businesses. This data collection is needed for use by the National Oceanic and Atmospheric Administration (NOAA) to describe the group of businesses that comprise the marine technology sector of the economy. NOAA describes the marine economy of the United States and this information is used by decision-makers to make policy decisions. NOAA's mission is to understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources. NOAA is authorized to engage in estimation of the ocean economy under the Coastal Zone Management Act, 16 U.S.C. 1456c. NOAA is responsible for measuring the size of the ocean economy, including developing metrics for the number of establishments, number of employees, wages, and GDP for six economic sectors within the ocean economy: Living Resources, Marine Construction, Marine Transportation, Offshore Mineral Resources, Ship and Boat Building, and Tourism and Recreation. NOAA publishes these metrics as part of the Economics: National Ocean Watch (ENOW) dataset on the Digital Coast website.

The information collected from manufacturers of technology used in marine related businesses will include (1) total revenue, (2) the proportion of revenue derived from marine related products and services and (3) information about sales going to consumers, businesses, and government. This information will be used to better understand marine related production of products and services by different manufacturers of technology used in marine related businesses. This information will be used to inform NOAA's understanding about this group of businesses that comprise the marine technology sector as part of NOAA's estimation of the ocean economy.

II. Method of Collection

The primary data collection vehicle will be an internet-based, survey distributed to manufacturers of technology used in marine related businesses. Respondents will volunteer to participate in the survey and choose which questions to answer. Telephone and personal interview may be employed to supplement and verify survey responses. All responses will be kept confidential in accordance with government confidentiality procedures.

III. Data

OMB Control Number: 0648–XXXX.
Form Number(s): None.

Type of Review: Regular submission (new information collection).

Affected Public: Business or other for-profit organizations.

Estimated Number of Respondents: 1,000.

Estimated Time per Response: 8 minutes.

Estimated Total Annual Burden Hours: 133 hours.

Estimated Total Annual Cost to Public: $0 in reporting/recordkeeping.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Sheleen Dumas,

Departmental Lead PRA Officer, Office of the Chief Information Officer, Commerce Department.

[FR Doc. 2019–15215 Filed 7–16–19; 8:45 am]

BILLING CODE 3510–JE–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XG907

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Ferry Berth Improvements in Tongass Narrows, Alaska

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

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

SUMMARY: NMFS has received a request from the Alaska Department of Transportation and Public Facilities (ADOT&PF) for authorization to take marine mammals incidental to two years of activity related to ferry berth improvements and construction in Tongass Narrows, near Ketchikan, AK. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue two consecutive incidental harassment authorizations (IHAs) to incidentally take marine mammals during the specified activities. The marine construction associated with the proposed activities will occur during two distinct year-long phases, and incidental take associated with these phases would be authorized in separate, consecutive IHAs. NMFS is also requesting comments on a possible one-year renewal for each IHA that could be issued under certain circumstances and if all requirements are met, as described in *Request for Public Comments* at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than August 16, 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.pauline@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: Rob Pauline, 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 as ''mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

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 two proposed IHAs 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 requests.

Summary of Request

On September 11, 2018, NMFS received a request from ADOT&PF for two consecutive IHAs to take marine mammals incidental to ferry berth improvements and construction in Tongass Narrows, near Ketchikan, Alaska. The application was deemed adequate and complete on March 20, 2019. ADOT&PF's request is for take of a small number of eight species of marine mammals, by Level B harassment. Of those eight species, three (harbor seal (*Phoca vitulina richardii*), harbor porpoise (*Phocoena phocoena*), and Dall's porpoise (*Phocoenoides dalli*) may also be taken by Level A harassment. Neither ADOT&PF nor NMFS expects serious injury or mortality to result from this activity and, therefore, IHAs are appropriate. The proposed IHAs would each cover one year of the two year project.

Description of Proposed Activity

Overview

The ADOT&PF plans to make improvements to existing ferry berths and construct new ferry berths on Gravina Island and Revilla Island in Tongass Narrows, near Ketchikan in southeast Alaska (Figure 1–1 of the application). These ferry facilities provide the only public access between the city of Ketchikan, AK on Revilla Island, and the Ketchikan International Airport on Gravina Island (see Figure 1–2 in application). The project's proposed activities that have the potential to take marine mammals, by Level A harassment and Level B harassment, include vibratory and impact pile driving, drilling operations for pile installation (rock socket and tension anchor drilling), and vibratory pile removal.

Improvement and construction of facilities is important to provide reliable access to the airport and facilitate growth and development in the region. Some of the existing ferry facilities are aging and periodically out-of-service for repairs or maintenance, and this project will provide redundant ferry berths to increase reliability. Ketchikan is Alaska's fifth largest city, with a population of approximately 8,125, and numerous marine facilities including fishing infrastructure, cruise and ferry terminals, and shipyards.

Planned construction includes the installation of new ferry facilities and the renovation of existing structures. The marine construction associated with the proposed activities will occur during two distinct year-long phases, and take associated with these phases would be authorized in separate, consecutive IHAs. Phase 1, which primarily includes both improvement of existing facilities and construction of new facilities on both islands, is planned to occur between March, 2020 to February, 2021, and Phase 2, which includes the improvement/refurbishing of existing facilities on both islands, is planned to occur from March, 2021, to February, 2022.

Section 101(a)(5)(D) specifies that ''the Secretary shall authorize [incidental take by harassment] for periods of not more than 1 year.'' In this case, the ADOT&PF knows at this time that it will take two years to complete the entire project, knows which activities would be conducted in each of the two years, and has submitted the entire two-year project to NMFS. NMFS has sufficient information to determine which species would be affected, the estimated amount and type of take that would result from the activities, and the estimated impacts to subsistence use from ADOT&PF's activities over each of the two years of the project. Thus NMFS is able to determine at this time whether the proposed activities meet all statutory requirements and can develop appropriate mitigation, monitoring, and reporting requirements for both years. It is therefore appropriate for NMFS to publish notice in the **Federal Register**, and seek public comment on, proposed IHAs for each of the two consecutive years of the project at this time.

Dates and Duration

In-water construction of Phase 1 is scheduled to begin in March 2020 and continue through February 2021. In-water construction of Phase 2 is scheduled to begin in March 2021 and continue through February 2022. Construction activities such as out-of-water work or in-water work that will not result in take may occur at multiple sites simultaneously; however, in-water pile installation/removal (including drilling) will not occur simultaneously at one or more component sites. Pile installation will occur intermittently over the work period, for durations of

minutes to hours at a time depending on weather, construction and mechanical delays, marine mammal shutdowns, and other potential delays and logistical constraints. There are 144 days of in-water construction planned for Phase 1 and 27 days planned for Phase 2.

Specific Geographic Region

The proposed Tongass Narrows project is located within the City of Ketchikan, Alaska (see Figure 1 below). Improvements and new construction on Revilla Island will occur approximately 2.6 miles north of downtown Ketchikan. The new Revilla Island Airport Shuttle Ferry Berth will be constructed immediately adjacent to the existing Revilla Island Ferry Berth. Improvements and new construction on Gravina Island will all be adjacent to the Ketchikan International Airport, and the new Gravina Island Airport Shuttle Ferry Berth will be constructed immediately adjacent to the existing Gravina Island Ferry Berth. The new Gravina Island Heavy Freight Mooring Facility will be constructed in the same location as the existing barge offload facility.

Tongass Narrows is an approximately 13-mile-long, north-south-oriented marine channel situated between Revilla Island to the east and Gravina Island to the west. In the vicinity of the proposed project, Tongass Narrows is as little as 300 meters (984 feet) wide. Tongass Narrows is generally characterized by strong tidal currents and by steep bedrock or coarse gravel-cobble-boulder shoreline. Pile installation will occur in waters ranging in depth from less than 1 meter (3.3 feet) nearshore to approximately 20 meters (66 feet), depending on the structure and location.

BILLING CODE 4164–01–P

Figure 1: Map of Tongass Narrows proposed project area near Ketchikan, Alaska.

BILLING CODE 4164–01–C

Ongoing vessel activities throughout Tongass Narrows, land-based industrial and commercial activities, and regular aircraft operations result in elevated in-air and underwater sound conditions in the project area that increase with proximity to the proposed project component sites. Sound levels likely vary seasonally, with elevated levels during summer when the tourism and fishing industries are at their peaks.

Detailed Description of Specific Activity

As discussed earlier, this project is composed of two consecutive phases, with take of marine mammals from each phase proposed to be authorized through separate IHAs. When necessary, the description of activity is broken down by phase below, but information relevant to both phases is presented together. Proposed activities with potential to take marine mammals include the noise generated by drilling of rock sockets and tension anchors into bedrock for steel pipe piles, vibratory removal of steel pipe piles, vibratory installation of sheet piles, and vibratory and impact installation of steel pipe piles. Each phase of the project will include different activities that are described in detail in the following sections.

Above-water work will consist of the installation of concrete or steel platform decking panels, transfer bridges, dock-mounted fenders, pedestrian walkways, gangways, and utility lines. Upland construction activities will consist of new terminal facilities, staging areas,

parking lot expansions, new roadways, retaining walls, stairways, and pedestrian walkways. No in-water noise is anticipated in association with above-water and upland construction activities and no take is expected to occur from in-air noise due to the lack of nearby pinniped haul-outs and the smaller in-air isopleths compared to isopleths from in-water activities.

Description of In-Water Activities (General to Both Phases)

Four methods of pile installation are anticipated. These include vibratory and impact hammers, down-hole drilling of rock sockets, and installation of tension anchors at some locations. Most piles will be installed vertically (plumb), but some will be installed at an angle (battered). Tension anchors will be used to secure some piles to the bedrock to withstand uplift forces. Rock sockets will be drilled at other locations where overlying sediments are too shallow to adequately secure the bottom portion of the pile. Some piles will be seated in rock sockets as well as anchored with tension anchors. A vibratory hammer will be used to install 44 temporary template piles, no greater than 20 inches in diameter, to a depth of 25 feet or less. The total duration of vibratory installation and subsequent removal of temporary piles will be approximately 44 hours spread over multiple days as shown in Table 2, and will take place within the same days as permanent pile installation. Installation and removal of temporary piles is therefore not anticipated to add to the overall estimated 144 days of pile installation and removal for Phase 1 as shown in Table 1.

The steel sheet piles for the bulkheads are of a Z-shape. Each pile is approximately 28 to 30 inches wide, and they interlock together to form a continuous wall. These sheet piles will be installed into the existing ground at elevations varying from +8 inches to +26 inches mean lower low water. Most of this work is expected to be done at lower tides so that in-water pile driving work is minimized. However, some installation work below the tidal elevations (in water) can be expected. The ground where the sheet piles will be installed is comprised of existing rubble mound slopes. Some excavation work will be needed to temporarily remove the large rocks prior to driving the sheet piles.

Vibratory and Impact Pile-Driving Methods—Installation of steel piles through the sediment layer will be done using vibratory or impact methods. All piles will be advanced to refusal at bedrock. Where sediments are deep and rock socketing or anchoring is not required, the final approximately 10 feet of driving will be conducted using an impact hammer so that the structural capacity of the pile embedment can be verified. Where sediments are shallow, an impact hammer will be used to seat the piles into competent bedrock before rock drilling begins. The pile installation methods used will depend on sediment depth and conditions at each pile location. The sheet pile abutment bulkheads for the new Revilla and Gravina ferry berths will be installed using vibratory hammer methods. Vibratory and impact pile driving will occur during both Phase 1 and Phase 2 of the project (Table 1 and 3).

In Table 1, it is estimated that some piles will require 50 strikes from the impact hammer and others will require 200 strikes. In general, projects on Gravina Island will require approximately 50 strikes and projects on Revillia Island will require approximately 200 strikes. These differences are based on sediment characteristics, depth to bedrock, and the planned need for further drilling once at bedrock.

Vibratory Pile Removal—A total of 13 previously installed piles will be removed during Phase 2 of the project (Table 2), and no piles will be removed during Phase 1. When possible, existing piles will be extracted by directly lifting them with a crane. A vibratory hammer will be used if necessary to extract piles that cannot be directly lifted. Removal of each old pile is estimated to require no more than 15 minutes of vibratory hammer use for the majority of the piles, but the removal of one 24-inch diameter pile may take up to 30 minutes.

Rock Socket Drilling—Rock sockets are holes drilled into the bedrock to advance piles beyond the depth vibratory or impact driving methods are able to achieve in softer overlying sediments. The depth of the rock socket varies, but 10–15 feet is commonly required. Drilling of rock sockets through the bedrock may use both rotary and percussion drill mechanisms. Drilling breaks up the rock to allow removal of the fragments and insertion of the pile. Drill cuttings are expelled from the top of the pile using compressed air. The diameter of the drilled rock socket is slightly larger than the pile being driving, and the pile is therefore easily advanced in the rock as the hole is drilled. It is estimated that drilling rock sockets into the bedrock will take about 1–3 hours per pile. Rock sockets will be used in both Phase 1 and Phase 2 of the project (Table 1 and 3).

