be machine readable and should not be copy protected. Written comments also may be submitted by mail to the International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Room 32019, Attn: SUPPORTVENEZUELA REQUEST FOR COMMENTS, Washington, DC 20230.

FOR FURTHER INFORMATION CONTACT: *SUPPORTVENEZUELA@trade.gov*. Please address your written comments to Lynn Costa at 202–482–5027.

SUPPLEMENTARY INFORMATION: On January 23, 2019 the United States recognized Juan Guaido as the interim President of Venezuela and called on Nicolas Maduro to step aside in favor of a legitimate leader. The United States and more than fifty-three other countries have now recognized Juan Guaido as the Interim President of Venezuela.

On January 25, 2019, President Donald J. Trump issued Executive Order 13857, which laid out additional steps that the United States is taking to address the national emergency with respect to Venezuela. In that Executive Order, President Trump highlighted ''actions by persons affiliated with the illegitimate Maduro regime, including human rights violations and abuses in response to anti-Maduro protests, arbitrary arrest and detention of anti-Maduro protestors, curtailment of press freedom, harassment of political opponents, and continued attempts to undermine the Interim President of Venezuela and undermine the National Assembly, the only legitimate branch of government duly elected by the Venezuelan people.''

On January 25, 2019 Secretary of State Michael R. Pompeo certified the authority of Venezuela's interim President Juan Guaido to receive and control certain property in accounts of the Government of Venezuela or Central Bank of Venezuela held by the Federal Reserve Bank of New York or any other U.S. insured banks, in accordance with Section 25B of the Federal Reserve Act. In order to facilitate the transition to a post-Maduro government in Venezuela, the Administration is considering steps it can take to assist Venezuela's economic recovery after the illegitimate Maduro regime has left Caracas, and we are seeking public input from policy experts, the business community, and others regarding steps this Administration should take.

Instructions for Commenters: This is a general solicitation of comments from the public. We invite comments on the issue presented by this RFC and on issues that are not specifically raised. Comments that contain references to specific court cases, studies, and/or research should include copies of the referenced materials along with the submitted comments. Commenters should include the name of the person or organization filing the comment, as well as a page number on each page of the submissions. All personal identifying information (for example, name or address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

Dates: October 9, 2019.

Anthony Diaz,

Program Analyst.

[FR Doc. 2019–22442 Filed 10–16–19; 11:15 am]

BILLING CODE 3510–DR–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XR049

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Construction Activities for the Statter Harbor Improvement Project

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

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from the City of Juneau for authorization to take marine mammals incidental to vibratory and impact pile driving, vibratory pile removal, and down the hole drilling in Auke Bay, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-year renewal that could be issued under certain circumstances and if all requirements are met, as described in *Request for Public Comments* at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than November 18, 2019.

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

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

FOR FURTHER INFORMATION CONTACT: Sara Young, Office of Protected Resources, NMFS, (301) 427–8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act*. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

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

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

The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

National Environmental Policy Act

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

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

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On April 15, 2019, NMFS received a request from the City of Juneau for an IHA to take marine mammals incidental to construction activities at Statter Harbor in Auke Bay, Alaska. The application was deemed adequate and complete on September 26, 2019. The City of Juneau's request is for take of a small number of eight species of marine mammals, by Level B harassment and Level A harassment. Neither the City of Juneau nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued an IHA to the City of Juneau for related work (84 FR 11066; March 25, 2019), which covers the first phase of activities (dredging, blasting, pile removal) and is effective from October 1, 2019 to September 30, 2020. The City of Juneau has not yet conducted any work under the previous IHA and therefore no monitoring results are available at the time of writing.

This proposed IHA would cover one year of a larger project for which the City of Juneau obtained one prior IHA. The larger multi-year project involves several harbor improvement projects including dismantling and demolition of existing docks, construction of a mechanically stabilized earth wall, and installation of concrete floats.

Description of Proposed Activity

Overview

The harbor improvements described in the application include installation of timber floats supported by 20 16-inch steel pipe piles, installation of a gangway, replacement of piles supporting a transient float, and removal of temporary fill that will be placed under the first IHA and construction of the permanent mechanically stabilized earth (MSE) wall.

Dates and Duration

The proposed activities are expected to occur between October 1, 2020 and May 1, 2021 but the IHA would be valid for one year to account for any delays in the construction timeline. In winter months, shorter 8-hour to 10-hour workdays in available daylight are anticipated. To be conservative, 12-hour work days were assumed for the purposes of analysis in this notice.

Specific Geographic Region

The proposed activities would occur at Statter Harbor in Auke Bay, Alaska which is in the southeast portion of the state. See Figure 3 in the application for detailed maps of the project area. Statter Harbor is located at the most northeasterly point of Auke Bay.

Detailed Description of Specific Activity

New infrastructure to be installed includes 9,136 square feet (848.8 square meters) of timber floats supported by twenty (20) 16-inch (4.1-decimeter) diameter steel pipe piles, an 10-foot by 100-foot gangway (3-meters by 30.5-meters), removal of the temporary surcharge fill and construction of the permanent MSE wall.

In addition to the new infrastructure, three existing piles will be repaired. A transient float was installed in Statter Harbor in 2018 as part of a different project and it is not operating as intended due to wave action and excessive movement of the float. Three temporary piles were installed without rock anchors as a temporary fix. During the proposed work, these piles will be removed with a crane or vibratory hammer and reinstalled with rock anchors to provide sufficient moorage capacity for the float.

Pile driving/removal will be conducted from a floating barge, utilizing a drill to install rock sockets and a vibratory hammer to install piles. Use of impact hammers is not anticipated, and will only be used for piles that encounter soils too dense to penetrate with the vibratory equipment. The floats will be unloaded from a barge and placed in the water. Piles will be driven as each float section is installed to hold the floats in place. Due to the substrate in the harbor, it is anticipated all of the piles will require drilling for rock anchors, referred to in this notice as down the hole drilling. The drilling would likely occur midway through vibratory installation of a pile and would occur on the same day the pile is being driven. A summary of the number and type of piles proposed to be driven is included in Table 1 below.

TABLE 1—PILE DRIVING AND REMOVAL SUMMARY

Activity	Number piles	Pile size/type	Method	Average piles/day [1] (Range)	Driving days	Strike/pile or minutes/pile	Estimated total daily duration
Pile Removal ...	3	16-inch (4.1-decimeter) Steel	Vibratory	3	1	30	12 hours/500 strikes.
Pile Installation	23	Pipe.	Vibratory	1.5 (1–3)	8–23	120	

TABLE 1—PILE DRIVING AND REMOVAL SUMMARY—Continued

Activity	Number piles	Pile size/type	Method	Average piles/day [1] (Range)	Driving days	Strike/pile or minutes/pile	Estimated total daily duration
			Impact	1 (0–2)		250	
			Drilling	1.5 (1–3)		240	

The temporary surcharge fill, placed during the previous IHA, would be excavated to elevation of the wall toe, approximately +3 feet (0.9 meters) MLLW or higher dependent on the location along the wall. The applicant will require the contractor to conduct all excavation work for temporary surcharge fill removal when the tide is below the work elevation, such that it will be completed in the dry. The wall would be constructed and then backfilled, reusing the temporary surcharge fill consisting of clean Class A shot rock originally used for the temporary blast pad in the previous IHA. Excavation and fill placement will be conducted such that work is done in the dry and not in the presence of marine mammals, thus excavation and fill placement are not discussed further in this notice.

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

Eight species of marine mammal have been documented in southeast Alaska waters in the vicinity of Statter Harbor. These species are: Harbor seal, harbor porpoise, Dall's porpoise, killer whale, humpback whale, minke whale, California sea lion, and Steller sea lion. Of these species, only three are known to occur in Statter Harbor regularly: Harbor seal, Steller sea lion, and humpback whale.

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

Table 2 lists all species with expected potential for occurrence in Statter Harbor and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2018). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS's stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS's U.S. Alaska Region and Pacific Region SARs (Carretta *et al.,* 2019; Muto *et al.,* 2019). All values presented in Table 2 are the most recent available at the time of publication and are available in the 2018 SARs (Carretta *et al.,* 2019; Muto *et al.,* 2019).

