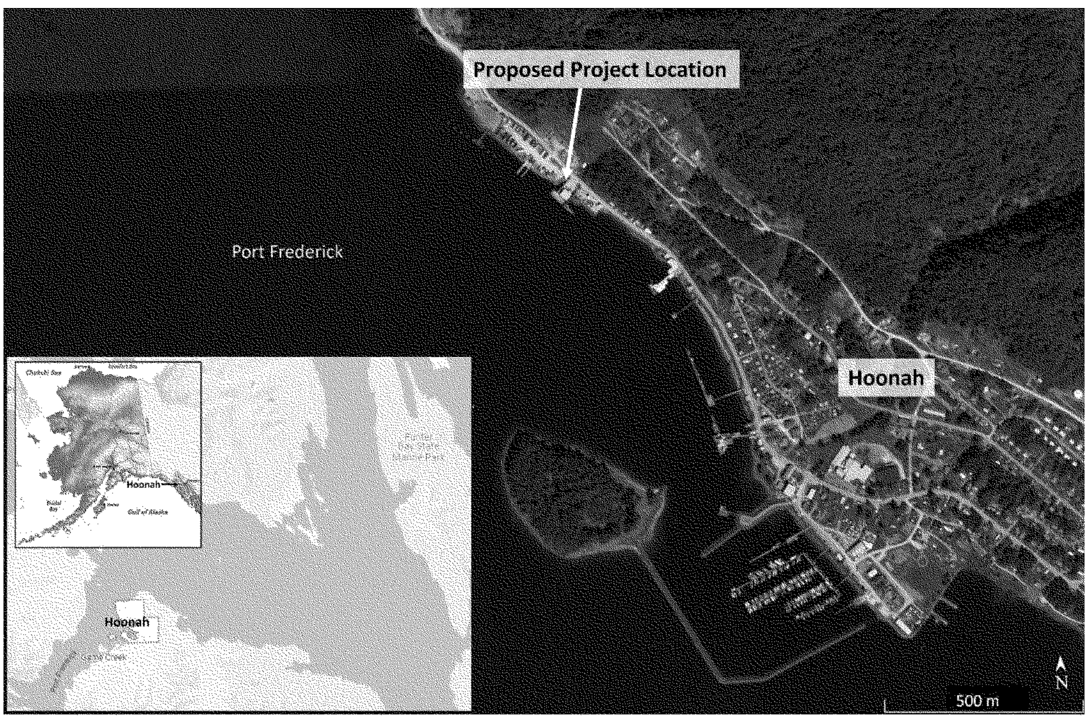

Figure 1 -- Map of Proposed Project Area in Hoonah, Alaska

Detailed Description of the Specified Activity

The construction of the sheet pile cargo dock, barge ramp, and breasting dolphins will include the installation of 542 (330 linear feet (ft), or 100.6 linear meters (m)) steel sheet piles, 5 steel wye piles, 1 steel X pile, 3 20-inch (in), or 0.51-m steel fender piles, 2 16-in (0.41 m) fender piles, 7 H-piles, 4 36-in (0.91 m) steel pipe piles, and 6 36-in (0.91 m) steel batter piles. The installation and removal of 50 temporary 24-in (0.61 m) steel pipe piles will be completed to support the permanent pile installation. Piles will be installed with vibratory and impact hammers, and temporary piles will be removed with a vibratory hammer. 8-to-10-in (0.20 to 0.25 m) steel pipe casings will be placed in each steel pipe/batter piles as tension anchors and set with tension anchoring. Table 1 provides a summary of the pile driving activities.

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

Activity	Pile type and size	Number of piles	Method	Piles per day	Total days
Installation	24-in temporary steel pipe pile	50	Vibratory	6	9
	Steel sheet pile	542		30	19

TABLE 1—NUMBER AND TYPE OF PILES TO BE INSTALLED AND REMOVED—Continued

Activity	Pile type and size	Number of piles	Method	Piles per day	Total days
	Steel wye pile	5		2	3
	Steel X pile	1		1	1
	20-in steel fender pile	3		3	1
	16-in steel fender pile	2		2	1
	Steel H-pile	7		2	4
	36-in steel pipe pile	4		2	2
	36-in steel batter pile	6		2	2
	Steel sheet pile	542	Impact	15	36
	Steel wye pile	5		2	3
	Steel X pile	1		1	1
	20-in steel fender pile	3		3	1
	16-in steel fender pile	2		2	1
	Steel H-pile	7		2	4
	36-in steel pipe pile	4		2	2
	36-in steel batter pile	6		4	2
	8-to-10-in pipe casing drilling	10	Tension Anchoring	2	5
Removal	24-in temporary steel pipe pile	50	Vibratory	6	9

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

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions, instead of reprinting the information. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find-species).*

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or proposed to be authorized here, PBR and annual serious injury and mortality (M/SI) from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Alaska and Pacific SARs. All values presented in table 2 are the most recent available at the time of publication and are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 2—SPECIES [1] LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [2]	Stock abundance (CV, N_{min}, most recent abundance survey) [3]	PBR	Annual M/SI [4]
Order Artiodactyla—Cetacea—Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals)						
Humpback Whale	*Megaptera novaeangliae*	Mainland Mexico—CA/OR/WA	T, D, Y	3,477 (0.101, 3,185, 2018).	43	22
		Hawai'i	-, -, N	11,278 (0.56, 7,265, 2020).	127	27.09
Minke Whale	*Balaenoptera acutorostrata*	AK	-, -, N	N/A (N/A, N/A, N/A) [5]	UND	0
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Killer whale	*Orcinus orca*	Eastern North Pacific Alaska Resident.	-, -, N	1,920 (N/A, 1,920, 2019) [6].	19	1.3
		Eastern Northern Pacific Northern Resident.	-, -, N	302 (N/A, 302, 2018) [6]	2.2	0.2
		West Coast Transient	-, -, N	349 (N/A, 349, 2018) [7]	3.5	0.4

TABLE 2—SPECIES [1] LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [2]	Stock abundance (CV, N_{min}, most recent abundance survey) [3]	PBR	Annual M/SI [4]
Pacific White-Sided Dolphin	*Lagenorhynchus obliquidens*	N Pacific	-, -, N	26,880 (N/A, N/A, 1990)	UND	0
Family Phocoenidae (porpoises)						
Dall's Porpoise	*Phocoenoides dalli*	AK	-, -, N	UND (UND, UND, 2015) [8].	UND	37
Harbor Porpoise	*Phocoena phocoena*	Northern Southeast Alaska Inland Waters [9].	-, -, N	1,619 (0.26, 1,250, 2019)	13	5.6
Order Carnivora—Pinnipedia						
Family Otariidae (eared seals and sea lions)						
Steller Sea Lion	*Eumetopias jubatus*	Western	E, D, Y	49,837 (N/A, 49,837, 2022) [10].	299	267
		Eastern	-, -, N	36,308 (N/A, 36,308, 2022) [11].	2,178	93.2
Family Phocidae (earless seals)						
Harbor Seal	*Phoca vitulina*	Glacier Bay/Icy Strait	-, -, N	7,455 (N/A, 6,680, 2017)	120	104

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

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

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

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

[5] Reliable population estimates are not available for this stock. Please see Friday *et al.* (2013) and Zerbini *et al.* (2006) for additional information on numbers of minke whales in Alaska.

