Frozen shrimp and prawns that are packed with marinade, spices or sauce are included in the scope of the orders. In addition, food preparations, which are not ''prepared meals,'' that contain more than 20 percent by weight of shrimp or prawn are also included in the scope of the orders.

Excluded from the scope are: (1) breaded shrimp and prawns (HTSUS subheading 1605.20.1020); (2) shrimp and prawns generally classified in the *Pandalidae* family and commonly referred to as coldwater shrimp, in any state of processing; (3) fresh shrimp and prawns whether shell on or peeled (HTSUS subheadings 0306.23.0020 and 0306.23.0040); (4) shrimp and prawns in prepared meals (HTSUS subheading 1605.20.0510); (5) dried shrimp and prawns; (6) Lee Kum Kee's shrimp sauce; [2] (7) canned warmwater shrimp and prawns (HTSUS subheading 1605.20.1040); and (8) certain battered shrimp. Battered shrimp is a shrimp-based product: (1) that is produced from fresh (or thawed-from-frozen) and peeled shrimp; (2) to which a ''dusting'' layer of rice or wheat flour of at least 95 percent purity has been applied; (3) with the entire surface of the shrimp flesh thoroughly and evenly coated with the flour; (4) with the non-shrimp content of the end product constituting between four and 10 percent of the product's total weight after being dusted, but prior to being frozen; and (5) that is subjected to individually quick frozen (''IQF'') freezing immediately after application of the dusting layer. When dusted in accordance with the definition of dusting above, the battered shrimp product is also coated with a wet viscous layer containing egg and/or milk, and par-fried.

The products covered by the orders are currently classified under the following HTSUS subheadings: 0306.17.00.03, 0306.17.00.06, 0306.17.00.09, 0306.17.00.12, 0306.17.00.15, 0306.17.00.18, 0306.17.00.21, 0306.17.00.24, 0306.17.00.27, 0306.17.00.40, 1605.21.10.30, 1605.29.10.10, 0306.17.0004, 0306.17.0005, 0306.17.0007, 0306.17.0008, 0306.17.0010, 0306.17.0011, 0306.17.0013, 0306.17.0014, 0306.17.0016, 0306.17.0017, 0306.17.0019, 0306.17.0020, 0306.17.0022, 0306.17.0023, 0306.17.0025, 0306.17.0026, 0306.17.0028, 0306.17.0029, 0306.17.0041, 0306.17.0042. These HTSUS subheadings are provided for convenience and for customs purposes only; the written description of the scope of the orders are dispositive.[3] ''

Background

On July 5, 2023, Commerce published in the **Federal Register** the continuation of the orders for certain frozen warmwater shrimp from China, India, Thailand, and Vietnam.[4] We inadvertently included the wrong scope of the orders.

Notification to Interested Parties

This notice is issued and published in accordance with sections 751(c), 751(d)(2), and 777(i) of the Tariff Act of 1930, as amended, and 19 CFR 351.218(f)(4).

Dated: January 5, 2024.

Abdelali Elouaradia,

Deputy Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2024–00396 Filed 1–10–24; 8:45 am]

BILLING CODE 3510–DS–P

[2] The specific exclusion for Lee Kum Kee's shrimp sauce applies only to the scope of the AD order on certain frozen warmwater shrimp from China.

[3] On April 26, 2011, Commerce amended the orders to include dusted shrimp, pursuant to the Court decision in *Ad Hoc Shrimp Trade Action Committee* v. *United States,* 703 F. Supp. 2d 1330 (CIT 2010) and the U.S. International Trade Commission determination, which found the domestic like product to include dusted shrimp. *See Certain Frozen Warmwater Shrimp from Brazil, India, the People's Republic of China, Thailand, and the Socialist Republic of Vietnam: Amended Antidumping Duty Orders in Accordance with Final Court Decision,* 76 FR 23277 (April 26, 2011); *see also Frozen Warmwater Shrimp from Brazil, China, India, Thailand, and Vietnam,* Inv. Nos. 731–TA1063, 1064, 1066–1068 (Review), USITC Pub. 4221 (March 2011).

[4] *See Certain Frozen Warmwater Shrimp from the People's Republic of China, India, Thailand, and the Socialist Republic of Vietnam: Continuation of Antidumping Duty Orders,* 88 FR 42914 (July 5, 2023).

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD574]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Sitka Seaplane Base Construction

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

ACTION: Notice; proposed incidental harassment authorizations; request for comments on proposed authorizations and possible renewals.

SUMMARY: NMFS has received a request from the City and Borough of Sitka (CBS) for authorization to take marine mammals incidental to Sitka seaplane base construction activities over two years in Sitka, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue two incidental harassment authorizations (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on possible one-time, 1-year renewals for each IHA that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than February 12, 2024.

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

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities* without change. All personal identifying information (*e.g.,* name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Jenna Harlacher, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

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

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

National Environmental Policy Act

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

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

Summary of Request

On September 1, 2023, NMFS received a request from CBS for two IHAs to take marine mammals incidental to the Sitka seaplane base construction project in Sitka, Alaska, over the course of two years. Following NMFS' review of the application and a revised version, CBS submitted a final version on November 15, 2023. The application was deemed adequate and complete on December 1, 2023. For both IHAs, CBS's request is for take of seven species of marine mammals by Level B harassment and, for a subset of three of these species, Level A harassment. Neither CBS nor NMFS expect serious injury or mortality to result from this activity and, therefore, IHAs are appropriate.

Description of Proposed Activity

Overview

CBS proposes to replace the existing seaplane base in the Sitka Channel in Sitka, Alaska. The purpose of this project is to construct a new seaplane base, which would address existing capacity, safety, and condition deficiencies for critical seaplane operations, and for all seaplanes to transit the Sitka Chanel more safely. The proposed location of the new seaplane base in the Sitka Channel is located on the northern shore of Japonski Island in the Sitka Sound. Over the course of 2 years spanning July 2024–June 2025 and July 2025–June 2026, CBS would use a variety of methods, including vibratory and impact pile driving, and down-the-hole (DTH) drilling to install and remove piles. These methods of pile driving would introduce underwater sounds that may result in take, by Level A and Level B harassment, of marine mammals.

Dates and Duration

CBS anticipates that the seaplane base construction project would occur over 2 years (phases). The in-water work window would last from July 2024 to June 2025 (Phase I) and July 2025 to June 2026 (Phase II). Pile driving and removal activities are anticipated to take 45 hours over 31 days in Phase I and 13 hours over 9 days in Phase II. All in-water pile driving would be completed during daylight hours. The Phase I IHA would be valid from July 1, 2024 to June 30, 2025, and the Phase II IHA would be valid from July 1, 2025 to June 30, 2026.

Specific Geographic Region

The CBS seaplane base is located on the northern shore of Japonski Island in the Sitka Channel. Sitka Channel separates Japonski Island from Sitka Harbor and downtown Sitka on the much larger Baranof Island. The Sitka Channel is located on the eastern shore of Sitka Sound, west of Crescent Bay and adjacent to Whiting Harbor. Sitka Channel is bookended by the Channel Rock Breakwaters to the north and James O'Connell Bridge to the south. Sitka Channel is approximately 150 feet (ft) (46 meters (m)) wide and about 22 ft (6.7 m) deep at its narrowest.