TABLE 2—SPECIES WITH THE POTENTIAL TO OCCUR IN STATTER HARBOR

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 noveangliae	Central North Pacific	E, D,Y	10,103 (0.3, 7,891, 2006)	83	26
Minke whale	Balaenoptera acutorostrata	Alaska	-;N	N/A	Und	0
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Killer whale	Orcinus orca	Northern Resident	-;N	261 (N/A, 261, 2011)	1.96	0
Killer whale	Orcinus orca	Gulf of Alaska transient	-;N	587 (N/A, 587, 2012)	5.87	1
Killer whale	Orcinus orca	West Coast Transient	-;N	243 (N/A, 243, 2009)	2.4	0
Family Phocoenidae (porpoises):						
Harbor porpoise	Phocoena phocoena	Southeast Alaska	-;Y	975 (0.14, 872, 2012)	8.7	34
Dall's porpoise	Phocoenoides dalli	Alaska	-;N	83,400 (0.097, N/A, 1991).	Und	38
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						

TABLE 2—SPECIES WITH THE POTENTIAL TO OCCUR IN STATTER HARBOR—Continued

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
California sea lion	*Zalophus californianus*	U.S.	-;N	257,606 (N/A, 233,515, 2014).	14,011	197
Steller sea lion	Eumetopias jubatus	Western DPS	E/D; Y	54,267 (N/A; 54,267, 2017).	326	252
Steller sea lion	Eumetopias jubatus	Eastern DPS	T/D; Y	41,638 (N/A, 41,638, 2015).	2,498	108
Family Phocidae (earless seals):						
Harbor seal	Phoca vitulina	Lynn Canal	-;N	9,478 (N/A, 8,605, 2011)	155	50

[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-assessments.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[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.

All species that could potentially occur in the proposed survey areas are included in Table 2. As described below, all eight species (with eleven managed stocks) temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur, and we have proposed authorizing it.

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

Humpback Whale

Prior to 2016, humpback whales were listed under the ESA as an endangered species worldwide. Following a 2015 global status review (Bettridge et al., 2015), NMFS established 14 distinct population segments (DPS) with different listing statuses (81 FR 62259; September 8, 2016) pursuant to the ESA. The DPSs that occur in U.S. waters do not necessarily equate to the existing stocks designated under the MMPA and shown in Table 2. Because MMPA stocks cannot be portioned, *i.e.,* parts managed as ESA-listed while other parts managed as not ESA-listed, until such time as the MMPA stock delineations are reviewed in light of the DPS designations, NMFS considers the existing humpback whale stocks under the MMPA to be endangered and depleted for MMPA management purposes (*e.g.,* selection of a recovery factor, stock status).

Humpbacks that breed around the main Hawaiian Islands have been observed in summer feeding grounds throughout the North Pacific. The majority of the humpbacks found in Southeast Alaska and northern British Columbia have migrated from Hawaii for foraging opportunities and belong to the Hawaii Distinct Population Segment (DPS) (Bettridge *et al.,* 2015). Wade *et al.* (2016) estimated that 93.9 percent of the humpbacks encountered in Southeast Alaska and Northern British Columbia are from the Hawaii DPS, with the remaining percentage of humpbacks coming from the Mexico DPS.

While in their Alaskan feeding grounds, humpback whales prey on a variety of euphausiids and small schooling fishes including herring, smelt, capelin, sandlance, juvenile pollock, and salmon smolts (Kawamura 1980; Krieger and Wing 1986; Witteveen *et al.,* 2008; Straley *et al.,* 2017; Chenoweth *et al.,* 2017). Herring targeted by Southeast Alaska whales in Lynn Canal during 2007–2009 winters were lipid-rich, with energy content ranging from 7.3–10.0 kJ/gram (Vollenweider *et al.,* 2011). The local distribution of humpbacks in Southeast Alaska appears to be correlated with the density and seasonal availability of prey, particularly herring and euphausiids (Moran *et al.,* 2017). Important feeding areas include Glacier Bay and adjacent portions of Icy Strait, Stephens Passage/Frederick Sound, Seymour Canal, Lynn Canal, and Sitka Sound and these areas have been included in the designation of a Biologically Important Area for humpbacks in the Gulf of Alaska. During autumn and winter, the non-breeding season, humpbacks remaining in Southeast Alaska target areas where herring and eulachon are abundant, such as Seymour Canal, Berners Bay, Auke Bay, Lynn Canal, and Stephens Passage (Krieger and Wing 1986; Moran *et al.,* 2017). Over 2,940 and 2,019 humpback whale foraging-days were documented in Lynn Canal alone in 2007–2008 and 2008–2009 winter seasons, respectively (Moran *et al.,* 2017).

Fidelity to feeding grounds by individual humpbacks is well documented; interchange between Alaskan feeding grounds is rare (Witteveen and Wynne 2017). Long-term research and photo-identification efforts have documented individual humpbacks that have returned to the same feeding grounds for as many 45 years (Straley 2017; Witteveen and Wynne 2017; Gabriele *et al.,* 2017). Based on fluke pattern identification, Krieger, Baker and Wing identified 189 unique whales in the Juneau to Glacier Bay and Seymour Canal area (Krieger *et al.,* 1986). In recent years, 179 individual humpback whales were identified from the Juneau area, based upon fluke photographs taken between 2006 and 2014 (Teerlink 2017). Humpback whales occur in the project area intermittently year-round. Auke Bay and Statter Harbor are thought to have certain habitat features that attract humpback whales in recent years. The aggregation of herring in inner Auke Bay provide a habitat where whales may make energetic decisions to exploit small volumes of fish and rest to conserve energy between foraging opportunities.

Humpback whales utilize habitats in the project area intermittently. The breakwater and other dock structures appear to serve as fish-attracting devices, where forage fish (herring, capelin, sandlance, pollock, and juvenile salmon) aggregate and are targeted by diving humpback whales. Two humpback whales in recent years have also targeted a shallow trough off the east end of the Statter Harbor breakwater for deeper diving foraging excursions targeting herring and possibly juvenile pollock (Ridgway pers. observ.). Some individual whales enter

Auke Bay through the north Coghlan Island entrance and conduct a pattern of exploitation or ''browsing'' in the bay and inner harbor. In this area some whales lunge feed and gulp massive volumes of feed in seawater immediately adjacent to or rubbing against boats, docks and other structures in deep to shallow waters throughout the action area. These whales have been observed continuing a pattern search alongshore to Auke Creek and up Fritz Cove, where they have been seen lunge feeding in small coves and gullies in shallow water to aggregate schooling fish.

Because humpback whale individuals of different DPS origin are indistinguishable from one another in Alaska (unless fluke patterns are linked to the individual in both feeding and breeding ground), the frequency of occurrence of animals by DPS is only estimated using the DPS ratio, based upon the assumption that the ratio is consistent throughout the Southeast Alaska region (Wade *et al.,* 2016).

Minke Whale

Minke whales are widely distributed throughout the northern hemisphere and are found in both the Pacific and Atlantic oceans. Minke whales in Alaska are considered migratory and during summer months are typically found in the Arctic and during winter months are found near the equator (NMFS 2019a).

Little is known about minke whale breeding areas, although it is believed they calve in the winter months. Minke whales feed by side-lunging through schools of prey and are opportunistic predators feeding on a variety of crustaceans, plankton, and small school fish (NMFS 2019a).

There is no quantifiable information on abundance or seasonality in Auke Bay or the surrounding area.

Killer Whale

NMFS considers three stocks of killer whales to occur in southeast Alaskan waters, which may occur separately or concurrently within the project area. These stocks are the Eastern North Pacific/Alaska Resident stock (2,347 individuals), Eastern North Pacific/ Northern Resident stock (261 individuals), the West Coast Transient stock (243 individuals) (Muto *et al.,* 2018). These stocks represent two of the three ecotypes of killer whales occurring within the North Pacific Ocean—resident (forages on fish) and transient (forages primarily on marine mammals). However, NMFS is evaluating new genetic information that will likely result in a revision of the above stock structure (Muto *et al.,* 2018).

The species has the most varied diet of all cetaceans; however, the transient populations typically hunt marine mammals while the resident populations feed on fish, particularly salmon and Atka mackerel (Barrett-Lennard *et al.,* 2011; Parsons *et al.,* 2013). Residents often travel in much larger and closer groups than transients and have been observed sharing fish they catch. Transient killer whales feed on other marine mammals including Steller sea lions, harbor seals, and various species of cetaceans. They are also more likely to rely on stealth, making less frequent and less conspicuous calls and skirting ''along shorelines and around headlands'' in order to hunt their prey in highly coordinated attacks (Barrett-Lennard *et al.,* 2011).