Tension Anchors—Tension anchors are installed within piles that are drilled into the bedrock below the elevation of the pile tip, after the pile has been driven through the sediment layer to refusal. A 6- or 8-inch diameter steel pipe casing is inserted inside the larger diameter production pile. A rock drill is inserted into the casing, and a 6- to 8-inch-diameter hole is drilled into bedrock with rotary and percussion drilling methods. The drilling work is contained within the smaller steel pile casing and the larger steel pipe pile. The typical depth of the drilled hole varies, but 20–30 feet is common. Rock fragments will be removed through the top of the casing with compressed air. A steel rod is then grouted into the drilled hole and affixed to the top of the pile. The purpose of a rock anchor is to secure the pile to the bedrock to withstand uplift forces. Tension anchors will be utilized during both Phase 1 and Phase 2 of the project, as shown in Table 1 and 3. Figure 1–3 in the IHA Application depicts a schematic of rock socket and tension anchor drilling techniques.

Underwater noise from tension anchor construction is typically low. The bedrock is overlain with sediments, and will attenuate noise production from drilling and reduce noise propagation into the water column. Additionally, the casing used during drilling is inside the larger diameter pile, further reducing noise levels. Therefore, the effects of tension anchor drilling on marine mammals are not expected to rise to the level of take. As stated, take is highly unlikely and is not proposed to be authorized for tension anchor drilling activities, so its impacts are discussed minimally in this document.

Phase 1 Project Components

Each of the four permanent project components in Phase 1 will include installation of steel pipe piles that are 18, 24, or 30 inches in diameter. Temporary piles installed and removed during Phase 1 to support templates for permanent piles will be a maximum of 20 inches in diameter. Two of the components (Revilla and Gravina New Ferry Berths) will require the installation of steel sheet piles that will comprise the bulkhead abutments and are 27.6 or 30.3 inches in width. These sheet piles will be installed using vibratory driving at elevations varying from +8 inches to +26 inches mean lower low-water. Most of this work is expected to be done at lower tides so that in-water pile driving work is minimized. However, some installation work below the tidal elevations (in

water) can be expected. The ground where the sheet piles will be installed is comprised of existing rubble mound slopes. Some excavation work will be needed to temporarily remove the large rocks prior to driving the sheet piles.

The estimated installation and removal rates for Phase 1 are 1.5 permanent pipe piles per day, 10 permanent sheet piles per day, and 4 to 6 temporary piles per day. Different types of piles may be installed or removed within a day.

Project components are briefly described below and Table 1 shows the number and size of piles broken down by the individual components of Phase 1. For additional information on how these piles will be configured, and what structures they will make up, please refer to the IHA Application.

Revilla New Ferry Berth and Upland Improvements—The new Revilla Island airport shuttle ferry berth will be constructed immediately adjacent to the existing Revilla Island Ferry Berth (Figure 1–2 in IHA Application). It is the only Phase 1 component that will occur on Revilla Island.

New Gravina Island Shuttle Ferry Berth/Related Terminal Improvements—The new Gravina Island airport shuttle ferry berth will be constructed immediately adjacent to the existing Gravina Island Ferry Berth (Figure 1–2 in IHA Application).

Gravina Airport Ferry Layup Facility—Improvements to the Gravina Island Ferry layup dock facility will occur in the same location as the existing layup dock facility (Figure 1–2 in IHA Application). The current layup dock is in disrepair and needs to be replaced.

Gravina Freight Facility—The new Gravina Island heavy freight mooring facility will be constructed in the same location as the existing barge offload facility (Figure 1–2 in IHA Application). This facility will provide improved access to Gravina Island for highway loads that cannot be accommodated by the shuttle ferry. Five breasting dolphins and one mooring dolphin will be constructed to support barge docking and will include pedestrian walkways for access by personnel. In addition, two new pile-supported mooring line structures will be constructed above the high tide line.

TABLE 1—PILE DETAILS AND ESTIMATED EFFORT REQUIRED FOR PILE INSTALLATION DURING PHASE 1

Project component / Pile type	Number of piles	Number of rock sockets	Number of tension anchors	Average vibratory duration per pile (minutes)	Average drilling duration for rock sockets per pile (minutes)	Impact strikes per pile	Average duration (minutes) per pile for vibratory	Average piles per day (range)	Days of installation
Revilla New Ferry Berth and Upland Improvements:									
24'' Pile Diameter	65	0	35	30	N/A	200	30	1.5 (1–3)	43
30'' Pile Diameter	18	0	14	30	N/A	200	30	1.5 (1–3)	12
AZ 14–770 Sheet Pile	55	N/A	N/A	15	N/A	N/A	15	6 (6–12)	9
New Gravina Island Shuttle Ferry Berth/Related Terminal Improvements:									
24'' Pile Diameter	66	52	25	15	120	50	15	1.5 (1–3)	44
30'' Pile Diameter	8	4	4	15	180	50	15	1.5 (1–3)	5
AZ 19–700 Sheet Pile	80	N/A	N/A	15	N/A	N/A	15	6 (6–12)	12
Gravina Airport Ferry Layup Facility:									
18'' Pile Diameter	3	0	0	15	N/A	50	15	1.5 (1–3)	2
30'' Pile Diameter	12	12	10	15	180	50	15	1.5 (1–3)	8
Gravina Freight Facility:									
20'' Pile Diameter	6	0	6	15	N/A	50	15	1.5 (1–3)	4
24'' Pile Diameter	3	3	3	.....	120	50	15	1.5 (1–3)	2
30'' Pile Diameter	4	2	4	15	180	50	15	1.5 (1–3)	3
Phase 1 Total	320	73	91	.....	.....	.....	.....	.....	144

TABLE 2—NUMBERS OF TEMPORARY PILES TO BE INSTALLED AND REMOVED FOR EACH PROJECT DURING PHASE 1

Project component	Number of temporary piles	Average vibratory duration per pile for installation (minutes)	Average vibratory duration per pile for removal (minutes)	Days of installation	Days of removal	Piles per day
Revilla New Ferry Berth and Upland Improvements.	12	15	15	2 to 3	2 to 3	4 to 6.
New Gravina Island Shuttle Ferry Berth/Related Terminal Improvements.	12	15	15	2 to 3	2 to 3	4 to 6.
Gravina Airport Ferry Layup Facility.	8	15	15	1 to 2	0.75 to 2	4 to 6.
Gravina Freight Facility.	12	15	15	2 to 3	2 to 3	4 to 6.
Total	44	660 (11 hours)	660 (11 hours)	7–11	7–11	

Phase 2 Project Components

The two project components in Phase 2 will include installation of steel pipe piles that are 16, 20, 24 and 30 inches in diameter as shown in Table 3. Methods for vibratory and impact installation of temporary and permanent piles, drilling of rock sockets, and installation of tension anchors will be consistent with those described above. The estimated installation and removal rate for Phase 2 is 1.5 pipe piles per day.

One 24-inch-diameter pile will be installed at the existing Revilla ferry berth. Fifteen 24-inch diameter piles and eight 30-inch-diameter piles will be installed at the existing Gravina ferry berth. A total of 10 piles will be removed to accommodate upgrades to the existing Revilla Island and Gravina Island ferry berths. One 24-inch pile will be removed from the floating fender dolphin at the existing Revilla ferry berth. The nine 16-inch-diameter piles that support the three existing dolphins at the Gravina ferry berth will also be removed. It is anticipated that, when possible, existing piles will be extracted by directly lifting them with a crane. A vibratory hammer will be used if necessary to extract piles that cannot be directly lifted. Installation of sheet piles and tension anchor drilling is not planned during Phase 2.

Revilla Refurbish Existing Ferry Berth Facility—Improvements to the existing Revilla Island Ferry Berth will include the following: (1) Replace the transfer bridge, (2) replace rubber fender elements and fender panels, (3) replace one 24-inch pile on the floating fender dolphin, and (4) replace the bridge float with a concrete or steel float of the same dimensions. Construction of the transfer bridge, bridge float, and fender elements will occur above water. The only in-water work will be pile installation and removal associated with construction of the dolphins. No temporary piles will be installed or removed during this component of the project.

Gravina Refurbish Existing Ferry Berth Facility—Improvements to the existing Gravina Island Ferry Berth will include the following: (1) Replace the transfer bridge, (2) remove the catwalk and dolphins, (3) replace the bridge float with a concrete or steel float of the same dimensions, (4) construct a floating fender dolphin, and (5) construct four new breasting dolphins. Construction of the transfer bridge, catwalk, and bridge float will occur above water. The only in-water work will be pile installation and removal associated with construction of the dolphins. A vibratory hammer will be used to install and remove 12 temporary template piles, no greater than 20 inches in diameter, to a depth of 25 feet or less (Table 4). The total duration of vibratory installation and subsequent removal of temporary piles will be approximately 6 hours spread over multiple days, and will take place within the same days as permanent pile installation. Installation and removal of temporary piles is therefore not anticipated to add to the overall estimated 27 days of pile installation and removal for Phase 2.

TABLE 3—PILE DETAILS AND ESTIMATED EFFORT REQUIRED FOR PILE INSTALLATION AND REMOVAL DURING PHASE 2

Project component / Pile type	Number of piles	Number of rock sockets	Number of tension anchors	Average vibratory duration per pile (minutes)	Average drilling duration for rock sockets per pile (minutes)	Impact strikes per pile	Estimated total number of hours	Average piles per day (range)	Days of installation and removal
Revilla Refurbish Existing Ferry Berth Facility:									
24'' Pile Diameter	1			30		50	1	1	1
24'' Pile Diameter (Removal)	1			30		N/A	1	1	1
Gravina Refurbish Existing Ferry Berth Facility:									
24'' Pile Diameter	15	0		15		50	11	1.5 (1–3)	10
30'' Pile Diameter	8	3	12	15	180	50	6	1.5 (1–3)	7
16'' Pile Diameter (Removal)	12			15			2	1.5 (1–3)	8
Phase 2 Total	24 (+13 Removal)	3							27

TABLE 4—NUMBER OF TEMPORARY PILES TO BE INSTALLED AND REMOVED FOR EACH PROJECT COMPONENT AND STRUCTURE DURING PHASE 2

Project component	Number of temporary piles	Average vibratory duration per pile for installation (minutes)	Average vibratory duration per pile for removal (minutes)	Days of installation	Days of removal	Piles per day
Revilla Refurbish Existing Ferry Berth Facility	0	0	0	0	0	0
Gravina Refurbish Existing Ferry Berth Facility	12	15	15	2 to 3	2 to 3	4 to 6
Total	12	180 (3 hours)	180 (3 hours)	2 to 3	2 to 3	

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

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. 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 5 lists all species with expected potential for occurrence in waters near Ketchikan, Alaska 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 (2016). 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 SARs (*e.g.,* Muto *et al.,* 2018) except for gray whale, which could occur in the proposed project area and is assessed in the U.S. Pacific SARs (Carretta *et al.* 2018). All values presented in Table 3 are the most recent available at the time of publication and are available in the 2017 SARs (Muto *et al.,* 2018, Carretta *et al.* 2018) and draft 2018 SARs (available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports*).

TABLE 5—MARINE MAMMALS THAT COULD OCCUR IN THE PROPOSED PROJECT AREA

Common name	Scientific name	MMPA stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance Nbest, (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae:						
Gray Whale	*Eschrichtius robustus*	Eastern North Pacific	-, -, N	26,960 (0.05, 25,849, 2016)	801	138
Family Balaenidae:						
Humpback whale	*Megaptera novaeangliae*	Central North Pacific	E, D, Y	10,103 (0.3; 7,890; 2006)	83	25
Minke whale	*Balaenoptera acutorostrata*	Alaska	-, N	N.A.	N.A.	N.A.
Fin whale	*Balaenoptera physalus*	Northeast Pacific	E, D, Y	N.A.	5.1	0.6
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Killer whale	*Orcinus orca*	Alaska Resident	-, N	2,347 (N.A.; 2,347; 2012)	24	1
		West Coast Transient	-, N	243 (N.A, 243, 2009)	2.4	0
		Northern Resident	-, N	261 (N.A.; 261, 2011	1.96	0
Pacific white-sided dolphin	*Lagenorhynchus obliquidens*	North Pacific	-,-; N	26,880 (N.A.; N.A.; 1990)	N.A.	0
Family Phocoenidae:						
Harbor porpoise	*Phocoena phocoena*	Southeast Alaska	-, Y	975 (0.10; 896; 2012)	8.95	34
Dall's porpoise	*Phocoenoides dalli*	Alaska	-, N	83400 (0.097, N.A., 1993)	N.A.	38
Order Carnivora—Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions):						
Steller sea lion	*Eumetopias jubatus*	Eastern U.S.	-,-, N	41,638 (N.A.; 41,638; 2015)	2,498	108
Family Phocidae (earless seals):						
Harbor seal	*Phoca vitulina richardii*	Clarence Strait	-, N	31,634 (N.A.; 29,093; 2011)	1,222	41

[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 (N.A.).

