



DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XE642]

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; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal
Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued
an incidental harassment authorization (IHA) to the City of Hoonah (Hoonah) to
incidentally harass marine mammals during pile driving and removal activities associated
with the Hoonah Cargo Dock project in Hoonah, Alaska. There are no changes from the
proposed authorization in this final authorization.

DATES: This authorization is effective from September 1, 2025 through August 31,
2026.

ADDRESSES: Electronic copies of the application and supporting documents, as well as
a list of the references cited in this document, may be obtained online at:

*[https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-
authorizations-construction-activities](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.

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.

Summary of Request

On 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 eight 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.

There are no changes from the proposed IHA to the final IHA.

Description of the Specified Activity

Overview

Hoonah plans to install a cargo dock at the Hoonah Marine Industrial Center (HMIC) in Hoonah, Alaska starting in September 2025. Work would occur on approximately 107 days over a span of 5 months. 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).

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.

A detailed description of the planned construction project is provided in the **Federal Register** notice for the proposed IHA (90 FR 1084, January 7, 2025). Since that time, no changes have been made to the planned activities. Therefore, a detailed description is not provided here. Please refer to that **Federal Register** notice for the description of the specified activity.

Comments and Responses

A notice of NMFS' proposal to issue an IHA to Hoonah was published in the **Federal Register** on January 7, 2025 (90 FR 1084). That notice described, in detail, Hoonah's activity, the marine mammal species that may be affected by the activity, and the anticipated effects on marine mammals. In that notice, we requested public input on the request for authorization described therein, our analyses, the proposed authorization, and any other aspect of the notice of proposed IHA, and requested that interested persons submit relevant information, suggestions, and comments. During the 30-day public comment period, NMFS did not receive any public comments.

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 1 lists all species or stocks for which take is expected and authorized for this activity and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or authorized here, PBR and annual serious injury and mortality (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 1 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 1 -- Species¹ 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)						
<i>Family Balaenopteridae (rorquals)</i>						
Humpback Whale	<i>Megaptera novaeangliae</i>	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	<i>Balaenoptera acutorostrata</i>	AK	-, -, N	N/A (N/A, N/A, N/A) ⁵	UND	0
Odontoceti (toothed whales, dolphins, and porpoises)						
<i>Family Delphinidae</i>						
Killer whale	<i>Orcinus orca</i>	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
Pacific White-Sided Dolphin	<i>Lagenorhynchus obliquidens</i>	N Pacific	-, -, N	26,880 (N/A, N/A, 1990)	UND	0
<i>Family Phocoenidae (porpoises)</i>						
Dall's Porpoise	<i>Phocoenoides dalli</i>	AK	-, -, N	UND (UND, UND, 2015) ⁸	UND	37
Harbor Porpoise	<i>Phocoena phocoena</i>	Northern Southeast Alaska Inland Waters ⁹	-, -, N	1,619 (0.26, 1,250, 2019)	13	5.6
Order Carnivora – Pinnipedia						
<i>Family Otariidae (eared seals and sea lions)</i>						
Steller Sea Lion	<i>Eumetopias jubatus</i>	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
<i>Family Phocidae (earless seals)</i>						
Harbor Seal	<i>Phoca vitulina</i>	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 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. 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 1 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.

A detailed description of the species likely to be affected by Hoonah's construction project, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the **Federal Register** notice for the proposed IHA (90 FR 1084, January 7, 2025); since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to that **Federal Register** notice for these descriptions. Please also refer to the NMFS website (<https://www.fisheries.noaa.gov/find-species>) for generalized species accounts.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately

assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). 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 2.

Table 2 – 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, <i>Kogia</i> , river dolphins, Cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>)	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>i.e.</i> , 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 <i>et al.</i> , 2007; Southall <i>et al.</i> , 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

The effects of underwater noise from Hoonah's pile driving and tension anchoring activities have the potential to result in behavioral harassment of marine mammals in the vicinity of the project area. The notice of the proposed IHA (90 FR 1084, January 7, 2025) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of underwater noise from Hoonah's construction activity on marine mammals and their habitat. That information and analysis is referenced in this final IHA determination and is not repeated here; please refer to the notice of the proposed IHA (90 FR 1084, January 7, 2025).

