based solutions.'' Climate change is greatly influencing the need to map all of our named oceans and coasts in detail. The data is integral to decision-making on coastal resilience efforts to save lives, implement proper infrastructure planning, and protect sensitive coastal ecosystems in light of ocean-born natural disasters.

IV. Proposal Eligibility

This matching fund opportunity is available to non-Federal entities. Examples of non-Federal entities include state and local governments, tribal entities, universities, researchers and academia, the private sector, non-governmental organizations (NGOs), and philanthropic partners. Qualifying proposals must demonstrate the ability to provide at least 30 percent of the funds needed for the proposed project. A coalition of non-Federal entities may assemble funds for the match and submit a proposal jointly. Use of other Federal agency funds as part of the non-Federal entities' match funds will be considered on a case-by-case basis and only as authorized by applicable laws. In-kind contributions are welcome to strengthen the project proposal but do not count toward the match and are not required.

V. Selection Criteria

Proposals will be evaluated by the Rear Admiral Richard T. Brennan Ocean Mapping Fund Program Management Team. Submissions will be ranked based on the following selection criteria:

1. Project justification (30 points)—This criterion ascertains whether there is intrinsic IOCM value in the proposed work and/or relevance to NOAA's missions and priorities (several noted in Section III), including downstream partner proposals and uses. Use of, and reference to, national priorities on coastal climate resilience and infrastructure, NOMEC, ACMS, the Coast Survey *Ocean Mapping Plan,* and OCAP; gap assessment tools such as the U.S. Bathymetry Gap Analysis; and the U.S. Interagency Elevation Inventory, among others, are recommended. The U.S. Mapping Coordination site shows current NOAA mapping plans as well as the latest in Federal mapping priorities and select regional mapping priorities.

2. Statement of need (10 points)—This criterion assesses clarity of project need, partner project funding alternatives if not selected, anticipated outcomes, and public benefit.

3. Specified partner match (20 points)—The proposal identifies a point of contact for the entity submitting the proposal, as well as any partnering entities, a clear statement on partner matching funds provenance (*e.g.,* state appropriations, NGO funds, or other sources) and timing of funds availability. In-kind contributions are welcome to strengthen the proposal but do not count toward the funding match and are not required.

4. Project costs (15 points)—This criterion evaluates whether the proposed budget is realistic and commensurate with the proposed project needs and timeframe.

5. Project feasibility and flexibility (25 points)—This criterion assesses the likelihood that the proposal would succeed, using evaluations of survey conditions, project size, location, weather, NOAA analysis of environmental compliance implications, project flexibility and adaptability to existing NOAA plans and schedules, and other factors.

During the proposal review period, the Rear Admiral Richard T. Brennan Ocean Mapping Fund Program Management Team reserves the right to engage with proposal points of contact to ask questions and provide feedback on project costs and feasibility.

VI. Submission Requirements

Project Proposal—To qualify, a proposal shall not exceed six (6) total pages and must include the following three components:

1. A project title; executive summary (3–5 sentences); and the names, affiliations, and roles of the project partners and any co-investigators, as well as the project lead that will serve as primary contact (1 page maximum).

2. A justification and statement of need; description and graphics of the proposed survey area, including relevance to the strategic areas of focus noted in Section III and degree of flexibility on timing of survey effort (4 pages maximum).

3. A project budget that lists the source(s) and amount(s) of funding that the partner would provide as its match to NOAA. Budget must confirm that partner funds can be transferred to NOAA before October 2024 (1 page maximum).

Proposals must be sent in a PDF format, and use 12-point, Times New Roman font, single spacing, and 1-inch margins. Failure to adhere to these submission requirements will result in the proposal being returned without review and eliminated from further consideration.

To facilitate review, NOAA welcomes the submission of GIS files of project areas. These ancillary GIS files must be in SHP format.

VII. Management and Oversight

Once the Rear Admiral Richard T. Brennan Ocean Mapping Fund Program Management Team selects project proposals, NOAA will coordinate the development of agreements, funding transfers, project planning, environmental compliance, acquisition awards, and quality assurance process with the project partners. NOAA may bring in additional partners and/or funding (Federal and/or non-Federal) to expand a project further, if feasible. Projects will be reviewed by NOAA annually to ensure they are responsive to partner interests and NOAA mission requirements, and to identify opportunities for outreach and education on the societal benefits of the work.

Authority: 33 U.S.C. 883e.

RDML Benjamin K. Evans,

Director, Office of Coast Survey, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2023–15419 Filed 7–19–23; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648–XC919]

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

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

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

SUMMARY: NMFS has received a request from the Alaska Department of Transportation and Public Facilities (ADOT&PF) for authorization to take marine mammals incidental to ferry berth construction in Tongass Narrows in Ketchikan, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1-year renewal that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the

end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than August 21, 2023.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to *ITP.Fleming@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, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *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.

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: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.* In case of problems accessing these documents, please call the contact listed below.

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

SUPPLEMENTARY INFORMATION:

Background

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

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

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must review our proposed action (*i.e.,* the issuance of an IHA) with respect to potential impacts on the human environment. This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

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

Summary of Request

On January 24, 2023, NMFS received a request from ADOT&PF for an IHA to take marine mammals incidental to the construction and improvements to four (initially five—see explanation below) ferry berths in Tongass Narrows in Ketchikan, Alaska. On February 23, 2023, ADOT&PF submitted a memo proposing additional construction activities at this project site, which was later retracted on March 21, 2023. Following NMFS' review of the application and discussions between NMFS and ADOT&PF, on May 2, 2023, ADOT&PF asked NMFS to halt processing of the IHA until it submitted an acoustic monitoring report associated with previous work at the project site. ADOT&PF submitted the report on May 24, 2023. NMFS reviewed and accepted the results in the report, and the application was deemed adequate and complete on June 27, 2023. ADOT&PF's request is for take of eleven species of marine mammals, by Level B harassment and, for Steller sea lion (*Eumetopias jubatus*), harbor seal (*Phoca vitulina*), northern elephant seal (*Mirounga angustirostris*), harbor porpoise (*Phocoena phocoena*), and Dall's porpoise (*Phocoenoides dalli*), Level A harassment. Neither ADOT&PF nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued two consecutive IHAs to ADOT&PF for this work (85 FR 673, January 7, 2020), which covered construction at the following six sites: Revilla New Ferry Berth and Upland Improvements (Revilla New Berth), New Gravina Island Shuttle Ferry Berth/Related Terminal Improvements (Gravina New Berth), Gravina Airport Ferry Layup Facility, Gravina Freight Facility, Revilla Refurbish Existing Ferry Berth Facility, and Gravina Refurbish Existing Ferry Berth Facility (Figure 1). Due to various project delays (and two minor changes to the phase 1 IHA activities), the phase 1 IHA was renewed (86 FR 23938, May 05, 2021) and the phase 2 IHA was reissued (87 FR 12117, March 3, 2022). Upon the expiration of the phase 1 renewal, because a subset of work had still not been completed, ADOT&PF requested, and NMFS issued, a new IHA (87 FR 15387, March 18, 2022) which was renewed upon its expiration (88 FR 13802, March 6, 2023). The reissued phase 2 IHA expired on February 28, 2023. While the current renewal IHA (88 FR 13802, March 6, 2023) does not expire until March 5, 2024, ADOT&PF proposed new project components that would warrant a new IHA, and a subset of activities covered under the reissued phase 2 IHA remain incomplete. As such, ADOT&PF has requested a new IHA to authorize take of marine mammals associated with all remaining work at the Tongass Narrows sites. Work at the Gravina Airport Ferry Layup Facility was completed prior to the application of this new IHA. Since the submission of ADOT&PF's 2023 IHA application, work has also been completed at the Gravina Freight