[6] N_{est} is based upon counts of individuals identified from photo-ID catalogs.

[7] N_{est} is based upon count of individuals identified from photo-ID catalogs in analysis of a subset of data from 1958–2018.

[8] The best available abundance estimate is likely an underestimate for the entire stock because it is based upon a survey that covered only a small portion of the stock's range.

[9] New stock split from Southeast Alaska stock.

[10] Nest is best estimate of counts, which have not been corrected for animals at sea during abundance surveys. Estimates provided are for the United States only. The overall N_{min} is 73,211 and overall PBR is 439.

[11] N_{est} is best estimate of counts, which have not been corrected for animals at sea during abundance surveys. Estimates provided are for the United States only.

As indicated above, all 8 species (with 12 managed stocks) in table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. All species that could potentially occur in the project area are included in table 6 of the IHA application. While gray whales and sperm whales have been documented in the area, the temporal and/or spatial occurrence of these species is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here. Gray whales are considered to be very rare (no local knowledge of sightings in the project area) and sperm whales are considered to be rare (no sightings in recent years) within the project area.

Additional information relevant to our analyses (beyond that included above, in the application, and on NMFS website) is included below, as appropriate. In addition, the Northern sea otter (*Enhydra lutris kenyoni*) may be found in the project area. However, sea otters are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

Humpback Whale

The Mainland Mexico—CA/OR/WA and Hawaii stocks of humpback whale occur in the project area. Wild *et al.* (2023) identified Glacier Bay and Icy Strait as a Biologically Important Area (BIA) for humpback whales for feeding during the months of May through October, with an importance score of two (indicating an area of moderate importance), an intensity score of two (indicating an area of moderate comparative significance) and a data support score of three (highest relative confidence in the available supporting data). Humpback whales have been observed within Port Fredrick and Icy Strait, with most sightings occurring from late May through October (SolsticeAK 2024).

Steller Sea Lion

Steller sea lions were listed as threatened range-wide under the ESA on November 26, 1990 (55 FR 49204). Steller sea lions were subsequently partitioned into the western and eastern Distinct Population Segments (DPSs; western and eastern stocks) in 1997 (62 FR 24345, May 5, 1997). The eastern DPS remained classified as threatened until it was delisted in November 2013. The western DPS (those individuals west of the 144° W longitude or Cape Suckling, Alaska) was upgraded to endangered status following separation of the DPSs, and it remains endangered today. There is regular movement of both DPSs across this 144° W longitude boundary especially within a core mixing zone (Jemison *et al.,* 2013). The proposed project is located outside of the known core mixing zone of eastern DPS and western DPS Steller sea lions; however, western DPS animals have been recorded within the Lynn Canal extended mixing zone which includes the proposed project area (Hastings *et al.,* 2020; *Jemison et al.,* 2013). Therefore, while both DPSs could be observed within the project area, most are expected to be from the unlisted eastern DPS.

Steller sea lions do not follow traditional migration patterns, but will move from offshore rookeries in the summer to more protected haulouts closer to shore in the winter. They use rookeries and haulouts as resting spots as they follow prey movements and take foraging trips for days, usually within a few miles (mi) of their rookery or haulout. They are generalist marine predators and opportunistic feeders based on seasonal abundance and location of prey. Steller sea lions forage in nearshore as well as offshore areas, following prey resources. They are highly social and are often observed in large groups while hauled out but alone or in small groups when at sea (NMFS 2023b).

Steller sea lions are common in the proposed project area and reside in the area year-round. The nearest rookery to the proposed project is White Sisters (~72 kilometers (km) (44.5 mi southwest of project) and the nearest major haulout is The Sisters (13 km (8 mi) northeast of project) (AFSC 2023).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Generalized hearing ranges were chosen based on the ~65 decibel (dB) threshold from composite audiograms, previous analyses in NMFS (2018), and/or data from Southall *et al.* (2007) and Southall *et al.* (2019). We note that the names of two hearing groups and the generalized hearing ranges of all marine mammal hearing groups have been recently updated (NMFS 2024) as reflected below in in table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS

[NMFS, 2024a]

Hearing group	Generalized hearing range *
UNDERWATER:	
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 36 * kHz.
High-frequency (HF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
Very High-frequency (VHF) cetaceans (true porpoises, *Kogia,* river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*).	200 Hz to 165 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	40 Hz to 90 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 68 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges may not be as broad. Generalized hearing range chosen based on ~65 dB threshold from composite audiogram, previous analysis in NMFS 2018, and/or data from Southall *et al.,* 2007; Southall *et al.,* 2019. Additionally, animals are able to detect very loud sounds above and below that ''generalized'' hearing range.

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

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. The Estimated Take of Marine Mammals section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The Negligible Impact Analysis and Determination section considers the content of this section, the Estimated Take of Marine Mammals section, and the Proposed Mitigation section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Description of Sound Sources

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

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

In-water construction activities associated with the project would include impact pile installation, vibratory pile installation and removal, and tension anchoring. Impact hammers typically operate by repeatedly dropping and/or pushing a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is impulsive, 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 typically produce less sound (*i.e.,* lower levels) than impact hammers. Peak 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; California Department of Transportation (CALTRANS), 2015, 2020). Sounds produced by vibratory hammers are non-impulsive; the rise time is slower, reducing the probability and severity of injury, and the sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.,* 2005). Tension anchoring through DTH systems would also be used during the proposed construction. A DTH hammer is essentially a drill bit that drills through the bedrock using a rotating function like a normal drill, in concert with a hammering mechanism operated by a pneumatic (or sometimes hydraulic) component integrated into the DTH hammer to increase speed of progress through the substrate (*i.e.,* it is similar to a ''hammer drill'' hand tool). The sounds produced by the DTH methods contain both a continuous non-impulsive component from the drilling action and an impulsive component from the hammering effect. Therefore, NMFS treats DTH systems as both impulsive and continuous, non-impulsive sound source types simultaneously.

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

Acoustic Impacts

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

NMFS defines a noise-induced TS as a change, usually an increase, in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018). The amount of TS 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 frequency range of the exposed species relative to the signal's frequency spectrum (*i.e.,* how an animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.,* 2014), and the overlap between the animal and the source (*e.g.,* spatial, temporal, and spectral).

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

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

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

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

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

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

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

Disturbance may result in changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); or avoidance of areas where sound sources are located. Pinnipeds may increase their haulout time, possibly to avoid in-water disturbance (Thorson and Reyff, 2006). Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.,* 1995; Wartzok *et al.,* 2003; Southall *et al.,* 2007; Weilgart, 2007; Archer *et al.,* 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to industrial sound than most cetaceans. Please see appendices B–C of Southall *et al.* (2007) and Gomez et al. (2016) for a review of studies involving marine mammal behavioral responses to sound.

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.,* 2004). Animals are most likely to habituate to sounds that are predictable and unvarying. It is important to note that habituation is appropriately considered as a ''progressive reduction in response to stimuli that are perceived as neither aversive nor beneficial,'' rather than as, more generally, moderation in response to human disturbance (Bejder *et al.,* 2009). The opposite process is sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure.