The best available data for Auke Bay comes from a compilation of public sightings recorded by Oceanus Alaska. This compilation is believed to be comprehensive as Juneau residents often report killer whale sightings. Killer whales are have been observed during all months, however less frequently in winter months. From 2010–2017 an average of 25 killer whale sightings were recorded in the project area per year (Ridgeway unpubl. data 2017). Data did not make distinctions between the stocks and thus the ratio between stocks is unknown. However, the AG resident pod is one pod known to frequent the Juneau area (Dahlheim *et al.,* 2009; personal observation) and has 41 members recorded in the North Gulf Oceanic Society's Identification Guide (NGOS 2019). This pod is seen in the area intermittently in groups of up to approximately 25 individuals (personal observation), consistent with the data for the area. Transient killer whales have been observed in nearby waterways as well and one group of 14 individuals were observed during surveys (Dahlheim *et al.,* 2009).

Harbor Porpoise

In Alaska, harbor porpoises are currently divided into three stocks, based primarily on geography: (1) The Southeast Alaska stock—occurring from the northern border of British Columbia to Cape Suckling, Alaska, (2) the Gulf of Alaska stock—occurring from Cape Suckling to Unimak Pass, and (3) the Bering Sea stock—occurring throughout the Aleutian Islands and all waters north of Unimak Pass. Only the Southeast Alaska stock is considered in this proposed IHA because the other stocks are not found in the geographic area under consideration.

There are no subsistence uses of this species; however, as noted above, entanglement in fishing gear contributes to human-caused mortality and serious injury. Muto *et al.* (2018) also reports harbor porpoise are vulnerable to physical modifications of nearshore habitats resulting from urban and industrial development (including waste management and nonpoint source runoff) and activities such as construction of docks and other over-water structures, filling of shallow areas, dredging, and noise (Linnenschmidt *et al.,* 2013).

Information on harbor porpoise abundance and distribution in Auke Bay has not been systematically collected. While sightings of harbor porpoise in Statter Harbor are rare, they are an inconspicuous species, often traveling alone or in pairs, difficult for marine mammal observers to sight, making any approach to a monitoring zone potentially difficult to detect. The applicant did not request authorization of take of harbor porpoise because they are not known to regularly occur in the vicinity of the project site. However, because the species has been rarely observed in the area and due to the difficulty of implementing mitigation sufficient to avoid incidental take of animals that do occur in the area, we have determined it appropriate to propose authorization of take of harbor porpoise.

Dall's Porpoise

Only one stock of Dall's porpoise is currently recognized in Alaskan waters—the Alaska stock—with an estimated abundance of 83,400, although this estimate is outdated (Muto *et al.,* 2019). While the Dall's porpoise is generally considered abundant, there is insufficient data on population trends to determine whether the population is stable, increasing or decreasing (NMFS 2019b).

Dall's porpoises are widely distributed in the North Pacific Ocean, usually in deep oceanic waters (>600 ft/ 183 m), over the continental shelf or along slopes (NMFS 2019b, Muto *et al.,* 2019). They can be found along the west coast of the United States ranging from California to the Bering Sea in Alaska (NMFS 2019b). There is little data regarding Dall's porpoise presence in the project area. Dall's porpoise are sighted frequently in southeast Alaska during the summer months but Dall's porpoise occurrence is thought to be low compared to summer occurrence in the Lynn Canal or Stephens Passage area (Jefferson *et al.,* 2019). Systematic surveys of Dall's porpoise abundance and distribution have not been

conducted in Auke Bay specifically, however from 2001–2007 surveys of cetaceans in Southeast Alaska were conducted during the spring, summer and fall. In-water work will occur from fall into late spring. Dall's porpoise were observed in nearby waterways including Stephen's Passage and Lynn Canal (Dalheim *et al.,* 2009) and while the species is generally in water depths of 600 feet (113 meters) or greater they may also occur in shallower waters, (Moran *et al.,* 2018). Dall's porpoises have been observed to have strong seasonal patterns with the highest number being observed in the spring and the fewest in the fall (Dahlheim *et al.,* 2009). Should Dall's porpoise be present within the project area it is most likely to be during the spring months based on the strong seasonal patterns observed.

California Sea Lion

The U.S. stock of California sea lions have a wide range, typically from the border of the United States and Mexico (NMFS 2019c). During the winter males commonly migrate to feeding grounds off California, Oregon, Washington, British Columbia and recently Southeast Alaska. There is an active unusual mortality event declared for the U.S. stock of California sea lions but this is mostly limited to southern California. Females and pups on the other hand stay close to breeding colonies until the pups have weened. The furthest north females have been observed is off the coast of Washington and Oregon during warm water years (NMFS 2019c). While California sea lions aren't common in Alaska, one was present on the docks in Statter Harbor in 2017 (NOAA 2017).

California sea lions feed primarily offshore in coastal waters. They are opportunistic predators and eat a variety of prey including squid, anchovies, mackerel, rockfish and sardines (NMFS 2019c). California sea lion breeding areas are mostly in southern California and are not expected to spatially overlap with the project area.

Steller Sea Lion

The Steller sea lion was listed as a threatened species under the ESA in 1990 following declines of 63 percent on certain rookeries since 1985 and declines of 82 percent since 1960 (55 FR 12645; April 5, 1990). In 1997, two DPSs of Steller sea lion were identified based on differences in genetics, distribution, phenotypic traits, and population trends: The Western DPS and Eastern DPS (Fritz *et al.,* 2013).

The Eastern DPS (eDPS) is commonly found in the project area waters and were most recently surveyed in Southeast Alaska in June–July of 2015. The current population estimate for the eDPS is 71,562 individuals of which 52,139 are non-pups and 19,423 are pups. In Southeast Alaska the estimated total abundance is 28,594 individuals of which 20,756 are non-pups and 7,838 are pups. The eDPS has been increasing between 1990 to 2015 with an estimated annual increase of 4.76 percent for pups and 2.84 percent for non-pups. (Muto *et al.,* 2018) The Western DPS (wDPS) is found infrequently in the project area waters, but have been sighted previously. The current abundance estimate for the US portion of the wDPS is 50,983 of which 12,492 were pups and 38,491 were non-pups. This is the minimum estimate for only the US portion of the wDPS. It is the minimum count because the counts were not corrected for animals at sea during the survey. The overall trend for the wDPS in Alaska is an annual increase of 1.94 percent for non-pups and 1.87 percent for pups. (Muto *et al.,* 2018)

There is no critical habitat designated for Steller sea lions within the action area. The action area is located approximately 12 nautical miles (22.22 kilometers) from around Benjamin Island, well outside of the 3,000-ft (914.4-m) designated critical habitat boundary designation.

Steller sea lions occur in Auke Bay in winter on an intermittent basis, but their genetic and stock-designation identities are rarely known: Individuals are indistinguishable unless sea lions are branded (and the brand is observed). Satellite-tagged individual animals from the Benjamin Island haulout and Auke Bay were observed multiple times between November 2010 and January 2011 (Fadely 2011), and the Auke Bay boating community frequently observes Steller sea lions moving to and from the haulout complex into Auke Bay.

From 2013–2017, Steller sea lions have been documented in Auke Bay travelling as individuals or in herds of 50 to an estimated 120+ animals, during every month of the winter season. During winter 2015–2016, Steller sea lions foraged aggressively on young herring and 1–2-year-old Walleye pollock for over 20 days, continuously. Some sea lions were also observed consuming small flatfish, likely yellowfin sole, harvested from the seafloor (depth 25–45 m), during this period. While no sea lions were observed hauled out on beaches or structures in the harbor, large rafts of 20–50 animals formed and rested in the outer harbor area between foraging bouts. Simultaneous surface counts of 121 individual sea lions suggests that likely upwards of 200 animals or more were targeting prey in Statter Harbor during herring aggregation events. These 121 to 200 animals comprise roughly 20 to 30 percent of the animals typically found at the Benjamin Island and Little Island haulout complexes during winter months. (Ridgway pers. observ.)

