

assignments for October 2026 through August 2027, as well as the current Council Committee assignments. NMFS will provide a brief overview of the Executive Order: Restoring American Saltwater Angling and Recreation.

The *Reef Fish* Committee will then receive updates on *Reef Fish* Landings and review and discuss final action items for *Reef Fish* Amendment 55/ *Snapper Grouper* Amendment 44: *Mutton Snapper* and *Yellowtail Snapper* Management Measures, modifications to *Red Snapper* Private Recreational Post-Season Accountability Measures, and draft options for management flexibility for the Federal For-hire component of the *Red Snapper* fishery.

Following lunch, the *Reef Fish* Committee will review the September 2026 Scientific and Statistical Committee (SSC) meeting summary and recommendations; consider Draft for *Reef Fish* Amendment 59A: Permit Requirements in Individual Fishing Quota (IFQ) Programs; receive a presentation on *Greater Amberjack* Count; review draft *Reef Fish* 65—Regional Management of Recreational *Greater Amberjack*; and discuss Exempted Fishing Permits, if any.

Wednesday, October 28, 2026; 8:30 a.m.–5:30 p.m., CDT

The meeting will begin with a litigation update, followed by the *Shrimp* Committee's review of draft membership list for the Review Panel for the *Shrimp* Permit Pool, Draft *Shrimp* Amendment 20—Status Determination Criteria for the *Penaeid Shrimp*, and recommendations from the *Shrimp* Advisory Panel (AP). The committee will discuss the 2024 *Shrimp* Effort in Relation to Threshold for Juvenile *Red Snapper*, Status Update on Working Group to Address Interactions and Bycatch of Protected Resources in *Shrimp* Trawl and any remaining items from the *Shrimp* Advisory AP meeting summary.

The Data Collection Committee will review and discuss the results of the Marine Recreational Information Program-Fishing Effort Survey Pilot Study, SSC Recommendations, and next steps. The committee will also receive an overview of the Mississippi and Alabama Creel Surveys and related SSC recommendations.

The Law Enforcement Committee will provide a summary report from the October Law Enforcement Technical Committee.

Following lunch, the Council will reconvene in Full Council for the Call to Order, announcements and introductions, adoption of the agenda, and approval of minutes. The Council

will receive public testimony beginning at 1:40 p.m.–4:30 p.m., CDT for public comment on Final Action Items—*Reef Fish* Amendment 55/*Snapper Grouper* Amendment 44: *Mutton Snapper* and *Yellowtail Snapper* Management Measures and Modifications to *Red Snapper* Private Recreational Post-Season Accountability Measures, Exempted Fishing Permits; and any Open Testimony on other Fishery Issues or Concerns.

The Council will then receive committee reports from the Law Enforcement and Data Collection Committees.

Thursday, October 29, 2026; 8:30 a.m.–5:30 p.m., CDT

Meeting will return to Committee Sessions starting with the Sustainable Fisheries Committee will give an overview of the Southeast Fisheries Observer Program, followed by a presentation on Regulatory Streamlining and SSC Recommendations, SSC Report from September 2026 meeting, including Spawning Habitat and Early-Life Linkages to Fisheries (SHELF) Egg Project and Social Sciences Gulf Species Questionnaire.

The Migratory Species Committee will provide presentations on *Shark* Depredation and updates on Highly Migratory Species documents.

Following lunch, the Council will return to Full Council and receive committee reports from *Reef Fish*, *Shrimp*, Sustainable Fisheries and Migratory Species Committees.

The Council will then receive updates from supporting agencies, including the South Atlantic Council Liaison, Texas Law Enforcement, NOAA Office of Law Enforcement (OLE), Gulf States Marine Fisheries Commission, U.S. Coast Guard, U.S. Fish and Wildlife Service, and the Department of State.

Finally, the Council will receive an update on documents transmitted for rulemaking, discuss Council planning and primary activities, and consider any other business including an update from NMFS on Advancing Agency-Level Reforms to Restore American Seafood Competitiveness.

—Meeting Adjourns

This meeting will be conducted in a hybrid format, with both in-person and virtual participation options available. Members of the public may register to listen to the meeting via webinar by visiting www.gulfcouncil.org and selecting the Council meeting from the calendar.

The timing and order of agenda items are subject to change to accommodate the needs of the Council. The most

current agenda and meeting materials will be posted on the Council's website as they become available.

Although non-emergency issues not included in this notice may come before the Council for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal Council action. Formal action will be limited to those issues specifically identified in this notice and any issues arising after publication that require emergency action under Section 305(c) of the Magnuson-Stevens Act, provided the public has been notified of the Council's intent to take final action to address the emergency.

Special Accommodations

These meetings are physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids or accommodations should be directed to Kathy Pereira at (813) 348–1630 at least 15 days prior to the meeting.

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

Dated: October 8, 2026.

Key Israel Marquez,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XF854]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the City and Borough of Juneau's Seawalk Extension Project, Juneau, 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 and Borough of Juneau (CBJ) for authorization to take marine mammals incidental to the Seawalk Extension Project in Juneau, Alaska (AK). Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting

comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than November 12, 2026.

ADDRESSES: Comments should be addressed to Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to ITP.jacobus@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/permit/incidental-take-authorizations-under-marine-mammal-protection-act>. 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: Kristy Jacobus, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Section 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) directs 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). If such findings are made, NMFS must prescribe the permissible methods of taking; 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 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 (see also 16 U.S.C. 1362; 50 CFR 216.3, 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

On March 3, 2026, NMFS received a request from CBJ for an IHA to take marine mammals incidental to a seawalk extension project in Juneau, AK. Following NMFS’ review of the application, CBJ submitted additional information on May 29, July 8, July 21, and August 3, 2026. A revised application was submitted on September 10, 2026, which NMFS deemed adequate and complete on September 14, 2026. CBJ’s request is for take of five species of marine mammals by Level B harassment, and for a subset

of two species, Level A harassment. Neither CBJ nor NMFS expect serious injury or mortality to result from the proposed project and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

CBJ proposes to extend the existing seawalk from the Franklin Dock to the AJ Dock to provide safe and continuous pedestrian access between cruise vessels moored at the AJ Dock and downtown Juneau. The project includes removal of an existing dock and mooring dolphins and unused timber piles; installation and removal of temporary template piles; and installation of a new seawalk, cruise ship mooring dolphin, and an access catwalk. Activities that have the potential to cause incidental take by Level A harassment and Level B harassment of marine mammals include vibratory pile driving (including installation and removal), impact pile driving, and down-the hole (DTH) drilling. Herein, unless otherwise specified, the term “pile driving” refers to impact pile installation and vibratory installation and removal.

Dates and Duration

The proposed IHA would be valid for the statutory maximum of 1 year from the date of effectiveness. It will become effective upon written notification from the applicant to NMFS, but not beginning later than 1 year from the date of issuance or extending beyond 2 years from the date of issuance. The specified activities are currently scheduled to begin in April 2027 and would occur on approximately 238 days over a 12-month period. However, project delays may occur due to a number of factors, including project funding, permitting requirements, availability of equipment and/or materials, weather-related delays, equipment maintenance and/or repair, transit to and from ports to survey locations, and other contingencies. Work is expected to be conducted for up to 12-hours on any given day.

Specific Geographic Region

The proposed project would occur on the eastern shore of Gastineau Channel, adjacent to downtown Juneau, AK (see figure 1). The Juneau waterfront is heavily influenced by industrialization, characterized by a blend of heavy marine industrial activities and significant tourism infrastructure. The waterfront supports commercial seafood processing, fishing, and, historically, major mining operations. Marine mammals within the area are

consistently subjected to commercial

and recreational vessel traffic, most notably large cruise ships.

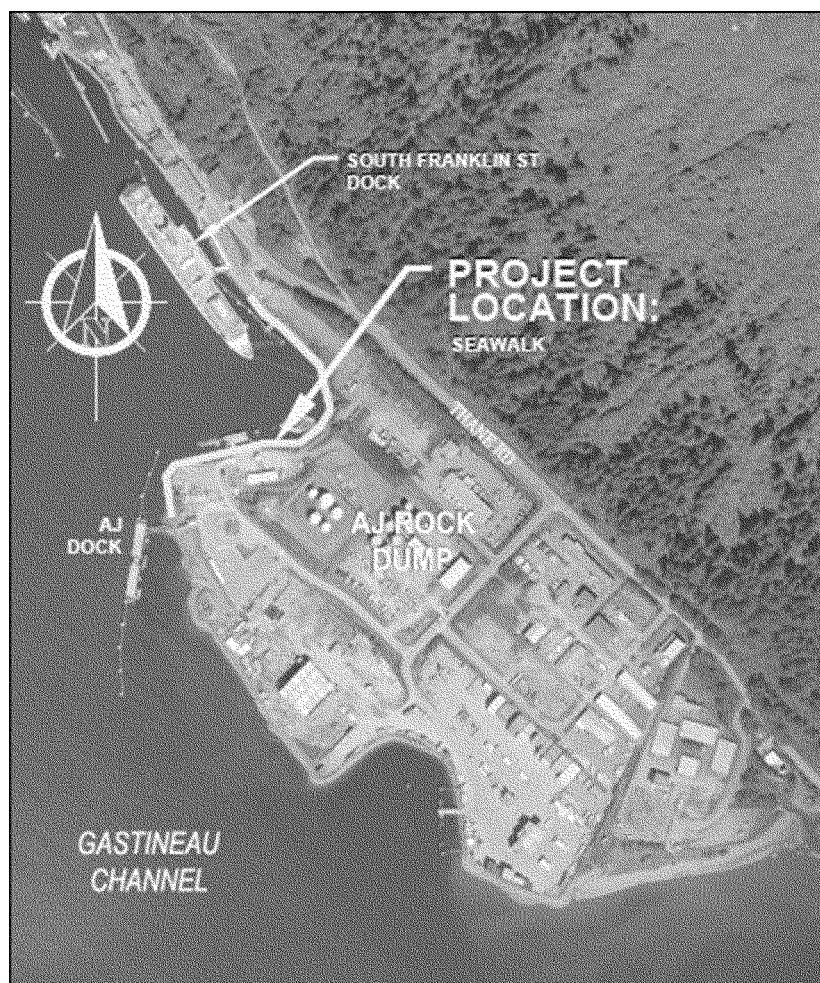


Figure 1 – Map of Project Location

Detailed Description of the Specified Activity

CBJ proposes to extend the existing seawalk from the Franklin Dock to the AJ Dock and install a cruise ship mooring dolphin with access catwalks. Construction includes removal of existing pile-supported docks, floats, and mooring dolphins and miscellaneous abandoned timber piles; installation and removal of temporary template construction piles; and installation of piles to support the new seawalk, cruise ship mooring dolphin, and access catwalks.