[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. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

All species that could potentially occur in the proposed project areas are included in Table 5. However, the spatial occurrence of gray whale and fin whale is such that take is not expected to occur, and they are not discussed further beyond the explanation provided here. Gray whales have not been reported by any local experts or recorded in monitoring reports and it would be extremely unlikely for a gray whale to enter Tongass Narrows or the small portions of Revillagigedo Channel this project will impact. Similarly for fin whale, sightings have not been reported and it would be unlikely for a fin whale to enter the project area as they are generally associated with deeper, more offshore waters.

Steller Sea Lion

Steller sea lions were listed as threatened range-wide under the ESA on November 26, 1990 (55 FR 49204). Steller sea lions were subsequently partitioned into the western and eastern Distinct Population Segments (DPSs; western and eastern stocks) in 1997 (62 FR 24345). The eastern DPS remained classified as threatened until it was

delisted in November 2013. The current minimum abundance estimate for the eastern DPS of Steller sea lions is 41,638 individuals (Muto *et al.* 2018). The western DPS (those individuals west of 144° W longitude or Cape Suckling, Alaska) was upgraded to endangered status following separation of the DPSs, and it remains endangered today. There is regular movement of both DPSs across this 144° W longitude boundary (Jemison *et al.,* 2013), however, due to the distance from this DPS boundary, it is likely that only eastern DPS Steller sea lions are present in the project area. Therefore, animals potentially affected by the project are assumed to be part of the eastern DPS. Sea lions from the western DPS, which is listed as endangered under the Endangered Species Act (ESA), are not likely to be affected by the proposed activity and are not discussed further.

The nearest known Steller sea lion haulout is located approximately 17 miles west/northwest of Ketchikan on Grindall Island (Figure 4–1 in application). Summer counts of adult and juvenile sea lions at this haulout since 2000 have averaged approximately 191 individuals, with a range from 6 in 2009 to 378 in 2008. Only two winter surveys of this haulout have occurred. In March 1993, a total of 239 individuals were recorded, and in December 1994, a total of 211 individuals were recorded. No sea lion pups have been observed at this haulout during surveys. Although this is a limited sample, it suggests that abundance may be consistent year-round at the Grindall Island haulout.

No systematic studies of sea lion abundance or distribution have occurred in Tongass Narrows. Anecdotal reports suggest that Steller sea lions may be found in Tongass Narrows year-round, with an increase in abundance from March to early May during the herring spawning season, and another increase in late summer associated with salmon runs. Overall sea lion presence in Tongass Narrows tends to be lower in summer than in winter (FHWA 2017). During summer, Steller sea lions may aggregate outside the project area, at rookery and haulout sites. Monitoring during construction of the Ketchikan Ferry Terminal in summer (July 16 through August 17, 2016) did not record any Steller sea lions (ADOT&PF 2015).

Marine mammal monitoring was conducted during construction of the Icy Strait Point Cruise Ship Terminal in Hoonah, Alaska, between June 1, 2015, and January 25, 2016. This site is approximately 387 km (240 miles) Northwest of Tongass Narrows, but still in Southeast Alaska and a useful prior project for comparison. These data from Icy Strait Point support similar estimates described above and are an example of how abundance can fluctuate throughout the season. Steller sea lions were observed on 47 of the 135 days of monitoring. Although sea lions were observed during all times of the year, observations peaked between late August and mid-October (Berger ABAM 2016).

Sea lions are known to transit through Tongass Narrows while pursuing prey. Steller sea lions are known to follow fishing vessels, and may congregate in small numbers at seafood processing facilities and hatcheries or at the mouths of rivers and creeks containing hatcheries, where large numbers of salmon congregate in late summer. Three seafood processing facilities are located east of the proposed berth location on Revilla Island, and two salmon hatcheries operated by the Alaska Department of Fish & Game (ADF&G) are located east of the project area. Steller sea lions may aggregate near the mouth of Ketchikan Creek, where a hatchery upstream supports a summer salmon run. The Creek mouth is more than 4 kilometers (2.5 miles) from both ferry berth sites, and is positioned behind the cruise ship terminal and within the small boat harbor. In addition to these locations, anecdotal information from a local kayaking company suggests that there are Steller sea lions present at Gravina Point, near the southwest entrance to Tongass Narrows.

Harbor Seals

Harbor seals range from Baja California north along the west coasts of Washington, Oregon, California, British Columbia, and Southeast Alaska; west through the Gulf of Alaska, Prince William Sound, and the Aleutian Islands; and north in the Bering Sea to Cape Newenham and the Pribilof Islands. Harbor seals are not listed as endangered or threatened under the ESA. In 2010, harbor seals in Alaska were partitioned into 12 separate stocks based largely on genetic structure (Allen and Angliss 2010). Harbor seals in Tongass Narrows are recognized as part of the Clarence Strait stock, which is increasing in population size (Muto *et al.* 2018). They haul out on rocks, reefs, beaches, and drifting glacial ice, and feed in marine, estuarine, and occasionally fresh waters. Harbor seals are generally non-migratory, with local movements associated with such factors as tides, weather, season, food availability, and reproduction (Muto, 2017a).

No systematic studies of harbor seal abundance or distribution have occurred in Tongass Narrows. Aerial surveys conducted in August 2011 did not record any harbor seal haulouts in Tongass Narrows, but several haulouts were located on the outer shores of Gravina Island (London *et al.* 2015). There are no known large harbor seal haulouts in Tongass Narrows. Harbor seals have been observed hauled out on docks in Ketchikan Harbor.

Anecdotal observations indicate that harbor seals are common in Tongass Narrows, although no data exist to quantify abundance. Two salmon hatcheries operated by ADF&G are located east of the project area. Like Steller sea lions, harbor seals may aggregate near the mouth of Ketchikan Creek when salmon are running in summer. The creek mouth is more than 4 kilometers (2.5 miles) from the project component sites, and is positioned behind both the cruise ship terminal and within the small boat harbor.

Harbor Porpoise

In the eastern North Pacific Ocean, the harbor porpoise ranges from Point Barrow, along the Alaska coast, and down the west coast of North America to Point Conception, California. Harbor porpoises are not listed as endangered or threatened under the ESA. In Alaska, harbor porpoises are currently divided into three stocks, based primarily on geography: The Bering Sea stock, the Southeast Alaska stock, and the Gulf of Alaska stock. The Southeast Alaska stock ranges from Cape Suckling to the Canadian border (Muto *et al.* 2018). Only the Southeast Alaska stock is considered in this proposed IHA because the other stocks occur outside the geographic area under consideration. Harbor porpoises frequent primarily coastal waters in Southeast Alaska (Dahlheim *et al.* 2009) and occur most frequently in waters less than 100 meters (328 feet) deep (Hobbs and Waite 2010).

Abundance data for harbor porpoises in Southeast Alaska were collected during 18 seasonal surveys spanning 22 years, from 1991 to 2012 (Dahlheim *et al.* 2015). The project area and Tongass Narrows fall within the Clarence Strait to Ketchikan region, as identified by this study for the survey effort.

Studies of harbor porpoises reported no evidence of seasonal changes in distribution for the inland waters of Southeast Alaska (Dahlheim *et al.* 2009). Their small overall size, lack of a visible blow, low dorsal fins and overall low profile, and short surfacing time make them difficult to spot (Dahlheim *et al.* 2015), likely reducing identification and

reporting of this species, and these estimates therefore may be low.

Harbor porpoises were observed on 19 days during 135 days of monitoring in Hoonah, Alaska, primarily between June and September (Berger ABAM 2016). Icy Strait was identified as an area with relatively high densities of harbor porpoises in the Dahlheim *et al.* (2015) study, and the Ketchikan area densities are expected to be much lower. This is supported by anecdotal estimates of harbor porpoise abundance.

Anecdotal reports (see IHA Application) specific to Tongass Narrows indicate that harbor porpoises are rarely observed in the project area, and actual sightings are less common than those suggested by Dahlheim *et al.* (2015). Harbor porpoises prefer shallower waters (Dahlheim *et al.* 2015) and generally are not attracted to areas with elevated levels of vessel activity and noise such as Tongass Narrows. Harbor porpoises are expected to be present in the project area only a few times per year.

Dall's Porpoise

Dall's porpoises are found throughout the North Pacific, from southern Japan to southern California north to the Bering Sea. Dall's porpoises are not listed as endangered or threatened under the ESA. All Dall's porpoises in Alaska are members of the Alaska stock, and those off California, Oregon, and Washington are part of a separate stock. This species can be found in offshore, inshore, and nearshore habitat.

No systematic studies of Dall's porpoise abundance or distribution have occurred in Tongass Narrows; however, surveys for cetaceans throughout Southeast Alaska were conducted between 1991 and 2007 (Dahlheim *et al.* 2009). The species is generally found in waters in excess of 600 feet (183 meters) deep (Dahlheim *et al.* 2009, Jefferson 2009), which do not occur in Tongass Narrows. Jefferson *et al.* (2019) presents historical survey data showing few sightings in the Ketchikan area, and based on these occurrence patterns, concludes that Dall's porpoise rarely come into narrow waterways, like Tongass Narrows. The mean group size in Southeast Alaska is estimated at approximately three individuals (Dahlheim *et al.* 2009, Jefferson 2019), although Freitag (2017, as cited in 83 FR 37473) suggested group sizes near Ketchikan range from 10 to 15 individuals. Although two individuals were observed near Hoonah during monitoring of the Icy Strait Point cruise ship terminal, both were in deeper offshore waters (Berger ABAM 2016) dissimilar to habitat found in the project area.

Anecdotal reports suggest that Dall's porpoises are found northwest of Ketchikan near the Guard Islands, where waters are deeper, as well as in deeper waters to the southeast of Tongass Narrows. Should Dall's porpoises occur in the project area, they would likely be present in March or April, given past observations in the region. Despite generalized water depth preferences, Dall's porpoises may occur in shallower waters. This species has a tendency to bow-ride with vessels and may occur in the project area incidentally a few times per year.

Pacific White-Sided Dolphin

Pacific white-sided dolphins are a pelagic species inhabiting temperate waters of the North Pacific Ocean and along the coasts of California, Oregon, Washington, and Alaska (Muto *et al.* 2018). Despite their distribution mostly in deep, offshore waters, they may also be found over the continental shelf and near shore waters, including inland waters of Southeast Alaska (Ferrero and Walker 1996). Pacific white-sided dolphins are not listed as endangered or threatened under the ESA. They are managed as two distinct stocks: The California/Oregon/Washington stock, and the North Pacific stock (north of 45° N, including Alaska).

Scientific studies and data are lacking relative to the presence or abundance of Pacific white-sided dolphins in or near Tongass Narrows. Although they generally prefer deeper and more-offshore waters, anecdotal reports suggest that Pacific white-sided dolphins have previously been observed in Tongass Narrows, although they have not been observed entering Tongass Narrows or nearby inter-island waterways in 15–20 years.

Pacific white-sided dolphins are rare in the inside passageways of Southeast Alaska. Most observations occur off the outer coast or in inland waterways near entrances to the open ocean. According to Muto (2018), aerial surveys in 1997 sighted one group of 164 Pacific white-sided dolphins in Dixon entrance to the south of Tongass Narrows. Surveys in April and May from 1991 to 1993 identified Pacific white-sided dolphins in Revillagigedo Channel, Behm Canal, and Clarence Strait (Dahlheim and Towell 1994). These areas are contiguous with the open ocean waters of Dixon Entrance. This observational data, combined with anecdotal information, indicates there is a rare, however, slight potential for Pacific white-sided dolphins to occur in the project area.

Killer Whale

Killer whales have been observed in all the world's oceans, but the highest densities occur in colder and more productive waters found at high latitudes (NMFS 2016a). Killer whales occur along the entire Alaska coast, in British Columbia and Washington inland waterways, and along the outer coasts of Washington, Oregon, and California (NMFS 2016a).

Based on data regarding association patterns, acoustics, movements, and genetic differences, eight killer whale stocks are now recognized within the Pacific U.S. Exclusive Economic Zone. This proposed IHA considers only the Eastern North Pacific Alaska Resident stock (Alaska Resident stock), Eastern North Pacific Northern Resident stock (Northern Resident stock), and West Coast Transient stock, because all other stocks occur outside the geographic area under consideration (Muto *et al.* 2018). Killer whales that have the potential to occur in Alaska are not listed as endangered or threatened under the ESA. Therefore, the ESA-listed southern resident killer whale would not be affected by the proposed activity.