Only three individual, branded wDPS Steller sea lions have been observed at Benjamin Island, the closest haulout, from 2003–2006 with a maximum of 3 sightings per individual. No branded wDPS individuals have been observed in the ADF&G surveys from 2007–2016. The 2007 ADF&G surveys offer the most abundant data for Steller sea lion counts at Benjamin Island. A total of 11 surveys were conducted between January and July 2017, ranging from 0–768 Steller sea lions, with an average count of 404 individuals. In 2007 no wDPS animals were observed. While it is possible an individual from the wDPS may be at the Benjamin Island haulout, it is rare, and none have been documented at this haulout for the last decade (Jemison pers. comm. 2017).

Although recent data in the northern part of the eastern DPS indicate movement of western sea lions east of the 144° line, the mixed part of the range remains small (Jemison *et al.,* 2013). Based on observations by ADF&G over the last decade this project is unlikely to impact wDPS individuals. An updated paper by Hastings *et al.* (in press) estimates that in the area surrounding Auke Bay, it is appropriate to assume a maximum of 18 percent of the sighted animals would be from the listed Western DPS.

Harbor Seal

The Lynn Canal/Stephens Passage stock is found in the project area waters. The current population estimate for the Lynn Canal/Stephens Passage stock is 9,478 individuals, and the 5-year trend estimate is −176. The probability of decrease of this stock is 0.71, indicating that evidence suggests that the stock is declining, however 9 of the 12 Alaska harbor seal stocks are showing a trend of increasing populations (Muto *et al.,* 2018). Typically harbor seals will stay within 16 miles (25 km) of shore, but they have been found up to 62 miles (100 km) from the shore (Klinkhart *et al.,* 2008). Harbor seal movement is highly variable, with no seasonal patterns identified.

Harbor seals use a variety of terrestrial sites to haul out for resting (year-round), pupping (May–July), and molting (August–September) including tidal and intertidal reefs, beaches, sand bars, and glacial/sea ice (Sease 1992; Klinkhart *et al.,* 2008). Some sites have traditional/historic value for pupping and molting while others are used as temporary

resting sites during seasonal foraging trips.

Harbor seals are residents of the project area and observed within the harbor on a regular basis and can be found within the immediate project vicinity on a daily basis. Over the last three winters, a group of up to 12 harbor seals has been observed in inner Statter Harbor near the harbormaster building along with 1–2 dispersed seals near the Auke Creek shoreline (Kate Wynne pers. observ.). Additionally, other counts from 2014–2016 recorded 2–16 animals within Statter Harbor. Up to 52 individual seals have been photographed simultaneously hauled out on the nearby dock at Fishermen's Bend, located in the northwest corner of Statter harbor (Ridgway unpubl. Data). It is assumed that the majority of animals that haul out on the nearby floats at Fishermen's Bend are likely to go under water and resurface throughout the duration of the project. However, further clarification on the number of individual seals likely to occur in the project area is difficult as harbor seals are not easily identifiable at an individual level.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans).

Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

TABLE 3—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. eight marine mammal species (five cetacean and three pinniped (two otariid and one phocid) species) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 2. Of the cetacean species that may be present, two are classified as low-frequency cetaceans (*i.e.,* all mysticete species), one is classified as mid-frequency cetaceans (killer whale), and two are classified as high-frequency cetaceans (harbor and Dall's porpoise).

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The *Negligible Impact Analysis and Determination* section considers the content of this section, the *Estimated Take by Incidental Harassment* section, and the *Proposed Mitigation* section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Description of Sound Sources

The marine soundscape is comprised of both ambient and anthropogenic sounds. Ambient sound is defined as the all-encompassing sound in a given place and is usually a composite of sound from many sources both near and far (ANSI 1994). 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 vibratory pile driving and removal, coupled with down the hole drilling, and potential impact pile driving. The sounds produced by these activities fall into one of two general sound types: Impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (ANSI 1986; NIOSH 1998; ANSI 2005; NMFS 2018). 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 2018). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward 1997 in Southall *et al.,* 2007).

Two types of pile hammers would be used on this project: Impact and vibratory. Impact hammers operate by repeatedly dropping a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper 2005). Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. Vibratory hammers produce significantly less sound than impact hammers. Peak 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).

Drilling would be conducted using a down-the-hole drill inserted through the hollow steel piles. A down-the-hole drill is a drill bit that drills through the bedrock using a pulse mechanism that functions at the bottom of the hole. This pulsing bit breaks up rock to allow removal of debris and insertion of the pile. The head extends so that the drilling takes place below the pile. The pulsing sounds produced by the down-the-hole drilling method are continuous, however this method likely increases sound attenuation because the noise is primarily contained within the steel pile and below ground rather than impact hammer driving methods which occur at the top of the pile (R&M 2016).

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

Acoustic Effects

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

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

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

Temporary Threshold Shift (TTS)—A temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Based on data from cetacean TTS measurements (see Southall *et al.,*

2007), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Schlundt *et al.,* 2000; Finneran *et al.,* 2000, 2002). As described in Finneran (2016), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, the growth curves become steeper and approach linear relationships with the noise SEL.

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

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin (*Tursiops truncatus*), beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaeorientalis*)) and five species of pinnipeds exposed to a limited number of sound sources (*i.e.,* mostly tones and octave-band noise) in laboratory settings (Finneran 2015). TTS was not observed in trained spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to impulsive noise at levels matching previous predictions of TTS onset (Reichmuth *et al.,* 2016). In general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Finneran 2015). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. No data are available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.* (2007), Finneran and Jenkins (2012), Finneran (2015), and Table 5 in NMFS (2018). Installing piles requires a combination of vibratory pile driving and down the hole drilling, as well as potential impact pile driving. For the project, these activities would not occur at the same time and there would likely be pauses in activities producing the sound during each day. Given these pauses and that many marine mammals are likely moving through the action area and not remaining for extended periods of time, the potential for TS declines.

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

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

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

In 2016, the Alaska Department of Transportation and Public Facilities (ADOT&PF) documented observations of marine mammals during construction activities (*i.e.,* pile driving and down-hole drilling) at the Kodiak Ferry Dock (80 FR 60636; October 7, 2015). In the marine mammal monitoring report for that project (ABR 2016), 1,281 Steller sea lions were observed within the Level B disturbance zone during pile driving or drilling (*i.e.,* documented as Level B harassment take). Of these, 19 individuals demonstrated an alert behavior, 7 were fleeing, and 19 swam away from the project site. All other animals (98 percent) were engaged in activities such as milling, foraging, or fighting and did not change their behavior. In addition, two sea lions approached within 20 meters of active vibratory pile driving activities. Three harbor seals were observed within the disturbance zone during pile driving activities; none of them displayed disturbance behaviors. Fifteen killer

whales and three harbor porpoise were also observed within the Level B harassment zone during pile driving. The killer whales were travelling or milling while all harbor porpoises were travelling. No signs of disturbance were noted for either of these species. Given the similarities in activities and habitat and the fact the same species are involved, we expect similar behavioral responses of marine mammals to the specified activity. That is, disturbance, if any, is likely to be temporary and localized (*e.g.,* small area movements). Monitoring reports from other recent pile driving and down-the-hole drilling projects in Alaska have observed similar behaviors (for example, the Biorka Island Dock Replacement Project).

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. Statter Harbor hosts numerous recreational and commercial vessels; therefore, background sound levels in the harbor are already elevated.

Airborne Acoustic Effects—Pinnipeds that occur near the project site could be exposed to airborne sounds associated with pile driving and removal and down-the-hole drilling that have the potential to cause behavioral harassment, depending on their distance from pile driving activities. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Airborne noise would primarily be an issue for pinnipeds that are swimming or hauled out near the project site within the range of noise levels elevated above the acoustic criteria. We recognize that pinnipeds in the water could be exposed to airborne sound that may result in behavioral harassment when looking with their heads above water. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon the area and move further from the source. However, these animals would previously have been 'taken' because of exposure to underwater sound above the behavioral harassment thresholds, which are in all cases larger than those associated with airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Therefore, we do not believe that authorization of incidental take resulting from airborne sound for pinnipeds is warranted, and airborne sound is not discussed further here.

Marine Mammal Habitat Effects

The City of Juneau's construction activities in Statter Harbor could have localized, temporary impacts on marine mammal habitat and their prey by increasing in-water sound pressure levels and slightly decreasing water quality. 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).

Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater and airborne sound. These sounds would not be detectable at the nearest known Steller sea lion haulouts, and all known harbor seal haulouts are well beyond the maximum distance of predicted in-air acoustical disturbance.

In-water pile driving, pile removal, and drilling activities would also cause short-term effects on water quality due to increased turbidity. Dispersal of suspended sediments produced by project activities could vary from moderate to rapid rates depending on tidal stage at the time of the activities. The City of Juneau would employ standard construction best management practices (see section 10 in application), thereby reducing any impacts. Therefore, the impact from increased turbidity levels is expected to be discountable.

In-Water Construction Effects on Potential Foraging Habitat

The area likely impacted by the project is relatively small compared to the available habitat in neighboring Fritz Cove or Favorite Channel (*e.g.,* most of the impacted area is limited to the northern and eastern portions of Auke Bay) and does not include any BIAs, ESA-designated critical habitat, or any other areas of known significance. Pile installation/removal and drilling may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. The City of Juneau must comply with state water quality standards during these operations by limiting the extent of turbidity to the immediate project area. In general, turbidity associated with pile installation is localized to about a 25-foot radius around the pile (Everitt *et al.,* 1980). Cetaceans are not expected to be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds would be transiting the area and could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to be discountable to marine mammals. Furthermore, pile driving and removal at the project site would not obstruct movements or migration of marine mammals.

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 of the other channels and bays immediately adjacent to Auke Bay.

The duration of the construction activities is relatively short. The construction window is for a maximum of 23 days and during each day, construction activities would occur for a maximum of 12 hours. Impacts to habitat and prey are expected to be minimal based on the short duration of activities.

In-Water Construction Effects on Potential Prey

Construction activities would produce continuous (*i.e.,* vibratory pile driving and down-the-hole drilling) and pulsed (*i.e.,* impact driving) sounds. Fish react to sounds that are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan 2001, 2002; Popper and Hastings 2009). Sound pulses at received levels of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality.

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

Construction activities, in the form of increased turbidity, have the potential to adversely affect forage fish and juvenile salmonid outmigratory routes in the project area. Both herring and salmon form a significant prey base for Steller sea lions, herring is a primary prey species of humpback whales, and both herring and salmon are components of the diet of many other marine mammal species that occur in the project area. Increased turbidity is expected to occur in the immediate vicinity 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 and salmon are expected to be minor or negligible. In addition, best management practices would be in effect, which would limit the extent of turbidity to the immediate project area. Finally, exposure to turbid waters from construction activities is not expected to be different from the current exposure; fish and marine mammals in Auke Bay are routinely exposed to substantial levels of suspended sediment from ongoing construction in the harbor.

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

Estimated Take

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

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

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.,* pile driving, removal, down the hole drilling) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, primarily for high frequency cetacean species and phocid pinnipeds because predicted auditory injury zones are larger than for mid-frequency species or otariid pinnipeds and they are known to frequent the harbor close to the docks where the construction would occur. Auditory injury is unlikely to occur for low or mid-frequency species. The proposed mitigation and monitoring measures are expected to minimize the severity of such taking to the extent practicable.

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

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

Acoustic Thresholds

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

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

The City of Juneau's proposed activity includes the use of continuous

(vibratory pile driving/removal and down the hole drilling) and impulsive (impact pile driving) sources, and therefore the 120 and 160 dB re 1 µPa (rms) thresholds are applicable.

Level A harassment for non-explosive sources—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (NMFS 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). The City of Juneau's proposed activity includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving/removal and down the hole drilling) sources.

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

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

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

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

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

Ensonified Area

Here, we describe operational and environmental parameters of the activity that will feed into identifying the area ensonified above the acoustic thresholds, which include source levels and transmission loss coefficient.

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

In order to calculate distances to the Level A and Level B harassment thresholds for piles of various sizes being used in this project, NMFS used acoustic monitoring data from other locations. Note that piles of differing sizes have different sound source levels. It is anticipated all of the piles will require drilling for rock anchors and will be installed at the rate of a single pile per day.

Vibratory removal—The closest known measurements of vibratory pile removal similar to this project are from the Kake Ferry Terminal project for vibratory extraction of an 18-inch steel pile. The extraction of 18-inch steel pipe piles using a vibratory hammer resulted in underwater noise levels reaching 152.4 dBRMS at 55.8 feet (17 meters) (Denes *et al.,* 2016). The pile diameters for the proposed project are smaller, thus the use of noise levels associated with the pile extraction at Kake are conservative.

Down the hole drilling—Little source level data are available for down-the-hole drilling. Denes *et al.* (2016) measured sound emanating from the drilling of 24-in (61-cm) piles at Kodiak and calculated a median SPL of 166.3 dB (at 10 m) which was used to calculate the PTS onset isopleths. Denes *et al.* (2016) also noted a transmission loss coefficient of 18.9 for drilling suggesting high attenuation when drilling below the seafloor. As the activity proposed will not occur in the same location as the Denes *et al.* measurements, NMFS is using a transmission loss coefficient of 15 in this proposed notice.

Vibratory driving—The closest known measurements of sound levels for vibratory pile installation of 16-inch (41-cm) steel piles are from the U.S. Navy Proxy Sound Source Study for projects in Puget Sound. Based on the projects analyzed it was determined that 16- to 24-inch (41- to 61-cm) piles exhibited similar sound source levels for projects in Puget Sound resulting in a recommended source level of 161 dB RMS at 33 feet (10 m) for piles diameters ranging from 16- to 24-inches (41- to 61-cm) (U.S. Navy 2015). However, as each pile that will be driven through vibratory driving will also utilize down the hole drilling, within the same day, the ensonified area for the down the hole drilling, which is larger and potentially a more conservative estimate, was used.

Impact driving—For impact pile driving of 16-inch (41-cm) piles, sound measurements were used from the literature review in Appendix H of the AKDOT&PF study (Yurk *et al.,* 2015) for 24-inch (61-cm) piles driven in the Columbia River with a diesel impact hammer. To estimate the sound source levels of 16-inch (41-cm) piles data for the 24-inch (61-cm) piles were used as the available data for 16-inch piles did not report a peak level, thus these noise levels used in this notice are likely overestimating the acoustic isopleths.

When the NMFS Technical Guidance (2018) was published, in recognition of the fact that ensonified area/volume could be more technically challenging to predict because of the duration component in the new thresholds, we developed a User Spreadsheet that includes tools to help predict a simple isopleth that can be used in conjunction with marine mammal density or occurrence to help predict takes. We note that because of some of the

assumptions included in the methods used for these tools, we anticipate that isopleths produced are typically going to be overestimates of some degree, which may result in some degree of overestimate of Level A harassment take. However, these tools offer the best way to predict appropriate isopleths when more sophisticated 3D modeling methods are not available, and NMFS continues to develop ways to quantitatively refine these tools, and will qualitatively address the output where appropriate. For stationary sources, such as the pile driving/removal and down the hole drilling proposed for this project, the NMFS User Spreadsheet predicts the distance at which, if a marine mammal remained at that distance the whole duration of the activity, it would incur PTS. Inputs used in the User Spreadsheet, and the resulting isopleths are reported below.

TABLE 5—NMFS USER SPREADSHEET INPUTS

	Vibratory driving	Vibratory removal	Down the hole drilling		Impact driving
Spreadsheet Tab Used.	A. (1) Non-impulsive, continuous.	A. (1) Non-impulsive, continuous.	A. (1) Non-impulsive, continuous.	Spreadsheet Tab Used.	E. (1) Impulsive, intermittent.
Source Level (RMS SPL).	161	152.4	166.3	Source level (Single shot SEL).	175.
Weighting Factor Adjustment (kHz).	2.5	2.5	2.5	Weighting Factor Adjustment (kHz).	2.
Number of piles in 24 hours.	2	2	1	Number of strikes per pile.	500.
Activity Duration (min) to drive 1 pile.	360	360	720	Number of piles per day.	1.
Propagation (xLogR)	15	15	15	Propagation (xLogR)	15.
Distance of source level measurement (meters).	10	17	10	Distance of source level measurement (meters).	10.
Other factors if using different tab for other source.				Source level (PK SPL).	205.
				Distance of source level measurement (meters).	10.