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes authorized 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 will 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 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 authorized for this activity. Below we describe how the authorized 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 authorized 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 μ Pa)) for continuous (*e.g.*, vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μ Pa 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 temporary threshold shift (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 planned 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 μ Pa are applicable. Tension anchoring has both continuous and intermittent components. 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 μ Pa.

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 planned 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 3 -- Thresholds Identifying the Onset of Auditory Injury

Hearing Group	Auditory Injury Onset Acoustic Thresholds* (Received Level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	<i>Cell 1</i> $L_{p, 0-pk, flat}$: 222 dB $L_{E, p, LF, 24h}$: 183 dB	<i>Cell 2</i> $L_{E, p, LF, 24h}$: 197 dB
High-Frequency (HF) Cetaceans	<i>Cell 3</i> $L_{p, 0-pk, flat}$: 230 dB $L_{E, HF, 24h}$: 193 dB	<i>Cell 4</i> $L_{E, p, HF, 24h}$: 201 dB
Very High-Frequency (VHF) Cetaceans	<i>Cell 5</i> $L_{pk, 0-pk, flat}$: 202 dB $L_{E, p, VHF, 24h}$: 159 dB	<i>Cell 6</i> $L_{E, p, VHF, 24h}$: 181 dB
Phocid Pinnipeds (PW) (Underwater)	<i>Cell 7</i> $L_{p, 0-pk, flat}$: 223 dB $L_{E, PW, 24h}$: 185 dB	<i>Cell 8</i> $L_{E, p, PW, 24h}$: 195 dB
Otariid Pinnipeds (OW) (Underwater)	<i>Cell 9</i> $L_{p, 0-pk, flat}$: 230 dB $L_{E, p, OW, 24h}$: 185 dB	<i>Cell 10</i> $L_{E, p, OW, 24h}$: 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 ($LE_{,p}$) has a reference value of 1 $\mu\text{Pa}^2\text{s}$ (underwater) and 20 $\mu\text{Pa}^2\text{s}$ (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 planned 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:

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

TL = transmission loss in dB

B = transmission loss coefficient

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

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

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the 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 ($20 \cdot \log[\text{range}]$). 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 ($10 \cdot \log[\text{range}]$). 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 4.

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 4 for NMFS' accepted source levels).

Table 4 -- Proxy Sound Source Levels at 10 m for Pile Sizes and Driving Methods

Pile Type	RMS SPL (re 1 µPa)	SEL (re 1 µPa ² -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 5 below. The maximum (underwater) area ensounded above the thresholds for behavioral harassment is 43 square

kilometers (km²; 16.6 square miles (mi²)). However, that zone will be truncated by land masses that will obstruct underwater sound transmission and will 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 5 -- 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 6-- 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	4.7	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	
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 is authorized. 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 authorized 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 6). All construction work will 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 shutdown requirements, no take by Level A harassment of minke whales is anticipated or authorized.

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 authorized 214 takes by Level B harassment of humpback whales. In the project area, it is estimated that the majority of whales (98 percent) will 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 will 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 6). All construction work will 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 shutdown requirements, no take by Level A harassment is anticipated or authorized 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 4 groups of 5 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 authorized 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 6). All construction work will 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 shutdown requirements, no take by Level A harassment of killer whales is anticipated or authorized.

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 authorized 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 6). All construction work will 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, shutdown requirements, and infrequent occurrence of Pacific white-sided dolphins, no take by Level A harassment of Pacific white-sided dolphins is anticipated or authorized.

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 4 groups of 5 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 authorized 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 6) during impact pile driving. Hoonah will 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 authorized 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 authorized 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 6) during impact pile driving. Hoonah will 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

concurr, 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 authorized 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 authorized 214 takes by Level B harassment of harbor seals. Additionally there is a harbor seal haulout located 3 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 authorized an additional 29 takes by Level B harassment of harbor seals. Cumulatively, NMFS authorized 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 6) during impact pile driving. Hoonah will 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 seal 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, NMFS authorized 42 takes by Level A harassment of harbor seals.

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 authorized 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) will be from the Eastern DPS and 1.4 percent will be from the Western DPS (Hastings *et al.*, 2020). Therefore, of the 428 total takes by Level B harassment, NMFS anticipates that 422 takes will 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 6). All construction work will 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 shutdown requirements, no take by Level A harassment is anticipated or authorized for Steller sea lions.