Facility. As such, remaining work proposed is limited to four project sites: Revilla New Berth, Gravina New Berth, Revilla Refurbish Existing Ferry Berth Facility, and Gravina Refurbish Existing Ferry Berth Facility. ADOT&PF has complied with all the requirements (*e.g.,* mitigation, monitoring, and reporting) of the previous IHAs with the exception of one incident in which ADOT&PF reported that a pile had been removed without the presence of a Protected Species Observer (PSO) on site. ADOT&PF reported the incident immediately and retrained the Construction Contractor's Foreman and ADOT&PF's on-site representative. ADOT&PF also notified NMFS on May 18, 2023 that 12 20'' piles that were not included in the renewal, but were included in the initial IHA on which the renewal was based, were driven after expiration of the initial IHA (while the renewal was effective). Monitoring results from the previous IHAs are discussed in the Potential Effects of Specified Activities on Marine Mammals and their Habitat and the Estimated Take of Marine Mammals section.

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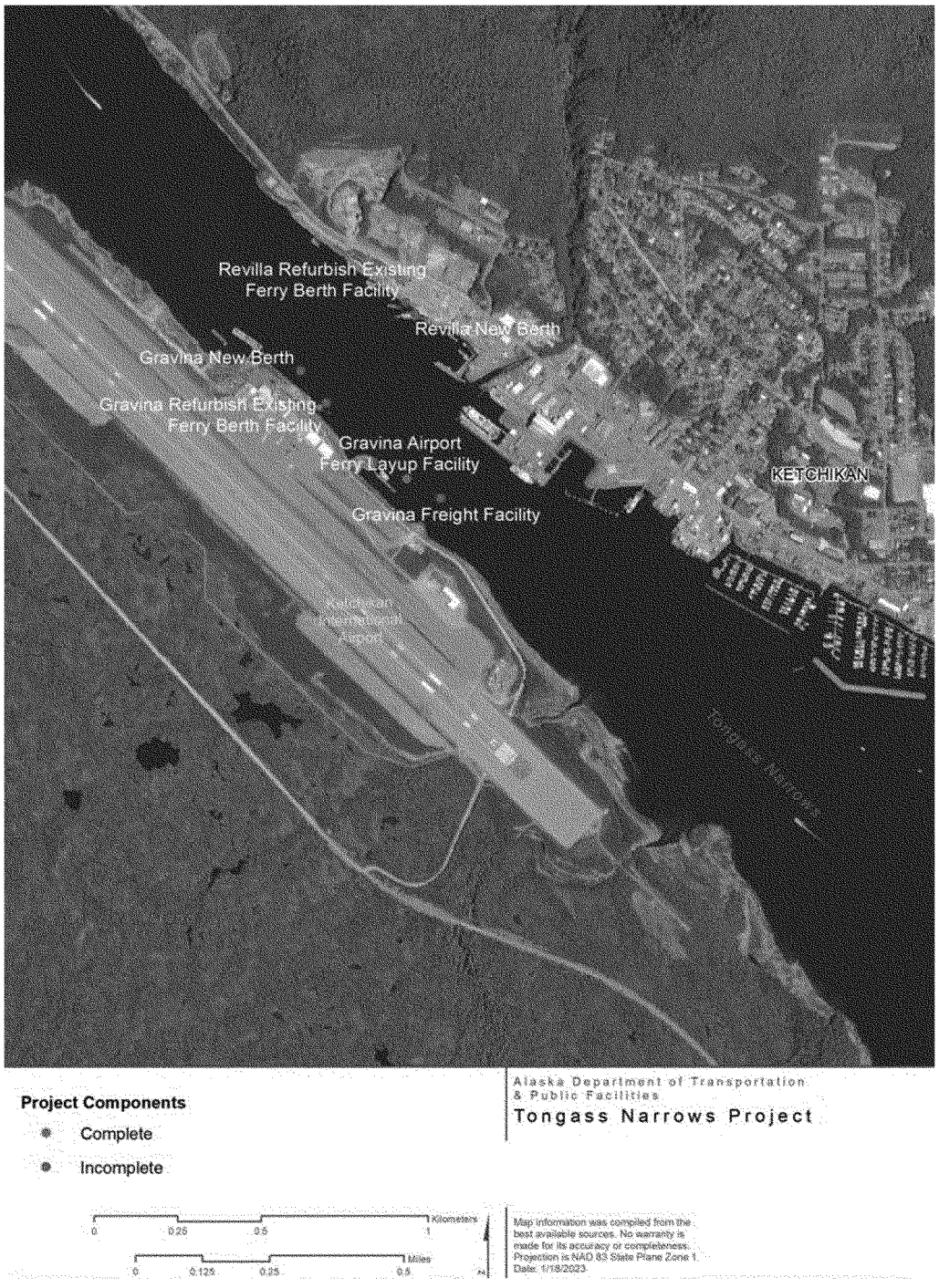

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Figure 1—Tongass Narrows Project Area

Description of Proposed Activity

Overview

ADOT&PF is making improvements to two existing ferry berths and constructing two new ferry berths on Gravina Island and Revillagigedo (Revilla) Island in Tongass Narrows, near Ketchikan, in southeast Alaska (Figure 1). The existing ferry facilities improve access to developable land on Gravina Island, improve access to the Ketchikan International Airport, and facilitate economic development in the Ketchikan Gateway Borough. The new ferry berths provide redundancy to the existing ferry berths. The project's proposed activities that have the potential to take marine mammals, by Level A harassment and Level B harassment, include down-the-hole (DTH) drilling of rock sockets and tension anchors, vibratory installation and removal of temporary steel pipe piles and/or H-piles, vibratory and impact installation of permanent steel pipe piles, and vibratory removal of permanent piles (in cases where work is being redone). The marine construction associated with the proposed activities is planned to occur over 131 non-consecutive days over 1 year.