TABLE 6—NMFS USER SPREADSHEET OUTPUTS

	PTS isopleth (meters)				
Source type	Low-frequency cetaceans	Mid-frequency cetaceans	High-frequency cetaceans	Phocid pinnipeds	Otariid pinnipeds
Vibratory driving	35.8	3.2	52.9	21.8	1.5
Vibratory removal	16.3	1.4	24.0	9.9	0.7
Down the hole drilling.	79.5	7.0	117.6	48.3	3.4
Impact driving (SEL/PK).	184.2/1.2	6.6/NA	219.5/15.8	98.6/1.4	7.2/NA
	Level B behavioral harassment isopleth (m)				
Vibratory driving	5,411.7				
Vibratory removal	2,457.2				
Down the hole drilling.	12,022.64				
Impact driving	1,000				

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

Reliable densities are not available for Statter Harbor or the Auke Bay area. Generalized densities for the North Pacific are not applicable given the high variability in occurrence and density at specific inlets and harbors. Therefore, the applicant consulted opportunistic sightings data from oceanographic surveys in Auke Bay and sightings from Auke Bay Marine Station observation pier for Statter Harbor to arrive at a number of animals expected to occur within the harbor per day. For humpback whales, it is assumed that a maximum of four animals per day are likely to occur in the harbor. For Steller sea lions, the potential maximum daily occurrence of animals is 121 individuals within the harbor. For harbor seals, the maximum daily occurrence of animals is 52 individuals. For Dall's porpoises, it was assumed a large pod (20 individuals) might occur in the project area once per month in the spring months of March, April, and May. For harbor porpoises, it was assumed that up to one pair may enter the project area daily. For killer whales, it was conservatively assumed that up to one pod of resident killer whales (41 individuals) and one pod of transient killer whales (14 killer whales) might enter Auke Bay over the course of the project. It was assumed that one minke

whale might enter the bay per month across the eight months when work could potentially be conducted. Take of California sea lions have been requested on a precautionary basis and it is assumed no more than one sea lion per day of in-water work would enter Auke Bay.

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate. Because reliable densities are not available, the applicant requests take based on the above mentioned maximum number of animals that may occur in the harbor per day multiplied by the number of days of the activity. For species occurring less frequently in the area, some take estimates were calculated based on potential monthly occurrence. The applicant varied these calculations based on certain factors.

Humpback whales—Because humpback whale individuals of different DPS (natal) origin are indistinguishable from one another (unless fluke patterns are linked to the individual in both feeding and breeding ground), the frequency of occurrence of animals by DPS is only estimated using the DPS ratio, based upon the assumption that the ratio is consistent throughout the Southeast Alaska region (Wade *et al.,* 2016). Work is expected to occur over 23 days and will involve a mixture of vibratory pile driving and drilling each day. Based on the available information and the extent of the Level B harassment zone it is estimated up to 4 humpback whales could be exposed to elevated noise during each day of pile driving and drilling. Using a daily potential maximum rate of four humpback whales per day, the project could take up to 92 humpback whales. Based on the allocation by DPS expected in the project area, it is assumed 6.1 percent of the humpbacks sighted would be from the ESA-listed Mexico DPS, or a potential 6 takes. No Level A harassment takes are requested for humpback whales as the Level A harassment zones are small and shutdown measures can be implemented prior to any humpback whales enter Level A harassment zones.

Steller sea lions—Using a potential daily maximum rate, the project could take up to 121 Steller sea lions each day of pile driving activities due to the large Level B harassment zones. The maximum daily count of 121 was used to make this determination as Steller sea lions have been observed in large herds within vicinity of the harbor in excess of seven days when prey is abundant and the Level B harassment zones are large and in relatively close proximity to Benjamin Island (~22 km from project site). Thus, during these times it is likely that the rate of taking would be higher as the animals will be counted more than once if they dive and/or leave and re-enter the monitoring zone. On other days when dense groups are not present, fewer takes will be encountered, and it is assumed the overall take levels will even out. While there are a small number of resident harbor seals, it is anticipated there will be larger numbers of Steller sea lion takes, due to the large herds they have been observed in, the large size of the Level B harassment zones (up to 12.1 km) and the relative proximity to an established haulout at Benjamin Island. While the Level B harassment zones for the first phase of construction were generally smaller, much of the larger zones in this second phase are truncated due to land masses. Further, take numbers are estimated based on the largest group observed rafting in the Auke Bay vicinity and thus is considered an appropriate estimate for this phase as well.

Assuming 121 Steller sea lion takes per day, the total requested number of Steller sea lion takes for 23 days of work is 2,783 Steller sea lions. Based on the recently published literature ascribing sighted Steller sea lions in the zone of mixing to an allocated DPS, it is assumed 18 percent of the total takes, or 501 individuals, would be from the ESA-listed Western DPS. No Level A harassment takes are requested for Steller sea lions as the Level A harassment zones are small and shutdown measures can be implemented prior to Steller sea lions entering any Level A harassment zone.

Harbor seals—Up to 52 individual seals have been photographed simultaneously hauled out on the nearby dock at Fishermen's Bend (Ridgway unpubl. data). Direct effects of construction noise in this area will be partially blocked by the recently constructed Phase II boat launch and parking area. We assume that the majority of animals that haul out on the nearby floats at Fishermen's Bend are likely to go under water and resurface throughout the duration of the project. The action area also extends into Stephens Passage near the location of a known harbor seal haulout near Horse Island. Abundance estimates within this area are 276.5 harbor seals (NOAA 2018). However, only a small portion of this survey unit is located within the project area and thus it is estimated that 25 percent (70 harbor seals) may also be located within the action area each day. With both areas combined it is estimated up to 121 harbor seals (52 + 70) may be exposed to elevated sound levels during each day of drilling, resulting in a total of 2,806 harbor seal takes by Level B harassment during the activity.

Due to the number of harbor seals commonly within the Level A harassment zones for impact pile driving and drilling, there is a chance the injury zone will not be free of harbor seals for sufficient time to allow for impact driving as harbor seals frequently use the nearby habitat. It is assumed that no more than 11 seals are likely to be found within the inner harbor, which will be used as the maximum of harbor seals that may be taken by Level A harassment for each day of the project. This results in a total estimate of 253 Level A harassment takes of harbor seals.

Dall's porpoise—Dall's porpoises have been observed to have strong seasonal patterns with the highest number being observed in the spring and the fewest in the fall (Dahlheim *et al.,* 2009). Group size in Alaska typically ranging from 10 to 20 individuals (Wells 2008). Should Dall's porpoise be present within the project area it is most likely to be during the spring months based on the strong seasonal patterns observed. The project is located in habitat that is not typical for Dall's porpoise, however they may still be present during the spring months of March, April and May. It is assumed that a large pod of 20 Dall's porpoises (Wells 2008) may enter the harassment zones once each of these months, resulting in a take estimate of 60 Level B harassment takes of Dall's porpoise.

Dall's porpoises can generally be observed by monitors due to the ''rooster tail'' splash often made when surfacing (Wells 2008). However, due to the size of the Level A harassment zone associated with drilling (120 meters) and impact driving (220 meters), and due to the possibility for night work, it is possible Dall's porpoises may enter and remain in the Level A harassment zone undetected. It is conservatively assumed that one pair of Dall's porpoises may enter the Level A harassment zone and remain undetected every fourth day of pile driving, resulting in a take estimate of 12 Level A takes of Dall's porpoise across during the activity.

Harbor porpoise—There is little data regarding harbor porpoise presence in the project area, however they have been observed in the project vicinity during several surveys of nearby waterways including Lynn Canal and Stephens Passage (Dahlheim *et al.,* 2009; Dahlheim *et al.,* 2015). The

average group size ranged from 1.24 to 1.57 throughout the study years, consistent with our estimate that one pair per day may be present in the Auke Bay Area. Based on the available information is estimated that up to one pair of harbor porpoises may be taken by Level B harassment during each of the 23 days of pile driving, resulting in a total estimated 46 takes by Level B harassment.

Harbor porpoises are stealthy, having no visible blow and a low profile in the water making the species difficult for monitors to detect (Dahlheim *et al.,* 2015). The Level A harassment zones extend up to 220 meters, because of this distance it is possible harbor porpoises may enter the Level A harassment zone undetected. It is conservatively assumed that one pair of harbor porpoises may enter the Level A harassment zone every other day of pile driving, resulting in a total estimated take of 24 harbor porpoises by Level A harassment.