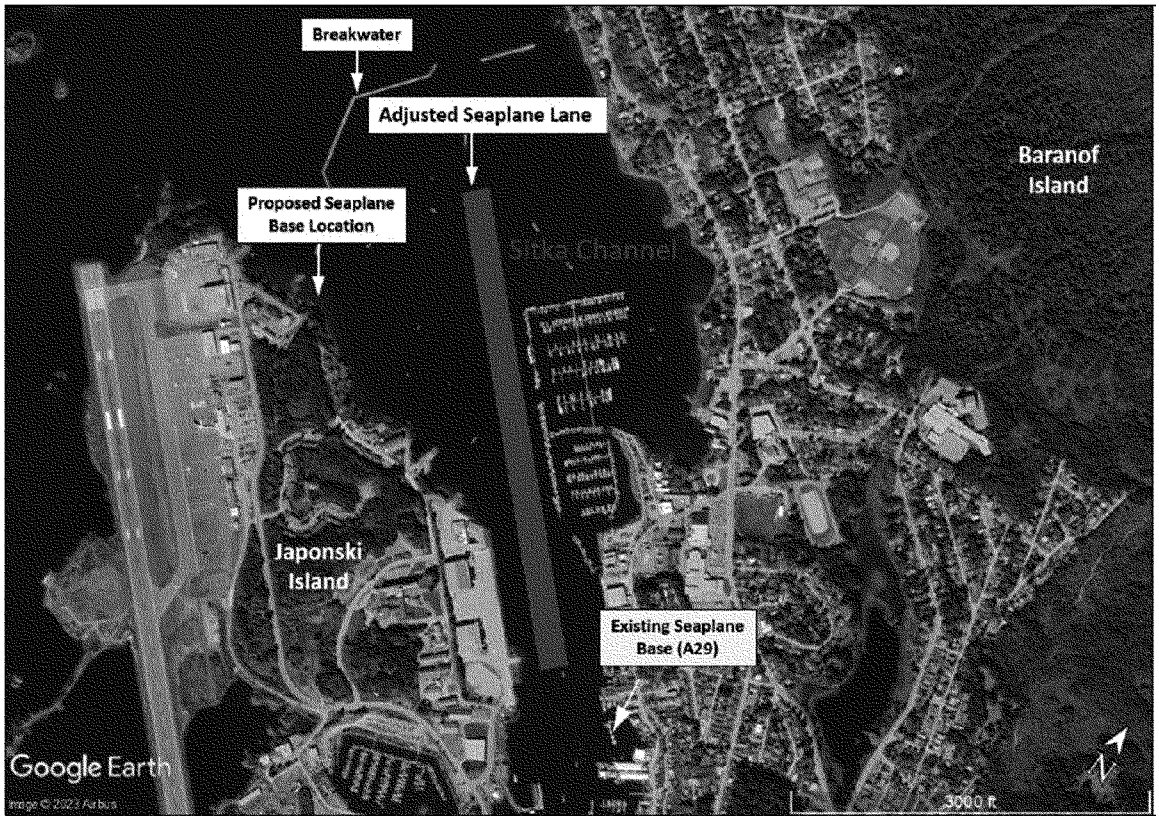

Figure 1—Project Location

Detailed Description of the Specified Activity

The purpose of the proposed project is to replace the existing seaplane base in Sitka that has come to the end of its useful life and has several shortcomings, including limited docking capacity. The existing facility is expensive to maintain, has wildlife conflicts with a nearby seafood processing plant, and requires pilots to navigate a busy channel with heavy ship traffic. The new seaplane base would improve safety of seaplane operations by reducing traffic and congestion in Sitka Channel. The proposed project would consist of several components including in-water and landside construction, completed over two phases. All components of landside construction would not cause harassment of marine mammals and are not discussed further.

Phase I would involve the installation and removal of temporary piles, and the installation of permanent piles. During Phase I, 10 16-inch (in, 0.4 m) and 16 24-in (0.6 m) permanent steel piles would be installed. The installation and removal of 12 temporary 16-in (0.4 m) steel pipe piles would be completed to support permanent pile installation. Vibratory hammers, impact hammers, and DTH drilling would be used for the installation and removal of the piles (table 1). The installation and removal of temporary piles would be conducted using impact and vibratory hammers. All permanent piles would be initially installed with a vibratory hammer. After vibratory driving, piles would be socketed into the bedrock with DTH drilling equipment. Finally, piles would be driven the final few inches of embedment with an impact hammer.

Phase II similarly would involve the installation and removal of temporary piles, and the installation of permanent piles. During Phase II six 24-in (0.6 m) steel piles would be installed. The installation and removal of six temporary 16-in (0.4 m) steel pipe piles would be completed to support the permanent pile installation. As in Phase I, vibratory hammers, impact hammers, and DTH drilling would be used for the installation and removal of the piles (table 2). The installation and removal of temporary piles would be conducted using impact and vibratory hammers. All permanent piles would be initially installed with a vibratory hammer. After vibratory driving, piles would be socketed into the bedrock with DTH drilling equipment. Finally, piles would be driven the final few inches of embedment with an impact hammer.

TABLE 1—PHASE 1 PROJECT PILE INSTALLATION AND REMOVAL SUMMARY

Project component	Temp install (16-in)	Temp remove (16-in)	Perm install (16-in)	Perm Install (24-in)
Total # of piles	12	12	10	16
Vibratory Pile Driving				
Max # of piles/day	6	6	6	6
Time/pile (minutes)	10	10	10	10
Time/day (min)	60	60	60	60

TABLE 1—PHASE 1 PROJECT PILE INSTALLATION AND REMOVAL SUMMARY—Continued

Project component	Temp install (16-in)	Temp remove (16-in)	Perm install (16-in)	Perm Install (24-in)
# of days	2	2	1.7	2.7
Total # of hours	2	2	1.7	2.7
DTH Drilling				
Max # of piles/day			2	2
strikes/pile			36,000	54,000
strikes/sec			10	10
time/pile			60	90
time/day (min)			120	180
# of days			5	8
Total # of hours			10	24
Impact Pile Driving				
Max # of piles/day	4		4	4
strikes/pile	175		175	175
time/pile (min)	5		5	5
time/day (min)	20		20	20
# of days	3		2.5	4
Total # of hours	1		0.8	1.3

TABLE 2—PHASE 2 PROJECT PILE INSTALLATION AND REMOVAL SUMMARY

Project component	Temp install (16-in)	Temp remove (16-in)	Perm install (24-in)
Total # of piles	6	6	6
Vibratory Pile Driving			
Max # of piles/day	6	6	6
Time/pile (minutes)	10	10	10
Time/day (min)	60	60	60
# of days	1	1	1
Total # of hours	1	1	1
DTH Drilling			
Max # of piles/day			2
strikes/pile			54,000
strikes/sec			10
time/pile			90
time/day (min)			180
# of days			3
Total # of hours			9
Impact Pile Driving			
Max # of piles/day	4		4
strikes/pile	175		175
time/pile (min)	5		5
time/day (min)	20		20
# of days	1.5		1.5
Total # of hours	0.5		0.5

Additionally, this project would include in-water work that is not expected to result in take of marine mammals. During Phase I and II, CBS proposed to discharge fill below the high tide line. The excavated materials from above the high tide line would be placed below the high tide line to develop the seaplane base uplands. The fill would be placed using an excavator and dozer and then compacted using a vibratory soil compactor. The total area of placement of fill below the high tide line in Phase I would be 1.6 acres (6,475 square meters (m^2)) and in Phase II would be 1.3 acres (5,261 m^2). While marine mammals may behaviorally respond in some small degree to the noise generated by the placement of fill operations, given the slow, predictable movements of the equipment, and absent any other contextual features that would cause enhanced concern, NMFS does not expect CBS's planned placement of fill to result in the take of marine mammals and it is not discussed further.