Dates and Duration

ADOT&PF anticipates the project would require approximately 131 days of pile installation and removal over the course of 1 year. Construction is planned to occur during daylight hours only with in-water construction occurring 7 days per week. This IHA would be effective for 1 year from the date of issuance.

Specific Geographic Region

The proposed construction project is in Tongass Narrows in Ketchikan, Alaska, on Revilla Island, 2.6 miles (4.2 kilometers) north of downtown Ketchikan, and Gravina Island, adjacent to the Ketchikan International Airport. All project components are located within approximately 0.5 miles (0.8 kilometers) of one another within the City of Ketchikan (Figure 1). The Revilla New Berth and Gravina New Berth are being constructed immediately adjacent to the existing ferry berths on Revilla and Gravina Islands, respectively.

A description of Tongass Narrows was provided in the proposed **Federal Register** notice for an IHA associated with previous work completed at these project sites (87 FR 5980, February 2, 2022). Please refer to that notice for additional information.

Detailed Description of the Specified Activity

Planned construction includes the installation and continued construction of new ferry facilities and the renovation of existing structures. As stated above, the four proposed construction components include: Revilla New Berth, Gravina New Berth, Revilla Refurbish Existing Ferry Berth Facility, and Gravina Refurbish Existing Ferry Berth Facility. Each of the project components would include installation and/or removal of steel pipe piles that are 24 or 30-inches diameter, or steel 14-inch H-piles using vibratory, impact, and/or DTH methods (Table 1). ADOT&PF does not plan to operate multiple hammers concurrently.

Revilla New Berth

The Revilla New Berth facility will consist of a 7,400-square-foot (687.5 square meter) pile-supported approach trestle at the shore side of the ferry terminal and a 1,500-square-foot (139.4 square meter) pile-supported approach trestle extension located landside and north of the new approach trestle. A 25-foot (17.6 meters) by 142-foot (43.3 meters) steel transfer bridge with vehicle traffic lane and separated pedestrian walkway will extend from the trestle to a new 2,200- square-foot (204.4 square meter) steel float and apron. The steel float will be supported by three guide pile dolphins. Two new stern berth dolphins with fixed hanging fenders and three new floating fender dolphins will be constructed to moor vessels. The new apron will be supported by three new guide pile dolphins. Water depths at the dolphins will reach approximately 60 feet (18.3 meters). Some permanent piles originally installed in previous years may need to be removed and reinstalled in the correct locations (Table 1).

Gravina New Berth

The Gravina New Berth facility will consist of an approximately 7,000-square-foot (650.3 square meter) pile-supported approach trestle at the shore side of the ferry terminal. A 25-foot (17.6 meters) by 142-foot (43.3 meters) steel transfer bridge with a vehicle traffic lane and separated pedestrian walkway will lead to a new 2,200-square-foot 204.4 square meter steel float and apron. The steel float will be supported by three new guide pile dolphins. Ferry berthing will be supported by two new stern berth dolphins and three new floating fender dolphins. To support the new facility, a new bulkhead retaining wall will be constructed between the existing ferry berth and the new approach trestle. A new fill slope measuring approximately 21,200 square feet (1,969.5 square meter) will be constructed west of the approach trestle. Upland improvements include widening of the ferry approach road, retrofits to the existing pedestrian walkway, installation of utilities, and construction of a new employee access walkway.

Revilla Refurbish Existing Ferry Berth

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 one remaining dolphin.

Gravina Refurbish Existing Ferry Berth

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. Some piles installed in previous years may need to be removed and reinstalled (Table 1).

Across the four project sites, three methods of pile installation are anticipated. These include use of vibratory and impact hammers and use of DTH systems to make holes for rock sockets and tension anchors at some locations. Installation of steel piles through the overburden layer would be accomplished using vibratory or impact methods. Where the overburden is deep, rock socketing or anchoring (described below) is not required, and the final approximately 10 ft (3 m) of driving would be conducted using an impact hammer. Some permanent piles would be battered (*i.e.,* installed at an angle). In shallow overburden, an impact hammer would be used to seat the piles into competent bedrock before a DTH system would be used to create holes for the rock sockets and/or tension anchors. The pile installation methods used would depend on overburden depth and conditions at each pile location. A description of DTH methods for rock

socketing and tension anchor installation was provided in the notice of proposed IHA associated with previous work completed at these project sites (87 FR 5980, February 2, 2022). Vibratory methods would also be used to remove temporary steel pipe piles. These proposed activities and the noise they produce have the potential to take marine mammals, by Level A harassment and Level B harassment of marine mammals.

The estimated installation rate of piles vary depending on pile type and location (Table 1). On some days, more or fewer piles or partial piles may be installed. It would likely not be possible to install an individual permanent pile to refusal with a vibratory hammer, use DTH methods for the rock socket, impact proof, and install the tension anchor on the same day. The construction crew may use a single installation method for multiple piles on a single day or find other efficiencies to increase production; the anticipated ranges of possible values are provided in Table 1.

Approximately 131 days of pile installation and removal are anticipated (Table 1). Note that ADOT&PF's application reflects 152 construction days rather than 131, but this number has been adjusted to account for one of five sites that has been completed. Up to 26 permanent piles previously installed will be removed and reinstalled. An additional 51 permanent piles will be installed. An additional 84 template piles will be installed and removed.

Above-water work would 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 associated take of marine mammals is anticipated from the noise or visual disturbance. Therefore, above-water and upland construction activities are not discussed further in this document.