Killer whale—From 2010–2017 an average of 25 killer whale sightings were recorded in the project area per year (Ridgeway unpubl. data 2017). Data did not make distinctions between the stocks and thus the ratio between stocks is unknown. However, a resident pod identified as the AG pod is known to frequent the Juneau area (Dahlheim *et al.,* 2009; personal observation) and has 41 members recorded in the North Gulf Oceanic Society's Identification Guide (NGOS 2019). This pod is seen in the area intermittently in groups of up to approximately 25 individuals (personal observation), consistent with the data for the area. Transient killer whales have been observed in nearby waterways as well and one group of 14 individuals were observed during surveys (Dahlheim *et al.,* 2009). Killer whales move fast and have large ranges, and while they may occasionally enter the Level B harassment zones they are unlikely to linger in the area. Based on the information available it is conservatively estimated that one pod of residents (41 individuals) and one pod of transients (14 individuals) may be taken during the duration of the project. As killer whales may not be able to be readily distinguished between resident and transients, or the applicable stock populations, a total of 55 takes of killer whales are requested. Based on the intermittent occurrence of killer whales from various stocks, if killer whales appear in Auke Bay during construction activities, it would be difficult to estimate what proportion of observed killer whales would be from each potential stock. Therefore, for the purposes of this analysis, we assume the total amount of estimated take of killer whales could be entirely from each of the three stocks in the area and have made our findings assuming the total amount of authorized take could be entirely from each of the three stocks. No Level A takes are requested for killer whales due to the small size of the Level A harassment zones and the conspicuous nature of killer whales that should allow for effective implementation of shutdowns before killer whales could incur PTS.

Minke whale—There are no known occurrences of minke whales within the action area, however since their ranges extend into the project area and they have been observed in southeast Alaska (Dahlheim *et al.,* 2009) it is possible the species could occur near the project area given the large harassment zones associated with drilling. Therefore, one take is being requested per month of the potential project window (October 2020 through May 2021) for a total of 8 estimated takes of minke whale by Level B harassment. Due to the unlikely occurrence of minke whales in the general area and the additional unlikely of a minke whale occurring within 200 meters of the construction activity, no Level A takes of minke whales is proposed.

California sea lion—California sea lions are not typically found in the project area, however one hauled out on Statter Harbor boat launch ramp float in September of 2017. For take purposes it is estimated that one California sea lion may be present each day of in-water work, resulting in a total of 23 estimated takes by Level B harassment. Due to the rarity of California sea lions in the area, no Level A harassment take is proposed.

The total number of takes proposed to be authorized are summarized in Table 7 below.

TABLE 7—TAKES PROPOSED TO BE AUTHORIZED BY LEVEL A AND LEVEL B HARASSMENT

	Total proposed Level B harassment takes	Total proposed Level A harassment takes	Total takes proposed to be authorized
Humpback whale	92	0	92
Steller sea lion eDPS	2,282	0	2,282
Steller sea lion wDPS	501	0	501
Harbor seal	2,806	253	3,059
Dall's porpoise	60	12	72
Harbor porpoise	46	24	70
Killer whale, Northern Resident, Gulf of Alaska Transient, West Coast Transient	55	0	55
Minke whale	8	0	8
California sea lion	23	0	23

Proposed Mitigation

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

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

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or

stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) the practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

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

- Conduct briefings between construction supervisors and crews and the marine mammal monitoring team prior to the start of all pile driving activity, and when new personnel join the work, to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures;
- For in-water heavy machinery work other than pile driving (*e.g.,* standard barges, *etc.*), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions;
- Work may not begin during nighttime hours, or during periods of low visibility when visual monitoring of marine mammals can be conducted. However, work can continue into the nighttime hours if necessary;
- For those marine mammals for which Level B harassment has not been authorized, in-water pile installation/removal and drilling will shut down immediately if such species are observed within or on a path towards the monitoring zone (*i.e.,* Level B harassment zone); and
- If take reaches the authorized limit for an authorized species, pile installation will be stopped as these species approach the Level B harassment zone to avoid additional take.

The following measures will apply to the City of Juneau's mitigation requirements:

Establishment of Shutdown Zone for Level A Harassment—For all pile driving/removal and drilling activities, the City of Juneau will establish a shutdown zone, as described in Table 8 below. The purpose of a shutdown zone is generally to define an area within which shutdown of activity will occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). The placement of Protected Species Observers (PSOs) during all pile driving and drilling activities (described in detail in the Proposed Monitoring and Reporting Section) will ensure marine mammals in the shutdown zones are visible.

TABLE 8—MONITORING AND SHUTDOWN ZONES FOR EACH PROJECT ACTIVITY

Source	Shutdown zones (m)					Monitoring zones (m)
	Low frequency cetacean	Mid-frequency cetacean	High frequency ceteacean	Phocid	Otariid	All species
Vibratory Removal	20	10	25	10	10	2,500
Vibratory Installation/Drilling	80	10	120	50	10	2,500
Impact Driving	185	10	220	100	10	1,000

Establishment of Monitoring Zones for Level B Harassment—The City of Juneau will establish monitoring zones to correlate when possible with Level B harassment zones which are areas where SPLs are equal to or exceed the 160 dB rms threshold for impact driving and the 120 dB rms threshold during vibratory driving and drilling. Monitoring zones provide utility for observing by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring zones enable observers to be aware of and communicate the presence of marine mammals in the project area outside the shutdown zone and thus prepare for a potential cease of activity should the animal enter the shutdown zone. The monitoring zones are described in Table 8 above. If visibility is such that observers are able to make observations beyond the monitoring zone distance, these observations will be recorded and reported. The Level B harassment zone for vibratory pile installation and down the hole drilling is so large that a smaller and more feasible zone will be implemented as monitoring zones. Should PSOs determine the monitoring zone cannot be effectively observed in its entirety, Level B harassment exposures will be recorded and extrapolated based upon the number of observed take and the percentage of the Level B harassment zone that was not visible.

Soft Start—The use of soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors will be required to provide an initial set of strikes from the hammer at reduced energy, with each strike followed by a 30-second waiting period. This procedure will be conducted a total of three times before impact pile driving begins. Soft start will be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer. Soft start is not required during vibratory pile driving and removal activities.

Pre-Activity Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving/removal or drilling of 30 minutes or longer occurs, PSOs will observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will be cleared when a marine mammal has not been observed within the zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start cannot proceed until the animal has left the zone or has not been observed for 15 minutes. If the monitoring zone has been observed for 30 minutes and non-permitted species are not present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the monitoring zone. When a marine mammal permitted for Level B harassment take is present in the monitoring zone, activities may begin and Level B harassment take will be recorded. If work ceases for more than

30 minutes, the pre-activity monitoring of both the monitoring zone and shutdown zone will commence.

Due to the depth of the water column and strong currents present at the project site, bubble curtains will not be implemented as they would not be effective in this environment.

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

Proposed Monitoring and Reporting

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

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

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

Marine Mammal Visual Monitoring

Monitoring shall be conducted by NMFS-approved PSOs per the Marine Mammal Monitoring Plan provided in Appendix B of the City of Juneau's application. Trained observers shall be placed from the best vantage points practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Observer training must be provided prior to project start, and shall include instruction on species identification (sufficient to distinguish the species in the project area), description and categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible).

Monitoring will be conducted 30 minutes before, during, and 30 minutes after pile driving/removal and drilling activities. In addition, observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving/removal and drilling 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.

A minimum of two PSOs will be based strategically with one PSO on land at the Statter Harbor project site and the other on land or potentially on a vessel partway into Auke Bay. These stations will allow full monitoring of the impact hammer monitoring zone and the Level A shutdown zones. Potential locations for the second observer are described on pages 5 and 6 in Appendix B of the City of Juneau's application.

PSOs will scan the waters using binoculars, and/or spotting scopes, and will use a handheld GPS or range-finder device to verify the distance to each sighting from the project site. All PSOs will be trained in marine mammal identification and behaviors and are required to have no other project-related tasks while conducting monitoring. In addition, monitoring will be conducted by qualified observers, who will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator. The City of Juneau will adhere to the following observer qualifications:

(i) Independent observers (*i.e.,* not construction personnel) are required;

(ii) At least one observer must have prior experience working as an observer;

(iii) Other observers may substitute education (degree in biological science or related field) or training for experience; and

(iv) The City of Juneau shall submit observer CVs for approval by NMFS.