Removal of Existing Docks and Piles

Prior to construction of the new seawalk and cruise ship mooring dolphin CBJ would demolish the existing National Guard Dock and

Moorage Float and National Guard Approach Dock and remove the supporting timber piles; remove two mooring dolphins supported by 24-inch and 36-inch steel pipe piles; and remove miscellaneous abandoned timber piles. All piles would be removed using a vibratory hammer if they cannot be removed via direct pull methods. See table 1 for summary of pile installation and removal details.

Seawalk Construction

The seawalk would be constructed using two-, three-, and four-pile bents, comprised of approximately 230 24-inch steel pipe piles. The piles would be initially installed with vibratory methods and then proofed for proper penetration and load capacity with an impact hammer. Three 24-inch steel

pipe piles would similarly be installed using both vibratory and impact methods in support of a catwalk. A cruise ship mooring dolphin, supported by five 42-inch steel pipe piles, would be installed using both vibratory and impact methods. Mooring dolphin piles that do not achieve the required embedment to resist loads will require the installation of 10-inch rock sockets with DTH drilling. Approximately 160 template piles would be installed and removed using vibratory methods in support of construction of seawalk piles and mooring dolphin. CBJ anticipates the use of two template piles per bent along the seawalk and four template piles in support of each mooring dolphin pile. See table 1 for pile installation and removal details.

TABLE 1—CBJ SEAWALK EXTENSION PROJECT SUMMARY OF PILE INSTALLATION AND REMOVAL

Project component	Pile size/type	Installation/removal method	Number of piles	Average piles per day	Maximum piles per day	Estimated number of days ^a
Pile Removal						
National Guard Dock and Moorage Float.	10- to 16-inch timber piles.	Vibratory Removal	40	10	12	^b 7
National Guard Approach Dock.	10- to 16-inch timber piles.	Vibratory Removal	4	2	4	2
Miscellaneous timber piles.	10- to 16-inch timber piles.	Vibratory removal	20	2	10	^b 14
Mooring dolphin	24-inch steel pipe pile	Vibratory removal	12	3	12	4
Mooring dolphin	36-inch steel pipe pile	Vibratory removal	4	1	4	4
Temporary Pile Installation and Removal						
Template piles	24-inch steel pipe pile	Vibratory Installation and Removal.	320 (160 installed, 160 removed)	4	12	80
New Pile Installation						
Seawalk support piles ..	24-inch steel pipe piles	Vibratory and impact ...	230	2	7	115
Catwalk support piles ...	24-inch steel pipe piles	Vibratory and impact ...	3	2	3	2
Mooring dolphin	42-inch steel pipe piles	Vibratory and impact ...	5	1	3	5
Mooring dolphin	10-inch rock socket	DTH drilling	5	1	2	5
Total						238

^a Average number of piles per day used to determine estimated number of pile driving days.

^b Estimated number of days were calculated by dividing the total number of piles by the average number of piles per day. For the National Guard Dock and Moorage Float and the miscellaneous timber piles, 4 days and 3 days were added to this number, respectively, to account for the possibility that some of the deteriorated piles might break during extraction, requiring more time for removal.

Existing armor rock slope protection may require temporary removal to facilitate pile installation, which would be conducted using a clamshell bucket or excavator. The armor rock would be replaced around the piles following installation. Excavation and fill activities are not expected to result in take of marine mammals.

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 likely 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 mortality and serious injury (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. 2024 SARs. All values presented in table 2 are the most recent available at the time of publication (including from the 2024 SARs) and are available online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>.

TABLE 2—SPECIES ¹ WITH ESTIMATED TAKE FROM 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
Family Balaenopteridae (rorquals):						
Humpback Whale	<i>Megaptera novaeangliae</i>	Hawai'i	-, -, N	11,278 (0.56, 7,265, 2020).	127	27.09
Family Delphinidae:						
Killer Whale	<i>Orcinus orca</i>	Eastern North Pacific Alaska Resident.	-, -, N	1,920 (N/A, 1,920, 2019) ⁵ .	19	1.3
Killer Whale	<i>Orcinus orca</i>	Eastern North Pacific Gulf of Alaska, Aleutian Islands and Bering Sea Transient.	-, -, N	587 (N/A, 587, 2012) ⁵	5.9	0.8
Killer Whale	<i>Orcinus orca</i>	Eastern North Pacific Northern Resident.	-, -, N	302 (N/A, 302, 2018) ⁵	2.2	0.2
Killer Whale	<i>Orcinus orca</i>	West Coast Transient	-, -, N	349 (N/A, 349, 2018) ⁵	3.5	0.4
Family Phocoenidae (porpoises):						
Harbor Porpoise	<i>Phocoena phocoena</i>	Northern Southeast Alaska In-land Waters.	-, -, N	1,619 (0.26, 1,250, 2019)	13	5.6
Order Carnivora—Pinnipedia						
Family Otariidae (eared seals and sea lions):						
Steller Sea Lion	<i>Eumetopias jubatus</i>	Western	E, D, Y	49,837 (N/A, 49,837, 2022) ⁶ .	299	267
Steller Sea Lion	<i>Eumetopias jubatus</i>	Eastern	-, -, N	36,308 (N/A, 36,308, 2022) ⁶ .	2,178	93.2
Family Phocidae (earless seals):						
Harbor Seal	<i>Phoca vitulina</i>	Lynn Canal/Stephens Passage	-, -, N	13,388 (N/A, 11,883, 2016).	214	50

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

³ NMFS marine mammal stock assessment reports online at: <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, vessel strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range.

⁵ Stock abundance is based upon counts of individuals identified from photo-ID catalogs.

⁶ Stock abundance is best estimate of counts, which have not been corrected for animals at sea during abundance surveys. Estimates are provided for the United States only.

As indicated above, all five species (with nine managed stocks) in table 2 temporally and spatially co-occur with the specified activity to the degree that take is likely to occur. While minke whales (*Balaena acutorostrata*), Dall's porpoise (*Phocoenoides dalli*), and Pacific white-sided dolphins (*Lagenorhynchus obliquidens*) 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.

Only about 2 percent of the humpback whales in the project area are expected to be from the Mexico-North Pacific stock (Wade, 2021). Given the low occurrence of humpback whales in the area, the likelihood of take of the Mexico-North Pacific stock is extremely low (see Estimated Take of Marine Mammals section below) and, therefore, take of this stock is neither expected nor proposed.

Large portions of southeast Alaska have been identified as humpback

whale biologically important areas (BIAs) for seasonal feeding due to the species' dependence on foraging resources in the region. The BIAs are active from April through October to overlap with the highest densities of humpback whales and their prey (Wild *et al.*, 2023). The narrow Gastineau Channel, where CBJ proposes to conduct construction, is positioned between the Juneau BIA to the north and the Frederick Sound & Stephens Passage BIA to the south and is not located with an area considered to be of importance for humpback whale foraging.

In addition, the northern sea otter (*Enhydra lutris kenyoni*) may be found in Juneau, AK. However, sea otters are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

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 approximately 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). In October 2024, NMFS published its 2024 Updated Technical Guidance, which includes updated thresholds and weighting functions to inform auditory injury estimates and

replaces the 2018 Technical Guidance referenced above. This 2024 Updated Technical Guidance represents the best available science. Marine mammal hearing groups and their associated hearing ranges are provided in table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS
[NMFS, 2024]

Hearing group	Generalized hearing range*
Low-frequency (LF) cetaceans (baleen whales).	7 hertz (Hz) to 36 kilohertz (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.e.*, all species within the group), where individual species' hearing ranges may not be as broad. Generalized hearing range chosen based on approximately 65 dB threshold from composite audiogram, previous analysis in NMFS (2018), and/or data from Southall *et al.* (2007) and 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, 2024) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section discusses how 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.

There are a variety of types and degrees of effects on marine mammals, prey species, and habitats that could result from the project. Below is a brief description of the sound sources the projects would generate, the general impacts of these activities, and an analysis of the anticipated impacts on marine mammals from the projects, with consideration of the proposed mitigation measures.

Description of Sound Sources

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 hammer's weight to drive them into the substrate. Vibratory hammers typically produce less sound (*i.e.*, lower levels) than impact hammers. Peak sound pressure levels (SPLs) may be 180 dB or greater but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.*, 2009, Caltrans, 2015, 2020). Sounds produced by vibratory hammers are non-impulsive; compared to sounds produced by impact hammers, 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).

DTH systems use a combination of percussive and drilling mechanisms, with the hammer acting directly on the rock to advance a hole into the rock and also advance the pile into that hole. The hammer 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). Therefore, DTH systems include both impulsive and continuous components. For this project, CBJ would utilize DTH drilling to install 10-inch rock sockets.

Potential Effects of Underwater Sound on Marine Mammals

The introduction of anthropogenic noise into the aquatic environment from vibratory pile removal, vibratory and impact pile installation, and DTH drilling are the means by which marine mammals may be harassed from CBJ's specified activities. Anthropogenic sounds span a broad range of frequencies and sound levels and can have highly variable impacts on marine life, from none or minor to potentially severe responses, depending on received levels, duration of exposure, behavioral context, and other factors. Broadly, underwater sound from active acoustic sources, such as those in these projects, can potentially result in one or more of the following: temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, stress, and masking (Richardson *et al.*, 1995, Nowacek *et al.*, 2007, Southall *et al.*, 2007, Götz *et al.*, 2009).

We describe the more severe effects of certain non-auditory physical or physiological effects only briefly, as we do not expect that the use of impact/vibratory hammers is reasonably likely to result in such effects (see below for further discussion).

Potential physiological effects from sound sources, particularly impulsive sound, can range from behavioral disturbance or tactile perception to physical discomfort, slight injury to the internal organs and the auditory system, or mortality (Yelverton *et al.*, 1973). Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to high level underwater sound or as a secondary effect of extreme behavioral reactions (*e.g.*, change in dive profile as a result of an avoidance reaction) caused by exposure to sound include neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006, Southall *et al.*, 2007, Zimmer and Tyack, 2007, Tal *et al.*, 2015). However, the project activities considered here do not involve the use of devices such as explosives or mid-frequency tactical sonar that are associated with these types of effects.

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, 2019). Exposure to anthropogenic noise can result in auditory threshold shifts and behavioral responses (*e.g.*, avoidance, temporary cessation of foraging and vocalizing, changes in dive behavior). It

can also lead to non-observable physiological responses, such as increased stress hormone levels. Additional noise in a marine mammal's habitat can mask acoustic cues used in daily functions, such as communication and predator and prey detection.

The degree of effect of an acoustic exposure on marine mammals is dependent on several factors, including, but not limited to, sound type (*e.g.*, impulsive vs. non-impulsive), signal characteristics, the species, age, and sex class (*e.g.*, adult male vs. mom with calf), duration of exposure, the distance between the noise source and the animal, received levels, behavioral state at time of exposure, and previous history with exposure (Wartzok *et al.*, 2004, Southall *et al.*, 2007). In general, sudden, high-intensity sounds can cause hearing loss, as can longer exposures to lower-intensity sounds. Moreover, any temporary or permanent loss of hearing, if it occurs at all, would occur almost exclusively for noise within an animal's hearing range. We describe below the specific manifestations of acoustic effects that may occur from the specified activities.