As noted above, behavioral state may affect the type of response. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.,* 1995; Wartzok *et al.,* 2004; National

Research Council (NRC), 2005). Controlled experiments with captive marine mammals have showed pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.,* 1997; Finneran *et al.,* 2003). Observed responses of wild marine mammals to loud pulsed sound sources (*e.g.,* seismic airguns) have been varied but often consist of avoidance behavior or other behavioral changes (Richardson *et al.,* 1995; Morton and Symonds, 2002; Nowacek *et al.,* 2007).

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 (*e.g.,* Erbe *et al.,* 2019). 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). However, there are broad categories of potential response, which we describe in greater detail here, that include alteration of dive behavior, alteration of foraging behavior, effects to breathing, interference with or alteration of vocalization, avoidance, and flight.

Changes in dive behavior can vary widely and may consist of increased or decreased dive times and surface intervals as well as changes in the rates of ascent and descent during a dive (*e.g.,* Frankel and Clark, 2000; Costa *et al.,* 2003; Ng and Leung, 2003; Nowacek *et al.,* 2004; Goldbogen *et al.,* 2013a, 2013b, Blair *et al.,* 2016). Variations in dive behavior may reflect interruptions in biologically significant activities (*e.g.,* foraging) or they may be of little biological significance. The impact of an alteration to dive behavior resulting from an acoustic exposure depends on what the animal is doing at the time of the exposure and the type and magnitude of the response.

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. In response to playbacks of vibratory pile driving sounds, captive bottlenose dolphins showed changes in target detection and number of clicks used for a trained echolocation task (Branstetter *et al.* 2018). Similarly, harbor porpoises trained to collect fish during playback of impact pile driving sounds also showed potential changes in behavior and task success, though individual differences were prevalent (Kastelein *et al.* 2019d).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.

A flight response is a dramatic change in normal movement to a directed and rapid movement away from the perceived location of a sound source. The flight response differs from other avoidance responses in the intensity of the response (*e.g.,* directed movement, rate of travel). Relatively little information on flight responses of marine mammals to anthropogenic signals exist, although observations of flight responses to the presence of predators have occurred (Connor and Heithaus, 1996; Bowers *et al.,* 2018). The result of a flight response could range from brief, temporary exertion and displacement from the area where the signal provokes flight to, in extreme cases, marine mammal strandings (England *et al.,* 2001). However, it should be noted that response to a perceived predator does not necessarily invoke flight (Ford and Reeves, 2008), and whether individuals are solitary or in groups may influence the response.

Behavioral disturbance can also impact marine mammals in more subtle ways. Increased vigilance may result in costs related to diversion of focus and attention (*i.e.,* when a response consists of increased vigilance, it may come at the cost of decreased attention to other critical behaviors such as foraging or resting). These effects have generally not been demonstrated for marine mammals, but studies involving fishes and terrestrial animals have shown that increased vigilance may substantially reduce feeding rates (*e.g.,* Beauchamp and Livoreil, 1997; Fritz *et al.,* 2002; Purser and Radford, 2011). In addition, chronic disturbance can cause population declines through reduction of fitness (*e.g.,* decline in body condition) and subsequent reduction in reproductive success, survival, or both (*e.g.,* Harrington and Veitch, 1992; Daan *et al.,* 1996; Bradshaw *et al.,* 1998). However, Ridgway *et al.* (2006) reported that increased vigilance in bottlenose dolphins exposed to sound over a 5-day period did not cause any sleep deprivation or stress effects.

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.,* 2002a) and, more rarely, studied in wild populations (*e.g.,* Romano *et al.,* 2002b). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as ''distress.'' In addition, any animal experiencing TTS would likely also experience stress responses (NRC, 2003), however distress is an unlikely result of this project based on observations of marine mammals during previous, similar projects in the area.

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

Airborne Acoustic Effects—Although pinnipeds are known to haul out regularly at two harbor seal haulout sites within Port Fredrick, NMFS expects that incidents of take resulting solely from airborne sound are unlikely due to their proximity. One of the haulouts (CE79A) is located approximately 10 km (6.25 mi) from the project site and is outside of the ensonfied zone for this action. The other (CF39A) is located approximately 3 km (2 mi) from the project site and will be ensonified during some vibratory and impact pile driving activities. Neither of these haulouts are listed as a ''key haulout,'' or a haulout with 50 or more individuals present at the time of survey (AFSC 2024).

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 elevated above the acoustic criteria. 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 likely previously have been ''taken'' because of exposure to underwater sound above the behavioral harassment thresholds, which are generally 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

Hoonah's construction activities could have localized, temporary impacts on marine mammal habitat by increasing in-water SPLs and slightly decreasing water quality. No net habitat loss is expected, since its proposed location is an existing barge ramp that already experiences frequent vessel traffic and is adjacent to an active road, ferry terminal, dock, boat haulout pier, and boat yard. Construction activities are localized and would likely have temporary impacts on marine mammal habitat through increases in underwater sounds. Increased noise levels may affect acoustic habitat (see masking discussion above) and adversely affect marine mammal prey in the vicinity of the project area (see discussion below). During pile driving activities, elevated levels of underwater noise would ensonify the project area where both fishes and marine mammals may occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction; however, displacement due to noise is expected to be temporary and is not expected to result in long-term effects to the individuals or populations.

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

In-Water Construction Effects on Potential Foraging Habitat

The proposed activities would not result in permanent impacts to habitats used directly by marine mammals outside of the actual footprint of the constructed dock. The total seafloor area affected by pile installation and removal is a very small area compared to the vast foraging area available to marine mammals in Port Fredrick and the surrounding waters. Pile extraction and installation and tension anchoring may have impacts on benthic invertebrate species primarily associated with disturbance of sediments that may cover or displace some invertebrates. The impacts would be temporary and highly localized, and no habitat would be permanently displaced by construction. Therefore, it is expected that impacts on foraging opportunities for marine mammals due to construction of the dock would be minimal.

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

Effects on Potential Prey

Construction activities would produce continuous (*i.e.,* vibratory pile driving and tension anchoring) and intermittent (*i.e.,* impact driving and tension anchoring) sounds. Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.,* fish). Marine mammal prey varies by species, season, and location. Here, we describe studies regarding the effects of noise on known marine mammal prey.

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

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

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

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

The greatest potential impact to fishes during construction would occur during impact pile driving and tension anchoring. The duration of impact pile driving would be limited to the final stage of installation (''proofing'') after the pile has been driven as close as practicable to the design depth with a vibratory driver. Only a total of 10 tension anchors will be set over a total of 5 days of construction. In-water construction activities would only occur during daylight hours, allowing fish to forage and transit the project area in the evening. Vibratory pile driving could elicit behavioral reactions from fishes such as temporary avoidance of the area but is unlikely to cause injuries to fishes or have persistent effects on local fish populations. Construction also would have minimal permanent and temporary impacts on benthic invertebrate species, a marine mammal prey source.

The area impacted by the project is relatively small compared to the available habitat in the remainder of Port Fredrick and the surrounding areas, and there are no areas of particular importance that would be impacted by this project. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. As described in the preceding, the potential for Hoonah's construction to affect the availability of prey to marine mammals or to meaningfully impact the quality of physical or acoustic habitat is considered to be insignificant.