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

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' 2022 U.S. Alaska SAR. All values presented in table 3 are the most recent available at the time of publication and are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 3—SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals):						
Humpback Whale	*Megaptera novaeangliae*	Hawai'i	-,-,N	11,278 (0.56, 7,265, 2020).	127	27
		Mexico-North Pacific	T,D,Y	N/A (N/A, N/A, 2006)	UND	0.6
Minke Whale	*Balaenoptera acutorostrata*	Alaska	-,-,N	N/A (N/A, N/A, 2018)		0
Family Eschrichtiidae:						
Gray Whale	*Eschrichtius robustus*	Eastern North Pacific	-,-,N	26,960 (0.05, 25,849, 2016).	801	131
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Killer whale	*Orca orcinus*	Northern Resident	-,-,N	302 (N/A, 302, 2018)	2.2	0.2
		Alaska Resident	-,-,N	1,920 (N/A, 1,920, 2019)	19	1.3
		Gulf of Alaska/Aleutian Islands/ Bering Sea Transient.	-,-,N	587 (N/A, 587, 2012)	5.9	0.8
		West Coast Transient	-,-,N	349 (N/A, 349, 2018)	3.5	0.4
Family Phocoenidae (porpoises):						
Harbor porpoise	*Phocoena phocoena*	Northern Southeast Alaska	-,-,N	1,619 (0.26, 1,250, 2019)	13	5.6
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						
Steller sea lion	*Eumetopias jubatus*	Western Stock	E,D,Y	52,932 (N/A, 52,932, 2019).	318	254
		Eastern Stock	-,-,N	43,201 (N/A, 43,201, 2017).	2,592	112
Family Phocidae (earless seals):						
Harbor seal	*Phoca vituline richardii*	Sitka/Chatham	-,-,N	13,289 (N/A, 11,883, 2015).	356	77

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

[2] NMFS marine mammal stock assessment reports online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports* CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance.

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

As indicated above, all 7 species (with 12 managed stocks) in table 3 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. All species that could potentially occur in the proposed action area are included in table 8 of the IHA application. While northern fur seal, Pacific white-sided

dolphin, Dall's porpoise, North Pacific right whale, sperm whale, fin whale, and Cuvier's beaked whale have been documented in or near Sitka Sound and Sitka Channel, the temporal and/or spatial occurrence of these species is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here. These species are all considered to be rare (no sightings in recent years) or very rare (no local knowledge of sightings within the project vicinity) within Sitka Sound or near the action area. The take of these species has not been requested nor is proposed to be authorized and these species are not considered further in this document. In addition to what is included in Sections 3 and 4 of the application, the SARs, and NMFS' website, further localized data and detail informing the baseline for select species (*i.e.,* information regarding current Unusual Mortality Events (UME) and important habitat areas) is provided below.

Additionally, the Northern Sea Otter may be found in Sitka Sound. However, the Northern Sea Otter are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

Gray Whale

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

During 190 hours of observation from 1994 to 2002 from Sitka's Whale Park, three gray whales were observed (Straley *et al.,* 2017). During recent marine mammal surveys conducted in the vicinity of the project action area, no gray whales were sighted, and these species are not known or expected to occur near or within Sitka Channel (Windward 2017; Turnagain 2017; Straley *et al.,* 2017; Turnagain 2018; SolsticeAK 2019; SolsticeAK 2020; Halibut Point Marine Services 2021; SolsticeAK 2022). However, Sitka Sound is within a gray whale migratory route Biologically Important Area (BIA) (March–May; November–January) and a feeding BIA (March–June) (Wild *et al.,* 2023).

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

Humpback Whale

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

Humpback whales have been frequently observed during construction projects in Sitka Sound, including the Biorka Island Dock Replacement Project (Turnagain Marine Construction, 2018) and the Sitka GPIP Multipurpose Dock Project (Turnagain Marine Construction, 2017). During 190 hours of observation from 1994 to 2002 from Sitka's Whale Park, 440 humpback whales were observed (Straley *et al.,* 2017). During 21 days of monitoring during the construction of GPIP Dock between October 9 and November 9, 2017, 39 humpback whales were observed (Turnagain 2017). No humpback whales were observed within Sitka Channel during the eight days of monitoring in January 2017 during the construction of the Sitka Petro Dock (Windward 2017). Near Biorka Island, about 25 kilometers south of the project, humpback whales were sighted in June (22 whales), July (3 whales), and September (2 whales) 2018 (Turnagain 2018). No whales were sighted in August during the Biorka Island monitoring effort. Humpback whales were not observed during recent monitoring conducted for short periods over 8 days in September 2018 within a 400-meter radius surrounding the O'Connell Bridge Lightering Float (SolsticeAK 2019). During 39 days of monitoring in January through March 2020 for the Crescent Harbor Float Rebuild Project, no humpbacks were observed. Humpback whales were not observed in the project area during 5 days of monitoring in March 2022 during the geotechnical survey for this project (SolsticeAK 2022).

Given their widespread range and their opportunistic foraging strategies, humpback whales may be in Sitka Sound year-round but are more likely to occur in the summer months, although they are not as frequent in the action area.

According to Wade *et al.* (2016), humpback whales in Southeast Alaska are most likely to be from the Hawaii DPS (distinct population segment, 98 percent probability), with a 2 percent probability of being from the threatened Mexico DPS. Sitka Sound is within seasonal humpback whale feeding BIAs from March–May and September–December (Wild *et al.,* 2023).

Steller Sea Lion

Steller sea lions occur year-round in the project area. Most are expected to be from the Eastern DPS; however, it is likely that some Steller sea lions in the action area are from the endangered Western DPS (Jemison *et al.* 2013; NMFS 2013). Jemison *et al.* (2013) estimated an average annual breeding season movement of 917 Western DPS Steller sea lions to Southeast Alaska. Based on surveys and analysis conducted by Hastings *et al.* (2020), an estimated 2.2 percent of Steller sea lions in the vicinity of the project are Western DPS Steller sea lions.

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

Based on Straley *et al.* (2017) and other vessel-based surveys conducted from 1994 to 2016, Steller sea lion numbers are highest near the project area in January and February. January was the most abundant month with about 190 Steller sea lions spotted. February and November were next with about 170 and 120 Steller sea lions spotted, respectively. The fewest Steller sea lions were spotted in the month of May (1995–2002).

Individual sea lions were seen on 19 of 21 days in Silver Bay and Easter Channel during monitoring for GPIP dock construction between October and November 2017 (Turnagain 2017). Near Biorka Island, sea lions were seen infrequently; sea lions were sighted in June (six animals), July (two animals), and no sea lions were seen in August 2018 (Turnagain 2018). During 8 days of monitoring in January 2017 for the Petro Marine dock, about 1.6 kilometers (1 mile) southwest of the Sitka SPB, individual sea lions were seen on 3 days (Windward 2017). Steller sea lions were observed 5 of 8 days during monitoring

conducted for 15-minute periods in September 2018 for the O'Connell Bridge Lightering Float (SolsticeAK 2019). During in-water construction work for the O'Connell Bridge Lightering Float Pile Replacement Project between June 9 and June 12, 2019, 42 Steller sea lions were sighted (SolsticeAK 2019). During 39 days of marine mammal monitoring for the Crescent Harbor Float Replacement Project in January and February 2020, six sea lions were observed southwest of Sitka Channel (SolsticeAK 2020). Steller sea lions were most often observed alone or in small groups of 2 or 3 during these monitoring efforts; however, a group of more than 100 was sighted on at least 1 occasion (Straley *et al.* 2017; Windward 2017; SolsticeAK 2019; SolsticeAK 2020). During the original construction of the Halibut Point Marine Services dock facility, no Steller sea lions were recorded within the 200-meter shutdown zone during pile driving operations; however, observers indicated observing individual sea lions outside the 200-meter zone four to five times per week (McGraw, 2019).

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

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in table 4.

TABLE 4—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

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

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

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

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

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

Description of Sound Sources

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

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a

given frequency and location can vary by 10–20 dB from day to day (Richardson *et al.,* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include impact and vibratory pile driving and DTH drilling. The sounds produced by these activities fall into one of two general sound types: impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (American National Standards Institute (ANSI) 1986; National Institute for Occupational Safety and Health (NIOSH) 1998; ANSI 2005; NMFS 2018a). Non-impulsive sounds (*e.g.,* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with raid rise/decay time that impulsive sounds do (ANSI 1995; NIOSH 1998; NMFS 2018a). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward 1997 in Southall *et al.,* 2007).

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

A DTH hammer is essentially a drill bit that drills through the bedrock using a rotating function like a normal drill, in concert with a hammering mechanism operated by a pneumatic (or sometimes hydraulic) component integrated into the DTH hammer to increase speed of progress through the substrate (*i.e.,* it is similar to a ''hammer drill'' hand tool). The sounds produced by the DTH method contain both a continuous non-impulsive component from the drilling action and an impulsive component from the hammering effect. Therefore, we treat DTH systems as both impulsive and non-impulsive sound source types simultaneously.