Richardson *et al.* (1995) described zones of increasing effect intensity that might be expected to occur with distance from a source, assuming that the signal is within an animal's hearing range. First (at the greatest distance) is the area within which the acoustic signal would be audible (potentially perceived) to the animal but not strong enough to elicit any overt behavioral or physiological response. The next zone (closer to the receiving animal) corresponds to the area where the signal is audible to the animal and sufficiently intense to elicit behavioral or physiological responsiveness. The third is a zone within which, for high-intensity signals, the received level is sufficient to cause discomfort or tissue damage to auditory or other systems. Overlaying these zones to some extent is the area within which masking (*i.e.*, when a sound interferes with or masks an animal's ability to detect a signal of interest above the absolute hearing threshold) may occur; the masking zone may vary widely in size.

Hearing Threshold Shifts

NMFS defines a noise-induced threshold shift (TS) as a change, usually an increase, in the audibility threshold at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS, 2018, 2024). The amount of threshold shift is customarily expressed in dB. A TS can be permanent or temporary. As described in NMFS

(2018, 2024), 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), the 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, the 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 the 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).

Temporary Threshold Shift

A 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, 2024) and is not considered an auditory injury (AUD INJ). Based on data from marine mammal TTS measurements (see Southall *et al.*, 2007, 2019), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Finneran *et al.*, 2000, 2002, Schlundt *et al.*, 2000). As described in Finneran (2015), marine mammal studies have shown that the amount of TTS increases with the 24-hour cumulative sound exposure level (SEL₂₄) in an accelerating fashion: at low exposures with lower SEL₂₄, the amount of TTS is typically small, and the growth curves have shallow slopes. At higher SEL₂₄ exposures, the growth curves become steeper and approach a linear relationship with the sound exposure level (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 more impactful (similar to those discussed in auditory masking, below). For example, a marine mammal may readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs while the animal is traveling through the open ocean, where ambient noise is lower and competing sounds are fewer. Alternatively, a larger amount and longer duration of TTS sustained during times when communication is critical for successful mother/calf interactions

could have more severe impacts. We note that reduced hearing sensitivity, as a simple function of aging, has been observed in marine mammals, as well as in humans and other taxa (Southall *et al.*, 2007), suggesting that strategies exist to cope 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, so the sound must be louder to be heard. In terrestrial and marine mammals, TTS can last from minutes to hours (in cases of strong TTS) (Finneran, 2015). In many cases, hearing sensitivity recovers rapidly after exposure to the sound ends. For cetaceans, published data on the onset of TTS are limited to captive bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaorientalis*) (Southall *et al.*, 2019). For pinnipeds in water, measurements of TTS are limited to harbor seals, northern elephant seals (*Mirounga angustirostris*), bearded seals (*Erignathus barbatus*), and California sea lions (*Zalophus californianus*) (Kastak *et al.*, 1999, 2007, Kastelein *et al.*, 2019b, 2019c, 2021, 2022a, 2022b, Reichmuth *et al.*, 2019, Sills *et al.*, 2020). TTS was not observed in spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to single airgun impulse sounds at levels matching previous predictions of TTS onset (Reichmuth *et al.*, 2016). These studies examine hearing thresholds in marine mammals before and after exposure to intense or long-duration sound. The difference between the pre-exposure and post-exposure thresholds can be used to determine the amount of threshold shift at various post-exposure times.

The amount and onset of TTS depend on the exposure frequency. Sounds below the region of best sensitivity for a species or hearing group are less hazardous than those 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 and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean

species (Finneran, 2015). In addition, TTS can accumulate across multiple exposures, but the resulting TTS would be lower than that 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, SEL₂₄, 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 whale, and false killer whale (*Pseudorca crassidens*)) when a warning sound preceded a relatively loud 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. Another study showed that echolocating animals (including odontocetes) might have anatomical specializations that enable conditioned hearing reduction and filtering of low-frequency ambient noise, including increased stiffness and control of middle ear structures, as well as placement of inner ear structures (Ketten *et al.*, 2021). Data available on noise-induced hearing loss for mysticetes are currently lacking (NMFS, 2024). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species.

Relationships between TTS and permanent threshold shift (PTS) thresholds have not been studied in marine mammals, and there are no measured PTS data for cetaceans, 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 dB above that inducing mild TTS (*e.g.*, a 40-dB threshold shift approximates PTS onset (Kryter *et al.*, 1966, Miller, 1974), while a 6-dB threshold shift approximates TTS onset (Southall *et al.*, 2007, 2019). Based on data from terrestrial mammals, a precautionary assumption is that the AUD INJ 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 AUD INJ 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 AUD INJ could occur.

Auditory Injury and Permanent Threshold Shift

NMFS (2024) defines AUD INJ as damage to the inner ear that can result in tissue destruction, such as loss of cochlear neuron synapses or auditory neuropathy (Houser, 2021, Finneran, 2024). AUD INJ may or may not result in PTS. PTS is defined 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, 2024). PTS generally affects only a limited frequency range, and animals with PTS have some level of hearing loss at the relevant frequencies; typically, animals with PTS or other AUD INJ 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 the onset of PTS (see Ward *et al.*, 1958, 1959, Ward, 1960, Kryter *et al.*, 1966, Miller, 1974, Ahroon *et al.*, 1996, Henderson *et al.*, 2008). However, a variety of terrestrial and marine mammal studies (see Ward *et al.*, 1958, 1959, Ward, 1960, Miller *et al.*, 1963, Kryter *et al.*, 1966, Southall *et al.*, 2007, Kastelein *et al.*, 2013) indicate that threshold shifts of up to 40 to 50 dB (measured a few minutes after exposure) may be induced without resulting in PTS. PTS levels for marine mammals are estimates; with the exception of a single study unintentionally inducing PTS in a harbor seal (Kastak *et al.*, 2008), no empirical data measure PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing AUD INJ are not typically pursued or authorized (NMFS, 2024). NMFS has set the PTS onset as an initial threshold shift of 40 dB.

However, after sound exposure ceases or between successive sound exposures, the potential for recovery from hearing loss exists. Thus, because a threshold shift is measured a few minutes after noise exposure does not mean that those initial shifts are persistent (*i.e.*, no recovery). When initial threshold shifts fully recover back to baseline hearing levels, these are considered TTS. PTS indicates there is no full recovery back to baseline hearing levels; however, it does not mean there is no recovery. Rather, PTS indicates incomplete recovery of hearing. Recovery depends

on the initial threshold shift amount, the frequency at which the shift occurred, the temporal pattern of exposure (*e.g.*, exposure duration; continuous vs. intermittent exposure), and the physiological mechanisms underlying the shift (*e.g.*, mechanical vs. metabolic). Since recovery is complicated, our current AUD INJ onset criteria do not account for the potential for recovery.

Behavioral Effects

Exposure to noise can also behaviorally disturb marine mammals to a level that rises to the definition of harassment under the MMPA. Generally speaking, NMFS considers a behavioral disturbance that rises to the level of harassment under the MMPA a non-minor response. In other words, not every response qualifies as a behavioral disturbance, and for responses that do, those of higher level or longer duration have the potential to affect foraging, reproduction, or survival. Behavioral disturbance may include subtle changes (*e.g.*, minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses may include changing durations of surfacing and dives, changing direction and/or speed; reducing/increasing vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); eliciting a visible startle response or aggressive behavior (such as tail/fin slapping or jaw clapping); and avoiding of areas where sound sources are located. In addition, pinnipeds may increase their haul-out time, possibly to avoid in-water disturbance (Thorson and Reyff, 2006).

Behavioral responses to sound are highly variable and context-specific, and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.*, species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.*, Richardson *et al.*, 1995, Wartzok *et al.*, 2004, Southall *et al.*, 2007, 2019, 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 and C of Southall *et al.* (2007) and Gomez *et al.* (2016) for reviews of studies involving marine mammal behavioral responses to sound.

As noted above, behavioral state may affect the type of response. For example, resting animals 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, 2005). Controlled experiments with captive marine mammals have shown 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 briefly reacts to an underwater sound by changing its behavior or moving a small distance, the resulting change is unlikely to be significant to the individual, let alone the stock or population. 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, 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 on breathing, interference with or alteration of vocalization, avoidance, and flight.

Avoidance and Displacement

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 in dive behavior resulting from acoustic exposure depends on what the animal is doing at the time of exposure and on 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. 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, the relationship between prey availability, foraging effort, and success, and the animal's life history stage.

Respiration rates vary naturally with different behaviors, and alterations in breathing rate, as a function of acoustic exposure, can be expected to co-occur with other behavioral reactions, such as a flight response or an alteration in diving. However, respiration rates in and of themselves may be representative of annoyance or an acute stress response. Various studies have shown that respiration rates may either be unaffected or could increase, depending on the species and signal characteristics, again highlighting the importance of understanding species differences in the tolerance of underwater noise when determining the potential for impacts resulting from anthropogenic sound exposure (*e.g.*, Kastelein *et al.*, 2001, 2005, 2006, Gailey *et al.*, 2007). For example, harbor porpoise respiration rates increased in response to pile driving sounds at and above a received broadband SPL of 136 dB (zero-peak SPL: 151 dB re 1 micropascal (μPa); SEL of a single strike (SEL_{ss}): 127 dB re 1 $\mu\text{Pa}^2\text{-s}$) (Kastelein *et al.*, 2013).

Avoidance is the displacement of an individual from an area or migration path due to the presence of a sound or other stressors and is one of the most obvious manifestations of disturbance in marine mammals (Richardson *et al.*, 1995). Avoidance may be short-term, with animals returning to the area once

the noise has ceased (*e.g.*, Bowles *et al.*, 1994, Goold, 1996, Stone *et al.*, 2000, Morton and Symonds, 2002, Gailey *et al.*, 2007). Longer-term displacement is possible, however, which may lead to changes in the abundance or distribution patterns of the affected species in the affected region if habituation to the sound does not occur (*e.g.*, Blackwell *et al.*, 2004, Bejder *et al.*, 2006, Teilmann *et al.*, 2006).

A flight response is a dramatic change in normal movement, with directed, rapid movement away from the perceived location of a sound source. The flight response differs from other avoidance responses in its intensity (*e.g.*, directed movement and travel rate). Relatively little information exists on the flight responses of marine mammals to anthropogenic signals, although observations of flight responses to the presence of predators have been made (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 affect marine mammals in more subtle ways. Increased vigilance may incur costs from the diversion of attention (*i.e.*, when a response requires heightened vigilance, it may come at the expense of reduced attention to other critical behaviors, such as foraging or resting). These effects have generally not been demonstrated in marine mammals, but studies of 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 reductions in fitness (*e.g.*, declines in body condition) and subsequent reductions 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 result in sleep deprivation or stress.