Estimated Take of Marine Mammals

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

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 tension anchoring) 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 very high frequency species and phocids because predicted auditory injury zones are larger than for high-frequency species and otariids. The proposed mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

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

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

Acoustic Criteria

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur auditory injury of some degree (equated to Level A harassment). We note that the criteria for auditory injury, as well as the names of two hearing groups, have been recently updated (NMFS 2024a) as reflected below in the Level A Harassment section.

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.,* frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.,* bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.,* Southall *et al.,* 2007, 2021, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μPa)) for continuous (*e.g.,* vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μPa for non-explosive impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

Hoonah's proposed activity includes the use of continuous (vibratory pile driving, tension anchoring) and impulsive (impact pile driving, tension anchoring) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μPa are applicable. Tension anchoring has both continuous and intermittent components as discussed in the *Description of Sound Sources* section above. When evaluating Level B harassment, NMFS recommends treating tension anchoring as a continuous source and applying the RMS SPL thresholds of 120 dB re 1 μPa.

Level A harassment—NMFS' Updated Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0) (Updated Technical Guidance, 2024) identifies dual criteria to assess auditory injury (Level A harassment) to five different underwater marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). Hoonah's proposed activity includes the use of impulsive (impact pile driving, tension anchoring) and non-impulsive (vibratory pile driving, tension anchoring) sources. Tension anchoring includes both impulsive and non-impulsive characteristics. When evaluating Level A harassment, NMFS recommends treating tension anchoring as an impulsive source.

The 2024 Updated Technical Guidance criteria include both updated thresholds and updated weighting functions for each hearing group. The thresholds are provided in the table below. The references, analysis, and methodology used in the development of the criteria are described in NMFS' 2024 Updated Technical Guidance, which may be accessed at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance-other-acoustic-tools.*

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF AUDITORY INJURY

Hearing group	Auditory injury onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{p,0\text{-}pk,flat}$: 222 dB; $L_{E,p,LF,24h}$: 183 dB	*Cell 2:* $L_{E,p,LF,24h}$: 197 dB.
High-Frequency (HF) Cetaceans	*Cell 3:* $L_{p,0\text{-}pk,flat}$: 230 dB; $L_{E,HF,24h}$: 193 dB	*Cell 4:* $L_{E,p,HF,24h}$: 201 dB.
Very High-Frequency (VHF) Cetaceans	*Cell 5:* $L_{pk,0\text{-}pk,flat}$: 202 dB; $L_{E,p,VHF,24h}$: 159 dB	*Cell 6:* $L_{E,p,VHF,24h}$: 181 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{p,0\text{-}pk,flat}$: 223 dB; $L_{E,PW,24h}$: 185 dB	*Cell 8:* $L_{E,p,PW,24h}$: 195 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{p,0\text{-}pk,flat}$: 230 dB; $L_{E,p,OW,24h}$: 185 dB	*Cell 10:* $L_{E,p,OW,24h}$: 199 dB.

* Dual metric criteria for impulsive sounds: Use whichever criteria results in the larger isopleth for calculating AUD INJ onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level criteria associated with impulsive sounds, the PK SPL criteria are recommended for consideration for non-impulsive sources.

Note: Peak sound pressure level (L_{p},0-$_{pk}$) has a reference value of 1 μPa (underwater) and 20 μPa (in air), and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1 μPa2s (underwater) and 20 μPa2s (in air). In this table, criteria are abbreviated to be more reflective of International Organization for Standardization standards (ISO 2017; ISO 2020). The subscript "flat" is being included to indicate peak sound pressure are flat weighted or unweighted within the generalized hearing range of marine mammals underwater (*i.e.,* 7 Hz to 165 kHz) or in air (*i.e.,* 42 Hz to 52 kHz). The subscript associated with cumulative sound exposure level criteria indicates the designated marine mammal auditory weighting function (LF, HF, and VHF cetaceans, and PW, OW, PA, and OA pinnipeds) and that the recommended accumulation period is 24 hours. The weighted cumulative sound exposure level criteria 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 criteria will be exceeded.

Ensonified Area

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

The sound field in the project area is the existing background noise plus additional construction noise from the proposed project. Vessel traffic and other commercial and industrial activities in the project area may contribute to elevated background noise levels which may mask sounds produced by the project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.,* vibratory pile driving and removal, impact pile driving, and tension anchoring).

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

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

where

TL = transmission loss in dB;
B = transmission loss coefficient;
R_1 = the distance of the modeled SPL from the driven pile, and
R_2 = the distance from the driven pile of the initial measurement.

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

The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. In order to calculate the distances to the Level A harassment and the Level B harassment sound thresholds for the methods and piles being used in this project, the applicant and NMFS used acoustic monitoring data from other locations to develop proxy source levels for the various pile types, sizes and methods. The project includes vibratory, and impact pile installation of steel pipe piles and vibratory removal of steel pipe piles, steel fender piles, steel sheet piles, steel H-piles, steel wye piles, steel X piles, and steel batter piles and tension anchoring drilling. Source levels for each pile size and driving method are presented in table 5.

NMFS recommends treating DTH systems as both impulsive and continuous, non-impulsive sound source types simultaneously. Thus, impulsive thresholds are used to evaluate Level A harassment, and continuous thresholds are used to evaluate Level B harassment. NMFS (2022) outlines its recommended source levels for DTH systems. NMFS has applied that guidance in this analysis (see Table 5 for NMFS' proposed source levels).

TABLE 5—PROXY SOUND SOURCE LEVELS AT 10 m FOR PILE SIZES AND DRIVING METHODS

Pile type	RMS SPL (re 1 μPa)	SEL (re 1 μPa²-sec)	Peak SPL (re 1 μPa)	Source
Vibratory Pile Driving				
Temporary 24-in steel pipe piles.	162	NA	NA	PR1 2023 calculations (cited in NMFS 2023).
20-in steel fender piles				
Steel sheet piles	160			Caltrans 2015 (cited in NMFS 2023).
16-in steel fender piles	155			PR1 2023 calculations (cited in NMFS 2023).
H-piles	150			PR1 2023 calculations (cited in NMFS 2023).
Wye piles				NMFS 2024.
X piles.				
36-in steel pile	166			PR1 2023 calculations (cited in NMFS 2023).
Impact Pile Driving				
20-in steel fender piles	190	177	203	Caltrans 2015 (cited in NMFS 2023).
Steel sheet piles	190	180	205	Caltrans 2015 (cited in NMFS 2023).
16-in steel fender piles	185	175	200	Caltrans 2020 (cited in NMFS 2023).
H-piles	183	170	210	Caltrans 2015 (cited in NMFS 2023).
Wye piles.				
X piles.				
36-in steel pile	193	183	210	Caltrans 2015 & 2020 (cited in NMFS 2023).
Tension Anchoring				
6–8 in anchor hole	156	144	170	NMFS 2022.

All Level B harassment isopleths are reported in Table 6 below. The maximum (underwater) area ensonified above the thresholds for behavioral harassment is 43 km² (16.6 mi²). However, that zone would be truncated by land masses that would obstruct underwater sound transmission and would be limited to Port Fredrick (see figure 4 in Trident's application).

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the 2024 Updated Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources such as pile driving, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur auditory injury. Inputs used in the optional User Spreadsheet tool, and the resulting estimated isopleths, are reported below.