Surveys between 1991 and 2007 encountered resident killer whales during all seasons throughout Southeast Alaska. Both residents and transients were common in a variety of habitats and all major waterways, including protected bays and inlets. There does not appear to be strong seasonal variation in abundance or distribution of killer whales, but there was substantial variability between years during this study (Dahlheim *et al.* 2009).

No systematic studies of killer whales have been conducted in or around Tongass Narrows. Killer whales were observed infrequently (11 of 135 days) during monitoring in Hoonah, and most were recorded in deeper, offshore waters (Berger ABAM 2016). Anecdotal reports suggest that large pods of killer whales (as many as 80 individuals, but generally between 25 and 40 individuals) are not uncommon in May, June, and July when the king salmon are running. During the rest of the year, killer whales occur irregularly in pods of 6 to 12 or more individuals. Large pods would be indicative of the Alaska resident population, which travels and hunts in large social groups.

Although killer whales may occur in large numbers, they generally form large pods and would incur fewer work stoppages than their numbers suggest. Killer whales tend to transit through Tongass Narrows, and do not linger in the project area. Killer whales are observed on average about once every 2

weeks in Tongass Narrows, and abundance increases between May and July. A previous incidental take authorization in the Ketchikan area (83 FR 37473) has estimated that one group of killer whales is present in Tongass Narrows once a month.

Transient killer whales are often found in long-term stable social units (pods) of 1 to 16 whales. Average pod sizes in Southeast Alaska were 6.0 in spring, 5.0 in summer, and 3.9 in fall. Pod sizes of transient whales are generally smaller than those of resident social groups. Resident killer whales occur in larger pods, ranging from 7 to 70 whales that are seen in association with one another more than 50 percent of the time (Dahlheim *et al.* 2009; NMFS 2016b). In Southeast Alaska, resident killer whale mean pod size was approximately 21.5 in spring, 32.3 in summer, and 19.3 in fall (Dahlheim *et al.* 2009).

Humpback Whale

Humpback whales worldwide were designated as ''endangered'' under the Endangered Species Conservation Act in 1970, and were listed under the ESA at its inception in 1973. However, on 08 September 2016, NMFS published a final decision that changed the status of humpback whales under the ESA (81 FR 62259), effective 11 October 2016. The decision recognized the existence of 14 DPSs based on distinct breeding areas in tropical and temperate waters. Five of the 14 DPSs were classified under the ESA (4 endangered and 1 threatened), while the other 9 DPSs were delisted. Humpback whales found in the project area are predominantly members of the Hawaii DPS, which is not listed under the ESA. However, based on a comprehensive photo-identification study, members of the Mexico DPS, which is listed as threatened, are known to occur in Southeast Alaska. Members of different DPSs are known to intermix on feeding grounds; therefore, all waters off the coast of Alaska should be considered to have ESA-listed humpback whales. Approximately 6.1 percent of all humpback whales in Southeast Alaska and northern British Columbia are members of the Mexico DPS, while all others are members of the Hawaii DPS (Wade *et al.* 2016).

The DPSs of humpback whales that were identified through the ESA listing process do not necessarily equate to the existing MMPA stocks. The stock delineations of humpback whales under the MMPA are currently under review. Until this review is complete, NMFS considers humpback whales in Southeast Alaska to be part of the Central North Pacific stock, with a status of endangered under the ESA and designations of strategic and depleted under the MMPA (Muto *et al.* 2018).

Humpback whales are found throughout Southeast Alaska in a variety of marine environments, including open-ocean, near-shore waters, and areas with strong tidal currents (Dahlheim *et al.* 2009). Most humpback whales are migratory and spend winters in the breeding grounds off either Hawaii or Mexico. Humpback whales generally arrive in Southeast Alaska in March and return to their wintering grounds in November. Some humpback whales depart late or arrive early to feeding grounds, and therefore the species occurs in Southeast Alaska year-round (Straley 1990). Across the region, there have been no recent estimates of humpback whale density.

No systematic studies have documented humpback whale abundance near Ketchikan. Anecdotal information (See Section 3 of IHA Application) suggests that this species is present in low numbers year-round in Tongass Narrows, with the highest abundance during summer and fall. Anecdotal reports suggest that humpback whales are seen only once or twice per month, while more recently it has been suggested that the occurrence is more regular, such as once per week on average, and more seasonal. Humpbacks observed in Tongass Narrows are generally alone or in groups of one to three individuals. In August 2017, a group of six individuals was observed passing through Tongass Narrows several times per day, for several days in a row. Local residents reported that such high abundance is common in August and September. NMFS reported that airport ferry personnel, in 2018, observed a lone humpback whale in the area every few days for several months and a group of two humpback whales every other week (NMFS 2019).

A total of 226 humpback whales were recorded as takes during 135 days of monitoring in Hoonah, Alaska (Berger ABAM 2016). During Hoonah monitoring, as many as 18 whales were observed in a single day, but the 90th percentile of individuals per day was approximately 7. Humpback whales were observed on 84 of the 135 days and were most often seen as lone individuals, or in small groups. An average of 2 individuals was recorded as take each day of the construction program. Abundance of humpback whales did not appear to change substantially with time; however, there was a noticeable increase in activity during September and October (Berger ABAM 2016). Hoonah is approximately 240 miles north of Ketchikan near an area of known humpback concentrations, so these data do not directly support anticipated levels of abundance in Ketchikan as recently reported by interviewed locals (See Section 3 of IHA Application).

In the Biological Opinion provided to the US Army Corp of Engineers (USACE) for this ADOT&PF project, NMFS assumed the occurrence of humpback whales in the project area to be one (1) group of two (2) humpback whales within the Level B harassment zone twice each week. This assumption was also used to estimate take for this proposed IHA. The assumption was based on differences in abundance throughout the year, recent observations of larger groups of whales present during summer, and a higher than average frequency of occurrence in recent months (NMFS 2019).

Southeast Alaska is considered a biologically important area for feeding humpback whales between March and May (Ellison *et al.* 2012). Most humpback whales migrate to other regions during the winter to breed, but rare events of over-wintering humpbacks have been noted, (Straley 1990). It is thought that those humpbacks that remain in Southeast Alaska do so in response to the availability of winter schools of fish prey (Straley 1990).

Minke Whale

The population status of minke whales is considered stable throughout most of their range. Historically, commercial whaling reduced the population size of this species, but given their small size, they were never a primary target of whaling and did not experience the severe population declines as did larger cetaceans. Minke whales are not listed as endangered or threatened under the ESA. Minke whales are found throughout the northern hemisphere in polar, temperate, and tropical waters. There is a dwarf form of minke whale found in the southern hemisphere, and the subspecies of Antarctic minke whales is found around the continent of Antarctica.

The International Whaling Commission has identified three stocks in the North Pacific: One near the Sea of Japan, a second in the rest of the western Pacific (west of 180°W), and a third, less concentrated stock, found throughout the eastern Pacific. NOAA further splits this third stock between Alaska whales and resident whales of California, Oregon, and Washington (Muto *et al.* 2018). Minke whales are found in all Alaska waters. There are no

population estimates for minke whales in Alaska. Surveys in Southeast Alaska have consistently identified individuals throughout inland waters in low numbers (Dahlheim *et al.* 2009).

Minke whales in Southeast Alaska are part of the Alaska stock (Muto *et al.* 2018). Dedicated surveys for cetaceans in Southeast Alaska found that minke whales were scattered throughout inland waters from Glacier Bay and Icy Strait to Clarence Strait, with small concentrations near the entrance of Glacier Bay (Dahlheim *et al.* 2009). All sightings were of single minke whales, except for a single sighting of multiple minke whales. Surveys took place in spring, summer, and fall, and minke whales were present in low numbers in all seasons and years. None of the interviews with local experts conducted by ADOT&PF reported winter sightings of minke whales in Southeast Alaska. Minke whales are expected to occur in Tongass Narrows no more than once per year.

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 which were later adopted by Southall *et al* (2019) with slight changes to the naming convention of each hearing group. 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 6.

TABLE 6—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 (six cetacean and two pinniped (one otariid and one phocid) species) have the reasonable potential to co-occur with the proposed survey activities. Please refer to Table 6. Of the cetacean species that may be present, two are classified as low-frequency cetaceans (*i.e.,* all mysticete species), two are classified as mid-frequency cetaceans (*i.e.,* all delphinid and ziphiid species and the sperm whale), and two are classified as high-frequency cetaceans (*i.e.,* harbor porpoise and Kogia *spp.*).

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. The sound level of an area is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.,* waves, wind, precipitation, earthquakes, ice, atmospheric sound), biological (*e.g.,* sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.,* vessels, dredging, aircraft, construction).

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a

result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10–20 dB from day to day (Richardson *et al.* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include impact pile driving, vibratory pile driving and removal, and drilling. The sounds produced by these activities fall into one of two general sound types: Impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay (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 rapid 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 of rock sockets would be conducted using a down-hole drill inserted through the hollow steel piles. A down-hole drill is a drill bit that drills through the bedrock using both rotary and percussion (impact) mechanisms that function at the bottom of the hole. This 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 sounds produced by the down-the-hole drilling method are considered continuous as the noise from the drilling component is dominant. In addition, 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 and introduce sound into the water column to a greater degree.

The likely or possible impacts of ADOT&PF'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 Impacts

The introduction of anthropogenic noise into the aquatic environment from pile driving and removal and down-hole drilling is the primary means by which marine mammals may be harassed from ADOT&PF'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, 2019). 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 (2015), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, the growth curves become steeper and approach linear relationships with the noise SEL.

Depending on the degree (elevation of threshold in dB), duration (*i.e.,* recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that takes place during a time when the animal is traveling through the open ocean, where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during 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 impact pile driving, vibratory pile driving, and down-hole drilling. 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 project 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 haul out time, possibly to avoid in-water disturbance (Thorson and Reyff 2006). Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.* 1995; Wartzok *et al.* 2003; Southall *et al.* 2007; Weilgart 2007; 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, ADOT&PF documented observations of marine mammals during construction activities (*i.e.,* pile driving and down-hole drilling) at the Kodiak Ferry Dock (ABR 2016) in the Gulf of Alaska. In the marine mammal monitoring report for that project, 1,281 Steller sea lions were observed within the Level B harassment zone during pile driving or drilling (*i.e.,* documented as take by Level B harassment). 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-hole drilling projects in Alaska have observed similar behaviors (for example, the Biorka Island Dock Replacement Project *https://www.fisheries.noaa.gov/action/incidental-take-authorization-faa-biorka-island-dock-replacement-project-sitka-ak*).

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

Airborne Acoustic Effects—Pinnipeds that occur near the project site could be exposed to airborne sounds associated with pile driving and removal and down-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 proposed activities at the project area would not result in permanent negative impacts to habitats used directly by marine mammals, but may have potential short-term impacts to food sources such as forage fish and may affect acoustic habitat (see masking discussion above). There are no known foraging hotspots or other ocean bottom structure of significant biological importance to marine mammals present in the marine waters of the project area during the construction window, but there are times of increased foraging during periods of forage fish and salmonid spawning. ADOT&PF construction activities in Tongass Narrows 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). During impact pile driving, elevated levels of underwater noise would ensonify a portion of Tongass Narrows and nearby waters where both fish and mammals occur and could affect foraging success.

Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater noise. These sounds would not be detectable at the nearest known Steller sea lion haulouts (Figure 4–1 in IHA application), and there are no known harbor seal haulouts in Tongass Narrows.

The area likely impacted by the project includes much of Tongass Narrows, but overall this area is relatively small compared to the available habitat in the surrounding area including Revillagigedo Channel, Behm Canal, and Clarence Strait. Pile installation/removal and drilling may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. 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 pinnipeds could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to minimal for marine mammals. Furthermore, pile driving and removal at the project site would not obstruct movements or migration of marine mammals.

In-water Construction Effects on Potential Prey — Construction activities would produce continuous (*i.e.,* vibratory pile driving and down-hole drilling) and intermittent (*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. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in the nearby vicinity in Revillagigedo Channel, Behm Canal, and Clarence Strait. Additionally, the City of Ketchikan within Tongass Narrows has a busy industrial water front, and human impact lessens the value of the area as foraging habitat. There are times of known seasonal marine mammal foraging in Tongass Narrows around fish processing/hatchery infrastructure or when fish are congregating, but the impacted areas of Tongass Narrows are a small portion of the total foraging habitat available in the region. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the short timeframe of the project.

Construction activities, in the form of increased turbidity, have the potential to adversely affect eulachon, herring, and juvenile salmonid outmigratory routes in the project area. Salmon and forage fish, like eulachon and herring, form a significant prey base for Steller sea lions and are major components of the diet of many other marine mammal species that occur in the project area. Increased turbidity is expected to occur only in the immediate vicinity of construction activities and to dissipate quickly with tidal cycles. Given the limited area affected and high tidal dilution rates any effects on fish are expected to be minor.