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

Acoustic Impacts

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

NMFS defines a noise-induced threshold shift (TS) as a change, usually an increase, in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). The amount of threshold shift is customarily expressed in dB. TS can be permanent or temporary. As described in NMFS (2018), there are numerous factors to consider when examining the consequence of TS, including, but not limited to, the signal temporal pattern (*e.g.,* impulsive or non-impulsive), likelihood an individual would be exposed for a long enough duration or to a high enough level to induce a TS, the magnitude of the TS, time to recovery (seconds to minutes or hours to days), the frequency range of the exposure (*i.e.,* spectral content), the hearing and vocalization frequency range of the exposed species relative to the signal's frequency spectrum (*i.e.,* how an animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.,* 2014), and the overlap between the animal and the source (*e.g.,* spatial, temporal, and spectral).

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

Temporary Threshold Shift (TTS)—TTS is a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Based on data from cetacean TTS measurements (see Southall *et al.,* 2007), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Schlundt *et al.,* 2000; Finneran *et al.,* 2000, 2002). As described in Finneran

(2015), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, the growth curves become steeper and approach linear relationships with the noise SEL.

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

Many studies have examined noise-induced hearing loss in marine mammals (see Finneran (2015) and Southall *et al.* (2019) for summaries). For cetaceans, published data on the onset of TTS are limited to the captive bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaeorientalis*), and for pinnipeds in water, measurements of TTS are limited to harbor seals, elephant seals (*Mirounga angustirostris*), and California sea lions (*Zalophus californianus*). These studies examine hearing thresholds measured in marine mammals before and after exposure to intense sounds. 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 depends on the exposure frequency. Sounds at low frequencies, well below the region of best sensitivity, are less hazardous than those at higher frequencies, near the region of best sensitivity (Finneran and Schlundt, 2013). At low frequencies, onset-TTS exposure levels are higher compared to those in the region of best sensitivity (*i.e.,* a low frequency noise would need to be louder to cause TTS onset when TTS exposure level is higher), as shown for harbor porpoises and harbor seals (Kastelein *et al.,* 2019a, 2019b). In addition, TTS can accumulate across multiple exposures, but the resulting TTS will be less than the TTS from a single, continuous exposure with the same SEL (Finneran *et al.,* 2010; Kastelein *et al.,* 2014; Kastelein *et al.,* 2015a; Mooney *et al.,* 2009). This means that TTS predictions based on the total, cumulative SEL will overestimate the amount of TTS from intermittent exposures such as sonars and impulsive sources. Nachtigall *et al.* (2018) describe the measurements of hearing sensitivity of multiple odontocete species (bottlenose dolphin, harbor porpoise, beluga, and false killer whale (*Pseudorca crassidens*)) when a relatively loud sound was preceded by a warning sound. These captive animals were shown to reduce hearing sensitivity when warned of an impending intense sound. Based on these experimental observations of captive animals, the authors suggest that wild animals may dampen their hearing during prolonged exposures or if conditioned to anticipate intense sounds. Another study showed that echolocating animals (including odontocetes) might have anatomical specializations that might allow for conditioned hearing reduction and filtering of low-frequency ambient noise, including increased stiffness and control of middle ear structures and placement of inner ear structures (Ketten *et al.,* 2021). Data available on noise-induced hearing loss for mysticetes are currently lacking (NMFS, 2018).

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

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

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

and success, and the life history stage of the animal.

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

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

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

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

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

Airborne Acoustic Effects—Although pinnipeds are known to haul out regularly on man-made objects, we believe that incidents of take resulting solely from airborne sound are unlikely due to the sheltered proximity between the proposed project area and haulout sites (outside of Sitka Channel). There is a possibility that an animal could surface in-water, but with head out, within the area in which airborne sound exceeds relevant thresholds and thereby be exposed to levels of airborne sound that we associate with harassment, but any such occurrence would likely be accounted for in our estimation of incidental take from underwater sound. Therefore, authorization of incidental take resulting from airborne sound for pinnipeds is not warranted, and airborne sound is not discussed further here. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Marine Mammal Habitat Effects

CBS's construction activities could have localized, temporary impacts on marine mammal habitat and their prey by increasing in-water sound pressure levels and slightly decreasing water quality. However, its proposed location is within the Sitka harbor and is located in an area that is currently used by numerous commercial fishing and personal vessels. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater and airborne sound. Increased noise levels may affect acoustic habitat (see masking discussion above) and adversely affect marine mammal prey in the vicinity of the project area (see discussion below). During DTH drilling, impact, and vibratory pile driving, elevated levels of underwater noise would ensonify the project area where both fish and mammals occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction; however, displacement due to noise is expected to be temporary and is not expected to result in long-term effects to the individuals or populations.

Temporary and localized increase in turbidity near the seafloor would occur in the immediate area surrounding the area where piles are installed or removed. In general, turbidity associated with pile installation is localized to about a 25-ft (7.6 m) radius around the pile (Everitt *et al.,* 1980). The sediments of the project site would settle out rapidly when disturbed. Cetaceans are not expected to be close enough to the pile driving areas to experience effects of turbidity, and any pinnipeds could avoid localized areas of turbidity. Therefore, we expect the impact from increased turbidity levels to be discountable to marine mammals and do not discuss it further.

In-Water Construction Effects on Potential Foraging Habitat

The proposed activities would not result in permanent impacts to habitats used directly by marine mammals as the project would not expand outside of the Sitka Channel, and no increases in vessel traffic in the area are expected as a result of this project. The total seafloor area likely impacted by the project is relatively small compared to the available habitat in Southeast Alaska. Sitka Sound is included as a BIA for humpback whales and gray whales, however the action area is within the breakwaters where baleen whales are rare. Additionally, the area already has elevated noise levels because of busy vessel traffic transiting through the area, and critical habitat impacts would not be permanent nor would it result long-term effects to the local population. No known rookeries or major haulouts would be impacted. Additionally, the total seafloor area affected by pile installation and removal is a small area compared to the vast foraging area available to marine mammals in the area. At best, the impact area provides marginal foraging habitat for marine mammals and fishes. Furthermore, pile driving at the project site would not obstruct movements or migration of marine mammals.

Effects on Potential Prey

Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.,* crustaceans, cephalopods, fish, zooplankton, *etc.*). Marine mammal prey varies by species, season, and location. Here, we describe studies regarding the effects of noise on known marine mammal prey.

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

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

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

The most likely impact to fish from pile driving activities at the project areas would be temporary behavioral avoidance of the area. The duration of fish avoidance of an area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

Construction activities, in the form of increased turbidity, have the potential to adversely affect forage fish in the project area. Forage fish form a significant prey base for many marine mammal species that occur in the project area. Increased turbidity is expected to occur in the immediate vicinity (on the order of 10 ft (3 m) or less) of construction activities. However, suspended sediments and particulates are expected to dissipate quickly within a single tidal cycle. Given the limited area affected and high tidal dilution rates, any effects on forage fish are expected to be minor or negligible.

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

In summary, given the short daily duration of sound associated with individual pile driving events and the relatively small areas being affected, pile driving activities associated with the proposed action are not likely to have a permanent adverse effect on any fish habitat, or populations of fish species. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity. Thus, we conclude that impacts of the specified activity are not likely to have more than short-term adverse effects on any prey habitat or populations of prey species. Further, any impacts to marine mammal habitat are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations.