TABLE 6—NMFS USER SPREADSHEET INPUTS

Pile size and type	Spreadsheet tab used	Weighting factor adjustment (kHz)	Transmission loss coefficient	Number of piles per day	Activity duration per pile (minutes)	Number of strikes per pile
Vibratory Pile Driving						
Temporary 24-in steel pipe piles	A.1 Vibratory pile driving.	2.5	15	6	15	NA
20-in steel fender piles		2.5	15	3	30	NA
Steel sheet piles		2.5	15	30	15	NA
16-in steel fender piles		2.5	15	2	30	NA
H-piles		2.5	15	2	30	NA
Wye piles		2.5	15	3	30	NA
X piles		2.5	15	1	30	NA
36-in steel pipe pile		2.5	15	2	60	NA
36-in steel batter pile		2.5	15	2	60	NA
Impact Pile Driving						
20-in steel fender piles	E.1. Impact pile driving.	2	15	3	30	600
Steel sheet piles		2	15	15	30	200
16-in steel fender piles		2	15	2	30	600
H-piles		2	15	2	30	600
Wye piles		2	15	2	30	200
X piles		2	15	1	30	200
36-in steel pipe pile		2	15	2	60	1,200
36-in steel batter pile		2	15	4	60	1,200
Tension Anchoring						
6–8 in anchor hole	E.2 DTH pile driving.	2	15	2	60	108,000

TABLE 7—CALCULATED LEVEL A AND LEVEL B HARASSMENT ISOPLETHS

Activity	Level A harassment zone (m)					Level B harassment zone (m)
	LF-cetaceans	HF-cetaceans	VHF-cetaceans	Phocids	Otariids	
Vibratory Pile Driving						
Temporary 24-in steel pipe piles	16.4	6.3	13.4	21.1	7.1	7,356.4
20-in steel fender piles						
Steel sheet piles	30.3	11.6	24.8	39.0	13.1	4,641.6
16-in steel fender piles	3.7	1.4	3.0	4.4	1.6	2,154.4
H-piles	1.7	0.7	1.4	2.2	0.7	1,000.0
Wye piles						
X piles	1.1	0.4	0.9	1.4	0.5	
36-in steel pipe pile	31.5	12.1	25.8	40.6	13.7	11,659.1
36-in steel batter pile						
Impact Pile Driving						
20-in steel fender piles	586.1	74.8	907.1	520.7	194.1	1,000.0
Steel sheet piles	1,305.9	166.6	2,020.9	1,160.1	432.4	
16-in steel fender piles	329.1	42.0	509.2	292.3	109.0	462.2
H-piles	152.7	19.5	236.4	135.7	50.6	341.5
Wye piles	73.4	9.4	113.6	65.2	24.3	
X piles	46.3	5.9	71.6	41.1	15.3	
36-in steel pipe pile	1,783.6	227.6	2,760.1	1,584.5	590.6	1,584.9
36-in steel batter pile	2,831.3	361.2	4,381.4	2,515.2	937.6	

TABLE 7—CALCULATED LEVEL A AND LEVEL B HARASSMENT ISOPLETHS—Continued

Activity	Level A harassment zone (m)					Level B harassment zone (m)
	LF-cetaceans	HF-cetaceans	VHF-cetaceans	Phocids	Otariids	
Tension Anchoring						
6–8 in anchor hole	90.0	11.5	139.2	79.9	29.8	2,512.0

Marine Mammal Occurrence and Take Estimation

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

Consultation with the Hoonah Harbormaster, applications and reports from other nearby in water construction projects, and available scientific literature are used to estimate the occurrence of marine mammals in the action area. Daily occurrence probability of each marine mammal species in the action area is based on historic data of occurrence, seasonality, and group size in Port Frederick and Icy Strait, and other nearby waters.

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization. Tables for each species are presented to show the calculation of take during the project. NMFS used the following equations to estimate take.

Incidental take estimate (daily) = group size * groups per day * days of pile driving activity (107 days)

Incidental take estimate (monthly) = group size * groups per month (considered 30 days) * months of pile driving activity (107 days/30 days per month)

Minke Whale

There are a few sightings of minke whales every year, so they could occur every month during the project. They typically occur in groups of two to three individuals (NMFS 2023d). Up to one group of three minke whales are expected to occur in the project area per month. Therefore, using the monthly equation above, NMFS proposes to authorize 11 takes by Level B harassment of minke whales.

The largest Level A harassment zone for minke whales extends 2,831 m from the sound source (table 7). All construction work would be shut down prior to a minke whale entering the Level A harassment zone specific to the in-water activity underway at the time. In consideration of the infrequent occurrence of minke whales in the project area and proposed shutdown requirements, no take by Level A harassment of minke whales is anticipated or proposed for authorization.

Humpback Whale

There are multiple sightings of humpback whales every month, and they could occur every day during the project. They typically occur in groups of one to two individuals (Dahlheim *et al.,* 2009). Up to one group of two humpback whales are expected to occur in the project area per day. Therefore, using the daily equation above, NMFS proposes to authorize 214 takes by Level B harassment of humpback whales. In the project area, it is estimated that the majority of whales (98 percent) would be from the Hawaii DPS and 2 percent will be from the Mexico DPS (Wade 2021; Muto *et al.* 2022). Therefore, of the 214 takes by Level B harassment, NMFS anticipates that 210 takes would be of individuals from the Hawaii DPS and 4 takes of individuals from the Mexico DPS.

The largest Level A harassment zone for humpback whales extends 2,831 m from the sound source (table 7). All construction work would be shut down prior to a humpback whale entering the Level A harassment zone specific to the in-water activity underway at the time. In consideration that humpback whales are most often seen in Icy Strait and the mouth of Port Fredrick and proposed shutdown requirements, no take by Level A harassment is anticipated or proposed for authorization for humpback whales.

Killer Whale

There are multiple sightings of killer whales every year, and they could occur every month during the project. They typically occur in groups of one to five individuals (NMFS 2023e). Up to four groups of five killer whales (*i.e.,* 20 killer whales total) are expected to occur in the project area per month. Therefore, using the monthly equation given above, NMFS proposes to authorize 72 takes by Level B harassment of killer whales.

The largest Level A harassment zone for killer whales extends 361 m from the sound source (table 7). All construction work would be shut down prior to a killer whale entering the Level A harassment zone specific to the in-water activity underway at the time. In consideration of the small size of the Level A harassment zone and proposed shutdown requirements, no take by Level A harassment of killer whales is anticipated or proposed for authorization.

Pacific White-Sided Dolphin

There are a few sightings of Pacific white-sided dolphins every year, but there are no sightings from recent years. However, to avoid underestimating potential impacts from the project, in estimating take, NMFS assumes they could occur every other month (*i.e.,* one group every 60 days) during the project. They occur in groups of 2 to 153 individuals, but are most commonly seen in groups of 23–26 individuals (Dahlheim *et al.,* 2009). NMFS anticipates that up to one group of 26 Pacific white-sided dolphins could occur in the project area every other month. Using the monthly equation above suggests that there could be 47 takes by Level B harassment of Pacific white-sided dolphins. However, since these dolphins can occur in large groups, NMFS proposes to authorize 153 takes by Level B harassment in case a larger pod is observed.