Many animals perform vital functions, such as feeding, resting, traveling, and socializing, on a diel cycle (24-hour cycle). Disruption of such functions

resulting from reactions to stressors, such as sound exposure, is more likely to be significant if it lasts more than 1 diel cycle or recurs on subsequent days (Southall *et al.*, 2007). Consequently, a behavioral response lasting less than 1 day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.*, 2007). Note that there is a difference between multi-day substantive (*i.e.*, meaningful) behavioral reactions and multi-day anthropogenic activities. For example, just because an activity lasts multiple days does not necessarily mean that individual animals are exposed to activity-related stressors for multiple days, or, further, exposed in a manner that results in sustained, multi-day, substantive behavioral responses.

Physiological Stress Responses

An animal's perception of a threat may be sufficient to trigger stress responses that include some combination of behavioral, autonomic nervous system, neuroendocrine, and immune responses (*e.g.*, Selye, 1950, Moberg, 2000). In many cases, an animal's first and sometimes most economical response (in terms of energetic costs) 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 pituitary hormone secretion have been implicated in reproductive failure, altered metabolism, reduced immune competence, and behavioral disturbances (*e.g.*, Moberg, 1987, Blecha, 2000). Increases in glucocorticoid levels are also associated 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 its glycogen stores, which 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 energy reserves to a sufficient level 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, Ayres *et al.*, 2012, Yang *et al.*, 2021). Stress responses to exposure to anthropogenic sounds or other stressors, and their effects on marine mammals, have also been reviewed (Fair and Becker, 2000, Romano *et al.*, 2002b) and, more rarely, studied in wild populations (*e.g.*, Romano *et al.*, 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. In addition, Lemos *et al.* (2022) observed a correlation between higher levels of fecal glucocorticoid metabolite concentrations (indicative of a stress response) and vessel traffic in gray whales. Yang *et al.* (2021) studied behavioral and physiological responses in captive bottlenose dolphins exposed to playbacks of “pile-driving-like” impulsive sounds, finding significant changes in cortisol and other physiological indicators, but only minor behavioral changes. 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 some of these responses may be classified as “distress.” In addition, any animal experiencing TTS would likely also experience stress responses (National Research Council, 2005); however, distress is unlikely to result from these projects based on observations of marine mammals during previous, similar construction projects in southeast Alaska.

Vocalizations and Auditory Masking

Since many marine mammals rely on sound to find prey, moderate social interactions, and facilitate mating (Tyack, 2008), noise from anthropogenic sound sources can interfere with these functions, but only if the noise spectrum overlaps with the hearing sensitivity of the receiving marine mammal (Southall *et al.*, 2007, Clark *et al.*, 2009, Hatch *et al.*, 2012). Chronic exposure to excessive, though not high-intensity, noise could cause masking at specific

frequencies for marine mammals that rely on sound for vital biological functions (Clark *et al.*, 2009). Acoustic masking is when other noises, such as from human sources, interfere 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, Erbe *et al.*, 2016).

The frequency range of the potentially masking sound is important in determining any potential behavioral impacts. For example, low-frequency signals may have less effect on high-frequency echolocation sounds produced by odontocetes but are more likely to affect the detection of mysticete communication calls and other potentially important natural sounds such as those produced by surf and some prey species. The masking of communication signals by anthropogenic noise may be considered as a reduction in the communication space of animals (*e.g.*, Clark *et al.*, 2009) and may result in energetic or other costs as animals change their vocalization behavior (*e.g.*, Miller *et al.*, 2000, Foote *et al.*, 2004, Parks *et al.*, 2007, Di Iorio and Clark, 2010, Holt *et al.*, 2009). Masking can be reduced in situations where the signal and noise come from different directions (Richardson *et al.*, 1995), through amplitude modulation of the signal, or through other compensatory behaviors, including modifications of the acoustic properties of the signal or the signaling behavior (Hotchkiss and Parks, 2013). Masking can be tested directly in captive species (*e.g.*, Erbe, 2008), but in wild populations it must be either modeled or inferred from evidence of masking compensation. Few studies have addressed real-world masking sounds likely to be experienced by marine mammals in the wild (*e.g.*, Branstetter *et al.*, 2013).

Masking occurs in the frequency band that the animals use and is more likely to occur in the presence of broadband, relatively continuous noise sources such as vibratory pile removal or installation. The energy distribution of pile-driving sound spans a broad frequency spectrum and is expected to fall within the audible range of marine mammals present in the project areas. Since noises generated from the proposed construction activities are mostly concentrated at low frequencies (<2 kHz), these activities likely have less effect on mid-frequency echolocation sounds produced by odontocetes (toothed whales). However, lower-frequency noises are more likely to

affect the detection of communication calls and other potentially important natural sounds, such as surf and prey noise. Low-frequency noise may also affect communication signals when they occur near the noise band, thereby reducing the communication space of animals (e.g., Clark *et al.*, 2009) and increasing stress levels (e.g., Holt *et al.*, 2009). Unlike TS, masking, which can occur over large temporal and spatial scales, can potentially affect the species at population, community, or even ecosystem levels, in addition to individual levels. Masking affects both senders and receivers of signals, and at higher levels and for longer durations could have long-term chronic effects on marine mammal species and populations. However, the noise generated by the CBJ's proposed activities would occur only intermittently across 238 days in a relatively small area focused around the proposed construction sites. Thus, while the CBJ's proposed activities may mask some acoustic signals relevant to the daily behavior of marine mammals, the short-term duration and limited areas affected make it very unlikely that the fitness of individual marine mammals would be affected.

Marine mammals vocalize for different purposes and across multiple modes, such as whistling, echolocation click production, calling, and singing. Changes in vocalization behavior in response to anthropogenic noise can occur across any of these modes and may result from a need to compete with increased background noise or may reflect increased vigilance or a startle response. For example, in the presence of potentially masking signals, humpback whales and killer whales have been observed to increase the length of their songs (Miller *et al.*, 2000, Frstrup *et al.*, 2003) or vocalizations (Foote *et al.*, 2004), respectively, while North Atlantic right whales (*Eubalaena glacialis*) have been observed to shift the frequency content of their calls upward while reducing the rate of calling in areas of increased anthropogenic noise (Parks *et al.*, 2007). Fin whales (*Balaenoptera physalus*) have also been documented to lower the bandwidth, peak frequency, and center frequency of their vocalizations in the presence of increased background noise from large vessels (Castellote *et al.*, 2012). Other alterations to communication signals have also been observed. For example, gray whales, in response to playback experiments that exposed them to vessel noise, have been observed to increase their vocalization rate and produce louder signals during periods of

increased outboard engine noise (Dahlheim and Castellote, 2016). Alternatively, in some cases, animals may cease sound production during the production of aversive signals (Bowles *et al.*, 1994, Wisniewska *et al.*, 2018).

Under certain circumstances, marine mammals that experience significant masking could also be impaired in maximizing their performance fitness for survival and reproduction. Therefore, when the coincident (masking) sound is human-made, it may be considered harassment if it disrupts or alters critical behaviors. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect but rather a potential behavioral effect (though not necessarily one associated with harassment). Therefore, under certain circumstances, marine mammals whose acoustic sensors or environment are severely masked could also be impaired in maximizing their performance fitness for survival and reproduction.

Airborne Acoustic Effects

Pinnipeds occurring near the project site could be exposed to airborne sounds associated with construction activities, depending on their distance from these activities, which could cause behavioral harassment. Airborne noise would primarily be an issue for pinnipeds that are swimming or hauled out near either project site, within the range of noise levels elevated above the airborne acoustic harassment criteria. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

We recognize that pinnipeds in the water may be exposed to airborne sound that could result in behavioral harassment when they lift their heads above the water or when they haul out. 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 a reduction in vocalizations, or to flush from haulouts, temporarily abandon the area, and/or move further from the source. However, these animals previously would have been "taken" because of exposure to underwater sound above the behavioral harassment thresholds, which are, in all cases, larger than those associated with

airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Therefore, authorization of additional incidental take resulting from airborne sound for pinnipeds was not requested by CBJ, and NMFS has determined is not warranted; airborne sound is not discussed further here.

Potential Effects on Marine Mammal Habitat

CBJ's specified activities could have localized, temporary impacts on marine mammal habitat, including prey, due to increased in-water noise levels and water quality degradation. Increased noise levels may affect the acoustic habitat and adversely affect marine mammal prey in the vicinity of the project areas (see discussion below). Elevated levels of underwater noise would ensonify the project areas where both fishes and mammals occur and could affect foraging success. Additionally, marine mammals may avoid the area during the proposed construction activities; however, any displacement due to noise is expected to be temporary and not to result in long-term effects on individuals or populations. A temporary reduction in water quality is expected due to disruption of sediment and increased turbidity, but long-term effects to marine mammals and their prey is not expected (see Water Quality section below).

The total area impacted by CBJ's proposed activities is relatively small compared to the available habitat within southeast Alaska. While marine mammals may forage in Gastineau Channel near the project area, the waters ensonified do not contain unique or particularly important habitat relative to other waters in southeast Alaska. Moreover, the Juneau waterfront area where the project would occur is industrialized.

The proposed project would occur within the same footprint as existing marine infrastructure. The nearshore and intertidal habitats where the proposed projects would occur are in industrialized areas with relatively high marine vessel traffic. Temporary, intermittent, and short-term habitat alteration may result from increased noise levels during the proposed construction activities, including temporary displacement of prey species. Although installation of new piles represents a permanent alteration to the marine habitat, the alteration is minor and limited in space and would not affect the survival of marine mammals or their prey.

Water Quality

Temporary and localized reduction in water quality would occur as a result of in-water construction activities. Most of this effect would occur during the removal and installation of piles, when bottom sediments are disturbed, and may temporarily increase suspended sediment in the project area. During pile extraction, sediment attached to the pile moves vertically through the water column causing a sediment plume. However, since currents are so strong in the area, following the completion of sediment-disturbing activities, suspended sediment in the water column should dissipate and quickly return to background levels across all construction scenarios.

Turbidity in the water column can reduce dissolved oxygen levels and irritate the gills of prey fish in the proposed project areas. Studies of the effects of turbid water on fish (marine mammal prey) suggest that concentrations of suspended sediment can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton, 1993). However, turbidity plumes associated with the projects would be temporary and localized, and fish in the proposed project areas would be able to move away from and avoid the areas where plumes may occur.

Overall, the water quality in the immediate area that is likely impacted by the proposed construction activities for both projects is relatively small compared to the available marine mammal habitat within and surrounding Juneau, and the effects would be temporary. Therefore, it is expected that water quality impacts on prey species due to turbidity, and therefore on marine mammals, would be minimal and temporary.

Potential Effects on Prey

Sound may affect marine mammals by altering the abundance, behavior, or distribution of prey species (e.g., crustaceans, cephalopods, fishes, zooplankton). Marine mammal prey varies by species, season, and location, and for some, it is not well documented. Studies regarding the effects of noise on known marine mammal prey are described here.

Avoidance by potential prey (i.e., fish) of the immediate areas due to increased noise is possible. The duration of avoidance of this area after construction stops is unknown, but a rapid return to normal recruitment, distribution, and behavior is anticipated. Any behavioral avoidance by fish would still leave significantly large areas of fish and

marine mammal foraging habitat in the nearby vicinity.