Additionally, the presence of transient killer whales means some marine mammal species are also possible prey (harbor seals, harbor porpoises). ADOT&PF's pile driving, pile removal, and drilling are expected to result in limited instances of take by Level B and Level A harassment on these smaller marine mammals. That, as well as the fact that ADOT&PF is impacting a small portion of the total available marine mammal habitat means that there will be minimal impact on these marine mammals as prey.

In summary, given the short daily duration of sound associated with individual pile driving and drilling events and the small area being affected relative to available nearby habitat, 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 or other prey. 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 these IHAs, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determinations.

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

Authorized takes would primarily be by Level B harassment, as use of the sources (*i.e.,* impact/vibratory pile driving and drilling) has the potential to result in disruption of behavioral patterns for individual marine mammals and some small amount of TTS. There is also some potential for auditory injury (Level A harassment) to result, primarily for mysticetes, high frequency species and phocids because predicted auditory injury zones are larger than for mid-frequency species and otariids. Auditory injury is unlikely to occur for, mid-frequency species and otariids. The proposed mitigation and monitoring measures are expected to minimize the severity of such taking to the extent practicable, and result in no take by Level A harassment for mysticetes.

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). Due to the lack of marine marine mammal density, NMFS relied local occurrence data and average group size to estimate take. Below, we describe the factors considered here in more detail and present the proposed take estimates.

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) (microPascal root mean square) 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. Typically, and especially in cases where PTS is predicted, NMFS anticipates that some number of individuals may incur TTS. However, it is not necessary to separately quantify those takes, as it is very unlikely that an individual marine mammal would be exposed at the levels and duration necessary to incur TTS without also being exposed to the levels

associated with behavioral harassment and, therefore, we expect any potential TTS takes to be captured by the estimated takes by behavioral harassment.

Both phases of ADOT&PF's proposed activity includes the use of continuous (vibratory pile driving/removal and drilling) and impulsive (impact pile driving) sources, and therefore both 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). Both phases of ADOT&PF's proposed activity includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving/removal and drilling) sources.

These thresholds are provided in Table 7 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 7—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, vibratory pile removal, and drilling).

Vibratory hammers produce constant sound when operating, and produce vibrations that liquefy the sediment surrounding the pile, allowing it to penetrate to the required seating depth. An impact hammer would then generally be used to place the pile at its intended depth. The actual durations of each installation method vary depending on the type and size of the pile. An impact hammer is a steel device that works like a piston, producing a series of independent strikes to drive the pile. Impact hammering typically generates the loudest noise associated with pile installation.

In order to calculate distances to the Level A harassment and Level B harassment sound thresholds for piles of various sizes being used in this project, NMFS used acoustic monitoring data from other locations to develop source levels (see Table 6). Note that piles of differing sizes have different sound source levels (SSLs).

Empirical data from recent ADOT&PF sound source verification (SSV) studies at Ketchikan were used to estimate sound source levels for vibratory and impact driving of 30-inch steel pipe piles and Kodiak for drilling (Denes *et al.* 2016). Data from Ketchikan was used because of its proximity to this proposed project in Tongass Narrows and Kodiak drilling data was used as a proxy here because of its relative proximity. However, the use of data from Alaska sites was not appropriate in all instances. Details are described below.

The source level for rock socket drilling was derived from the above mentioned ADOT&PF SSV study at Kodiak, Alaska. The reported median source value for drilling was determined to be 166.2 dB rms for all pile types (Denes *et al.* 2016, Table 72).

For vibratory driving of 24-inch steel piles, data from a Navy pile driving project in the Puget Sound, WA was reviewed (Navy, 2015). From this review, ADOT&PF determined the Navy's suggested source value of 161 dB rms was an appropriate proxy source value, and NMFS concurs. Because the source value of smaller piles of the same general type (steel in this case) are not expected to exceed a larger pile, the same 161 dB rms source value was used for 18-inch and 16-inch steel piles. This assumption conforms with source values presented in Navy (2015) for a project using 16-inch steel piles at Naval Base Kitsap in Bangor, WA.

For vibratory driving of both 27.6-inch and 30.3-inch sheet piles, ADOT&PF used a source level of 160 dB rms. These source levels were reported in Caltrans (2015) summary tables for 24-inch steel sheet piles, and NMFS concurs that this value was an acceptable proxy.

Finally, ADOT&PF used source values of 177 dB SEL and 190 dB rms for impact driving of 24-inch and 18-inch steel piles. These values were determined based on summary values presented in Caltrans (2015) for impact driving of 24-inch steel piles. NMFS concurs that the same source value was

an acceptable proxy for impact driving of 18-inch steel piles.

TABLE 8—ESTIMATES OF MEAN UNDERWATER SOUND LEVELS GENERATED DURING VIBRATORY AND IMPACT PILE INSTALLATION, DRILLING, AND VIBRATORY PILE REMOVAL

Method and pile type	Sound source level at 10 meters			Literature source
Vibratory hammer	dB rms			
30-inch steel piles	162			Denes *et al.* 2016, Table 72.
24-inch steel piles	161			Navy 2015.
20-inch steel piles	161			Navy 2015.
18-inch steel piles	161			Navy 2015.
16-inch steel piles	161			Navy 2015.
27.6-inch sheet pile	160			Caltrans 2015.
30.3-inch sheet pile	160			Caltrans 2015.
Drilling rock sockets	dB rms			
All pile diameters	166.2			Denes *et al.* 2016, Table 72.
Impact hammer	dB rms	dB SEL	dB peak	
30-inch steel piles	195	181	209	Denes *et al.* 2016, Table 72.
24-inch steel piles	190	177	203	Caltrans 2015.
18-inch steel piles	190	177	203	Caltrans 2015.

Note: It is assumed that noise levels during pile installation and removal are similar. Use of an impact hammer will be limited to 5–10 minutes per pile, if necessary. It is assumed that drilling produces the same SSL regardless of down-hole diameter. SEL = sound exposure level; dB peak = peak sound level; rms = root mean square.

Level B Harassment Zones

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

TL = B * Log10 (R1/R2),

Where

TL = transmission loss in dB

B = transmission loss coefficient; for practical spreading equals 15

R1 = the distance of the modeled SPL from the driven pile, and

R2 = the distance from the driven pile of the initial measurement

The recommended TL coefficient for most nearshore environments is the, practical spreading value of 15. This value results in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions, which is the most appropriate assumption for ADOT&PFs proposed activity.

Using the practical spreading model, ADOT&PF determined underwater noise would fall below the behavioral effects threshold of 120 dB rms for marine mammals at a maximum radial distance of 12,023 m for rock socket drilling. This distance determines the maximum Level B harassment zone for the project. Other activities, including vibratory and impact pile driving, will have smaller Level B harassment zones. All Level B harassment isopleths are reported in Table 9 below and visualized in Figure 6–3 (Phase 1) and Figure 6–7 (Phase 2) in the IHA Application. It should be noted that based on the geography of Tongass Narrows and the surrounding islands, sound will not reach the full distance of the Level B harassment isopleth in all directions. Generally, due to interaction with land, only a thin slice of the possible area is ensonified to the full distance of the Level B harassment isopleth.

TABLE 9—CALCULATED DISTANCES TO LEVEL B HARASSMENT ISOPLETHS AND ENSONIFIED AREAS DURING PILE INSTALLATION AND REMOVAL

Pile size	Isopleth-impact (m) (160 dB)	Impact (km^2)	Isopleth-vibratory (m) (120 dB)	Vibratory (km^2)	Isopleth-drilling (m) (120 dB)	Drilling (km^2)
Phase 1 Revilla side:						
24-inch piles	1,000	0.780348	5,412	3.224297	.....	.....
30-inch piles	2,154	1.504843	6,310	3.584237	.....	.....
Sheet pile	.....	.....	4,642	2.856483	.....	.....
Phase 1 Gravina side:						
18-inch	1,000	1.297393	5,412	9.361061	.....	.....
24-inch piles	1,000	1.297393	5,412	9.361061	12,023	23.618314
30-inch piles	2,154	3.077801	6,310	11.11939	12,023	23.618314
Sheet pile	.....	.....	4,642	7.712967	.....	.....
Phase 2 Revilla side:						
24-inch	1,000	0.780348	5,412	3.187212	.....	.....
Phase 2 Gravina side:						
16-inch	.....	.....	5,412	8.03168	.....	.....
24-inch piles	1,000	1.297393	5,412	8.03168	.....	.....

TABLE 9—CALCULATED DISTANCES TO LEVEL B HARASSMENT ISOPLETHS AND ENSONIFIED AREAS DURING PILE INSTALLATION AND REMOVAL—Continued

Pile size	Isopleth-impact (m) (160 dB)	Impact (km^2)	Isopleth-vibratory (m) (120 dB)	Vibratory (km^2)	Isopleth-drilling (m) (120 dB)	Drilling (km^2)
30-inch piles	2,154	3.077801	6,310	9.472484	12,023	23.618314

Level A Harassment Zones

When the NMFS Technical Guidance (2016) 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 take by Level A harassment. 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 impact/vibratory pile driving or drilling, NMFS User Spreadsheet predicts the closest distance at which, if a marine mammal remained at that distance the whole duration of the activity, it would not incur PTS. Inputs used in the User Spreadsheet, and the resulting isopleths are reported below (Table 10).

Level A harassment thresholds for impulsive sound sources (impact pile driving) are defined for both SELcum and Peak SPL with the threshold that results in the largest modeled isopleth for each marine mammal hearing group used to establish the Level A harassment isopleth. In this project, Level A harassment isopleths based on SELcum were always larger than those based on Peak SPL. It should be noted that there is a duration component when calculating the Level A harassment isopleth based on SELcum, and this duration depends on the number of piles that will be driven in a day and strikes per pile. For some activities, ADOT&PF has proposed to drive variable numbers of piles per day throughout the project (See ''Piles Installed or Removed per day'' in Table 9), and determine at the beginning of each pile driving day, how many piles will be driven that day. Here, this flexibility has been accounted for by modeling multiple durations for the activity, and determining the relevant isopleths.

TABLE 10—PARAMETERS OF PILE DRIVING AND DRILLING ACTIVITY USED IN USER SPREADSHEET

Equipment type	Vibratory pile removal	Vibratory pile driver (installation of sheet piles)	Vibratory pile driver (installation of 30-inch steel piles)	Vibratory pile driver (installation of 24-inch steel piles)	Vibratory pile driver (installation of 24-inch steel piles)	Vibratory pile driver (installation of 18-inch steel piles)	Impact pile driver (30-inch steel piles)	Impact pile driver (24-inch steel piles)	Impact pile driver (18-inch steel piles)	Rock socket drilling
Spreadsheet tab used	Non-impulsive, continuous	Non-impulsive, continuous	Non-impulsive, continuous	Non-impulsive, continuous	Non-impulsive, continuous	Non-impulsive, continuous	Impulsive, non-continuous	Impulsive, non-continuous	Impulsive, non-continuous	Non-impulsive, continuous
Source Level	161 SPL	160 SPL	162 SPL	161 SPL	161 SPL	161 SPL	181 SEL	177 SEL	177 SEL	166.2 SPL.
Weighting Factor Adjustment (kHz)	2.5	2.5	2.5	2.5	2.5	2.5	2	2	2	2.
(a) Activity duration (hours) within 24 hours. (b) Number of strikes per pile. (c) Number of piles per day.	(a) 2.5, 5 * 30 mins.	(a) 2.5 (15 mins * 10).	(a) 1.5, 3 * 30 mins.	(a) 1.5, 3 * 30 mins.	(a) 1.5, 3 * 30 mins.	(a) 1.5, 3 * 30 mins.	(b) 200 or 50 (c) 1 to 3.	(b) 200 or 50 (c) 1 to 3.	(b) 50 (c) 1 to 3.	(a) 9 or 6.*
Propagation (xLogR)	15	15	15	15	15	15	15	15	15	15.
Distance of source level measurement (meters) + .	10	10	10	10	10	10	10	10	10	10.

* Duration estimates for rock socket drilling are based on assumption of drilling 3 rock sockets per day. 9 hours would be the estimated duration for drilling related to 30 inch piles, and 6 hours would be the duration for drilling related to 24 and 18 inch piles.

** For specifics of what number of strikes and number of piles will be used in a given situation, please refer to Table 1 and Table 3.