Estimated Take of Marine Mammals

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

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

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.,* vibratory or 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 auditory injury (Level A harassment) to result, primarily for harbor porpoise, harbor seals and Steller sea lions. Harbor porpoise have larger predicted auditory injury zones and due to their small size they could enter the Level A harassment zone and remain undetected for sufficient duration to incur auditory injury. While Steller sea lion do not have large Level A harassment zones, they are frequently sighted in the project area and therefor have some potential for auditory injury. Additionally harbor seals have larger Level A harassment zones and are common in the action area, and therefore have potential for auditory injury. Auditory injury is unlikely to occur for all other species, based on the unlikelihood of the species in the action area and the smaller Level A harassment zones. The proposed mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

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

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

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

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

CBS's proposed activity includes the use of continuous (vibratory hammer and DTH drilling) and impulsive (DTH drilling and impact pile driving) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 µPa are applicable.

Level A harassment—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). CBS's proposed activity includes the use of impulsive (impact pile-driving and DTH drilling) and non-impulsive (vibratory hammer and DTH drilling) sources.

These thresholds are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance, which may be accessed at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

TABLE 5—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS onset acoustic thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{pk,flat}$: 219 dB; $L_{E,LF,24h}$: 183 dB	*Cell 2:* $L_{E,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{pk,flat}$: 230 dB; $L_{E,MF,24h}$: 185 dB	*Cell 4:* $L_{E,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{pk,flat}$: 202 dB; $L_{E,HF,24h}$: 155 dB	*Cell 6:* $L_{E,HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{pk,flat}$: 218 dB; $L_{E,PW,24h}$: 185 dB	*Cell 8:* $L_{E,PW,24h}$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{pk,flat}$: 232 dB; $L_{E,OW,24h}$: 203 dB	*Cell 10:* $L_{E,OW,24h}$: 219 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 µPa, and cumulative sound exposure level (L_E) has a reference value of 1 µPa^{2}s. In this table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.,* varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

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

The sound field in the project area is the existing background noise plus additional construction noise from the proposed project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.,* impact pile driving, vibratory pile driving and removal, and DTH).

In order to calculate distances to the Level A harassment and Level B harassment thresholds for the methods and piles being used in this project, NMFS used acoustic monitoring data from other locations to develop source levels for the various pile types, sizes and methods (table 6). This analysis uses practical spreading loss, a standard assumption regarding sound propagation for similar environments, to estimate transmission of sound through water. For this analysis, the transmission loss factor of 15 (4.5 dB per doubling of distance) is used. A weighting adjustment factor of 2.5 or 2, a standard default value for vibratory pile driving and removal or impact driving and DTH respectively, were used to calculate Level A harassment areas.

NMFS recommends treating DTH systems as both impulsive and continuous, non-impulsive sound source types simultaneously. Thus, impulsive thresholds are used to evaluate Level A harassment, and continuous thresholds are used to evaluate Level B harassment. With regards to DTH mono-hammers, NMFS recommends proxy levels for Level A harassment based on available data regarding DTH systems of similar sized piles and holes (Denes *et al.,* 2019; Guan and Miner, 2020; Reyff and Heyvaert, 2019; Reyff, 2020; Heyvaert and Reyff, 2021) (table 1 and 2 includes number of piles and duration for each phase; table 6 includes peak pressure, sound pressure, and sound exposure levels for each pile type).

TABLE 6—ESTIMATES UNDERWATER PROXY SOURCE LEVEL FOR PILE INSTALLATION AND REMOVAL

Method and pile type	Sound source at 10 meters			Source
Vibratory Hammer	dB rms			
16 in	161			NAVFAC 2015.
24 in	161			NAVFAC 2015.
DTH Drill	dB rms	dB SEL	dB peak	
16 in	167	146	172	Heyvaert and Reyff 2021, Guan and Miner 2020.
24 in	167	159	184	Heyvaert and Reyff 2021.
Impact Hammer	dB rms	dB SEL	dB peak	
16 in	185	175	200	Caltrans 2020.
24 in	190	177	203	Caltrans 2015.

Level B Harassment Zones

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

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

Where:

TL = transmission loss in dB

B = transmission loss coefficient; for practical spreading equals 15

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.

The recommended TL coefficient for most nearshore environments is the practical spreading value of 15. This value results in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions, which is the most appropriate assumption for CBS's proposed underwater activities. The Level B harassment zones and approximate amount of area ensonified for the proposed underwater activities are shown in table 7.

Level A Harassment Zones

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

tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. The isopleths generated by the User Spreadsheet used the same TL coefficient as the Level B harassment zone calculations (*i.e.,* the practical spreading value of 15). Inputs used in the User Spreadsheet (*e.g.,* number of piles per day, duration and/or strikes per pile) are presented in tables 1 and 2. The maximum RMS SPL, SEL, and resulting isopleths are reported in tables 6 and 7.

TABLE 7—LEVEL A AND LEVEL B HARASSMENT ISOPLETHS FOR PILE DRIVING ACTIVITIES

Activity	Level A isopleth (m)					Level B isopleth (m)
	LF	MF	HF	Phocids	Otariids	
Vibratory Pile Removal/Installation						
Phase I:						
16-in temp install	6.8	0.6	10.1	4.2	0.3	5,411.7
16-in temp removal	6.8	0.6	10.1	4.2	0.3	5,411.7
16-in perm install	6.8	0.6	10.1	4.2	0.3	5,411.7
24-in perm install	6.8	0.6	10.1	4.2	0.3	5,411.7
Phase II:						
16-in temp install	6.8	0.6	10.1	4.2	0.3	5,411.7
16-in temp removal	6.8	0.6	10.1	4.2	0.3	5,411.7
24-in perm install	6.8	0.6	10.1	4.2	0.3	5,411.7
DTH Pile Installation						
Phase I:						
16-in perm install	59	2.1	70.3	31.6	2.3	[1] 8,500
24-in perm install	568.9	20.2	677.6	304.4	22.2	[1] 8,500
Phase II:						
24-in perm install	568.9	20.2	677.6	304.4	22.2	[1] 8,500
Impact Pile Installation						
Phase I:						
16-in temp install	231	8.2	275	123	9	464.2
16-in perm install	231	8.2	275	123	9	464.2
24-in perm install	313	11.1	373	168	12.2	1,000
Phase II:						
16-in temp install	231	8.2	275	123	9	464.2
24-in perm install	313	11.1	373	168	12.2	1,000

[1] The calculated Level B harassment zone is 13,594 m. However, the farthest distance that sound will transmit from the source is 8,500 m before transmission is stopped by landmasses.

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.

Daily occurrence probability of each marine mammal species in the action area is based on consultation with previous monitoring reports, local researchers and marine professionals. Occurrence probability estimates are based on conservative density approximations for each species and factor in historic data of occurrence, seasonality, and group size in Sitka Sound and Sitka Channel. A summary of proposed occurrence is shown in table 9. To accurately describe species occurrence near the action area, marine mammals were described as either common (species sighted consistently during all monitoring efforts in the project vicinity, assume one to two groups per day), frequent (species sighted with some consistency during most monitoring efforts in the project vicinity, assume one group per week), or infrequent (species sighted occasionally during a few monitoring efforts in the project vicinity, assume one group per 2 weeks).

TABLE 8—ESTIMATED OCCURRENCE OF GROUP SIGHTINGS OF MARINE MAMMAL SPECIES

Species	Frequency	Average group size	Expected occurrence
Humpback whale	Frequent	3.4	1 group/week.
Minke whale [1]	Infrequent	3.5	1 group/2 weeks.
Gray whale	Infrequent	3.5	1 group/2 weeks.
Killer whale	Frequent	6.6	1 group/week.
Harbor porpoise	Infrequent	5.0	1 group/2 weeks.
Harbor seal [2]	Common	2.1	1–2 groups/day.
Steller sea lion [2]	Common	2.0	1–2 groups/day.

[1] Minke whale considered rare in Sitka Channel, but to be conservative they are treated as infrequent for take estimation as there is a small likelihood they could be in the area during the activity.

[2] Likelihood of one group/day in the Level A harassment zone and likelihood of two groups/day in the level B harassment zone.

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.

For the total underwater take estimate, the daily occurrence probability for a species was multiplied by the estimated group size and by the number of days of each type of pile driving activity. Group size is based on the best available published research for these species and their presence in the action area.