Fishes use 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 and detect the motion of surrounding water (Fay *et al.*, 2008). The potential effects of noise on fishes depend on the overlapping frequency range, distance from the sound source, water depth of exposure, and species-specific hearing sensitivity, anatomy, and physiology. Key impacts on fishes may include behavioral responses, hearing damage, barotrauma (pressure-related injuries), and mortality.

Fish react to 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 their physiological state, 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 fishes (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., Peña *et al.*, 2013, Wardle *et al.*, 2001, Jorgenson and Gyselman, 2009, Cott *et al.*, 2012). More commonly, though, the impacts of noise on fishes are temporary.

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 is likely restored when damaged cells are replaced with new cells. Halvorsen *et al.* (2012b) showed that a TTS of 4–6 dB was recoverable within 24 hours in one species. Impacts would be most severe when the individual fish is near the source, and the exposure duration is

long. Injury caused by barotrauma can range from slight to severe and cause death; risk of injury is higher for fish with swim bladders. Barotrauma injuries have been documented during controlled exposure to impact pile driving (Halvorsen *et al.*, 2012a, Casper *et al.*, 2013, 2017).

Fish populations in the proposed project area that serve as prey for marine mammals could be temporarily affected by noise from pile removal and installation. 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 in response to strong and/or intermittent sounds that could harm fish. 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).

Zooplankton is a food source for several marine mammal species, as well as a food source for fish that are then preyed upon by marine mammals. Population effects on zooplankton could indirectly affect marine mammals. Data are limited on the effects of underwater sound on zooplankton species, particularly sound from construction (Erbe *et al.*, 2019). Popper and Hastings (2009) reviewed information on the effects of human-generated sound and concluded that no substantive data are available on whether sound levels from pile driving, seismic activity, or other human-made sources would have physiological effects on invertebrates. Any such effects would be limited to the area very near (1 to 5 meters [m]) the sound source and would result in no population effects because of the relatively small area affected at any one time and the reproductive strategy of most zooplankton species (short generation, high fecundity, and very high natural mortality). No adverse impact on zooplankton populations is expected from the specified activities, due in part to their large reproductive capacity and naturally high levels of predation and mortality. Any mortalities or impacts that might occur would be negligible.

The greatest potential acoustic impact on marine mammal prey during construction would occur during impact pile driving. Vibratory pile removal/installation may elicit behavioral responses in fishes, such as temporary avoidance of the area, but is unlikely to cause injuries to fishes or have persistent effects on local fish populations. In-water construction

activities would only occur during daylight hours, allowing fish to forage and transit the project area in the evening. Construction would also have minimal permanent and temporary impacts on benthic invertebrate species, a marine mammal prey source.

Potential Effects on Foraging Habitat

The proposed project activities are not expected to result in any habitat-related effects that could cause significant or long-term negative consequences for individual marine mammals or their populations, since removal and installation of in-water piles would be temporary and intermittent. The area affected by these activities is relatively small compared to the available habitat just outside the project areas, and neither project would affect any areas of particular importance. Any behavioral avoidance by fish in the disturbed areas 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 the CBJ's activities 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. Therefore, the impacts of the project activities are not likely to adversely affect marine mammal foraging habitat in the proposed project area.

In summary, given the relatively small areas being affected, as well as the temporary and mostly transitory nature of the proposed construction activities, any adverse effects from CBJ's activities on prey habitat or prey populations are expected to be primarily minor and temporary although some fish injury or mortality may occur (e.g., Hastings and Popper, 2005). The most likely impact on fishes at the project sites would be temporary avoidance of the area. Any behavioral avoidance by fish in the disturbed areas would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. Thus, we conclude that the impacts of the specified activities are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts on marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals or to contribute to adverse impacts on their populations.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization through 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., vibratory and impact pile driving and DTH drilling) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for AUD INJ (Level A harassment) to result for two species of marine mammals (Steller sea lions and harbor seals). 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 criteria above which NMFS believes there is some reasonable potential for marine mammals to be behaviorally harassed or incur some degree of AUD INJ; (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 criteria 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 AUD INJ of

some degree (equated to Level A harassment). Below, we describe the thresholds used by CBJ and NMFS for this analysis.

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 sound pressure 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 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.

CBJ's proposed activities include the use of continuous (vibratory pile driving and DTH drilling) and impulsive (impact pile driving and DTH drilling) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μ Pa are applicable.

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 AUD INJ (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) (see table 4). CBJ's activities include the use of impulsive

(impact pile driving and DTH drilling) and non-impulsive (vibratory pile driving and DTH drilling) sources.

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	AUD INJ onset acoustic thresholds* (received level)	
	Impulsive	Non-impulsive
LF Cetaceans	Cell 1: $L_{pk,flat}$: 222 dB; $L_{E,LF,24h}$: 183 dB	Cell 2: $L_{E,LF,24h}$: 197 dB.
HF Cetaceans	Cell 3: $L_{pk,flat}$: 230 dB; $L_{E,HF,24h}$: 193 dB	Cell 4: $L_{E,HF,24h}$: 201 dB.
VHF Cetaceans	Cell 5: $L_{pk,flat}$: 202 dB; $L_{E,VHF,24h}$: 159 dB	Cell 6: $L_{E,VHF,24h}$: 181 dB.
PW (Underwater)	Cell 7: $L_{pk,flat}$: 223 dB; $L_{E,PW,24h}$: 183 dB	Cell 8: $L_{E,PW,24h}$: 195 dB.
OW (Underwater)	Cell 9: $L_{pk,flat}$: 230 dB; $L_{E,OW,24h}$: 185 dB	Cell 10: $L_{E,OW,24h}$: 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 peak SPL (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 μ Pa, and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1 μ Pa²s. In this table, criteria are abbreviated to be more reflective of International Organization for Standardization standards (ISO, 2017). 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). The subscript associated with cumulative sound exposure level criteria indicates the designated marine mammal auditory weighting function (LF, HF, and VHF cetaceans, and PW and OW 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 project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.*, vibratory and impact pile driving and DTH drilling).

The project includes vibratory pile installation and removal, impact pile installation, and DTH drilling. Source

levels for these activities are based on reviews of measurements of the same or similar types and dimensions of piles available in the literature. Source levels for each pile size and activity are presented in table 5. Source levels for vibratory installation and removal of piles of the same diameter are assumed to be the same.

TABLE 5—PROXY SOUND SOURCE LEVELS

Pile size and type	Source level (at 10 m)			Reference
	Peak (dB re 1 μPa)	RMS (dB re 1 μPa)	SEL (dB re 1 μPa ² sec)	
Vibratory				
10- to 16-inch timber pile	N/A	162	N/A	Caltrans (2020).
24-inch steel pipe pile	N/A	163	N/A	U.S. Navy (2012, 2013), Miner (2020).*
36-inch steel pipe pile	N/A	166	N/A	U.S. Navy (2012, 2013), Sexton (2007), Laughlin (2011, 2017), Miner (2020) *
42-inch steel pipe piles	N/A	170	N/A	Reyff and Heyvaert (2019).*
Impact				
24-inch steel pipe piles	203	190	177	Caltrans (2015).
42-inch steel pipe piles	208	195	180	Caltrans (2020)—Russian River Geysersville, CA; Terminal Replacement, Antioch, CA, Illingworth & Rodkin (2017)-Philadelphia, PA; Austin <i>et al.</i> , (2016).*
DTH				
10-inch rock socket	172	167	146	Guan and Miner (2020), Reyff and Heyvaert (2019), and Reyff (2020) as cited in NMFS (2022).

* Methodology followed U.S. Navy (2015) and included available data from Puget Sound, Washington, and Southern Alaska.

DTH systems have both continuous, non-impulsive, and impulsive components. When evaluating Level B harassment, NMFS recommends treating DTH as a continuous source and applying RMS SPL thresholds of 120 dB re 1 μ Pa, and when evaluating Level A harassment, NMFS recommends treating DTH as an impulsive source (NMFS, 2022).

Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from space. 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:

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

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 depends on various factors, most notably the water bathymetry and the 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 ($20 \times \log[\text{range}]$). 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 ($10 \times \log[\text{range}]$). A practical spreading value of 15 is often used in coastal waters, such as those found in the CBJ Seawalk project area. In these environments, sound waves repeatedly reflect off the surface and bottom, reflecting an expected propagation environment between spherical and cylindrical spreading-loss conditions. Therefore, the default coefficient of 15 is used to calculate distances to the Level A harassment and Level B harassment isopleths.

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 a practical, alternative way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources, such as vibratory and impact pile driving and DTH drilling, 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 AUD INJ. Inputs used in the optional User Spreadsheet tool (table 6), and the resulting estimated isopleths (table 7), are reported below.

TABLE 6—USER SPREADSHEET INPUT PARAMETERS USED FOR CALCULATING LEVEL A HARASSMENT ISOPLETHS FOR PILE DRIVING AND DTH DRILLING

Project component	Pile size/type	Hammer	Piles per day ^a	Duration (minutes) ^b	Strikes per pile	Strikes per second
Pile Removal						
National Guard Dock and Moorage Float.	10- to 16-inch timber piles	Vibratory	12	30	N/A	N/A
National Guard Approach Dock	10- to 16-inch timber piles	Vibratory	4	60	N/A	N/A
Miscellaneous timber piles	10- to 16-inch timber piles	Vibratory	10	30	N/A	N/A
Mooring dolphin	24-inch steel pipe piles	Vibratory	12	45	N/A	N/A
Mooring dolphin	36-inch steel pipe piles	Vibratory	4	60	N/A	N/A
Temporary Piles						
Template piles	24-inch steel pipe piles	Vibratory	12	45	N/A	N/A
New Pile Installation						
Seawalk support	24-inch steel pipe piles	Vibratory	7	100	N/A	N/A
		Impact	7	N/A	2,000	N/A
Catwalk support	24-inch steel pipe piles	Vibratory	3	120	N/A	N/A
		Impact	3	N/A	1,200	N/A
Mooring dolphin	42-inch steel pipe pile	Vibratory	3	180	N/A	N/A
		Impact	3	N/A	3,000	N/A
Mooring dolphin	10-inch rock socket	DTH drilling	2	120	N/A	15

^a CBJ used the maximum number of piles that could be installed or removed per day (see table 1).

^b CBJ used the average amount of time expected per pile for installation or removal per day.