TABLE 11—CALCULATED DISTANCES TO LEVEL A HARASSMENT ISOPLETHS DURING PILE INSTALLATION AND REMOVAL

Activity	Pile diameter(s)	Minutes per pile or strikes per pile	Piles installed or removed per day	Level A harassment isopleth distance (meters)				
				Cetaceans			Pinnipeds	
				LF	MF	HF	PW	OW
Vibratory Installation	30-inch	30 Minutes	3	11	<1	15	6	<1
	24-inch, 20-inch, 18-inch.	15–30 Minutes	3	9	<1	13	5	<1
	27.6-inch sheet pile, 30.3-inch sheet pile.	15 Minutes	10	11	1	16	7	<1
Vibratory Removal	24-inch 16-inch	30 Minutes	5	13	1	19	8	<1
Drilling Rock Sockets ...	30-inch	180 Minutes	3	66	4	58	36	3
	24-inch, 18-inch	120 Minutes	3	51	3	45	27	2
Impact Installation	30-inch	50 Strikes	3	208	8	247	111	9
		50 Strikes	2	159	6	189	85	7
		50 Strikes	1	100	4	119	54	4
		200 Strikes	3	523	19	623	280	21
		200 Strikes	2	399	15	476	214	16
		200 Strikes	1	252	9	300	135	10
Impact Installation	24-inch	50 Strikes	3	113	4	134	61	5
		50 Strikes	2	86	3	102	46	4
		50 Strikes	1	54	2	65	29	3
		200 Strikes	3	283	11	337	152	11
		200 Strikes	2	216	8	258	116	9
		200 Strikes	1	136	5	162	73	6
Impact Installation	18-inch	50 Strikes	3	113	4	134	61	5
		50 Strikes	2	86	3	102	46	4
		50 Strikes	1	54	2	65	29	3

Note: A 10-meter shutdown zone will be implemented for all species and activity types to prevent direct injury of marine mammals.

Marine Mammal Occurrence and Take Calculation and Estimation

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations. Additionally, we describe how the occurrence information is brought together to produce a quantitative take estimate for each phase. Table 12 and 13 below show take from Phase 1 and Phase 2, respectively, as a percentage of population for each of the species.

Steller Sea Lion

Steller sea lion abundance in the Tongass Narrows area is not well known. No systematic studies of Steller sea lions have been conducted in or near the Tongass Narrows area. Steller sea lions are known to occur year-round and local residents report observing Steller sea lions about once or twice per week (based on communication outlined in Section 3 of the IHA application). Abundance appears to increase during herring runs (March to May) and salmon runs (July to September). Group sizes are generally 6 to 10 individuals (Freitag 2017 as cited in 83 FR 37473) but have been reported to reach 80 animals (HDR 2003). Tongass Narrows represents an area of high anthropogenic activity that sea lions would normally avoid, but at least three seafood processing plants and two fish hatcheries may be attractants to these opportunistic scavengers and predators. Sea lions are generally unafraid of humans when food sources are available. For these reasons, we conservatively estimate that one group of 10 Steller sea lions may be present in the project area each day, but this occurrence rate may as much as double (20 Steller sea lions per day) during periods of increased abundance associated with the herring and salmon runs (March to May and July to September).

Take Estimation for Phase 1: During Phase 1, we anticipate that one large group (10 individuals) may be present in the Level B harassment zone once per day. However, as discussed above, we anticipate that exposure may be as much as twice this rate during March, April, May, July, August, and September, due to the increased presence of prey. Therefore, we anticipate that two large groups (20 individuals) may be present in the Level B harassment zone each day during these months (approximately half of Phase 1). Therefore, we estimate a total of 2,160 potential takes of Steller sea lions by Level B harassment (*i.e.,* 1 group of 10 sea lions per day × 72 days [or half of Phase 1] + 2 groups of 10 sea lions per day × 72 days = 2,160 sea lions) (Table 12).

Take by Level A harassment is not expected for Steller sea lions in Phase 1, because of the small Level A harassment zones for otarrids (Table 11) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Take Estimation for Phase 2: During Phase 2, we anticipate Steller sea lions would be exposed at the same rate as during Phase 1. Phase 2 construction is planned to occur in the months of April, May and June. Therefore, we expect that one large group (10 individuals) may be present in the Level B harassment zone once per day for 9 days in June, with an increase to 2 large groups per day when fish runs occur for 9 days each month in April and May. Therefore, we estimate a total of 450 potential takes of Steller sea lions by Level B harassment (*i.e.,* 1 group of 10 sea lions per day × 9 days in June + 2 groups of 10 sea lions per day × 9 days per month in both April and May = 450 sea lions) (Table 13).

Take by Level A harassment is not expected for Steller sea lions in Phase 2, because of the small Level A harassment zones for otarrids (Table 11) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Harbor Seal

Harbor seal densities in the Tongass Narrows area are not well known. No systematic studies of harbor seals have been conducted in or near Tongass Narrows. They are known to occur year-round with little seasonal variation in abundance (Freitag 2017 as cited in 83 FR 37473) and local experts estimate that there are about 1 to 3 harbor seals in Tongass Narrows every day, in addition to those that congregate near

the seafood processing plants and fish hatcheries. Based on this knowledge, the expected maximum group size in Tongass Narrows is three individuals. Harbor seals are known to be curious and may approach novel activity. For these reasons we conservatively estimate that up to two groups of 3 harbor seals per group could be exposed to project-related underwater noise each day. Additionally, a smaller number of harbor seals could occasionally be present in the Level A harassment (PTS) zone and exposed to sound levels for a duration expected to result in take by Level A harassment. To account for these uncommon instances, ADOT&PF assumed and NMFS agrees that the equivalent of six groups of three individuals may be exposed in the Level A harassment zone during the whole of Phase 1, and the equivalent of three groups of three individuals may be exposed during the whole of Phase 2. Because of the nature of take by Level A harassment (small zone size, factoring in duration of exposure) and possibility for a marine mammal group to be spread over a relatively large area compared to the Level A harassment zone, take by Level A harassment will likely not occur to an entire group at once. Despite being expected to occur on an individual basis, these group size estimates still serve as the basis for take estimation for harbor seals.

Take Estimation for Phase 1: During Phase 1, we anticipate that two groups of 3 individuals could be present in the Level B harassment zone once per day for a total of 864 takes of harbor seals by Level B harassment (*i.e.,* 6 individuals per day × 144 days = 864 seals) (Table 12).

During Phase 1, it is possible, but unlikely, that harbor seals may be exposed to sound levels in the Level A harassment zone for a duration expected to result in take. Therefore, NMFS is proposing take by Level A harassment for the equivalent of six groups (18 individuals) during Phase 1.

Take Estimation for Phase 2: During Phase 2, we anticipate that two groups of 3 individuals could be present in the Level B harassment zone once per day for a total of 162 takes of harbor seals by Level B harassment (*i.e.,* 6 individuals per day × 27 days = 162 seals) (Table 11).

During Phase 2, we anticipate that the equivalent of three groups of 3 individuals may be present in the Level A harassment zone without detection. Therefore, NMFS is proposing take by Level A harassment of 9 harbor seals during Phase 2.

Harbor Porpoise

Harbor porpoises are non-migratory; therefore, our occurrence estimates are not dependent on season. Freitag (2017 as cited in 83 FR 37473) observed harbor porpoises in Tongass Narrows zero to one time per month. Harbor porpoises observed in the project vicinity typically occur in groups of one to five animals with an estimated maximum group size of eight animals (83 FR 37473, August 1, 2018, Solstice 2018). For our impact analysis, we are considering a group to consist of five animals, a value on the high end of the typical group size. Based on Freitag (2017), and supported by the reports of knowledgeable locals as described in the application, it is estimated that one group of harbor porpoises could enter Tongass Narrows and potentially be exposed to project related noise each month. Additionally harbor porpoises may rarely enter the applicable Level A harassment zone and be exposed to sound levels for a duration expected to result in take by Level A harassment, necessitating the proposed authorization of take by Level A harassment.

Take Estimation for Phase 1: During Phase 1, we estimate that two groups of harbor porpoises could be present in the Level B harassment zone each month for a total of 120 takes of harbor porpoises by Level B harassment (*i.e.,* 2 groups of 5 per month × 12 months = 120 harbor porpoises) (Table 12).

During Phase 1, we anticipate that 5 individuals (the equivalent of one group) may enter the Level A harassment zone undetected, and be exposed to sound levels for a duration expected to result in take by Level A harassment, approximately once during every 4 months of construction, for a total of 15 potential takes by Level A harassment.

Take Estimation for Phase 2: During Phase 2, we estimate that two groups of harbor porpoises may be present in the Level B harassment zone each month for a total of 30 individuals takes by Level B harassment (*i.e.,* 2 groups of 5 per month × 3 months = 30 harbor porpoises) (Table 13).

During Phase 2, we anticipate that the equivalent of two groups of 5 individuals may enter the Level A harassment zone undetected, and be exposed to sound levels for a duration expected to result in take by Level A harassment, during the 3 months of construction, for a total of 10 potential takes by Level A harassment.

Dall's Porpoise

Dall's porpoises are expected to only occur in the project area a few times per year. Their relative rarity is supported by Jefferson *et al.'*s (2019) presentation of historical survey data showing very few sightings in the Ketchikan area and conclusion that Dall's porpoise generally are rare in narrow waterways, like the Tongass Narrows. This species is non-migratory; therefore, our occurrence estimates are not dependent on season. We anticipate that one large Dall's porpoise pod (15 individuals) (Freitag 2017, as cited in 83 FR37473) may be present in the project area each month during construction. Additionally Dall's porpoises may rarely be present in the applicable Level A harassment zone and be exposed to sound levels for a duration expected to result in take by Level A harassment. To account for this rare circumstance, ADOT&PF assumes and NMFS concurs that the equivalent of one group of 15 individuals may be exposed to sound levels in the Level A harassment zone for a duration expected to result in take during the whole of Phase 1, and one group of 15 individuals may be present during the whole of Phase 2.

Take Estimation for Phase 1: During Phase 1, we estimate that 180 Dall's porpoises could be present in the Level B harassment zone (*i.e.,* 15 individuals per month × 12 months of construction = 180 total potential takes by Level B harassment) (Table 12).

During Phase 1, we anticipate that the equivalent of one group of 15 individuals may be exposed to sound levels in the Level A harassment zone for a duration expected to result in take, resulting in take by Level A harassment of 15 individual Dall's porpoises.

Take Estimation for Phase 2: During Phase 2, we estimate that 45 Dall's porpoises could be present in the Level B harassment zone (*i.e.,* 15 individuals per month × 3 months of construction = 45 takes by Level B harassment) (Table 13).

During Phase 2, we anticipate that the equivalent of one group of 15 individuals may be exposed to sound levels in the Level A harassment zone for a duration expected to result in take, resulting in take by Level A harassment of 15 individual Dall's porpoises.

Pacific White-Sided Dolphin

Pacific white-sided dolphins do not generally occur in the shallow, inland waterways of Southeast Alaska. There are no records of this species occurring in Tongass Narrows, and it is uncommon for individuals to occur in the proposed project area. However, historical sightings in nearby areas (Dahlheim and Towell 1994; Muto *et al.* 2018) and recent fluctuations in

distribution and abundance mean it is possible the species could be present.

To account for the possibility that this species may be present in the project area, we conservatively predict that one large group (50 individuals) of Pacific white-sided dolphins may experience take by Level B harassment during each phase of the proposed activity.

Take Estimation for Phase 1: 50 takes by Level B harassment (Table 12).

Take by Level A harassment is not expected for Pacific white-sided dolphins in Phase 1, because of the small Level A harassment zones for mid-frequency cetaceans (Table 9) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Take Estimation for Phase 2: 50 takes by Level B harassment (Table 13).

Take by Level A harassment is not expected for Pacific white-sided dolphins in Phase 2, because of the small Level A harassment zones for mid-frequency cetaceans (Table 9) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Killer Whale

Killer whales are observed in Tongass Narrows irregularly with peaks in abundance between May and July. A previous incidental take authorization in the Ketchikan area estimated killer whale occurrence in Tongass Narrows at one pod per month (Freitag 2017 as cited in 83 FR 37473). We estimate that one pod of 12 individuals may be present and exposed to project-related underwater noise every month except between May and July, when two pods of 12 individuals may be present and exposed.

Take Estimation for Phase 1: During Phase 1, we predict that a total of 180 killer whales may be present in the Level B harassment zone (*i.e.,* (12 exposures per month × 9 months) + (24 exposures per month × 3 months) = 180 takes of killer whales by Level B harassment) (Table 12).

Take by Level A harassment is not expected for killer whales in Phase 1, because of the small Level A harassment zones for mid-frequency cetaceans (Table 11) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Take Estimation for Phase 2: During Phase 2, we anticipate that construction would occur in April, May and June. Therefore, a total of 96 killer whales may be present in the Level B harassment zone (*i.e.,* 12 exposures per month × 1 month (April) + 24 exposures per month × 2 months (May, June) = 60 takes of killer whales by Level B harassment) (Table 13).

Take by Level A harassment is not expected for killer whales in Phase 2, because of the small Level A harassment zones for mid-frequency cetaceans (Table 11) and the expected effectiveness of the proposed monitoring and mitigation measures discussed below.