Estimated take = Group size × Groups per day × Days of pile driving activity

Take by Level A harassment is requested for Steller sea lions and harbor seals. Although Steller sea lion Level A harassment zones are small, as previously discussed they are known to spend extended periods of time within the breakwaters in Sitka sound and in the project area. Harbor seals are also common in the project area and although their Level A harassment zones are farther from the project area, CBS has requested a maximum shutdown zone of 125 m for harbor seals and therefor there is likelihood for take by Level A harassment of harbor seals. Take by Level A harassment is also requested for harbor porpoise. We are proposing a maximum shutdown zone for high frequency species of 300 m and therefor there is likelihood for some take by Level A harassment. Even though they are not as common within the breakwaters, their Level A harassment zone extends beyond the breakwaters and they are elusive in nature. The take by Level A harassment for both pinniped species, are based on a lower daily occurrence rate based on the frequency of sightings within the smaller Level A harassment zone of the breakwaters (table 8).

Additionally, for species that are large and/or infrequent (gray whale, minke whale, humpback whale, and harbor porpoise) in Sitka Sound and are unlikely to be within the breakwaters where the proposed action will take place, take by Level B harassment is only anticipated to occur incidental to vibratory and DTH methods, given the larger Level B harassment zones which will extend beyond the breakwaters. Anticipated take by Level A harassment for harbor seal and harbor porpoise would likely occur only incidental to impact pile driving and DTH drilling, and anticipated take of Steller sea lion by Level A harassment would likely occur only incidental to DTH drilling, due to the larger Level A harassment zones for these activities. See table 7.

TABLE 9—PROPOSED TAKE OF MARINE MAMMALS BY LEVEL A AND LEVEL B HARASSMENT AND PERCENT OF STOCK PROPOSED TO BE TAKEN

Species	Stock	Phase 1			Phase 2		
		Level A	Level B	Percent of stock	Level A	Level B	Percent of stock
Humpback whale [1]	Hawai'i	0	11	0.1	0	*4	0
	Mexico-North Pacific [2]	0	0	0	0	0	0
Gray Whale	Eastern North Pacific	0	6	0	0	*4	0
Minke Whale	Alaska	0	6	NA	0	*4	NA
Killer whale	West Coast Transients	0	3	0.9	0	1	0.3
	Gulf, Aleutian, Bering Transient	0	6	0.9	0	2	0.3
	Northern Resident	0	3	0.9	0	1	0.3
	Alaska Resident	0	18	0.9	0	6	0.3
Harbor porpoise	Northern Southeast Alaska	*5	8	0.9	*5	*5	0.7
Harbor seal	Sitka/Chatham Alaska	48	130	1.3	13	38	0.4
Steller sea lion	Eastern US	16	121	0.3	6	35	0.1
	Western US	0	3	0	0	2*	0

[1] Take estimates are weighted based on calculated percentages of population for each distinct stock, assuming animals present would follow same probability of presence in project area. Humpback whale probability by stock based on Southeast Alaska estimates from NMFS 2021 (98 percent Hawaii DPS; 2 percent Mexico DPS).

[2] ESA listed Mexico humpback whales take calculation resulted in less than 0.5 takes, therefore no takes are anticipate or are proposed for authorization.

* Where proposed calculated take was less than the average group size, the take was rounded up to a group size as that is likely what would be encountered.

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.

Mitigation Measures

For each IHA, CBS must follow mitigation measures as specified below:

- Ensure that construction supervisors and crews, the monitoring team, and relevant CBS staff are trained prior to the start of all pile driving and DTH drilling activity, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work;
- Employ Protected Species Observers (PSOs) and establish

monitoring locations as described in the application and the IHA. The Holder must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions. For all pile driving and removal at least one PSO must be used. The PSO will be stationed as close to the activity as possible;

- The placement of the PSOs during all pile driving and removal and DTH drilling activities will ensure that the entire shutdown zone is visible during pile installation;
- Monitoring must take place from 30 minutes prior to initiation of pile driving or DTH drilling activity (*i.e.,* pre-clearance monitoring) through 30 minutes post-completion of pile driving or DTH drilling activity;
- Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown 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 shutdown zones are clear of marine mammals;
- CBS must use soft start techniques when impact pile driving. 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. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer; and
- If a marine mammal is observed entering or within the shutdown zones indicated in table 10, pile driving and DTH drilling must be delayed or halted. If pile driving is 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 shutdown zone (table 11) or 15 minutes have passed without re-detection of the animal.

As proposed by the applicant, in water activities will take place only between civil dawn and civil dusk when PSOs can effectively monitor for the presence of marine mammals; during conditions with a Beaufort sea state of 4 or less. Pile driving and DTH drilling may continue for up to 30 minutes after sunset during evening civil twilight, as necessary to secure a pile for safety prior to demobilization during this time. The length of the post-activity monitoring period may be reduced if darkness precludes visibility of the shutdown and monitoring zones.

Shutdown Zones

CBS will establish shutdown zones for all pile driving and DTH drilling activities. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones would be based upon the Level A harassment isopleth for each pile size/type and driving method where applicable, as shown in table 10.

For in-water heavy machinery activities other than pile driving, if a marine mammal comes within 10 m, work will stop and vessels will reduce speed to the minimum level required to maintain steerage and safe working conditions. A 10 m shutdown zone serves to protect marine mammals from physical interactions with project vessels during pile driving and other construction activities, such as barge positioning or drilling. If an activity is 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 shutdown zone indicated in table 10 or 15 minutes have passed without re-detection of the animal. Construction activities must be halted upon observation of a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met entering or within the harassment zone.

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

CBS would also establish shutdown zones for all marine mammals for which take has not been authorized or for which incidental take has been authorized but the authorized number of takes has been met. These zones are equivalent to the Level B harassment zones for each activity. If a marine mammal species not covered under this IHA enters the shutdown zone, all in-water activities will cease until the animal leaves the zone or has not been observed for at least 15 minutes, and NMFS will be notified about species and precautions taken. Pile driving will proceed if the non-IHA species is observed to leave the Level B harassment zone or if 15 minutes have passed since the last observation.

If shutdown and/or clearance procedures would result in an imminent safety concern, as determined by CBS or its designated officials, the in-water activity will be allowed to continue until the safety concern has been addressed, and the animal will be continuously monitored.

TABLE 10—PROPOSED SHUTDOWN AND MONITORING ZONES

Activity	Level A isopleth (m)					Level B isopleth (m)
	LF	MF	HF [2]	Phocids [1]	Otariids	
Vibratory Pile Removal/Installation						
Phase I:						
16-in temp install	10	10	20	10	10	5,415
16-in temp removal	10	10	20	10	10	5,415
16-in perm install	10	10	20	10	10	5,415
24-in perm install	10	10	20	10	10	5,415
Phase II:						
16-in temp install	10	10	20	10	10	5,415
16-in temp removal	10	10	20	10	10	5,415
24-in perm install	10	10	20	10	10	5,415
DTH Pile Installation						
Phase I:						
16-in perm install	60	10	75	35	10	8,500

TABLE 10—PROPOSED SHUTDOWN AND MONITORING ZONES—Continued

Activity	Level A isopleth (m)					Level B isopleth (m)
	LF	MF	HF [2]	Phocids [1]	Otariids	
24-in perm install	570	30	300	125	30	8,500
Phase II:						
24-in perm install	570	30	300	125	30	8,500
Impact Pile Installation						
Phase I:						
16-in temp install	235	10	275	125	10	465
16-in perm install	235	10	275	125	10	465
24-in perm install	315	20	300	125	20	1,000
Phase II:						
16-in temp install	235	10	275	125	10	465
24-in perm install	315	20	300	125	20	1,000

[1] Maximum shutdown for phocids is reduced to 125 m as they are a common species within the breakwaters of Sitka Sound.
[2] Maximum shutdown for high frequency species is reduced to 300 m, given the difficulty observing harbor porpoise at greater distances.