TABLE 7—CALCULATED DISTANCES TO LEVEL A HARASSMENT AND LEVEL B HARASSMENT ISOPLETHS FOR PILE DRIVING AND DTH DRILLING

Project component	Pile size/type	Hammer	Level A harassment zones (m) ^a					Level B harassment zone (m)
			LF	HF	VHF	PW	OW	
Pile Removal								
National Guard Dock and Moorage Float.	10- to 16-inch timber piles.	Vibratory	36	14	29	46	15	^b 6,310

TABLE 7—CALCULATED DISTANCES TO LEVEL A HARASSMENT AND LEVEL B HARASSMENT ISOPLETHS FOR PILE DRIVING AND DTH DRILLING—Continued

Project component	Pile size/type	Hammer	Level A harassment zones (m) ^a					Level B harassment zone (m)
			LF	HF	VHF	PW	OW	
National Guard Approach Dock.	10- to 16-inch timber piles.	Vibratory	27	10	22	35	12	^b 6,310
Miscellaneous timber piles.	10- to 16-inch timber piles.	Vibratory	31	12	26	40	14	^b 6,310
Mooring dolphin	24-inch steel pipe piles	Vibratory	54	21	44	70	24	^b 7,356
Mooring dolphin	36-inch steel pipe piles	Vibratory	50	19	41	64	22	^b 11,659
Temporary Piles								
Template piles	24-inch steel pipe piles	Vibratory	54	21	44	70	24	^b 7,356
New Pile Installation								
Seawalk support	24-inch steel pipe piles	Vibratory	65	25	53	83	28	^b 7,356
		Impact	2,301	294	^b 3,561	2,044	762	1,000
Catwalk support	24-inch steel pipe piles	Vibratory	41	16	34	53	18	^b 7,356
		Impact	930	119	1,440	827	308	1,000
Mooring dolphin	42-inch steel pipe piles	Vibratory	159	61	130	205	69	^b 21,544
		Impact	2,716	347	^b 4,204	2,413	900	2,154
Mooring dolphin	10-inch rock socket	DTH drilling	122	16	189	109	41	^b 13,594

^a Level A harassment isopleths are conservative because the maximum number of piles per day were used to calculate the isopleths.

^b These isopleths are truncated by land at approximately 3,550 m during high tide. During low tide, these isopleths are truncated by land at approximately 2,230 m.

As described above, NMFS uses dual metric criteria for impulsive sounds (impact pile driving) when determining onset of AUD INJ (Level A harassment), using either the PK SPL or weighted cumulative sound exposure level (SEL₂₄) and recommends using the larger isopleth. In table 7 above, all Level A harassment isopleths are based on the SEL₂₄ metric. The PK SPL Level A harassment isopleths were less than 10 m for all hearing groups for all impact pile driving scenarios except for VHF cetaceans. The PK SPL Level A harassment isopleths for VHF cetaceans were 12 m for the impact installation of the seawalk and catwalk support piles and 25 m for the impact installation of the mooring dolphin 42-inch steel pipe piles. For DTH installation of the 10-inch rock socket, the PK SPL Level A harassment isopleth based on the peak threshold was considered N/A for all hearing groups because the peak source level is less than the threshold for that marine mammal hearing group.

Marine Mammal Occurrence

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

Density estimates are not readily available for the project area; therefore, CBJ reviewed marine mammal monitoring reports for construction conducted in the same area, citizen science reports from *inaturalist.com* and *happywhale.com*, and anecdotal evidence. More information regarding occurrence data and sources cited can

be found in section 6 of CBJ's application.

Humpback whale—Humpback whales are relatively common in southeast Alaska, especially during the summer, but they are seen in Gastineau Channel relatively rarely, with only occasional sightings (PND Engineers, 2026). One humpback whale was seen in March during monitoring for the Downtown Waterfront Improvements Project (Uchytel *et al.*, 2020). During monitoring for other projects in Gastineau Channel, no humpback whales were seen (Michrowski and Easterly, 2025, Uchytel and Michrowski, 2021, Michrowski *et al.*, 2021), although these projects were all conducted during fall and winter months when humpback whales are less likely to be in the area. Because anecdotal reports and citizen science suggest that humpback whales pass through the project area intermittently (PND Engineers, 2026), particularly in summer months, CBJ conservatively assumes that three individual whales will occur per month, and NMFS concurs.

Killer whale—Killer whales are occasionally seen transiting through Gastineau Channel. During 58 days of marine mammal monitoring for the Downtown Juneau Waterfront Improvements Project, a group of 4 killer whales was observed (Uchytel *et al.*, 2020). Reports indicate occasional sightings of killer whales in Gastineau Channel, with a group of at least seven animals seen near downtown Juneau in January 2020 and May 2021 (*happywhale.com*). CBJ therefore conservatively assumes one group of

seven killer whales could occur per month during construction, and NMFS concurs with this approach.

Harbor porpoise—Harbor porpoise are relatively uncommon in Gastineau Channel. Additionally, harbor porpoises can be very cryptic, making reports of harbor porpoises in Gastineau Channel relatively scarce. During marine mammal monitoring for the Downtown Juneau Waterfront Improvements Project, a group of four harbor porpoises were observed (Uchytel *et al.*, 2020). In February 2024, a pair of harbor porpoises were spotted near the Juneau-Douglas Bridge (Woodford, 2024). CBJ conservatively estimates that one group of four harbor porpoises will occur in CBJ's construction area per month, and NMFS concurs with this approach.

Steller sea lion—During 58 days of monitoring for the Downtown Waterfront Improvement project, eight Steller sea lions were observed on 1 day (Uchytel *et al.*, 2020), and one Steller sea lion was observed during the Wayside Park Float and Dredging project in December of 2024 (Michrowski and Easterly, 2025). The Douglas Island Pink and Chum, Inc. salmon hatchery is located along the Gastineau Channel, approximately 5.5 kilometers (km) northwest of CBJ's project area. Hatchery staff report that during the months of July through September, they see one to two Steller sea lion per day (PND Engineers, 2026). Given the proximity of the CBJ project area to the hatchery (which attracts Steller sea lions) and likelihood that Steller sea lions would pass through CBJ's project area, CBJ assumes that two Steller sea

lions per day would be present in CBJ’s project area, and NMFS concurs.

Harbor seal—Harbor seals are one of the most frequently sighted marine mammals in the project area. Over the course of 58 days of monitoring for the Downtown Juneau Waterfront Improvements Project in 2020, harbor seals were present in the project area on most days, and the monitoring report suggests that a resident group of around 10–12 harbor seals uses Gastineau Channel in the winter (Uchytel *et al.*, 2020). In total, there were 164 observations of harbor seals within the Level B harassment isopleth throughout the course of monitoring. Over 2 days of monitoring for the Harris Harbor Pile Driving project in February 2021, a total of 26 harbor seals were observed, and observers estimated that approximately three to five resident harbor seals comprised the bulk of the recorded sightings (Michrowski *et al.*, 2021). CBJ conducted pre-construction monitoring of a 130 m shutdown zone for the Downtown Juneau Waterfront Improvements Projects, and an average of 18 harbor seals were observed per day (PND Engineers, 2019). CBJ therefore assumes 18 harbor seals per day in the project area, and NMFS concurs with this approach.

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization.

In general, the formula for determining the number of takes that may occur incidental to CBJ’s proposed project is:

Total take by harassment = occurrence estimate (in days) × pile activity days (238 days)

For species where occurrence was estimated as a number of individuals per month, CBJ assumed 30 days per month and converted the monthly occurrence to daily occurrence by dividing the monthly occurrence by 30. When the calculated number had a decimal, the number was rounded down when below 0.5 and up when greater than or equal to 0.5. See table 8 for estimated takes.

TABLE 8—ESTIMATED MONTHLY AND DAILY MARINE MAMMAL OCCURRENCE DURING CBJ’S PROPOSED PROJECT

Species	Monthly occurrence	Daily occurrence
Humpback whale	3	0.1

TABLE 8—ESTIMATED MONTHLY AND DAILY MARINE MAMMAL OCCURRENCE DURING CBJ’S PROPOSED PROJECT—Continued

Species	Monthly occurrence	Daily occurrence
Killer whale	7	0.23
Harbor porpoise	4	0.13
Steller sea lion ..	N/A	2
Harbor seal	N/A	18

To determine the number of takes that may occur by Level A harassment, NMFS considered sound sources, calculated distance to thresholds assuming the maximum number of piles per day would be installed, and species detectability and behavior. For vibratory pile installation and removal, it is unlikely that Level A harassment would occur due to relatively lower source levels and that threshold were either not exceeded or calculated distances to thresholds were small. Therefore, all takes calculated incidental to these activities were attributed to Level B harassment.

Similarly, NMFS does not expect nor does it propose take by Level A harassment for killer whales for any activity. The calculated distances to Level A harassment thresholds for killer whales is relatively short (see table 7) and represents extended durations. Because an animal is unlikely to remain in such close proximity to the piles for that time, AUD INJ is unlikely to occur. Further, killer whales are a highly visible species such that PSOs are likely to detect them and implement mitigation to avoid take by Level A harassment. Some of the Level A harassment isopleths for humpback whales due to impact pile driving are relatively large (approximately 2.3 km for impact installation of the seawalk support piles and 2.7 km for impact installation of 42-inch steel pipe piles (see table 7). CBJ proposes to shut down impact pile driving for humpback whales at 2,000 m for these piles. We expect humpback whales to be highly visible for protected species observers (PSOs) to implement shutdown, and we do not expect that humpback whales would remain in the area between the furthest extent of the Level A harassment isopleth and the shutdown zone long enough to incur AUD INJ. For other piles and DTH drilling, the calculated distances to the Level A harassment threshold are less than 2 km. Therefore, no Level A harassment of humpback whales is anticipated and none is proposed to be authorized.

The best available science demonstrates that harbor porpoises are

behaviorally sensitive species and exhibit strong reactions to impulsive noise such as impact pile driving. For example, displacement of harbor porpoises has been observed during impact pile driving associated with the construction at multiple offshore wind projects (Tougaard *et al.*, 2009, Bailey *et al.*, 2010, Dähne *et al.*, 2013, Lucke *et al.*, 2012, Haelters *et al.*, 2015, Brandt *et al.*, 2018). These studies document long-distance (*i.e.*, several kilometers) displacement; however, the duration of displacement has been documented to generally be temporary. The piles involved in coastal construction projects are smaller than those in these studies; however, other data support predicted avoidance responses wherein porpoise move away from a man-made sound source; thereby reducing accumulated noise energy. For example, Kok *et al.* (2018) found that two captive harbor porpoises spatially avoided a noisy pool when exposed to intermittent or continuous sound stimuli. In summary, harbor porpoises are likely to avoid coastal construction-related sound sources associated with the project to the degree that AUD INJ is unlikely. For these reasons, NMFS is not proposing to authorize Level A harassment of harbor porpoise.

Take by Level A harassment is proposed for authorization for Steller sea lions and harbor seals primarily because Level A harassment isopleths are relatively large for impact pile driving and DTH drilling (up to approximately 2.4 km for phocids and 900 m for otariids for impact pile driving of the 42-inch steel pipe pile), visibility of these species is such that we would not expect PSOs to observe them at such a large distance, and it is possible these species could remain in the area between the furthest extent of the Level A harassment zone and the shutdown zone to incur AUD INJ.