Additional standard observer qualifications include:

- 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 and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; 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.

The City of Juneau will submit a marine mammal monitoring report. A draft marine mammal monitoring report will be submitted to NMFS within 90 days after the completion of pile driving and removal and drilling activities. It will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report must include:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;

- Weather parameters (*e.g.,* percent cover, visibility);
- Water conditions (*e.g.,* sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Locations of all marine mammal observations; and
- Other human activity in the area.

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

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury, serious injury or mortality, the City of Juneau will immediately cease the specified activities and report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinator. The report will include the following information:

- Description of the incident;
- Environmental conditions (*e.g.,* Beaufort sea state, visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities may not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with the City of Juneau to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The City of Juneau will not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the City of Juneau discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.,* in less than a moderate state of decomposition as described in the next paragraph), City of Juneau will immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinator. The report will include the same information identified in the paragraph above. Activities will be able to continue while NMFS reviews the circumstances of the incident. NMFS will work with City of Juneau to determine whether modifications in the activities are appropriate.

In the event that City of Juneau discovers an injured or dead marine mammal and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), City of Juneau will report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinator, within 24 hours of the discovery. City of Juneau will provide photographs, video footage (if available), or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

Negligible Impact Analysis and Determination

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

Pile driving/removal and drilling activities associated with the Statter Harbor construction project as outlined previously, have the potential to disturb or displace marine mammals in Auke Bay. Specifically, the specified activities may result in take, in the form of Level A harassment and Level B harassment from underwater sounds generated from pile driving and removal and down-the-hole drilling. Potential takes could occur if individuals of these species are present in the ensonified zone when these activities are underway.

The takes from Level A and Level B harassment will be due to potential behavioral disturbance, TTS, and PTS (for select species). No mortality is anticipated given the nature of the activity and measures designed to minimize the possibility of injury to marine mammals. Level A harassment is only anticipated for Dall's porpoise, harbor porpoise, and harbor seal. The potential for harassment is minimized through the construction method and the implementation of the planned mitigation measures (see Mitigation section).

As described previously, killer whales, minke whales, and California sea lions are considered rare in the project area and we authorize only nominal and precautionary take of these species. Therefore, we do not expect meaningful impacts to these species and find that the total killer whale, minke whale, and California sea lion take from each of the specified activities will have a negligible impact on this species.

For remaining species, we discuss the likely effects of the specified activities in greater detail. Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff 2006; Lerma 2014; ABR 2016). Most likely, individuals will move away from the sound source and be temporarily displaced from the areas of pile driving and drilling, although even this reaction has been observed primarily only in association with impact pile driving. The pile driving activities analyzed here are similar to, or less impactful than, numerous other construction activities conducted in southeast Alaska, which

have taken place with no known long-term adverse consequences from behavioral harassment. Level B harassment will be reduced to the level of least practicable adverse impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to avoid the area while the activity is occurring. While vibratory driving and drilling associated with the planned project may produce sound at distances of many kilometers from the project site, thus intruding on some habitat, the project site itself is located in a busy harbor and the majority of sound fields produced by the specified activities are close to the harbor. Therefore, we expect that animals annoyed by project sound would avoid the area and use more-preferred habitats.

In addition to the expected effects resulting from authorized Level B harassment, we anticipate that harbor porpoises, Dall's porpoises, and harbor seals may sustain some limited Level A harassment in the form of auditory injury. However, animals in these locations that experience PTS would likely only receive slight PTS, *i.e.,* minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by pile driving. If hearing impairment occurs, it is most likely that the affected animal would lose only a small number of decibels in its hearing sensitivity, which in most cases is not likely to meaningfully affect its ability to forage and communicate with conspecifics. As described above, we expect that marine mammals would be likely to move away from a sound source that represents an aversive stimulus, especially at levels that would be expected to result in PTS, given sufficient notice through use of soft start.

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

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

- No mortality is anticipated or authorized;
- The Level A harassment exposures are anticipated to result only in slight PTS, within the lower frequencies associated with pile driving;
- The anticipated incidents of Level B harassment are likely to consist of temporary modifications in behavior that are not anticipated to result in fitness impacts to individuals;
- The specified activity and ensonification area is very small relative to the overall habitat ranges of all species; and
- The presumed efficacy of the mitigation measures in reducing the effects of the specified activity to the level of least practicable adverse impact.

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

Small Numbers

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

Table 7 demonstrates the number of animals that could be exposed to received noise levels that could cause Level A harassment and Level B harassment for the planned activities in the Statter Harbor project area. Our analysis shows that less than one third of the population abundance of each affected stock could be taken by harassment. The numbers of animals anticipated to be taken for these stocks would be considered small relative to the relevant stock's abundances even if each estimated taking occurred to a new individual—an extremely unlikely scenario.

Calculated takes do not assume multiple harassments of the same individual(s), resulting in larger estimates of take as a percentage of stock abundance than are likely given resident individuals. This is the case with the resident harbor seals (Lynn Canal/Stephens Passage stock) as it is documented that the same small group of individuals frequent the Statter Harbor area.

As reported, a small number of harbor seals, most of which reside in Statter Harbor year-round, will be exposed to construction activities for 23 days. The total population estimate in the Lynn Canal/Stephens Passage stock is 9,478 animals over 1.37 million acres (5,500 km^2) of area in their range. The great majority of these exposures will be to the same animals given their residency patterns, however the number of repeat exposures is difficult to quantify due to the lack of visible markings on harbor seals in water. No more than 121 harbor seals have ever been sighted in the project area and the harbor seals are known to be resident. Therefore, it is unlikely that the harbor seals entering the area on each of the 23 days of construction activity are unique individuals and are rather repeated takes of the same small number of individuals.

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

Unmitigable Adverse Impact Analysis and Determination

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

The proposed project is not known to occur in an important subsistence hunting area. Auke Bay is a developed area with regular marine vessel traffic. Of the marine mammals considered in this IHA application, only harbor seals are known to be used for subsistence in the project area. In a previous consultation with ADF&G, the Douglas Indian Association, Sealaska Heritage Institute, and the Central Council of the Tlingit and Haida Indian Tribes of Alaska on other construction activities in Statter Harbor, representatives indicated that the primary concern with construction activities in Statter Harbor was impacts to herring fisheries, not marine mammals. As stated above, impacts to fish from the proposed project are expected to be localized and temporary, so are not likely to impact herring fisheries. If any tribes express concerns regarding project impacts to subsistence hunting of marine mammals, further communication between will take place, including provision of any project information, and clarification of any mitigation and minimization measures that may reduce potential impacts to marine mammals. Therefore, NMFS has preliminarily determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

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

The effects of this proposed Federal action were adequately analyzed in NMFS' 2019 Biological Opinion on the City and Borough of Juneau Docks and Harbors Department Statter Harbor Improvements Project, Juneau, Alaska, which concluded that the take NMFS proposes to authorize through this IHA would not jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify any designated critical habitat.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the City of Juneau for conducting pile driving and removal activities in Auke Bay between October 2020 and May 2021, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act.*

Request for Public Comments

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

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

- A request for renewal is received no later than 60 days prior to expiration of the current IHA.
- The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested Renewal 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 because only a subset of the initially analyzed activities remain to be completed under the Renewal).

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

- Upon review of the request for Renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: October 11, 2019.

Donna S. Wieting,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Proposed Information Collection; Comment Request; Paperwork Submissions Under the Coastal Zone Management Act Federal Consistency Requirements

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

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted on or before December 17, 2019.

ADDRESSES: Direct all written comments to Adrienne Thomas, Government Information Specialist, NOAA, 151 Patton Avenue, Room 159, Asheville, NC 28801 (or via the internet at *PRAcomments@doc.gov*). All comments received are part of the public record. Comments will generally be posted without change. All Personally Identifiable Information (for example, name and 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: Requests for additional information or copies of the information collection instrument and instructions should be directed to David Kaiser, 603–862–2719 or *David.Kaiser@noaa.gov.*