Protected Species Observers

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

PSOs would monitor the full shutdown zones and the remaining Level A harassment and the Level B harassment zones to the extent practicable. Monitoring zones provide utility for observing by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring zones enable observers to be aware of and communicate the presence of marine mammals in the project areas outside the shutdown zones and thus prepare for a potential cessation of activity should the animal enter the shutdown zone.

Pre-Activity Monitoring

Prior to the start of daily in-water construction activity, or whenever a break in pile driving or DTH drilling of 30 minutes or longer occurs, PSOs would observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone would be considered cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zones listed in table 10, pile driving activity would be delayed or halted. If work ceases for more than 30 minutes, the pre-activity monitoring of the shutdown zones would commence. A determination that the shutdown zone is clear must be made during a period of good visibility (*i.e.,* the entire shutdown zone and surrounding waters must be visible to the naked eye).

Soft-Start Procedures

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

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

Proposed Monitoring and Reporting

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

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

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

Visual Monitoring

Marine mammal monitoring must be conducted in accordance with the conditions in this section and the IHA.

Marine mammal monitoring during pile driving activities would be conducted by PSOs meeting NMFS' following requirements:

- PSOs must be independent of the activity contractor (for example, employed by a subcontractor) and have no other assigned tasks during monitoring periods;
- At least one PSO would have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;
- Other PSOs may substitute education (degree in biological science or related field) or training for experience; and
- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator would be designated. The lead observer would be required to have prior experience working as a marine mammal observer during construction.

PSOs should have the following additional qualifications:

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

- CBS must employ up to five PSOs depending on the size of the monitoring and shutdown zones. A minimum of two PSOs (including the lead PSO) must be assigned to the active pile driving location to monitor the shutdown zones and as much of the Level B harassment zones as possible.
- CBS must establish monitoring locations with the best views of monitoring zones as described in the IHA and Monitoring Plan posted on our website.
- Up to four monitors will be used at a time depending on the size of the monitoring area. PSOs would be deployed in strategic locations around the area of potential effects at all times during in-water pile driving and removal. PSOs will be positioned at locations that provide full views of the monitoring zones and the Level A harassment Shutdown Zones. All PSOs would have access to high-quality binoculars, range finders to monitor distances, and a compass to record bearing to animals as well as radios or cell phones for maintaining contact with work crews.
- Up to four PSOs will be stationed at the following locations: the project site, Sandy Beach Day use site, O'Connell lightering float, and Whale Park.

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

CBS shall conduct briefings between construction supervisors and crews, PSOs, CBS staff prior to the start of all pile driving activities and when new personnel join the work. These briefings would explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

Reporting

A draft marine mammal monitoring report will be submitted to NMFS within 90 days after the completion of pile driving and removal activities for each IHA, or 60 days prior to a requested date of issuance from any future IHAs for projects at the same location, whichever comes first. The report will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

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

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

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the IHA-holder must immediately cease the specified activities and report the

incident to the Office of Protected Resources (OPR) (*PR.ITP.MonitoringReports@noaa.gov*), NMFS and to the Alaska Regional Stranding Coordinator as soon as feasible. If the death or injury was clearly caused by the specified activity, CBS must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS. The report must include the following information:

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

Negligible Impact Analysis and Determination

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

To avoid repetition, the discussion of our analysis applies to all species listed in table 3, 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. In addition, because both the number and nature of the estimated takes anticipated to occur are identical in Phase I and II, the analysis below applies to both of the IHAs.

Pile driving and DTH drilling activities associated with the project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment and, for some species, Level A harassment from underwater sounds generated by pile driving and DTH drilling. Potential takes could occur if individuals are present in the ensonified zone when these activities are underway.

No serious injury or mortality would be expected, even in the absence of required mitigation measures, given the nature of the activities. Further, no take by Level A harassment is anticipated for killer whales, humpback whales, gray whales, or minke whales due to the application of planned mitigation measures, such as shutdown zones that encompass the Level A harassment zones for the species, the rarity of the species near the action area, and the small Level A harassment zones (for killer whales only). The potential for harassment would be minimized through the construction method and the implementation of the planned mitigation measures (see Proposed Mitigation section).

Take by Level A harassment is proposed for three species (harbor porpoise, Steller sea lion, and harbor seal) as the Level A harassment isopleths exceed the size of the shutdown zones for specific construction scenarios, the Level A harassment zones are large, and/or the species is frequent near the action area. Therefore, there is the possibility that an animal could enter a Level A harassment zone and remain within that zone for a duration long enough to incur PTS. Level A harassment of these species is therefore proposed for authorization. Any take by Level A harassment is expected to arise from, at most, a small degree of PTS (*i.e.,* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by impact pile driving such as the low-frequency region below 2 kHz), not severe hearing impairment or impairment within the ranges of greatest hearing sensitivity. Animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of PTS.

Further, the amount of take proposed for authorization by Level A harassment is very low for the marine mammal stocks and species. If hearing impairment occurs, it is most likely that the affected animal would lose only a few decibels in its hearing sensitivity. Due to the small degree anticipated, any PTS potential incurred would not be expected to affect the reproductive success or survival of any individuals, much less result in adverse impacts on the species or stock.

The Level A harassment zones identified in table 7 are based upon an animal exposed to pile driving or DTH drilling of several piles per day (six piles per day for vibratory removal and installation, four piles per day of impact driving, and two piles per day of DTH drilling). Given the short duration to impact drive or vibratory install or remove, or use DTH drilling, each pile and break between pile installations (to reset equipment and move piles into place), an animal would have to remain within the area estimated to be ensonified above the Level A harassment threshold for multiple hours. This is highly unlikely given marine mammal movement patterns in the area. If an animal was exposed to accumulated sound energy, the resulting PTS would likely be small (*e.g.,* PTS onset) at lower frequencies where pile driving energy is concentrated, and unlikely to result in impacts to individual fitness, reproduction, or survival.

Additionally, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. However, since the hearing sensitivity of individuals that incur TTS is expected to recover completely within minutes to hours, it is unlikely that the brief hearing impairment would affect the individual's long-term ability to forage and communicate with conspecifics, and would therefore not likely impact reproduction or survival of any individual marine mammal, let alone

adversely affect rates of recruitment or survival of the species or stock.

The nature of the pile driving project precludes the likelihood of serious injury or mortality. For all species and stocks, take would occur within a limited, confined area (adjacent to the project site) of the stock's range. The intensity and duration of take by Level A and Level B harassment would be minimized through use of mitigation measures described herein. Further, the amount of take proposed to be authorized is extremely small when compared to stock abundance.

Behavioral responses of marine mammals to pile driving, pile removals, and DTH drilling in Sitka Channel and the surrounding Sitka Sound are expected to be mild, short term, and temporary. Marine mammals within the Level B harassment zones may not show any visual cues they are disturbed by activities or they could become alert, avoid the area, leave the area, or display other mild responses that are not observable such as changes in vocalization patterns. Given that pile driving, pile removal, and DTH drilling are temporary activities and effects would cease when equipment is not operating, any harassment occurring would be temporary. Additionally, many of the species present in the region would only be present temporarily based on seasonal patterns or during transit between other habitats. These species would be exposed to even smaller periods of noise-generating activity, further decreasing the impacts.

Nearly all inland waters of southeast Alaska, including Sitka Sound, are included in the southeast Alaska humpback whale feeding BIA (Wild *et al.,* 2023), though humpback whale distribution in southeast Alaska varies by season and waterway (Dahlheim *et al.,* 2009). Humpback whales could be present within Sitka Sound year round, however the action area is within the breakwaters where humpback whales are not commonly found and therefore, the BIA is not expected to be affected. Therefore, the proposed project is not expected to have significant adverse effects on the foraging of humpback whales.