TABLE 1—PILE DETAILS FOR EACH PROJECT COMPONENT

Project component / Pile type	Number of piles	Number of rock sockets	Number of tension anchors	Average vibratory duration per pile (minutes)	Average DTH duration for rock sockets per pile (minutes)	Average DTH duration for tension anchors per pile (minutes)	Impact strikes per pile (duration in minutes)	Estimated total number of hours per pile (range)	Average piles per day (range)	Days of installation and removal
Revilla New Berth (Installation):										
30″ Permanent	13	.....	3	30	.....	120–240	200 (15)	2 (0.75–4.75)	1 (1–3)	13
24″ or 14″ H Template	28	.....	.....	120	.....	.....	50 (15)	2.25	2 (1–4)	14
Revilla New Berth (Removal):										
30″ Permanent	13	.....	.....	60	.....	.....	.....	1	3 (1–6)	5
24″ or 14″ H Template	28	.....	.....	60	.....	.....	.....	1	6 (1–8)	5
Gravina New Berth (Installation):										
24″ Permanent	27	11	28	30	180–360	120–240	200 (15)	6 (2.75–10.75)	1 (1–3)	27
24″ or 14″ H Template	24	.....	.....	120	.....	.....	50 (15)	2.25	2 (1–4)	12
Gravina New Berth (Removal):										
24″ or 14″ H Template	24	.....	.....	60	.....	.....	.....	1	6 (1–8)	4
Revilla Refurbish Existing Ferry Berth Facility (Installation):										
24″ Permanent	1	.....	.....	120	.....	.....	200 (15)	2.25	1	1
Revilla Refurbish Existing Ferry Berth Facility (Removal):										
24″ Permanent	1	.....	.....	60	.....	.....	.....	1	1	1
Gravina Refurbish Existing Ferry Berth Facility (Installation):										
24″ Permanent	23	13	16	30	180–360	120 (120–240)	200 (15)	6 (2.75–10.75)	1 (1–3)	23
24″ or 14″ H Template	32	.....	.....	120	.....	.....	50 (15)	2.25	2 (1–4)	16
Gravina Refurbish Existing Ferry Berth Facility (Removal):										
24″ Permanent	12	.....	.....	60	.....	.....	.....	1	3 (1–6)	4
24″ or 14″ H Template	32	.....	.....	60	.....	.....	.....	1	6 (1–8)	6

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

Description of Marine Mammals in the Area of Specified Activities

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

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this activity, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a

marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or proposed to be authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Alaska and Pacific Ocean 2021 SARs (*e.g.,* Muto *et al.,* 2022, Caretta *et al.* 2022) and the draft 2022 SARs (*e.g.,* Young *et. al.,* 2022). All values presented in Table 2 are the most recent available at the time of publication (including from the draft 2022 SARs) and are available online at: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 2—MARINE MAMMAL SPECIES LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR	Annual M/SI [3]
Order Artiodactyla—Infraorder Cetacea—Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals):						
Minke Whale [4]	*Balaenoptera acutorostrata*	AK	-,-,N	N/A (N/A, N/A, N/A)	UND	0
Fin Whale [5]	*Balaenoptera physalus*	Northeast Pacific	E, D, Y	3,168 (0.26, 2,554, 2013)	UND	0.6
Humpback Whale	*Megaptera novaeangliae*	Central North Pacific	-,-,Y	10,103 (0.3, 7,891, 2006)	3.4	4.46
Family Eschrichtiidae:						
Gray whale	*Eschrichtius robustus*	Eastern North Pacific	-,-,N	26,960 (0.05, 25,849, 2016).	801	131
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae:						
Pacific White-sided Dolphin	*Lagenorhynchus obliquidens*	N Pacific	-,-,N	26,880 (N/A, N/A, 1990)	UND	0
Killer Whale	*Orcinus orca*	Eastern North Pacific Alaska Resident.	-,-,N	1,920, (N/A, 1,920, 2019)	19	1.3
		Eastern North Pacific Northern Resident.	-,-,N	302 (N/A, 302, 2018)	2.2	0.2
		West Coast Transient	-,-,N	349 (N/A, 349, 2018)	3.5	0.4
Family Phocoenidae (porpoises):						
Harbor Porpoise [6]	*Phocoena phocoena*	Southeast Alaska	-,-,Y	1302 (0.21, 1057, 2019)	UND	34
Dall's Porpoise [7]	*Phocoenoides dalli*	Alaska	-,-,N	15,432 (0.097, 13,110, 2021).	131	37
Order Carnivora—Pinnipedia						
Family Otariidae (eared seals and sea lions):						
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-,-,N	43,201 (N/A, 43,201, 2017).	2,592	112
Family Phocidae (earless seals):						
Northern Elephant Seal	*Mirounga angustirostris*	CA Breeding	-,-,N	187,386 (N/A, 85,369, 2013).	5,122	13.7
Harbor Seal	*Phoca vitulina*	Clarence Strait	-,-,N	27,659 (N/A, 24,854, 2015).	746	40

[1] 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: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

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

[4] No population estimates have been made for the number of minke whales in the entire North Pacific. Some information is available on the numbers of minke whales on some areas of Alaska, but in the 2009, 2013 and 2015 offshore surveys, so few minke whales were seen during the surveys that a population estimate for the species in this area could not be determined (Rone *et al.,* 2017). Therefore, this information is N/A (not available).

[5] The best available abundance estimate for this stock is not considered representative of the entire stock as surveys were limited to a small portion of the stock's range. Based upon this estimate and the Nmin, the PBR value is likely negatively biased for the entire stock.

[6] Abundance estimates assumed that detection probability on the trackline was perfect; work is underway on a corrected estimate. Additionally, preliminary data results based on eDNA analysis show genetic differentiation between harbor porpoise in the northern and southern regions on the inland waters of southeast Alaska. Geographic delineation is not yet known. Data to evaluate population structure for harbor porpoise in Southeast Alaska have been collected and are currently being analyzed. Should the analysis identify different population structure than is currently reflected in the Alaska SARs, NMFS will consider how to best revise stock designations in the future.

[7] Previous abundance estimates covering the entire stock's range are no longer considered reliable and the current estimates presented in the SARs and reported here only cover a portion of the stock's range. Therefore, the calculated Nmin and PBR is based on the 2015 survey of only a small portion of the stock's range. PBR is considered to be biased low since it is based on the whole stock whereas the estimate of mortality and serious injury is for the entire stock's range.

On January 24, 2023, NMFS published the draft 2022 SARs (*https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region*). The Alaska and Pacific Ocean

SARs include a proposed update to the humpback whale and harbor porpoise stock structures. The new humpback whale structure, if finalized, would modify the MMPA-designated stocks to align more closely with the ESA-designated Distinct Population Segments (DPS). The new harbor porpoise structure, if finalized, would modify the Southeast Alaska stock into three stocks: the Northern Southeast Alaska Inland Waters, Southern Southeast Alaska Inland Waters, and Yakutat/Southeast Alaska Offshore Waters. Please refer to the draft 2022 Alaska and Pacific Ocean SARs for additional information.

NMFS Office of Protected Resources, Permits and Conservation Division has generally considered peer-reviewed data in draft SARs (relative to data provided in the most recent final SARs), when available, as the best available science, and has done so here for all species and stocks, with the exception of the new proposals to revise harbor porpoise and humpback whale stock structure. Given that the proposed changes to these stock structures involve application of NMFS's Guidance for Assessing Marine Mammals Stocks and could be revised following consideration of public comments, it is more appropriate to conduct our analysis in this proposed authorization based on the status quo stock structures identified in the most recent final SARs for these species (2021; Muto *et al.,* 2022).

As indicated above, all 11 species (with 13 managed stocks) in Table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur.