Table 7 -- Authorized 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 Authorized Take	Authorized Take as Percentage of Stock ²
Minke whale	Alaska	UND	0	11	11	UND ³
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	UND ⁴
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.

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 will apply to 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 will 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 8. A minimum shutdown zone of 10 m will be required for all in-water construction activities to avoid physical interaction with marine mammals. Marine mammal monitoring will be conducted during all pile driving activities to ensure that shutdowns occur, as required. Shutdown zones for each activity type are shown in table 8.

Prior to pile driving, shutdown zones will be established as indicated in table 8. Observers will 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 will 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 will 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 will be monitored in the Level B harassment zones and throughout the area as far as visual monitoring can take place. If a marine mammal enters the Level B harassment zone, in-water activities will continue and protected species observers (PSOs) will document the animal's presence within the estimated harassment zone.

Table 8 -- 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						
Wye piles	10	10	10	10	10	1,000
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	
Wye piles	75	10	115	70	25	345
X piles	50	10	75	45	20	
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 PSOs during all pile driving activities (described in the **Monitoring and Reporting** section) will ensure that the entire shutdown zone is visible. Should environmental conditions deteriorate such that the entire shutdown zone would not be visible (e.g., fog, heavy rain), pile driving would be delayed until the PSO is confident marine mammals within the shutdown zone could be detected.

PSOs will monitor the full shutdown zones and 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 must observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will be considered cleared when a marine mammal has not been observed within the zone for a 30-minute period. If a marine mammal is observed within the shutdown zones, pile driving activity will be delayed or halted. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones will 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 planned measures, NMFS has determined that the mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

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

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

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas);

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring 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 will 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 will be selected by the Contractor during pre-construction. PSOs will 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 will 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 must 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 will 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 of 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 will constitute the final report. If comments are received, a final report addressing NMFS comments must be submitted within 30 days after receipt of comments.

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, 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 1, 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 mitigation measures (see **Mitigation** section).

Take will 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 will be minimized through use of mitigation measures described herein. Further, the amount of take 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 will 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 planned 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 Biologically Important Area (BIA) (Wild *et al.*, 2023). However, underwater sound will be constrained to Port Fredrick and will be truncated by land masses in the inlet. The area of the BIA that may be affected by the planned project is small relative to the overall area of the BIA. The humpback whale feeding BIA is active between May and October while the planned 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 planned 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 ensonified 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 planned 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 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 authorized 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 will 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 monitoring and mitigation measures, NMFS finds that the total

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

Small Numbers

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

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 authorized number of takes is less than one-third of the best available population abundance estimate (table 7). The numbers of animals authorized to be taken from these stocks is 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 that is authorized 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 authorized is small relative to estimated survey abundance, even if each 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 planned project area will impact a small portion of this range.

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

Unmitigable Adverse Impact Analysis and Determination

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/documentated harvests of marine mammals in Hoonah in 2012. The planned 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 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 mitigation and monitoring measures, NMFS has determined that there will not be an unmitigable adverse impact on subsistence uses from Hoonah's planned activities.

Endangered Species Act

There are two marine mammal species (Mexico DPS humpback whale and western DPS Steller sea lion) with confirmed occurrence in the project area that are listed as endangered under the ESA. The NMFS Alaska Regional Office issued a Biological Opinion on February 20, 2025 under section 7 of the ESA, on the issuance of an IHA to Hoonah under section 101(a)(5)(D) of the MMPA by the NMFS Office of Protected Resources. The Biological Opinion concluded that the planned action is not likely to jeopardize the continued existence of Mexico DPS humpback whales or western DPS Steller sea lions, and is not likely to destroy or adversely modify Mexico DPS humpback whale and western DPS Steller sea lion critical habitat.

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 determined that the issuance of this IHA qualifies to be categorically excluded from further NEPA review.

Authorization

NMFS has issued an IHA to Hoonah for the potential harassment of small numbers of eight marine mammal species incidental to the Hoonah Cargo Dock Project in Hoonah, Alaska, that includes the previously explained mitigation, monitoring, and reporting requirements.

Dated: March 10, 2025.

Kimberly Damon-Randall,

Director, Office of Protected Resources,

National Marine Fisheries Service.

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