The largest Level A harassment zone for Pacific white-sided dolphins extends 361 m from the sound source (table 7). All construction work would be shut down prior to a Pacific white-sided dolphin entering the Level A harassment zone specific to the in-water activity underway at the time. In consideration of the small size of the Level A harassment zone, proposed shutdown requirements, and infrequent occurrence of Pacific white-sided dolphins, no take by Level A harassment of Pacific white-sided dolphins is anticipated or proposed for authorization.

Dall's Porpoise

There are multiple sightings of Dall's porpoises every year, and they could occur every month during the project. They typically occur in groups of two to five individuals (Dahlheim *et al.,* 2009). NMFS anticipates that up to four groups of five Dall's porpoises (*i.e.,* 20 Dall's porpoises total) could occur in the project area per month. Therefore, using the monthly equation given above, NMFS proposes to authorize 72 takes by Level B harassment of Dall's porpoises.

The largest Level A harassment zone for Dall's porpoises extends 4,381 m from the sound source (table 7) during impact pile driving. Hoonah would be required to implement shutdowns during all pile driving activities. However, during impact pile driving of the 20-in fender piles, 16-in fender piles, sheet piles, and 36-in piles, the Level A harassment zones for Dall's porpoise extend beyond the shutdown zones, and NMFS anticipates that Level A harassment could occur. Hoonah estimates, and NMFS concurs, that up to four groups of two Dall's porpoises could occur in the Level A harassment zone for a duration long enough to incur auditory injury during each month of impact pile driving (42 days of pile driving). Using the monthly equation above, NMFS proposes to authorize 12 takes by Level A harassment of Dall's porpoises.

Harbor Porpoise

There are multiple sightings of harbor porpoises every month, and they could occur every day during the project. They typically occur in groups of one to three individuals (Dahlheim *et al.,* 2009). Up to one group of three harbor porpoises are expected to occur in the project area per day. Therefore, using the daily equation given above, NMFS proposes to authorize 321 takes by Level B harassment of harbor porpoises.

The largest Level A harassment zone for harbor porpoises extends 4,381 m from the sound source (table 7) during impact pile driving. Hoonah would be required to implement shutdowns during all pile driving activities. However, during impact pile driving of the 20-in fender piles, 16-in fender piles, sheet piles, and 36-in piles, the Level A harassment zones for the harbor porpoise extend beyond the shutdown zone, and NMFS anticipates that Level A harassment could occur. Hoonah expects, and NMFS concurs, that up to one group of two harbor porpoises could be present in the Level A harassment zone for each day of impact pile driving (42 days of pile driving). Using the daily equation given above, NMFS proposes to authorize 84 takes by Level A harassment of harbor porpoises.

Harbor Seal

There are a multiple sightings of harbor seals every month, and they could occur every day during the project. They typically occur in groups of one to four individuals (Jefferson *et al.,* 2019). Up to one group of two harbor seals are expected to occur in the project area per day. Therefore, using the daily equation given above, NMFS proposes to authorize 214 takes by Level B harassment of harbor seals. Additionally there is a harbor seal haulout located three km (1.9 mi) from the project site where harbor seals congregate in larger numbers. Hoonah estimated, and NMFS concurs that up to 1 group of 20 harbor seals could be taken by Level B harassment every month that the Level B harassment zone is larger than 2,000 m (43 days of pile driving). Therefore, using the monthly equation given above, NMFS proposes to authorize an additional 29 takes by Level B harassment of harbor seals. Cumulatively, NMFS proposes to authorize 243 takes by Level B harassment of harbor seals.

The largest Level A harassment zone for harbor seals extends 2,515 m from the sound source (table 7) during impact pile driving. Hoonah would be required to implement shutdowns during all pile driving activities. However, during impact pile driving of the 20-in fender piles, 16-in fender piles, sheet piles, and 36-in piles, the Level A harassment zones for the harbor porpoise extend beyond the shutdown zone, and NMFS anticipates that Level A harassment could occur. Hoonah expects, and NMFS concurs, that up to one harbor seal could be present in the Level A harassment zone for each day of impact pile driving (42 days of pile driving). Using the equation given above, the calculated estimated take by Level A harassment for harbor seals would be 42.

Steller Sea Lion

There are a multiple sightings of Steller sea lions every month, and they could occur every day during the project. They typically occur in groups of one to four individuals (NMFS 2023f). Up to one group of four Steller sea lions is expected to occur in the project area per day. Therefore, using the daily equation given above, NMFS proposes to authorize 428 takes by Level B harassment of Steller sea lions. Both the Eastern DPS and Western DPS of Steller sea lions occur in the project area. NMFS estimates that the majority of Steller sea lions in the project area (99.6 percent) would be from the Eastern DPS and 1.4 percent would be from the Western DPS (Hastings *et al.,* 2020). Therefore, of the 428 total takes by Level B harassment, NMFS anticipates that 422 takes would be of individuals from the Eastern DPS and 6 takes of individuals from the Western DPS.

The largest Level A harassment zone for Steller sea lions extends 938 m from the sound source (table 7). All construction work would be shut down prior to a Steller sea lion entering the Level A harassment zone specific to the in-water activity underway at the time. In consideration of the proposed shutdown requirements, no take by Level A harassment is anticipated or proposed for Steller sea lions.

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

Common name	Stock	Stock abundance [1]	Level A harassment	Level B harassment	Total proposed take	Proposed take as percentage of stock [2]
Minke whale	Alaska	UND	0	11	11	[3] UND
Humpback whale	Hawaii DPS	11,278	0	214	214	1.9
	Mexico DPS	3,477				6.1
Killer whale	Eastern North Pacific Alaska Resident	1,920	0	72	72	3.8
	West Coast Transient	349				20.6
	Eastern North Pacific Northern Resident.	302				23.8
Pacific white-sided dolphin	North Pacific	26,880	0	153	153	0.6
Dall's porpoise	Alaska	UND	12	72	83	[4] UND
Harbor porpoise	Northern Southeast Alaska Inland Waters.	1,619	84	321	403	24.9
Harbor seal	Glacier Bay/Icy Strait	7,455	42	243	298	4.0
Steller sea lion	Western DPS	49,837	0	428	428	0.9
	Eastern DPS	36,308				1.2

[1] Stock size is Nbest according to NMFS 2023 Draft SARs, unless otherwise noted.

[2] Percent of stock reflects the combined total of take by Level B and Level A harassment (if requested). If a species has multiple stocks, NMFS conservatively assumes that all takes occur to each stock.
[3] The Alaska SAR does not have an estimated population size for the Alaska stock of minke whales due to only a portion of the stock's range being surveyed and such few whales seen during stock abundance surveys.
[4] NMFS does not have an official abundance estimate for this stock, and the minimum population estimate is considered to be unknown (Young *et al.,* 2023). See Small Numbers for additional discussion.

Proposed Mitigation

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

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

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

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

The mitigation measures described in the following paragraphs would apply to the Hoonah's in-water construction activities.