In addition, the northern sea otter may be found in Tongass Narrows. However, northern sea otters are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

Minke Whale

Minke whale surveys in Southeast Alaska have consistently identified individuals throughout inland waters in low numbers (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. No information appears to be available on the winter occurrence of minke whales in Southeast Alaska.

There are no known occurrences of minke whales within the project area. No minke whales were reported during the nearby City of Ketchikan (COK) Rock Pinnacle Blasting Project (Sitkiewicz 2020) located approximately 2.5 miles (4 kilometers) southeast of the proposed project site, or across 8 months of monitoring at Ward Cove Cruise Ship Dock in 2020, located approximately 3.7 miles (6 kilometers) northwest of the Project site (Power Systems and Supplies of Alaska, 2020). Additionally, no minke whales were observed during the marine mammal monitoring that took place during construction of previous components of the Tongass Narrows Project (ADOT&PF 2021, 2022, 2023). However, since minke whale have been observed in southeast Alaska, including in Clarence Strait (Dahlheim *et al.,* 2009), it is possible the species could occur near the project area. Future observations of minke whale in the project area are expected to be rare.

Fin Whale

Fin whales in the Northeast Pacific are typically distributed off the coast of the Gulf of Alaska and the Bering and Chukchi Seas. They are seldom detected outside the Gulf of Alaska in summer months, suggesting that the northern populations are migratory (Muto *et al.* 2021). They typically inhabit deep, offshore waters and often travel in open seas away from coasts. They often occur in social groups of two to seven individuals. Fin whales are not expected to occur in Tongass Narrows, but a single fin whale was recently observed in Clarence Strait (Scheurer, personal communication).

Humpback Whale

Humpback whales in the project area are predominantly of the Hawaii DPS, which is not ESA-listed. However, based on a comprehensive photo-identification study, individuals of the Mexico DPS, which is listed as threatened, are known to occur in Southeast Alaska. Individuals 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 2 percent of all humpback whales in Southeast Alaska and northern British Columbia are of the Mexico DPS, while all others are of the Hawaii DPS (NMFS 2021).

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.* 2021).

The project area overlaps a Biologically Important Area (BIA) identified as important for humpback whale feeding (Wild *et al.,* 2023). The BIA that overlaps the project area is active May through September, which overlaps with ADOT&PF's planned work period (any time of year). According to the criteria outlined in Harrison *et al.* (2023), the BIA is considered to be of lower importance, has low boundary certainty, and limited data to support the identification of the BIA. The BIA was identified as having ephemeral spatiotemporal variability.

Most humpback whales migrate to other regions during the winter to breed, but rare events of over-wintering humpbacks have been noted, and may be attributable to staggered migration (Straley, 1990; Straley *et al.* 2018). Group sizes in Southeast Alaska generally range from one to four individuals (Dahlheim *et al.* 2009). No systematic studies have documented humpback whale abundance near Ketchikan. Anecdotal information suggests that this species is present in low numbers year-round in Tongass Narrows, with the highest abundance during summer and fall. PSOs associated with previous construction activities at this site have monitored the project site across 215 days between October 2020—February 2021, May 2021—February 2022, and March 2022—December 2022 (ADOT&PF 2021, 2022, 2023). During this time, 80 humpback whales were observed, or an average of 0.37 humpback whales per day. According to ADOT&PF, the average group size was 1.25 humpback whales and the maximum group size was 4 humpback whales. Humpbacks were also detected during marine mammal monitoring associated with other projects in Tongass Narrows. The COK Rock Pinnacle project reported one humpback whale sighting of one individual during the project (December 2019—January 2020) (Sitkiewicz 2020). During the Ward Cove Cruise Ship Dock Construction, PSOs observed 28 sightings of humpbacks on 18 days of in water work that occurred between February and September 2020, with at least one humpback being recorded every month. A total of 42 individuals were recorded and group sizes ranged from solo whales to pods of up to 6 (Power Systems & Supplies of Alaska 2020). Humpbacks were recorded in each month of construction, with the most individuals (10) being recorded in May, 2020.

Gray Whale

Gray whales are distributed throughout the North Pacific Ocean and

are found primarily in shallow coastal waters (Muto *et al.,* 2021). Gray whales in the Eastern North Pacific stock range from the southern Gulf of California, Mexico to the arctic waters of the Bering and Chukchi Seas. Gray whales are generally solitary and travel together alone or in small groups.

Gray whales are rare in the action area and unlikely to occur in Tongass Narrows. They were not observed during the Dahlheim *et al.* (2009) surveys of Alaska's inland waters with surveys conducted in the spring, summer and fall months. No gray whales were reported during the COK Rock Pinnacle Blasting Project (Sitkiewicz, 2020) or during monitoring surveys conducted between February and September 2020 as part of the Ward Cove Cruise Ship Dock (Power Systems & Supplies of Alaska, 2020), nor were they observed during 215 days of monitoring associated with the previous ADOT&PF Tongass Narrows construction activities (ADOT&PF 2021, 2023). However a gray whale could migrate through or near the project during November especially.

There is an ongoing Unusual Mortality Event (UME) involving gray whales on the Pacific Coast (*https://www.fisheries.noaa.gov/national/marine-life-distress/2019-2023-gray-whale-unusual-mortality-event-along-west-coast-and*). A definitive cause has not been found for the UME but many of the animals show signs of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. As part of the UME investigation process, NOAA has assembled an independent team of scientists to coordinate with the Working Group on Marine Mammal Unusual Mortality Events to review the data collected, sample stranded whales, consider possible causal-linkages between the mortality event and recent ocean and ecosystem perturbations, and determine the next steps for the investigation.

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.,* 2021). Despite their distribution mostly in deep, offshore waters, they also occur over the continental shelf and near shore waters, including inland waters of Southeast Alaska (Ferrero and Walker 1996). The North Pacific stock occurs within the project area. Group sizes have been reported to range from 40 to over 1,000 animals, but groups of between 10 and 100 individuals (Stacey and Baird 1991) occur most commonly. Seasonal movements of Pacific white-sided dolphins are not well understood, but there is evidence of both north-south seasonal movement (Leatherwood *et al.* 1984) and inshore-offshore seasonal movement (Stacey and Baird 1991).

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 *et al.* (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. Dalheim *et al.* (2009) frequently encountered Pacific white-sided dolphin in Clarence Strait with significant differences in mean group size and rare enough encounters to limit the seasonality investigation to a qualitative note that spring featured the highest number of animals observed. These observations were noted most typically in open strait environments, near the open ocean. Mean group size was over 20, with no recorded winter observations nor observations made in the Nichols Passage or Behm Canal, located on either side of the Tongass Narrows.