Sitka Sound is also within a gray whale migratory corridor BIA (Wild *et al.,* 2023). Construction is expected to occur while the BIA is active during the southbound migration (November to January) and northbound migration (March–May). The Sound is also a Gray whale feeding BIA. Construction is expected to overlap with the feeding BIA (March–June). However, as noted for humpback whales, project activities will only overlap seasonally in the gray whale migratory and feeding BIAs, and the overall 2 year project (Phase I and Phase II) is expected to occur over just 40 in-water workdays, further reducing the temporal overlap with the BIAs. Additionally, the area of the feeding BIA in which impacts of the planned project may occur is small relative to both the overall area of the BIA and the overall area of suitable gray whale habitat outside of this BIA. The area of Sitka Sound affected by this project is also small relative to the rest of the Sound, such that it allows animals within the migratory corridor to still utilize Sitka Sound without necessarily being disturbed by the construction. Specifically, all Level A harassment isopleths for gray whale are within the breakwaters where gray whales are not expected. Therefore, take of gray whales using the feeding and migratory BIAs is not expected to impact feeding or migratory behavior and, therefore, would not impact reproduction or survivorship.

As noted previously, since January 1, 2019, elevated gray whale strandings have occurred along the west coast of North America from Mexico through Alaska. The event has been declared an UME, though a cause has not yet been determined. While 6 takes by Level B harassment in phase I and 4 takes by Level B harassment in phase II of gray whale are proposed to be authorized for each year this is an extremely small portion of the stock (<1 percent), and CBS will be required to implement a shutdown zone that includes the entire Level A harassment zone for low-frequency cetaceans such as gray whales.

The same regions are also a part of the Western DPS Steller sea lion ESA critical habitat. While Steller sea lions are common in the project area, there are no essential physical and biological habitat features, such as haulouts or rookeries, within the proposed project area. The nearest haulout is approximately 25 km away from the proposed project area. Therefore, the proposed project is not expected to have significant adverse effects on the critical habitat of Western DPS Steller sea lions. No areas of specific biological importance (*e.g.,* ESA critical habitat, other BIAs, or other areas) for any other species are known to co-occur with the project area.

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

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;
- Level A harassment would be very small amounts and of low degree;
- Level A harassment takes of only harbor porpoise, Steller sea lions and harbor seals;
- For all species, the Sitka Sound and channel are a very small and peripheral part of their range;
- Anticipated takes by Level B harassment are relatively low for all stocks. Level B harassment would be primarily in the form of behavioral disturbance, resulting in avoidance of the project areas around where impact or vibratory pile driving is occurring, with some low-level TTS that may limit the detection of acoustic cues for relatively brief amounts of time in relatively confined footprints of the activities;
- Effects on species that serve as prey for marine mammals from the activities are 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 to adverse impacts on their populations;
- The ensonified areas are very small relative to the overall habitat ranges of all species and stocks, and would not adversely affect ESA-designated critical habitat for any species or any areas of known biological importance;
- The lack of anticipated significant or long-term negative effects to marine mammal habitat; and
- CBS would implement mitigation measures including soft-starts and shutdown zones to minimize the numbers of marine mammals exposed to injurious levels of sound, and to ensure that take by Level A harassment is, at most, a small degree of PTS.

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, specific to each of the 2 consecutive

years of proposed activity, would have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

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

The amount of take NMFS proposes to authorize, for each of the 2 consecutive years of proposed activity, is below one third of the estimated stock abundance for all species (in fact, take of individuals is less than 2 percent of the abundance of the affected stocks, see table 9). This is likely a conservative estimate because we assume all takes are of different individual animals, which is likely not the case. Some individuals may return multiple times in a day, but PSOs would count them as separate takes if they cannot be individually identified.

There is no current or historical estimate of the Alaska minke whale stock, but there are known to be over 1,000 minke whales in the Gulf of Alaska (Muto *et al.* 2018), so the 10 takes by Level B harassment proposed over the 2 years of the project duration is small relative to estimated survey abundance, even if each take occurred to a new individual. Additionally, the range of the Alaska stock of minke whales is extensive, stretching from the Canadian Pacific coast to the Chukchi Sea, and CBS's project would only impact a small portion of this range.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that, specific to each of the two consecutive years of proposed activity, 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.

Sitka Channel and other nearby areas are within the traditional territory of the Sheet'ká Kwáan. Alaska natives have traditionally harvested marine mammals in Sitka, however today a majority of the subsistence harvest is of species other than marine mammals. Alaska Department Fish and Game reported that in 2013, around 11 percent of Sitka households used subsistence-caught marine mammals (ADF&G, 2023), however this is the most recent data available and there has not been a survey since.

The proposed project is not likely to adversely impact the availability of any marine mammal species or stocks that are commonly used for subsistence purposes or impact subsistence harvest of marine mammals in the region because:

- There is no recent recorded subsistence harvest of marine mammals in the area;
- Construction activities are temporary and localized primarily within Sitka Channel;
- Construction will not take place during the herring spawning season when subsistence species are more active;
- Mitigation measures will be implemented to minimize disturbance of marine mammals in the action area; and,
- The project will not result in significant changes to availability of subsistence resources.

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, specific to each of the two consecutive years of proposed activity, there will not be an unmitigable adverse impact on subsistence uses from CBS's proposed activities.

Endangered Species Act

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

NMFS OPR has requested initiation of section 7 consultation with the NMFS AKR 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 two sequential IHAs, each lasting 1 year, to CBS for conducting Seaplane Base construction in Sitka, Alaska, starting in July 2024 for Phase I and July 2025 for Phase II, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. Drafts of the proposed IHAs 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 IHAs for the proposed construction project. We also request comment on the potential renewal of these proposed IHAs 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 these IHAs or subsequent renewal IHAs.

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 one year from expiration of the initial IHA).
- The request for renewal must include the following:

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

(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: January 5, 2024.

Kimberly Damon-Randall,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XD640]

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Geophysical Surveys Related to Oil and Gas Activities in the Gulf of Mexico

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

ACTION: Notice of issuance of Letter of Authorization.

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA), as amended, its implementing regulations, and NMFS' MMPA Regulations for Taking Marine Mammals Incidental to Geophysical Surveys Related to Oil and Gas Activities in the Gulf of Mexico, notification is hereby given that a Letter of Authorization (LOA) has been issued to Chevron U.S.A. Inc. (Chevron) for the take of marine mammals incidental to geophysical survey activity in the Gulf of Mexico.

DATES: The LOA is effective from January 5, 2024 through February 19, 2024.

ADDRESSES: The LOA, LOA request, and supporting documentation are available online at: *https://www.fisheries.noaa.gov/action/incidental-take-authorization-oil-and-gas-industry-geophysical-survey-activity-gulf-mexico*. In case of problems accessing these documents, please call the contact listed below (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Jenna Harlacher, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

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

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined ''negligible impact'' in 50 CFR 216.103 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.

Except with respect to certain activities not pertinent here, 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).

On January 19, 2021, we issued a final rule with regulations to govern the unintentional taking of marine mammals incidental to geophysical survey activities conducted by oil and gas industry operators, and those persons authorized to conduct activities on their behalf (collectively ''industry operators''), in U.S. waters of the Gulf of Mexico (GOM) over the course of 5 years (86 FR 5322, January 19, 2021). The rule was based on our findings that the total taking from the specified activities over the 5-year period will have a negligible impact on the affected species or stock(s) of marine mammals and will not have an unmitigable adverse impact on the availability of those species or stocks for subsistence uses. The rule became effective on April 19, 2021.

Our regulations at 50 CFR 217.180 *et seq.* allow for the issuance of LOAs to industry operators for the incidental take of marine mammals during geophysical survey activities and prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat (often referred to as mitigation), as well as requirements pertaining to the monitoring and reporting of such taking. Under 50 CFR 217.186(e), issuance of an LOA shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under these regulations and a determination that the amount of take authorized under the LOA is of no more than small numbers.

Summary of Request and Analysis

This LOA covers work that was not completed under Chevron's 2023 LOA that expired on January 2, 2024 (88 FR 40209, June 21, 2023). Chevron requested an additional LOA covering 26 days of work. There are no other changes from the previously analyzed and issued LOA (88 FR 40209, June 21, 2023) other than a reduction in the