To determine the number of takes by Level A harassment for Steller sea lions and harbor seals, CBJ first considered the number of days that Level A harassment might occur and considered this to be days of impact pile driving and DTH drilling where the Level A harassment zone is larger than the shutdown zone. CBJ estimates the number of days in which harbor seals might incur Level A harassment to be 127 days (5 days for impact installation of 42-inch steel pipe piles, 2 days of impact installation of 24-inch steel catwalk piles, 115 days of impact installation of 24-inch seawalk support piles, and 5 days of DTH drilling) and for Steller sea lions, CBJ estimates 120 days (5 days for impact installation of 42-inch pipe piles and 115 days of

impact installation of the 24-inch steel seawalk support piles). Steller sea lions are not expected to incur Level A harassment on days of DTH drilling because the Level A harassment isopleth for Steller sea lions during DTH drilling is only 41 m, and we expect PSOs to institute shutdown before this species would enter the Level A harassment isopleth. The Level A harassment isopleth for harbor seals during DTH drilling, on the other hand, is 109 m. The shutdown zone for phocids has been set to 25 m for practicability concerns (see Proposed Mitigation section below), and therefore we expect that harbor seals could incur Level A harassment. CBJ then estimated the number of takes by Level A harassment by multiplying the daily occurrence estimate by 120 days for Steller sea lions and 127 days for harbor seals.

To estimate the number of takes by Level B harassment, CBJ used the following equation:

Takes by Level B harassment = Total take by harassment - Takes by Level A harassment

NMFS acknowledges that the number of estimated exposures above higher threshold criteria using the methodology (*e.g.*, sound exposures exceeding Level A harassment criteria), also encompasses the potential for less impactful effects (*e.g.*, Level B harassment). An individual exposure exceeding a Level A harassment criterion may not result in actual AUD INJ, yet the individual may have experienced Level B harassment. This outcome is accounted for in our authorization of potential higher-level takes and in our analysis.

Where multiple stocks of a single species may be present, NMFS considered the best available science to determine the percentage of takes by stock. Both the Hawai'i and Mexico-North Pacific stocks of humpback whale occur in the project area. However, only about 2 percent of the humpback whales in the area are expected to be from the Mexico-North Pacific stock, as described in Wade (2021). Because the total calculated takes of humpback whales in the area are 24, the calculated number of humpback whales from the Mexico-

North Pacific stock would be less than 0.5 whales. Therefore, we do not expect humpback whales from the Mexico-North Pacific Stock to be taken by harassment incidental to the specified activities.

In the Juneau area, about 1.4 percent of Steller sea lions are expected to be from the Western stock (NOAA Fisheries, 2020), and the remainder are expected to be from the Eastern stock. Therefore, to determine the number of takes that may occur to Steller sea lions from the Western stock, the total number of takes by Level A harassment (240) and Level B harassment (236) were multiplied by 1.4 percent and rounded to the nearest whole number. The remainder of takes by Level A and Level B harassment were attributed to the Eastern stock of Steller sea lions (see table 9).

Sufficient data does not exist to predict the likelihood of each stock of killer whale in the project area. Therefore, NMFS assumes that the proposed takes could be attributed to any of the stocks in the area.

TABLE 9—NUMBER OF TAKES, BY LEVEL A AND LEVEL B HARASSMENT, PROPOSED FOR AUTHORIZATION

Species	Stock	Stock abundance	Estimated takes by Level A harassment	Estimated takes by Level B harassment	Total instances of take	Percent of Stock ^a
Humpback whale	Hawai'i	11,278	0	24	24	0.2
Killer whale	Eastern North Pacific Alaska Resident.	1,920	0	55	55	2.9
	Eastern North Pacific Gulf of Alaska, Aleutian Island, and Bering Sea Transient.	587				9.4
	Eastern North Pacific Northern Resident.	302				18.2
	West Coast Transient	349				15.8
Harbor porpoise	Northern Southeast Alaska In-land Water.	1,619	0	31	31	1.9
Steller sea lion	Western	49,837	3	3	6	<0.1
	Eastern	36,308	237	233	470	1.3
Harbor seal	Lynn Canal/Stephens Passage ...	13,388	2,286	1,998	4,284	^b 32

^a The values presented here are based on calculations assuming all takes were from a different individual. However, repeated takes of the same individual are more likely to occur for species remaining within the area to forage or those that display increase site fidelity (*e.g.*, harbor seals). Therefore, the actual percentage of the population taken is likely less than that provided here.

^b Harbor seals in Gastineau Channel display site fidelity, and there is a group of resident harbor seals within Gastineau Channel (see *Marine Mammal Occurrence* section above). Therefore, repeated takes of an individual are likely, and the actual percentage of the population is likely less than what is provided here.

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.

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, as well as subsistence uses. 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 requirements described below were proposed by CBJ in its adequate and complete application or are the result of subsequent coordination between NMFS and CBJ. CBJ has agreed that all of the mitigation measures are practicable. NMFS has fully reviewed the specified activities and the mitigation measures to determine if the mitigation measures would result in the least practicable adverse impact on marine mammals and their habitat, as required by the MMPA, and has determined the proposed measures are appropriate. NMFS describes these below as proposed mitigation requirements and has included them in the proposed IHA which is available for review at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>.

Establishment of Clearance and Shutdown Zones

CBJ proposed, and NMFS would require, the establishment of clearance

and shutdown zones identified in table 10 for all pile driving and DTH activities. The purpose of “clearance” of a particular zone is to prevent potential instances of auditory injury and more severe behavioral disturbance the maximum extent practicable by delaying the commencement of pile driving or DTH drilling if marine mammals are detected within certain pre-defined distances from the pile being installed. The purpose of a shutdown is to prevent a specific acute impact, such as auditory injury or severe behavioral disturbance, by halting the activity if a marine mammal is to approach or enter the Level A harassment isopleth. Additionally, to avoid unauthorized takes, CBJ would delay an activity or shut down in the event that a species for which take is not authorized or for which take has been reached is observed within or entering any designated harassment zone. If pile driving or DTH activities are delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the clearance and shutdown zones indicated in table 10 or 15 minutes have passed without re-detection of the animal.

In-water construction activities that do not include the specified activities but require heavy equipment will also shut down if a marine mammal approaches within 10 m to avoid direct interaction.

In general, the clearance and shutdown zones represent the

calculated Level A harassment distance rounded up for ease of implementation. However, a maximum shutdown zone of 2,000 m for low frequency cetaceans and 300 m for very high frequency cetaceans and otariids will be maintained due to detectability and/or practicability. In addition, CBJ is proposing a maximum 25 m clearance and shutdown zone be maintained for harbor seals. Data collected by CBJ in 2019 during pre-construction monitoring for the Downtown Juneau Waterfront Improvement Project indicates that extended mitigation zones would not be practicable as harbor seals are frequently observed in close proximity (within 130 m) to the project site such that the specified activities would not be able to commence or continue to the degree that the project could be completed within reasonable time frames (PND Engineers, 2019). For that project, harbor seal presence close to the pile driving location resulted in CBJ requesting a modified IHA to reduce original harbor seal shutdown zone sizes from 130 m to 25 m (<https://www.fisheries.noaa.gov/action/incidental-take-authorization-juneau-waterfront-improvement-project-juneau-alaska>), and they have applied that experience to this project. NMFS has determined that clearance and shutdown zones beyond 25m for harbor seals is not practicable and could result in delays such that noise-generating activities associated with the project would be unnecessarily extended.

TABLE 10—PROPOSED SHUTDOWN/CLEARANCE ZONES FROM SOURCE (m)

Pile size/type	LF	HF	VHF	PW	OW
Vibratory					
10- to 16-inch timber piles	40	15	30	25	15
24-inch steel pipe piles	65	25	55	25	30
36-inch steel pipe piles	50	20	45	25	25
42-inch steel pipe piles	160	65	130	25	70
Impact					
Seawalk support piles (24-inch steel pipe piles)	2,000	295	300	25	300
Catwalk support piles (24-inch steel pipe piles)	930	120	300	25	300
42-inch steel pipe piles	2,000	350	300	25	300
DTH Drilling					
10-inch rock socket	125	20	190	25	45

Pre- and Post-Activity Monitoring

Monitoring would take place from 30 minutes prior to initiation of pile driving and DTH drilling (pre-start clearance monitoring) through 30

minutes post-completion of pile driving and DTH drilling. In addition, monitoring for 30 minutes would take place whenever a break in the specified activity (*i.e.*, impact or vibratory pile

driving or DTH drilling) of 30 minutes or longer occurs. Pre-start clearance monitoring would be conducted during periods of visibility sufficient for protected species observers (PSOs) to

determine that the clearance zones indicated in table 10 are clear of marine mammals. Pile driving and DTH drilling may commence following 30 minutes of observation when the determination is made that the clearance zones are clear of marine mammals.

Soft Start

CBJ would use soft start procedures for impact pile driving to provide additional protection to marine mammals by issuing a warning and/or giving them a chance to leave the area before the hammer operates at full capacity. Soft start requires contractors to provide an initial set of three strikes at reduced energy, followed by a 30 second waiting period, then two subsequent reduced-energy strike sets. This soft start would be implemented at the start of each day's impact pile driving and at any time following cessation of this activity for a period of 30 minutes or longer within a day.

Bubble Curtains

CBJ has not proposed to use a bubble curtain during impact pile driving due to limited effectiveness of the bubble curtains due to the strong tides in the area and economic impracticability. In general, bubble curtains reduce noise levels near the source, minimizing exposure level. However, for this project, most of the piles are located within the intertidal zone, and for a significant number of piles the upper limits of the bubble curtain would be above the water surface preventing the bubble curtains from being effective. In addition, requiring the use of a bubble curtain would reduce the number of piles that could be installed in a day due to the time it takes to install and move the device. Therefore, the duration over which the project would occur would be extending, increasing project costs and exposing marine mammals to underwater sound over longer time periods. For these reasons, CBJ has determined that the use of a bubble curtain is not practicable, and NMFS agrees.

NMFS conducted an independent evaluation of the proposed measures and 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, areas of similar significance, and on the availability of such species or stock for subsistence uses. Specific proposed mitigation measures can be found in the draft IHA found at <https://www.fisheries.noaa.gov/national/>

marine-mammal-protection/incidental-take-authorizations-construction-activities.

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.

The monitoring and reporting requirements described in the following were proposed by CBJ in its adequate and complete application and/or are the result of subsequent coordination

between NMFS and CBJ. CBJ has agreed to the requirements. NMFS describes these below as requirements and has included them in the proposed IHA.

CBJ would abide by all monitoring and reporting measures contained within the IHA, if issued, and their Protected Species Mitigation and Monitoring Plan (see NMFS' website at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>).

Visual Monitoring

A minimum of one NMFS-approved PSO would be assigned to each active pile driving and DTH drilling location, and at least two NMFS-approved PSOs would be on duty during all pile driving and DTH drilling activities. PSOs would 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 would have prior experience performing the duties of a PSO during an activity pursuant to a NMFS issued Incidental Take Authorization (ITA) or Letter of Concurrence (LOC). Other PSOs may substitute other relevant experience (including relevant Alaska Native traditional knowledge), 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. Where a team of three or more PSOs is required a lead observer or monitoring coordinator would be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued ITA or LOC.