Pacific white-sided dolphins were not observed during the 215 days of marine mammal monitoring associated with ADOT&PF's previous construction activities at this site (ADOT&PF 2021, 2023). There were also no sightings of Pacific white-sided dolphins during the COK Rock Pinnacle Blasting Project during monitoring surveys conducted in December 2019 and January 2020 (Sitkiewicz 2020) nor during monitoring surveys for the Ward Cove Cruise Ship Dock Project (Power Systems and Supplies of Alaska, 2020).

Observational data and anecdotal information discussed above, indicates there is a rare, however, slight potential for Pacific white-sided dolphins to occur in the project area.

Killer Whale

Of the eight killer whale stocks that are 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.,* 2021).

There are three distinct ecotypes, or forms, of killer whales recognized: Resident, Transient, and Offshore. The three ecotypes differ morphologically, ecologically, behaviorally, and genetically. 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). Spatial distribution has been shown to vary among the different ecotypes, with resident and, to a lesser extent, transient killer whales more commonly observed along the continental shelf, and offshore killer whales more commonly observed in pelagic waters (Rice *et al.,* 2021).

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).

While no systematic studies of killer whales have been conducted in or around Tongass Narrows, killer whales have been observed in Tongass Narrows year-round and are most common during the summer Chinook salmon run (May-July). During this time, Ketchikan residents have reported pods of 20–30 whales and during the 2016/2017 winter a pod of 5 whales was observed in Tongass Narrows (84 FR 36891, July 30, 2019).

Across the 215 days of monitoring during ADOT&PF's previous Tongass Narrows construct activities, a total of 78 killer whales were observed, for an average observation rate of 0.36 per day (ADOT&PF 2021, 2023). According to ADOT&PF, the average group size observed was 4.6 individuals while the maximum group size was eight. Killer whales have been observed occasionally during other projects completed in the Tongass Narrows. During the COK's

monitoring for the Rock Pinnacle Removal project in December 2019 and January 2020, no killer whales were observed (Sitkiewicz 2020). Over 8 months of monitoring at the Ward Cove Cruise Ship Dock in 2020, killer whales were only observed on 2 days in March (Power Systems and Supplies of Alaska, 2020). These observations included a sighting of one pod of two killer whales and a second pod of five individuals travelling through the project area. Killer whales tend to transit through Tongass Narrows and do not linger in the project area.

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. The stock delineations of harbor porpoise under the MMPA are currently under review. Until this review is complete, NMFS considers harbor porpoise in Southeast Alaska to be 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.* 2021). Only the Southeast Alaska stock is considered herein 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; Dahlheim *et al.* 2015).

Studies of harbor porpoises reported no evidence of seasonal changes in distribution for the inland waters of Southeast Alaska (Dahlheim *et al.* 2009).

Harbor porpoises often travel alone or in small groups less than 10 individuals (Schmale 2008). According to aerial surveys of harbor porpoise abundance in Alaska conducted in 1991–1993, mean group size in Southeast Alaska was calculated to be 1.2 animals (Dahlheim *et al.* 2000).

Harbor porpoises prefer shallower waters (Dahlheim *et al.* 2015) and generally avoid areas with elevated levels of vessel activity and noise such as Tongass Narrows. However, harbor porpoises were sighted on 3 days of in-water work during monitoring associated with the Ward Cove Cruise Ship Dock, with three sightings of 15 individuals sighted in March and April, 2020 (Power Systems and Supplies of Alaska, 2020). Solo individuals and pods of up to 10 were identified as swimming and travelling 2,500 m to 2,800 m from in-water work. During ADOT&PF's marine mammal monitoring of Tongass Narrows, 21 harbor porpoises were observed during the March–December 2022 season, and ADOT&PF recently reported that 4 harbor porpoise were observed in the project area. Across all years, ADOT&PF reported an average group size of 3.5 and maximum group size was 5. Marine mammal monitoring associated with the COK Rock Pinnacle Removal project did not observe any harbor porpoise during surveys conducted in December 2019 and January 2020 (Sitkiewicz 2020). As such, 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. All Dall's porpoises in Alaska are of the Alaska stock. This species can be found in offshore, inshore, and nearshore habitat.

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). 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. This species may occur in the project area a few times per year.

Marine mammal monitoring associated with the COK Rock Pinnacle Removal project did not observe any Dall's porpoise during surveys conducted in December 2019 and January 2020 (Sitkiewicz 2020). However, eight Dall's porpoises were observed on 2 days of in-water work during monitoring associated with the Ward Cove Cruise Ship Dock in March and April 2020 (Power Systems and Supplies of Alaska, 2020). Additionally, 28 Dall's porpoise were observed during ADOT&PF's Tongass Narrows marine mammal monitoring across 215 days (ADOT&PF 2021, 2023). ADOT&PF reported that the average group size across all years was 5.6 and the maximum group size was 10.

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 DPSs (and MMPA stocks) in 1997 (62 FR 24345, May 5, 1997). The eastern DPS remained classified as threatened until it was delisted in November 2013. 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.

There are several mapped and regularly monitored long-term Steller sea lion haulouts surrounding Ketchikan, such as West Rocks (36 miles (58 kilometers) from Ketchikan) or Nose Point (37 miles (60 kilometers) from Ketchikan), but none are known to occur within Tongass Narrows (Fritz *et al.* 2016). The nearest known Steller sea lion haulout is located approximately 20 miles (58 kilometers) 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 and dated sample, it suggests that abundance may be consistent year-round at the Grindall Island haulout.

Steller sea lions occur in Tongass Narrows year-round, and anecdotal reports suggest 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 (Federal Highway Administration 2017). During summer, Steller sea lions may aggregate outside the project area, at rookery and haulout sites. During the 215 days of marine mammal monitoring that took place during construction of previous components of the Tongass Narrows Project, a total of 322 Steller sea lions were observed (ADOT&PF 2021, 2023). Average group size reported was 1.25 individuals and maximum group size observed was five individuals. At least one individual was observed during

each month that monitoring took place. Monitoring during construction of the Ward Cove Dock, recorded 181 individual sea lions on 44 days between February and September 2020 (Power Systems & Supplies of Alaska, 2020). Most sightings occurred in February (45 sightings of 88 sea lions) and March (34 sightings of 45 sea lions); the fewest number of sightings were observed in May (one sighting of one sea lion) (Power Systems & Supplies of Alaska, 2020).

Northern Elephant Seal

Northern elephant seals breed and give birth in California and Baja California, primarily on offshore islands (Stewart *et al.,* 1994). Spatial segregation in foraging areas between males and females is evident from satellite tag data (Le Beouf *et al.,* 2000). Males migrate to the Gulf of Alaska and western Aleutian Islands along the continental shelf to feed on benthic prey, while females migrate to pelagic areas in the Gulf of Alaska and the central North Pacific to feed on pelagic prey (Le Beouf *et al.,* 2000). Elephant seals spend a majority of their time at sea (average of 74.7 days during post breeding migration and an average of 218.5 days during the postmolting migration; Robinson *et al.,* 2012). Although northern elephant seals are known to visit the Gulf of Alaska to feed on benthic prey, they rarely occur on the beaches of Alaska.