Shutdown Zones and Monitoring

Hoonah must establish shutdown zones for all pile driving activities. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity would occur upon sighting of a marine animal (or in anticipation of an animal entering the defined area). Shutdown zones vary based on the activity type and duration and marine mammal hearing group, as shown in table 9. A minimum shutdown zone of 10 m would be required for all in-water construction activities to avoid physical interaction with marine mammals. Marine mammal monitoring would be conducted during all pile driving activities to ensure that shutdowns occur, as required. Proposed shutdown zones for each activity type are shown in table 9.

Prior to pile driving, shutdown zones would be established based on zones represented in table 9. Observers would survey the shutdown zones for at least 30 minutes before pile driving activities start. If marine mammals are observed within the shutdown zone, pile driving and tension anchoring will be delayed until the animal has moved out of the shutdown zone, either verified by an observer or by waiting until 15 minutes has elapsed without a sighting of small cetaceans, delphinids, and pinnipeds; or 30 minutes has elapsed without a sighting of a large cetacean. If a marine mammal approaches or enters the shutdown zone during pile driving or tension anchoring, the activity would be halted. If a species for which authorization has not been granted, or a species which has been granted but the authorized takes are met, is observed approaching or within the Level B harassment zone during pile driving or tension anchoring, the activity would be halted. Pile driving may resume after the animal has moved out of and is moving away from the shutdown zone (or Level B harassment zone for which authorization has not been granted, or a species which has been granted but the authorized takes are met) or after at least 15 minutes has passed since the last observation of the animal.

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

TABLE 9—SHUTDOWN AND LEVEL B HARASSMENT ZONES BY ACTIVITY

Activity	Minimum shutdown zone (m)					Level B harassment zone (m)
	LF-cetaceans	HF-cetaceans	VHF-cetaceans	Phocids	Otariids	
Vibratory Pile Driving						
Temporary 24-in steel pipe piles	20	10	15	25	10	7,360
20-in steel fender piles						
Steel sheet piles	35	15	25	40	15	4,645
16-in steel fender piles	10	10	10	10	10	2,155
H-piles	10	10	10	10	10	1,000
Wye piles						
X piles						
36-in steel pipe pile	35	15	30	45	15	11,660
36-in steel batter pile						
Impact Pile Driving						
20-in steel fender piles	590	75	200	200	195	1,000
Steel sheet piles	1,310	170	200	200	435	
16-in steel fender piles	330	42	200	200	110	465
H-piles	155	20	200	140	55	345
Wye piles	75	10	115	70	25	
X piles	50	10	75	45	20	

TABLE 9—SHUTDOWN AND LEVEL B HARASSMENT ZONES BY ACTIVITY—Continued

Activity	Minimum shutdown zone (m)					Level B harassment zone (m)
	LF-cetaceans	HF-cetaceans	VHF-cetaceans	Phocids	Otariids	
36-in steel pipe pile	1,785	230	200	200	595	1,5890
36-in steel batter pile	2,835	365	200	200	940	
Tension Anchoring						
6–8 in anchor hole	90	15	140	80	30	2,515

Protected Species Observers

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

PSOs would monitor the full shutdown zones and as much of the Level B harassment zones as possible. Monitoring enables observers to be aware of and communicate the presence of marine mammals in the project areas outside the shutdown zones and thus prepare for a potential cessation of activity should the animal enter the shutdown zone.

Pre- and Post-Activity Monitoring

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

Soft Start

Soft-start procedures provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the impact hammer operating at full capacity. Hoonah must implement soft start techniques when impact pile driving. Soft start requires contractors to conduct an initial set of three strikes at reduced energy, followed by a 30-second waiting period, then two subsequent three-strike sets before initiating continuous driving. Soft start will be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer.

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

Proposed Monitoring and Reporting

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

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

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

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring and Mitigation Plan and section 5 of the IHA. Hoonah's draft Marine Mammal Monitoring and Mitigation Plan is Appendix D of the IHA application. Prior to the beginning of construction, Hoonah would submit a revised Marine Mammal Mitigation and Monitoring Plan containing additional details of monitoring locations and methodology for NMFS concurrence.

Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods;
- At least one PSO must have prior experience performing the duties of a PSO during construction activity

pursuant to a NMFS-issued incidental take authorization;

- Other PSOs may substitute education (degree in biological science or related field) or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization. PSOs may also substitute Alaska native traditional knowledge for experience;
- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization; and PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.

PSOs 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.

Between one and three PSOs will be on duty depending on the size of the Level B harassment zone. PSOs will establish monitoring locations as described in the Marine Mammal Mitigation and Monitoring Plan. Monitoring locations would be selected by the Contractor during pre-construction. PSOs would monitor for marine mammals entering the Level B harassment zones; the position(s) may vary based on construction activity and location of piles or equipment.

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

Data Collection

PSOs would use approved data forms to record the following information:

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

Reporting

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

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including the number and type of piles driven or removed and by what method (*i.e.,* impact, vibratory, tension anchoring). The total duration of driving time must be recorded for each pile during vibratory driving and, number or strikes for each pile during impact driving, and the duration of operation of drilling and components for tension anchoring;
- PSO locations during marine mammal monitoring;
- Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance;
- Upon observation of a marine mammal, the following information: (1) name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; (2) time of sighting; (3) identification of the animal(s) (*e.g.,* genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species; (4) distance and bearing of each marine mammal observed relative to the pile being driven for each sighting (if pile driving was occurring at time of sighting); (5) estimated number of animals (min/max/best estimate); (6) estimated number of animals by cohort (adults, juveniles, neonates, group composition, *etc.*); (7) animal's closest point of approach and estimated time spent within the harassment zone; and (8) description of any marine mammal behavioral observations (*e.g.,* observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.,* no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);
- Number of marine mammals detected within the harassment zones, by species; and
- Detailed information about any implementation of any mitigation triggered (*e.g.,* shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

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

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, Hoonah shall report the incident to the Office of Protected Resources (OPR), NMFS and to the Alaska regional stranding network as soon as feasible. If the death or injury was clearly caused by the specified activity, Hoonah must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS. The report must include the following information:

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

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.,* intensity, duration), the context of any impacts or responses (*e.g.,* critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the majority of our analysis applies to all the species listed in table 2, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, they are described independently in the analysis below.

Pile driving and tension anchoring activities have the potential to disturb or displace marine mammals. Specifically, the project activities may result in take, in the form of Level A harassment (Dall's porpoise, harbor porpoise, and harbor seal) and Level B harassment from underwater sounds generated from pile driving and removal and tension anchoring. Potential takes could occur if individuals are present in the ensonified zone when these activities are underway.

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

Take would occur within a limited, confined area (Port Fredrick) of the stocks' ranges. The intensity and duration of take by Level A harassment and Level B harassment would be minimized through use of mitigation measures described herein. Further, the amount of take proposed to be authorized is extremely small when compared to stock abundance, and the project is not anticipated to impact any known important habitat areas for any marine mammal species with the exception of a known biologically important area for humpback whales, discussed below.

Take by Level A harassment is authorized to account for the potential that an animal could enter and remain within the area between a Level A harassment zone and the shutdown zone for a duration long enough to be taken by Level A harassment. Any take by Level A harassment is expected to arise from, at most, a small degree of auditory injury because animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of auditory injury. Additionally, and as noted previously, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. Because of the small degree anticipated, though, any auditory injury or TTS potentially incurred here would not be expected to adversely impact individual fitness, let alone annual rates of recruitment or survival.