Humpback Whale

As discussed in ''Description of Marine Mammals in the Area of Specified Activities,'' locals have observed humpback whales about once per week, on average, in Tongass Narrows but there is evidence to suggest occurrence may be higher during some periods of the year. In the Biological Opinion provided to USACE for this ADOT&PF project, NMFS determined, based on the observations of local experts, that across the whole year, approximately one group of two individuals would be present in Tongass Narrows during ADOT&PF activity two times every seven days during pile driving, pile removal, and drilling activities.

Take Estimation for Phase 1: Based on the estimated occurrence rate of 2 groups of 2 individuals every 7 days and an anticipated timeframe of Phase 1 pile driving to occur over the course of 144 days (Table 1), an estimated total of 82 humpback whales are expected to be present in the Level B harassment zone during project activity. Of these 82 takes, based on the estimated proportion of humpback whales in Southeast Alaska that belong to the ESA-listed Mexico DPS, 6.1 percent (Wade *et al.,* 2016), there would be an estimated 5 takes by Level B harassment of Mexico DPS humpback whales. This estimated take of the Mexico DPS concurs with the assessment presented in Biological Opinion (Table 12).

Take by Level A harassment is not expected for humpback whales in Phase 1, because of the expected effectiveness of the proposed monitoring and mitigation measures and detecting and avoiding take by Level A harassment via shutdowns of pile installation equipment.

Take Estimation for Phase 2: Based on the estimated occurrence rate of 2 groups of 2 individuals every 7 days and an anticipated timeframe of Phase 2 pile driving to occur over the course of 27 days (Table 3), an estimated total of 16 humpback whales were initially expected to be present in the Level B harassment zone during project activity. At the ADOT&PF's request, and based on the analysis in the Biological Opinion, this take estimate for Phase 2 has been increased to 17 takes by Level B harassment. The difference in calculations is the result of a slight difference in rounding between the Biological Opinion and the method presented here. This increase in estimated take is a conservative change. Based on the estimated proportion of humpback whales in Southeast Alaska that belong to the ESA-listed Mexico DPS, 6.1 percent (Wade *et al.,* 2016), there would be an estimated 1 take by Level B harassment of Mexico DPS humpback whales. This estimate concurs with the assessment presented in the Biological Opinion (Table 13).

Take by Level A harassment is not expected for humpback whales in Phase 2, because of the expected effectiveness of the proposed monitoring and mitigation measures and detecting and avoiding take by Level A harassment via shutdowns of pile installation equipment.

Minke Whales

Minke whales may be present in Tongass Narrows year-round. Their abundance throughout Southeast Alaska is very low, and anecdotal reports have not included minke whales near the project area. However, minke whales are distributed throughout a wide variety of habitats and could occur near the project area. Minke whales are generally sighted as individuals (Dahlheim *et al.* 2009). Based on Freitag (2017 as cited in 83 FR 37473) it is estimated that three individual minke whales may occur near or within Tongass Narrows every 4 months.

Take Estimation for Phase 1: Based on the estimated occurrence rate of three individuals every four months, we predict that 9 minke whales (*i.e.,* 3 individuals over a 4 month time period and 12 months of work = 9 individuals in 12 months) may be present in the Level B harassment zone during the 12 month duration of Phase 1, resulting in 9 takes of minke whales by Level B harassment (Table 12).

Take by Level A harassment is not expected for minke whales in Phase 1, because of the expected effectiveness of the proposed monitoring and mitigation measures at detecting and avoiding take by Level A harassment via shutdowns of pile installation equipment. Additionally, minke whales are expected to be rare in the project area so they will likely not occur in the Level A harassment zone.

Take Estimation for Phase 2: Based on the estimated occurrence rate of three individuals every 4 months, we conservatively predict that 3 minke whales may be present in the Level B harassment zone during the 3 month

duration of Phase 2, resulting in 3 takes of minke whales by Level B harassment (Table 13).

Take by Level A harassment is not expected for minke whales in Phase 2, because of the expected effectiveness of the proposed monitoring and mitigation measures and detecting and avoiding take by Level A harassment via shutdowns of pile installation equipment. Additionally, minke whales are expected to be rare in the project area so they will likely not occur in the Level A harassment zone.

TABLE 12—PROPOSED TAKE ESTIMATES AS A PERCENTAGE OF STOCK ABUNDANCE FOR PHASE 1

Species	DPS/stock	Estimated number of exposures to Level B harassment	Estimated number of exposures to Level A harassment	Total estimated exposures (Level A and Level B)	Stock abundance	Instances of take as percentage of population
Steller sea lion	Eastern DPS	2,160	0	2,160	41,638	5.2
Harbor seal	Clarence Strait	846	18	864	31,634	2.7
Harbor porpoise	Southeast Alaska	105	15	120	11,146	1.1
Dall's porpoise	Alaska	165	15	180	83,400	0.2
Pacific white-sided dolphin	North Pacific	50	0	50	26,880	0.2
Killer whale	West Coast transient	180	0	180	2,347	[a] 7.7
	Alaska resident				261	[a] 69.0
	Northern Resident				243	[a] 74.1
Humpback whale	Hawaii DPS	77	0	77	11,398	[b] 0.7
	Mexico DPS	5	0	5	3,264	[b] 0.2
Minke whale	Alaska	9	0	9	Unknown	N/A

Note: DPS = distinct population segment.
[a] These percentages assume all takes come from the same killer whale stock, thus the percentage should be adjusted down if multiple stocks are actually affected.
[b] Assumes that 6.1 percent of humpback whales exposed are members of the Mexico DPS (Wade *et al.* 2016).

TABLE 13—PROPOSED TAKE ESTIMATES AS A PERCENTAGE OF STOCK ABUNDANCE FOR PHASE 2

Species	DPS/stock	Estimated number of exposures to Level B harassment	Estimated number of exposures to Level A harassment	Total estimated exposures (Level A and Level B)	Stock abundance	Instances of take as percentage of population
Steller sea lion	Eastern DPS	450	0	450	41,638	1.1
Harbor seal	Clarence Strait	162	9	171	31,634	0.5
Harbor porpoise	Southeast Alaska	30	10	40	11,146	0.4
Dall's porpoise	Alaska	45	15	60	83,400	<0.1
Pacific white-sided dolphin	North Pacific	50	0	50	26,880	0.2
Killer whale	West Coast transient				2,347	[a] 4.1
	Alaska resident	96	0	96	261	[a] 36.8
	Northern Resident				243	[a] 39.5
Humpback whale	Hawaii DPS	16	0	16	11,398	[b] 0.1
	Mexico DPS	1	0	1	3,264	[b] <0.1
Minke whale	Alaska	6	0	6	Unknown	N/A

Note: DPS = distinct population segment.
[a] These percentages assume all takes come from the same killer whale stock, thus the percentage should be adjusted down if multiple stocks are actually impacted.
[b] Assumes that 6.1 percent of humpback whales exposed are members of the Mexico DPS (Wade *et al.* 2016).

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. 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, ADOT&PF must 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/removal and drilling (*e.g.,* standard barges, tug boats), 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. This type of work could include the following activities: (1) Movement of the barge to the pile location; or (2) positioning of the pile on the substrate via a crane (*i.e.,* stabbing the pile);
- Work may only occur during daylight hours, when visual monitoring of marine mammals can be conducted;
- For any marine mammal species for which take by Level B harassment has not been requested or authorized, in-water pile installation/removal and drilling will shut down immediately when the animals are sighted;
- If take by Level B harassment 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 of them.

The following mitigation measures would apply to ADOT&PF's in-water construction activities:

Establishment of Shutdown Zone for Level A Harassment—For all pile driving/removal and drilling activities, ADOT&PF will establish a shutdown zone. The purpose of a shutdown zone is generally to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones will vary based on the activity type, marine mammal hearing group, and in the case of impact pile driving, additional details about the activity including the expected number of pile strikes required, size of the pile, and number of piles to be driving during that day (See Table 10). Here, shutdown zones are larger than the calculated Level A harassment isopleth shown in Table 11. The largest shutdown zones are generally for low frequency and high frequency cetaceans as shown in Table 14. The placement of Protected Species Observers (PSOs) during all pile driving, pile removal and drilling activities (described in detail in the Proposed Monitoring and Reporting Section) will ensure that the entire shutdown zone is visible during pile installation.

TABLE 14—PROPOSED SHUTDOWN ZONES

Activity	Pile size (inches)	Minutes per pile or strikes per pile	Piles installed or removed per day	Level B harassment isopleth (m)	Shutdown distances (m)				
					LF	MF	HF	PW	OW
Vibratory Installation	30	30 min	3	6,310	50				
	24, 18	30 min	3	5,420					
	27.6 sheet pile, 30.3 sheet pile.	15 min	10	4,650					
Vibratory Removal	24, 16	30 min	5	5,420					
Drilling Rock Sockets	30	180 min	3	12,030	70	50	60	50	
	24, 18	120 min	3		60	50			
Impact Installation	30	50 strikes	3	2,160	250	50	250	150	50
			2		200		200	100	
			1		100		150	100	
		200 strikes	3		550		650	300	
			2		400		500	250	
			1		300		300	150	
	24	50 strikes	3	1,000	150		150	100	
			2		100		150	50	
			1		100		100	50	
		200 strikes	3		300		350	200	
			2		250		300	150	
			1		150		200	100	
	18	50 strikes	3		150		150	100	
			2		100		150	50	
			1		100		100	50	

Establishment of Monitoring Zones for Level B Harassment—ADOT&PF will establish monitoring zones, based on the 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, removal 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 isopleths for the Level B harassment zones are depicted in Table 9. As shown, the largest Level B harassment zone for both Phase 1 and Phase 2 extends to a radius of 12,023 meters in at least one direction up or down Tongass Narrows (Figure 6–3 and 6–7 in IHA Application), making it impracticable for the PSOs to consistently view the entire harassment area. Due to this, takes by Level B harassment will be recorded and extrapolated based upon the number of observed takes and the percentage of the Level B harassment zone that was not visible.

In order to observe as much of the monitoring zone as possible, one PSO will be centrally located near the worksite where pile installation/removal is occurring that day, and

primarily tasked with observing the shutdown zones. Other PSOs will begin at the central worksite and travel along the Tongass Narrows until they have reached the edges of the monitoring zone, based on the Level B harassment zone. These PSOs will then monitor the edges of the monitoring zone and as much as possible of the rest of the monitoring zone, allowing awareness of animals entering the Level B harassment zone. If waters exceed a sea state that restricts the MMO's ability to make observations within the Level A harassment zones (*e.g.,* excessive wind or fog), pile installation and removal must cease. Pile driving must not be re-initiated until the entire relevant Level A harassment zones are visible.

Soft Start—The use of a soft-start procedure 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 percent energy, each strike followed by no less than a 30-second waiting period. This procedure will be conducted a total of three times before impact pile driving begins. Soft Start is not required during vibratory pile driving and removal activities. If a marine mammal is present within the Level A harassment zone, soft start will be delayed until the animal leaves the Level A harassment zone. Soft start will begin only after the MMO has determined, through sighting, that the animal has moved outside the Level A harassment zone. If a marine mammal is present in the Level B harassment zone, soft start may begin and a Level B take will be recorded. Soft start up may occur when these species are in the Level B harassment zone, whether they enter the Level B zone from the Level A zone or from outside the Project area.

Pre-Activity Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, the observer 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 Level B harassment zone has been observed for 30 minutes and marine mammals are not present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the Level B harassment zone. When a marine mammal permitted for take by Level B harassment is present in the Level B harassment zone, piling activities may begin and take by Level B will be recorded. As stated above, if the entire Level B harassment zone is not visible at the start of construction, piling or drilling activities can begin. If work ceases for more than 30 minutes, the pre-activity monitoring of both the Level B harassment and shutdown zone will commence.

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

Proposed Monitoring and Reporting

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

Visual Monitoring

Monitoring would 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 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 thirty minutes.

There will be at least two PSOs monitoring at all specified times. PSOs will not perform duties for more than 12 hours in a 24-hour period. PSOs would be land-based observers, positioned at the best practical vantage points. Suitable observation points are available from the Tongass Highway (Revillia Island) and Gravina Airport Access Road (Gravina Island). The positions may vary based on construction activity and location of piles or equipment. One PSO, generally the lead, will be stationed centrally near the work site. This individual will be able to monitor all Level A harassment zones under normal circumstances. Depending on the activity (vibratory driving/removal, drilling, or impact driving), additional PSOs will be stationed along the road system, as described above in ''Proposed Mitigation.'' With this configuration, PSOs can have a full view of the Level A harassment zone and awareness of as much of the Level B harassment zone as possible. This monitoring will provide information on marine mammal occurrence within Tongass Narrows and how these marine mammals are impacted by pile installation and removal.