Despite the low probability of northern elephant seals entering the project area, there have been recent reports of elephant seals occurring in and near the Tongass Narrows. Two northern elephant seals were observed during ADOT&PF's Tongass Narrows construction in 2022 (ADOT&PF 2021, 2023).

Harbor Seal

Harbor seals inhabit coastal and estuarine waters off Alaska. They haul out on rocks, reefs, beaches, and drifting glacial ice. They are generally non-migratory, with local movements associated with such factors as tides, weather, season, food availability, and reproduction (Muto *et al.,* 2021). They are opportunistic feeders and often adjust their distribution to take advantage of locally and seasonally abundant prey (Womble *et al.,* 2009; Allen and Angliss, 2015).

Harbor seals in Tongass Narrows are recognized as part of the Clarence Strait stock. Distribution of the Clarence Strait stock ranges from the east coast of Prince of Wales Island from Cape Chacon north through Clarence Strait to Point Baker and along the east coast of Mitkof and Kupreanof Islands north to Bay Point, including Ernest Sound, Behm Canal, and Pearse Canal (Muto *et al.,* 2021). In the project area, they tend to be more abundant during spring, summer and fall months when salmon are present in Ward Creek. During marine mammal monitoring associated with ADOT&PF's previous Tongass Narrows construction activities, 550 harbor seals were observed with an average of 1.2 harbor seals per day and a maximum group size of 5. During pre- and post-blasting monitoring completed for the COK pinnacle rock blasting project a total of 21 harbor seal sightings of 24 individuals were observed over 76.2 hours (Sitkiewicz 2020). Additionally, information from PSOs associated with on-going construction indicate a small number of harbor seals are regularly sighted at about 820 feet (250 meters) from the Project location (Wyatt, personal communication).

There are two key harbor seal haulouts about 7.1 miles (11.5 kilometers) from the project area on a mid-channel island to the southeast of the project site. Each haulout was monitored in 2022 with 10 harbor seals present at one site and 50 harbor seals present at the other (Richland, personal communication).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc.*). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in Table 3.

TABLE 3—MARINE MAMMAL HEARING GROUPS

[NMFS, 2018]

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

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

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

For more detail concerning these groups and associated frequency ranges,

please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

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

Acoustic effects on marine mammals during the specified activity can occur from impact and vibratory pile driving and removal and DTH. The effects of underwater noise from ADOT&PF's proposed activities have the potential to result in Level A harassment and Level B harassment of marine mammals in the action area.

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 (American National Standards Institute 1995). 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 use of DTH equipment. 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; National Institute of Occupational Safety and Health (NIOSH) 1998; 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).

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

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

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 DTH.

Acoustic Impacts

The introduction of anthropogenic noise into the aquatic environment from pile driving and removal and DTH 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 DTH 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 DTH 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 *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).

Behavioral Harassment—Exposure to noise from pile driving and removal and DTH 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; National Research Council (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 and 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; Melcón *et al.,* 2012). In addition, behavioral state of the animal plays a role in the type and severity of a behavioral response, such as disruption to foraging (*e.g.,* Sivle *et al.,* 2016). 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 (Goldbogen *et al.,* 2013).

Across 215 days between October 2020 and February 2021, May 2021 and February 2022, and March and December 2022, ADOT&PF documented observations of marine mammals during construction activities (*i.e.,* pile driving and removal and DTH) in Tongass Narrows (ADOT&PF 2023, 2022, 2023). According to ADOT's monitoring reports, potential takes by Level B harassment of 82 Steller sea lion, 100 harbor seals, 10 Dall's porpoise, 60 killer whale, 33 humpback whale; and 1 elephant seal were recorded during pile driving or DTH. Additionally, 1 potential take by Level A harassment of harbor seal was recorded. While in the Level B harassment zones, Steller sea lions and harbor seals were identified as traveling, foraging, swimming, milling, looking and sinking, vocalizing, and resting. Steller sea lions also dived, breached, slapped, and chuffed while harbor seal also played, hauled out, and entered the water.

Dall's porpoise and killer whales were observed milling and porpoising. Killer whales also swam, breached, and slapped; the humpback whale was observed traveling, diving, swimming, foraging, breaching, chuffing, milling and swimming away from in-water work. Given the project is a continuation of these previous activities in the same location, we expect similar behavioral responses of marine mammals to ADOT&PF's specified activity. That is, disturbance, if any, is likely to be temporary and localized (*e.g.,* small area movements).

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

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

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

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well-studied through controlled experiments and for both laboratory and free-ranging animals (*e.g.,* Holberton *et al.* 1996; Hood *et al.* 1998; Jessop *et al.* 2003; Krausman *et al.* 2004; Lankford *et al.* 2005). Stress responses due to exposure to anthropogenic sounds or other stressors and their effects on marine mammals have also been reviewed (Fair and Becker 2000; Romano *et al.* 2002b) and, more rarely, studied in wild populations (*e.g.,* Romano *et al.* 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as ''distress.'' In addition, any animal experiencing TTS would likely also experience stress responses (NRC 2003), however distress is an unlikely result of this project based on observations of marine mammals during previous, similar projects in the area.

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

Airborne Acoustic Effects—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. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Marine Mammal Habitat Effects

ADOT&PF 's 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). ADOT&PF's 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 DTH, impact and vibratory pile driving or removal, elevated levels of underwater noise would ensonify a portion of Tongass Narrows and nearby waters where both fishes and mammals occur and could affect foraging success. Additionally, marine mammals may avoid the area during construction, however, displacement due to noise is expected to be temporary and is not expected to result in long-term effects to the individuals or populations. Construction activities are of short duration and would likely have temporary impacts on marine mammal habitat through increases in underwater and airborne sound.

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

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

Fish react to sounds 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. The reaction of fish to noise depends on the physiological state of the fish, past exposures, motivation (*e.g.,* feeding, spawning, migration), and other environmental factors. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish; several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan 2001, 2002; Popper and Hastings 2009). Several studies have demonstrated that impulse sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (*e.g.,* Fewtrell and McCauley, 2012; Pearson *et al.* 1992; Skalski *et al.* 1992; Santulli *et al.* 1999; Paxton *et al.* 2017). However, some studies have shown no or slight reaction to impulse sounds (*e.g.,* Pena *et al.* 2013; Wardle *et al.* 2001; Jorgenson and Gyselman, 2009; Cott *et al.* 2012).