Reporting

CBJ would submit a draft report on all construction activities and marine mammal monitoring results to NMFS within 90 days of the completion of monitoring, or 60 days prior to the requested issuance of any subsequent IHAs or similar activity at the same location, whichever comes first. CBJ will provide a final report to NMFS within 30 days following resolution of NMFS' comments on the draft report. The information required to be collected and reported to NMFS is included in the draft IHA available at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>. In summary, the report would include, but not be limited to, information regarding activities that occurred, marine mammal sighting data,

and whether mitigative actions were taken or could not be taken. CBJ would also be required to submit reports on any observed injured or dead marine mammals. If the death or injury was clearly caused by a specified activity, the CBJ would 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. CBJ would not resume its activities until notified by NMFS.

Specific proposed monitoring and reporting measures can be found in the draft IHA found at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities>.

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 discussion of our analysis applies to all species listed in table 9 given that the anticipated effects of this activity on these different

marine mammal stocks are expected to be similar. There is little information about the nature or severity of the impacts, or the size, status, or structure of any of these species or stocks that would lead to a different analysis for this activity.

Specifically, the specified activities may result in take, in the form of Level A harassment and/or Level B harassment, from underwater sounds generated from pile driving and DTH drilling. Potential takes could occur if individuals of these species are present in zones encompassed above the thresholds for Level A harassment and/or Level B harassment identified above when these activities are underway. CBJ would implement mitigation measures designed to reduce the potential for and severity of harassment that effect the least practicable adverse impact on the affected marine mammal species and stocks during the specified activities. Given the nature of the proposed activities, NMFS does not anticipate serious injury or mortality due to CBJ’s specified activities, even in the absence of required mitigation.

For all species and stocks, take is expected to occur within a limited, confined area (adjacent to the project site) of the species’ range, including Southeast Alaska. The intensity and duration of take by Level A harassment and/or Level B harassment would be minimized through the proposed mitigation measures described herein. Furthermore, the number of takes proposed for authorization is small compared to the relative stock’s abundance, even assuming that every take for any particular species could wholly occur to individuals of an individual stock.

NMFS is proposing to authorize take, by Level A harassment, for two marine mammal species (Steller sea lions and harbor seals) incidental to the specified activities. As described in the Potential Effects to Marine Mammals and Their Habitat section, the impacts could be a small degree of AUD INJ which may or may not manifest as PTS. Should PTS occur, at most, NMFS anticipates it would be of a small degree; therefore, NMFS anticipates a sound would have to be only slightly louder for it to be heard by an individual that may incur PTS from the project. Further, PTS would only occur within the frequency range of the source (*i.e.*, impact pile driving, DTH drilling) which does not cover any species’ complete hearing range. For most species, the frequency range of the noise produced by the specified activities is outside their primary hearing range.

Additionally, as noted previously, some subset of individuals who are behaviorally harassed during the activities could also simultaneously incur some small degree of TTS for a short duration. However, because of the anticipated small degree of possible overlap of sound exposure, duration, and hearing frequency with species occurrence, any TTS is expected to be limited.

Behavioral responses of marine mammals to pile removal and installation activities in the project area, if any, are expected to be mild, short-term, and temporary. Marine mammals within the Level B harassment zones may not show any visual cues that they are disturbed by activities, or they may become alert, avoid the area, leave the area, or display other mild responses that are not observable, such as changes in vocalization patterns. Additionally, many of the species present in the region would be present only temporarily, based on seasonal patterns or during active transit between other habitats. Most likely, during the specified activities, individuals are expected to move away from the sound source until the source ceases. An avoidance response is most likely to occur if an animal is in close proximity to a source, most notably impact pile driving and DTH drilling. At distance, the severity of any behavioral response is likely to be diminished from all of the specified activities. It is possible that avoidance or other behavioral responses do not occur for some species, especially for non-impulsive sources such as vibratory pile removal and driving, given marine mammals in the Juneau area are consistently exposed to anthropogenic noise sources like vessel traffic. Regardless, NMFS conservatively assumes animals disturbed by project sounds would be expected to avoid the area and use nearby higher-quality habitats. Further, pinnipeds in the area would be able to haul out to avoid underwater noise exposure.

Although the majority of marine mammal species would be temporarily passing through the project area, there is likely a small group of resident harbor seals in Gastineau Channel, as described in previous monitoring reports (Uchytel *et al.*, 2020, Michrowski *et al.*, 2021). These animals may be taken repeatedly during construction. However, because these animals are habituated to the industrialized waters around Juneau, it is unlikely that repeated takes would occur either in numbers or clumped across sequential days in a manner likely to impact foraging success and energetic or other behaviors such that

reproduction or survival of any individuals is likely to be impacted.

For humpback whales, the inland waters of Southeast Alaska are a seasonal feeding BIA from May through September (Wild *et al.*, 2023). However, the Gastineau Channel, where CBJ proposes to conduct their construction, is not included within this feeding BIA. Thus, neither the proposed activities nor the ensonified areas from CBJ's proposed activities would have overlap with this foraging habitat, and we do not expect CBJ's proposed activities to have any effect on humpback whale's ability to forage.

The potential and severity of harassment is minimized by implementing the proposed mitigation measures. During all pile removal and installation activities, CBJ would delay commencement of or shutdown activities if a marine mammal is observed within designates zones to minimize instance and severity of behavioral harassment and injury. These zones would be monitored by NMFS-approved PSOs. Further, prior to impact pile driving, CBJ will implement a soft-start of the equipment prior to operating at maximum energy. Given sufficient notice through soft start, marine mammals are expected to move away from a sound source to avoid the loudest noise exposure, thereby reducing the intensity of any behavioral reactions or injury that may occur.

Any impact on marine mammal habitat, including prey, from CBJ's proposed activities would primarily have temporary effects primarily resulting in increased turbidity and avoidance of the immediate vicinity around the project site by prey. Some injury or mortality of fish prey may occur if exposed to sufficiently high SPLs; however, these more severe impacts are expected to be minimal, if any at all. Addition of the new seawalk and cruise ship mooring dolphin would result in permanent impacts; however, these and the expected temporary impacts are not expected to adversely affect the degree to which marine mammals can efficiently forage.

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

- No serious injury or mortality is anticipated or authorized;
- Any Level A harassment (AUD INJ) is anticipated to be slight AUD INJ, including slight PTS of a few dB within the lower frequencies associated with

pile driving and not encompassing a species' full hearing range;

- The anticipated incidents of Level B harassment would result in, at worst, temporary modifications in behavior or a small degree of TTS that would resume to baseline at the cessation of activities or as animals move away from the source;

- The project area is located in a highly industrialized and commercial area; therefore, species taken are likely acclimated to anthropogenic activities and behavioral reactions are expected to be temporary and of low severity;

- Take would occur within a very small area affected by the specified activity relative to the overall habitat ranges of all species, and it does not include any rookeries, ESA-designated critical habitat, or BIAs;

- Effects on species that serve as prey for marine mammals from the activities are primarily expected to be short-term and, therefore, any associated impacts on marine mammal feeding are not expected to result in significant or long-term consequences for individuals, or to accrue adverse impacts on their populations; and

- The proposed mitigation measures, such as soft-starts for impact pile driving and implementation of clearance and shutdown zones, are expected to reduce the effects of the specified activity to the least practicable adverse impact level.

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 section 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 (see

86 FR 5322, January 19, 2021).

Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

The amount of take NMFS proposes to authorize is below one-third of the estimated stock abundances for all stocks (table 9). Calculations are assuming that all takes were from a different individual. However, as described in the *Marine Mammal Occurrence* section, there is a group of resident harbor seals in Gastineau Channel. It is, therefore, likely, that repeated takes of harbor seals would occur, and that the percentage of the Lynn Canal/Stephens Passage stock of harbor seals is likely less than the calculated 32 percent.

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 sea lions and harbor seals, in Southeast Alaska. Surveys of harbor seal and sea lion subsistence harvest in Alaska began in 1992, and since 2001, there has been a discernible decrease in households harvesting harbor seals. In the period from 1992 to 2001, the counts of households harvesting harbor seals ranged from 246 to 310 households each year, but since 2001 the counts of harvesters ranged from 138 to 205 households (Wolfe *et al.*, 2013). In 2012 (the last reported survey year), the count of harvesters was the second lowest it

had ever been at 140 households (Wolfe *et al.*, 2013). Throughout all the years of subsistence surveys, hunting effort for sea lions has remained at a low level, with only 4 households reporting to hunt sea lions in 2012 (Wolfe *et al.*, 2013). In 2012, the community of Juneau harvested 23 harbor seals and no sea lions (Wolfe *et al.*, 2013).

The Alaska Department of Fish and Game has designated the area around Juneau, including ensonified waters from the project, a non-subsistence area, defined as an area where dependence upon subsistence (customary and traditional uses of fish and wildlife) is not a principal characteristic of the economy, culture, and way of life (AS 16.05.258(c)). Regardless, the impact of the project on marine mammals is expected to be primarily limited to mild behavioral reactions (e.g., avoidance during pile activities, increased swim speeds, or cessation of vocalizations) such that it would not affect their availability for subsistence use.

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 CBJ'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 ensures 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 incidental take authorizations, NMFS consults internally whenever we propose to authorize take for ESA-listed species, in this case with the NMFS Alaska Regional Office (AKRO).

NMFS Office of Protected Resources (OPR) is proposing to authorize take of the western stock of Steller sea lions, which are listed under the ESA. OPR has requested initiation of section 7 consultation with AKRO 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 CBJ allowing for the

incidental take of marine mammals incidental to the Seawalk Extension Project in Juneau, AK, 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. We also request comment on the potential renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for this IHA or a subsequent renewal IHA.

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

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond 1 year from expiration of the initial IHA).
- The request for renewal must include the following:
 1. An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).
 2. A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.
- Upon review of the request for renewal, the status of the affected

species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: October 7, 2026.

Kimberly Damon-Randall,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; Natural Resource Damage Assessment Restoration Project Information Sheet

The Department of Commerce will submit the following information collection request to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, on or after the date of publication of this notice. We invite the general public and other Federal agencies to comment on proposed, and continuing information collections, which helps us assess the impact of our information collection requirements and minimize the public's reporting burden. Public comments were previously requested via the **Federal Register** on March 20, 2026, during a 60-day comment period. This notice allows for an additional 30 days for public comments.

Agency: National Oceanic and Atmospheric Administration (NOAA), Commerce.

Title: Natural Resource Damage Assessment Restoration Project Information Sheet.

OMB Control Number: 0648-0497.

Form Number(s): None.

Type of Request: Regular submission [extension of a current information collection].

Number of Respondents: 100.

Average Hours per Response: Reports: 20 minutes and updates to reports: 10 minutes.

Total Annual Burden Hours: 107 hours.

Needs and Uses: This is a request for renewal of an approved information collection. The purpose of this information collection is to assist state