As part of monitoring, PSOs would scan the waters using binoculars, and/or spotting scopes, and would use a

handheld GPS or range-finder device to verify the distance to each sighting from the project site. All PSOs would 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. Qualified observers are trained and/or experienced professionals, with the following minimum qualifications:

- Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target.
- Independent observers (*i.e.,* not construction personnel).
- Observers must have their CVs/resumes submitted to and approved by NMFS
- Advanced education in biological science or related field (*i.e.,* undergraduate degree or higher). Observers may substitute education or training for experience.
- Experience and ability to conduct field observations and collect data according to assigned protocols (this may include academic experience).
- At least one observer must have prior experience working as an observer.
- 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.
- 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.

Preliminary Reporting

NMFS is proposing to issue two distinct and consecutive IHAs within this action. In recognition of the value of marine mammal monitoring in understanding the impacts of ADOT&PF's activity, NMFS is requiring that ADOT&PF submit a preliminary marine mammal monitoring report for Phase 1 of the project (2020 through 2021) at least 4 months prior to the effective date of the second IHA and initiation of Phase 2. This preliminary report must contain all items that would be included in the draft final report, listed below under ''Reporting''. This will allow NMFS to assess the impact of the proposed action relative to the analysis presented here, and modify the IHA for Phase 2 if the preliminary monitoring report shows unforeseen impacts on marine mammals in the area. If needed, NMFS will publish a **Federal Register** Notice for a proposed amended IHA, describing any changes but referencing the original IHA for Phase 2, and include an opportunity for the public to comment on the amended authorization.

Reporting

Separate draft marine mammal monitoring reports must be submitted to NMFS within 90 days after the completion of both Phase 1 and Phase 2 pile driving, pile removal, and drilling activities. These reports will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the reports 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;
- An estimate of total take based on proportion of the monitoring zone that was observed; and
- Other human activity in the area.

If no comments are received from NMFS within 30 days, that phase's draft final report will constitute the final report. If comments are received, a final report for the given phase 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 IHAs (if issued), such as an injury, serious injury or mortality, ADOT&PF would 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 would 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 would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with ADOT&PF to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. ADOT&PF would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that ADOT&PF 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), ADOT&PF would 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 would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with ADOT&PF to determine whether modifications in the activities are appropriate.

In the event that ADOT&PF 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 these IHAs (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), ADOT&PF would 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. ADOT&PF would provide photographs, video footage (if available), or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

Negligible Impact Analyses and Determinations

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).

To avoid repetition, our analysis applies to all species listed in Tables 12 and 13, given that NMFS expects the anticipated effects of the proposed pile driving/removal and drilling to be similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, NMFS has identified species-specific factors to inform the analysis. Additionally, the proposed activity for both Phase 1 and Phase 2 is similar in nature, so the impacts are expected to be similar and are analyzed as such, unless otherwise noted.

NMFS does not anticipate that serious injury or mortality would occur as a result of ADOT&PF's proposed activity. As stated in the proposed mitigation section, shutdown zones that equal or exceed Level A harassment isopleths shown in Table 11 will be implemented. Take by Level A harassment is proposed for authorization for some species (harbor seals, harbor porpoises, and Dall's porpoises) to account for the slight possibility that these species escape observation by the PSOs within the Level A harassment zone. Further, any take by Level A harassment is expected to arise from, at most, a small degree of PTS because animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of PTS. Additionally, as noted previously, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. Because of the small degree anticipated, though, any PTS or TTS potentially incurred here would not be expected to adversely impact individual fitness.

Behavioral responses of marine mammals to pile driving, pile removal, and drilling at the proposed sites in Tongass Narrows are expected to be mild, short term, and temporary. Marine mammals within the Level B harassment zone may not show any visual cues they are disturbed by activities (as noted during modification to the Kodiak Ferry Dock (ABR 2016) See ''*Acoustic Impacts*'' above) or they could become alert, avoid the area, leave the area, or display other mild responses that are not observable such as changes in vocalization patterns. Given the short duration of noise-generating activities per day and that pile driving, removal, and drilling would occur for only a portion of the project's two years on nonconsecutive days (144 days in Phase 1, or 27 days in Phase 2), any harassment during both phases would be temporary. Additionally, many of the species present in Tongass Narrows would only be present temporarily based on seasonal patterns or during transit between other habitats. These temporarily present species would be exposed to even smaller periods of noise-generating activity, further decreasing the impacts.

In addition, for all species except humpbacks, there are no known Biologically Important Areas (BIAs) near the project zone that would be impacted by ADOT&PF's proposed activities. For humpback whales, the whole of Southeast Alaska is a seasonally important BIA from spring through late fall (Ferguson *et al.,* 2015), however, Tongass Narrows is not an important portion of this habitat due to development and human presence. Additionally, Tongass Narrows is a small passageway and represents a very small portion of the total available habitat. There is no ESA-designated critical habitat for humpback whales.

More generally, there are no known calving or rookery grounds within the project area, but anecdotal evidence from local experts shows that marine mammals are more prevalent in Tongass Narrows during spring and summer associated with feeding on aggregations of fish, meaning the area may play a role in foraging. Because ADOT&PF's activities, especially in Phase 1, could occur at any time of year, takes may occur at any time of the year, including these times of feeding. However, the project area represents a small portion of available foraging habitat and the actual duration of noise-producing activities each day is short, meaning impacts on marine mammal feeding for all species, including humpback whale, should be minimal.

Any impacts on marine mammal prey that would occur during ADOT&PF's proposed activity would have at most short-terms effects on foraging of individual marine mammals, and likely no effect on the populations of marine mammals as a whole. Therefore, indirect effects on marine mammal prey during the construction are not expected to be substantial, and these insubstantial effects would therefore be unlikely to cause substantial effects on marine mammals at the individual or population level.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity, for both Phase 1 and Phase 2, are not expected to adversely affect the species or stocks through effects on annual rates of recruitment or survival:

- No serious injury or mortality is anticipated or authorized.
- ADOT&PF would implement mitigation measures including soft-starts for impact pile driving and shutdown zones that exceed Level A harassment zones for most authorized species, which will help to ensure that take by Level A harassment is at most a small degree of PTS.
- The only known BIA is across a broad area of southeast Alaska for humpback whales, and the project area is a very small portion of that BIA. No

other known areas of particular biological importance to any of the affected stocks are impacted by the activity.

- The project area represents a very small portion of the available foraging area for all marine mammal species and anticipated habitat impacts are minor.

Phase 1—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 ADOT&PF's proposed Phase 1 activities will have a negligible impact on all affected marine mammal species or stocks.

Phase 2—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 ADOT&PF's proposed Phase 2 activities 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 that may be 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 12 and 13, in the *Marine Mammal Occurrence and Take Calculation and Estimation* section, present the number of animals that could be exposed to received noise levels that may result in take by Level A harassment or Level B harassment for both Phase 1 and Phase 2 of ADOT&PF's proposed activities. Our analysis of ADOT&PF's planned Phase 1 activity shows that for all but the two stocks of killer whale mentioned above, approximately 8 percent or less of the best population estimates of each affected stock could be taken. Similar analysis of Phase 2 showed similar results, with all but the two mentioned killer whale stocks, expected to have less than 5 percent or less of their stock experience take.

There are two stocks, Northern Resident killer whales and West Coast Transient killer whales, for which the estimated instances of take, in both Phase 1 and Phase 2 of the ADOT&PF's planned project, appear high when compared to the stock abundance (Table 12 and 13). However, when other qualitative factors are used to inform an assessment of the likely number of individual marine mammals taken, the resulting numbers are appropriately considered small. Initial analysis of the West Coast Transient stock shows that in Phase 1, when instances of take (not individuals taken) are compared to the stock abundance, 74.1 percent of the stock is expected to experience take, and in Phase 2, approximately 39.5 percent of the stock is expected to experience take. For the Northern Resident stock, the initial analysis shows that when instances of take (not individuals taken) are compared to the stock abundance, approximately 69 percent of the stock is expected to experience take in Phase 1, and 36.8 of the stock is expected to experience take in Phase 2. While these numbers appear high, the extensive ranges of both stocks compared to ADOT&PF's project area mean that realistically there will be multiple takes of a smaller number of individuals from these stocks, resulting in no more than a third of the individuals of any of these stocks being taken. The Northern Resident stock's range stretches from Washington State into southeast Alaska and the stock is frequently observed along British Columbia, Canada (Muto *et al.,* 2018). The West Coast transient stock occurs in California, Oregon, Washington, British Columbia, and southeastern Alaska. In both cases, ADOT&PF is only impacting a small portion of the total range, and this impact is intermittent. Further, the above percentages are based on analyzing the entire estimated take of killer whales as if it would occur to each stock.

Realistically, the take will be spread in some way among the stocks expected to be in the area (*i.e.,* 100 percent of the take cannot occur to each of the three stocks), further reducing the percentage of takes anticipated to come from any single stock. As a result, it is likely that fewer than one third of both the Northern Resident and West Coast Transient killer whale stocks would be taken in each phase of the project.

For both Phase 1 and Phase 2, there was one stock, minke whale, where the lack of an accepted stock abundance value prevented us from calculating an expected percentage of the population that would be affected. The most relevant estimate of partial stock abundance is 1,233 minke whales for a portion of the Gulf of Alaska (Zerbini *et al.,* 2006). Given the proposed 9 authorized takes by Level B harassment for the stock in Phase 1, comparison to the best estimate of stock abundance shows less than 1 percent of the stock is expected to be impacted. A similar analysis of the Phase 2, with 6 takes of minke whale by Level B harassment proposed for authorization, comparison to the best estimate of stock abundance show less then 1 percent of the stock is expected to be impacted. Additionally, the range of the Alaska stock of minke whales is extensive, stretching from the Canadian Pacific coast to the Chukchi Sea, and ADOT&PF's project area impacts a small portion of this range. Therefore, the numbers of minke whales authorized to be taken would be considered small relative to estimated survey abundance even if each estimated taking occurred to a new individual.

Phase 1—Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals for Phase 1 of ADOT&PF's activity, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks in Phase 1 of the project.

Phase 2—Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals for Phase 2 of ADOT&PF's activity, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks in Phase 2 of the project.

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.

Harbor seals are the marine mammal species most regularly harvested for subsistence by households in Ketchikan and Saxman (A community a few miles south of Ketchikan, on the Tongass Narrows). Eighty harbor seals were harvested by Ketchikan residents in 2007, which ranked fourth among all communities in Alaska that year for harvest of harbor seals. Thirteen harbor seals were harvested by Saxman residents in 2007. In 2008, two Steller sea lions were harvested by Ketchikan-based subsistence hunters, but this is the only record of sea lion harvest by residents of either Ketchikan or Saxman. In 2012, the community of Ketchikan had an estimated subsistence take of 22 harbor seals and 0 Steller sea lion (Wolf *et al.,* 2013). This is the most recent data available. Hunting usually occurs in October and November (ADF&G 2009), but there are also records of relatively high harvest in May (Wolfe *et al.,* 2013). The ADF&G has not recorded harvest of cetaceans from either community (ADF&G 2018). All project activities will take place within the industrial area of Tongass Narrows immediately adjacent to Ketchikan where subsistence activities do not generally occur. The project will not have an adverse impact on the availability of marine mammals for subsistence use at locations farther away, where these construction activities are expected to take place. Some minor, short-term harassment of the harbor seals could occur, but this is not likely to have any measureable effect on subsistence harvest activities in the region.

Phase 1—Based on the description and location of the specified activity, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from Phase 1 of ADOT&PF's proposed activities.

Phase 2—Based on the description and location of the specified activity, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from Phase 2 of ADOT&PF's proposed activities.

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 Office of Protected Resources consults internally, in this case with NMFS Alaska Regional Office, whenever we propose to authorize take for endangered or threatened species.

NMFS is proposing to authorize take of the Central North Pacific stock of humpback whales, of which a portion belong to the Mexico DPS humpback whales, which are listed under the ESA. During the USACE permitting process for the Tongass Narrows Project, the effects of this proposed Federal action were analyzed in NMFS' 2019 Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion for Construction of the Tongass Narrows Project (Gravina Access), however, this biological opinion did not analyze the issuance of IHAs. Therefore, the NMFS Permit and Conservation Division has requested initiation of Section 7 consultation with the NMFS Alaska Regional Office for the issuance of these IHAs. NMFS will conclude the ESA consultation prior to reaching a determination regarding the proposed issuance of the authorizations.

Proposed Authorizations

As a result of these preliminary determinations, NMFS proposes to issue two distinct and consecutive IHAs to ADOT&PF for conducting ferry berth improvements and construction in Tongass Narrows, Alaska in 2020 through 2021 (Phase 1) and 2021 through 2022 (Phase 2), provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. Drafts of the proposed IHAs can be found at *https://www.fisheries.noaa.gov/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 in-water construction project. 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 second IHA 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: July 11, 2019.

Donna S. Wieting,

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

[FR Doc. 2019–15115 Filed 7–16–19; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Submission for OMB Review; Comment Request

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35).