Behavioral responses of marine mammals to pile driving at the project site, if any, are expected to be mild and temporary. Marine mammals within the Level B harassment zone may not show any visual cues they are disturbed by activities or could become alert, avoid the area, leave the area, or display other mild responses that are not observable such as changes in vocalization patterns. Given the limited number of piles to be installed or extracted per day and that pile driving and removal would occur across a maximum of 107 days within the 12-month authorization period, any harassment would be temporary.

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

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

The waters of Glacier Bay and Icy Strait are part of the Alaska humpback whale feeding BIA (Wild *et al.,* 2023). However, underwater sound would be constrained to Port Fredrick and would be truncated by land masses in the inlet. The area of the BIA that may be affected by the proposed project is small relative to the overall area of the BIA. The humpback whale feeding BIA is active between May and October while the proposed project is scheduled to occur between September and January, resulting in only 2 months of overlap. Additionally, pile driving associated with the project is expected to take only 107 days, further reducing the temporal overlap with the BIA. Therefore, the proposed project is not expected to have significant adverse effects on the foraging of Alaska humpback whale.

There are two known harbor seal haulouts within Port Fredrick. One of the haulouts (CE79A) is located approximately 10 km (6.25 mi) from the project site and is outside of the ensonfied zone for this action. The other (CF39A) is located approximately 3 km (2 mi) from the project site and will be ensonified during some vibratory and impact pile driving activities. Neither of these haulouts are listed as a ''key haulout,'' or a haulout with 50 or more individuals present at the time of survey (AFSC 2024). Given that these are not considered key haulouts, and the maximum of 43 days that the ensonified zone will extend over 2 km, the proposed project is not expected to have significant adverse effects on harbor seal haulout sites. No areas of specific biological importance (*e.g.,* ESA critical habitat, other BIAs, or other areas) for any other species are known to co-occur with the project area.

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

- No serious injury or mortality is anticipated or authorized;
- For all species except Dall's porpoises, harbor porpoises, and harbor seals, no Level A harassment is anticipated or proposed for this action;
- The intensity of anticipated takes by Level B harassment is relatively low for all stocks and would not be of a duration or intensity expected to result in impacts on reproduction or survival;
- The lack of anticipated significant or long-term negative effects to marine mammal habitat;
- With the exception of the humpback whale BIA described above, no areas of specific biological importance (*e.g.,* ESA critical habitat, other BIAs, or other areas) for any other species are known to co-occur with the project area; and
- Hoonah would implement mitigation measures, such as soft-starts for impact pile driving and shutdowns to minimize the numbers of marine mammals exposed to injurious levels of sound, and to ensure that take by Level A harassment, is at most, a small degree of auditory injury.

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

Small Numbers

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

For all stocks, except for the Alaska stock of minke whales and the Alaska stock of Dall's porpoises, whose abundance estimate is unknown, the proposed number of takes is less than one-third of the best available population abundance estimate (table 8). The numbers of animals proposed for authorization to be taken from these stocks would be considered small relative to the relevant stocks' abundances, even if each estimated taking occurred to a new individual—an extremely unlikely scenario.

Current abundance estimates of Dall's porpoises in the region are not available. the most recent estimate (83,400 individuals) does not include coastal or inland waters of southeast Alaska and is considered unreliable since it is based upon data collected more than 8 years ago (Young *et al.,* 2023). However, given the size of the most recent estimate, the 83 takes of this stock proposed for authorization clearly represents small numbers of this stock.

There is no current or historical estimate of the Alaska minke whale stock, but there are known to be over 1,000 minke whales in the Gulf of Alaska (Muto *et al.* 2018), so the 11 takes proposed for authorization is small relative to estimated survey abundance, even if each proposed take occurred to a new individual. Additionally, the range of the Alaska stock of minke whales is extensive, stretching from the Canadian Pacific coast to the Chukchi Sea, and Hoonah's proposed project area would impact a small portion of this range.

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

Unmitigable Adverse Impact Analysis and Determination

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.

Alaska Natives have traditionally harvested subsistence resources, including marine mammals, in the Glacier Bay and Icy Strait for a millennia. Present day Hoonah is the principle village of the Huna tribe, and according to Ian Johnson, Hoonah Indian Association's Environmental Coordinator, no known marine mammal harvest takes place in the immediate HMIC area (Johnson 2024). Limited subsistence harvests of marine mammals within Port Fredrick has occurred in the past, with the most recent recorded/documented harvests of marine mammals in Hoonah in 2012. The proposed activity will take place in Port Fredrick, and no activities overlap with current subsistence hunting areas; therefore, there are no relevant subsistence uses of marine mammals adversely impacted by this action. The proposed project is not likely to adversely impact the availability of any marine mammal species or stocks that are commonly used for subsistence purposes or to impact subsistence harvest of marine mammals in the region.

Based on the description of the specified activity, the measures described to minimize adverse effects on the availability of marine mammals for subsistence purposes, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from Hoonah's proposed activities.

Endangered Species Act

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

NMFS is proposing to authorize take of humpback whales (Mexico DPS) and Steller sea lions (western DPS), which are listed under the ESA. The Permits 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 Hoonah for conducting the Hoonah Cargo Dock Project in Hoonah, Alaska from September 1, 2025 through August 31, 2026, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.*

Request for Public Comments

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

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

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond 1 year from expiration of the initial IHA);
- The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (*e.g.,* reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take); 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 2, 2025.

Catherine Marzin,

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

[FR Doc. 2025–00014 Filed 1–6–25; 8:45 am]

BILLING CODE 3510–22–P

COMMODITY FUTURES TRADING COMMISSION

Sunshine Act Meetings

TIME AND DATE: 10:30 a.m. EST, Friday, January 10, 2025.

PLACE: Virtual meeting.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Enforcement and examinations matters. In the event that the time, date, or location of this meeting changes, an announcement of the change, along with the new time, date, and/or place of the meeting will be posted on the Commission's website at *https://www.cftc.gov/.*

CONTACT PERSON FOR MORE INFORMATION: Christopher Kirkpatrick, 202–418–5964.

(Authority: 5 U.S.C. 552b.)

Dated: January 3, 2025.

Christopher Kirkpatrick,

Secretary of the Commission.

[FR Doc. 2025–00222 Filed 1–3–25; 4:15 pm]

BILLING CODE 6351–01–P

COMMODITY FUTURES TRADING COMMISSION

Sunshine Act Meetings

TIME AND DATE: 9:30 a.m. EST, Friday, January 10, 2025.

PLACE: Virtual meeting.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Matters relating to the CFTC's bargaining position and related issues concerning ongoing negotiations over CFTC employee compensation and benefits. In the event that the time, date, or location of this meeting changes, an announcement of the change, along with the new time, date, and/or place of the meeting will be posted on the Commission's website at *https://www.cftc.gov/.*

CONTACT PERSON FOR MORE INFORMATION: Christopher Kirkpatrick, 202–418–5964.

(Authority: 5 U.S.C. 552b.)

Dated: January 3, 2025.

Christopher Kirkpatrick,

Secretary of the Commission.

[FR Doc. 2025–00221 Filed 1–3–25; 4:15 pm]

BILLING CODE 6351–01–P