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

The most likely impact to fish from pile driving and removal and DTH 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 COK is within Tongass Narrows and 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 migratory 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 DTH activities are expected to result in limited instances of take by Level B harassment 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 would be minimal impact on these marine mammals as prey.

In summary, given the short daily duration of sound associated with individual pile driving and DTH events and the small area being affected relative to available nearby habitat, pile driving and DTH 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 of Marine Mammals

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

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

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.,* impact and vibratory pile driving and removal and DTH) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, primarily for high frequency cetaceans, phocids, and otariids because predicted auditory injury zones are larger than for other hearing groups. Auditory injury is unlikely to occur for other groups. The proposed mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

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

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

Acoustic Thresholds

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

Level B Harassment—Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.,* frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.,* bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.,* Southall *et al.,* 2007, 2021, Ellison *et al.,* 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 µPa)) for continuous (*e.g.,* vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 µPa for non-explosive impulsive (*e.g.,* impact pile driving) or intermittent (*e.g.,* scientific sonar) sources. This take estimation includes disruption of behavioral patterns resulting directly in response to noise exposure (*e.g.,* avoidance), as well as the resulting indirectly form the associated impacts such as TTS or masking. ADOT&PF's proposed activity includes the use of continuous (vibratory pile driving/removal and DTH) and impulsive (impact pile driving and DTH) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 µPa are applicable.

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

These thresholds are provided in Table 4 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: *www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.*

TABLE 4—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS onset thresholds * (received level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1:* $L_{p,0\text{-pk,flat}}$: 219 dB; $L_{E,p,LF,24h}$: 183 dB	*Cell 2:* $L_{E,p,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3:* $L_{p,0\text{-pk,flat}}$: 230 dB; $L_{E,p,MF,24h}$: 185 dB	*Cell 4:* $L_{E,p,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5:* $L_{p,0\text{-pk,flat}}$: 202 dB; $L_{E,p,HF,24h}$: 155 dB	*Cell 6:* $L_{E,p,HF,24h}$: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7:* $L_{p,0\text{-pk,flat}}$: 218 dB; $L_{E,p,PW,24h}$: 185 dB	*Cell 8:* $L_{E,p,PW,24h}$: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9:* $L_{p,0\text{-pk,flat}}$: 232 dB; $L_{E,p,OW,24h}$: 203 dB	*Cell 10:* $L_{E,p,OW,24h}$: 219 dB.

* Dual metric 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 are recommended for consideration.

Note: Peak sound pressure level ($L_{p,0\text{-pk}}$) has a reference value of 1 µPa, and weighted cumulative sound exposure level ($L_{E,p}$) has a reference value of 1µPa²s. In this Table, thresholds are abbreviated to be more reflective of International Organization for Standardization standards (ISO 2017). The subscript "flat" is being included to indicate peak sound pressure are flat weighted or unweighted within the generalized hearing range of marine mammals (*i.e.,* 7 Hz to 160 kHz). 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 weighted 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 thresholds will be exceeded.

Ensonified Area

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

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

The intensity of pile driving sounds is greatly influenced by factors such as the type of piles (material and diameter), hammer type, and the physical environment (*e.g.,* sediment type) in which the activity takes place. The ADOT&PF evaluated SPL measurements available for certain pile types and sizes from similar activities elsewhere to determine appropriate proxy levels for their proposed activities. The ADOT&PF also initially referred to preliminary results from a sound source verification study to determine SPLs for DTH of 8-inch tension anchors and Transmission Loss values (TLs) for all DTH activities. As discussed in the Summary of Request section above, a Sound Source Verification (SSV) report detailing sound source values and TL coefficients collected at the project site was subsequently submitted.

To determine appropriate proxy SPLs for impact and vibratory pile driving of all pile types, NMFS completed a comprehensive review of source levels relevant to Southeast Alaska to generate regionally-specific source levels. NMFS compiled all available data from Puget Sound and Southeast Alaska and adjusted the data to standardize distance from the measured pile to 10 m.. NMFS then calculated average source levels for each project and for each pile type. NMFS weighted impact pile driving project averages by the number of strikes per pile following the methodology in Navy (2015). The source levels for these various pile types, sizes and methods are listed in Table 5. Additionally, ADOT&PF requested, and NMFS agreed, to use the 24-inch sound source values for impact or vibratory pile driving of 14-inch H-piles, because the source value of smaller piles of the same general type (steel) are not expected to exceed a larger pile.

NMFS recommends treating DTH systems as both impulsive and continuous, non-impulsive sound source types simultaneously. Thus, impulsive thresholds are used to evaluate Level A harassment, and continuous thresholds are used to evaluate Level B harassment. NMFS (2022) recommended guidance on DTH systems (*https://media.fisheries.noaa.gov/2022-11/PUBLIC%20DTH%20Basic%20Guidance_November%202022.pdf*) outlines its recommended source levels for DTH systems. NMFS has applied that guidance in this analysis (see Table 5 for NMFS' proposed source levels). Note that the values in this table represent the SPL referenced to a distance of 10 m (33 ft) from the source.

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

Absent site-specific acoustical monitoring with differing measured transmission loss, a practical spreading value of 15 is used as the transmission loss coefficient in the above formula. Site-specific transmission loss data for the Tongass Narrows are not available for vibratory pile installation and removal and impact pile driving; therefore, the default coefficient of 15 is used to determine the distances to the Level A harassment and Level B harassment thresholds for these activities and associated pile types. In the case of DTH activities, ADOT&PF conducted SSV at the project site for DTH of 24-inch rock sockets and 8-inch tension anchors. NMFS reviewed the TL data from this monitoring and has incorporated the most conservative transmission loss values measured for each pile type at the project site in its analysis herein (Table 5).

TABLE 5—ESTIMATES OF MEAN UNDERWATER SOUND LEVELS GENERATED DURING VIBRATORY AND IMPACT PILE INSTALLATION, DTH, AND VIBRATORY PILE REMOVAL

	RMS SPL (dB re 1 μPa)	SEL_{ss} (dB re 1 μPa^2 sec)	Peak SPL (dB re 1 μPa)	References levels (TL)	TL coefficient [1]
Vibratory Hammer					
30-inch steel piles	166	NA	NA	NMFS Analysis—C. Hotchkin April 24, 2023.	15
24-inch steel piles	163	NA	NA	NMFS Analysis—C. Hotchkin April 24, 2023.	15
Steel 14″ H-piles [3]	163	NA	NA	24-inch as proxy	15
DTH of Rock Sockets and Tension Anchors—Continuous					
24-inch (Rock Socket)	167	NA	NA	Heyvaert & Reyff 2021; (Reyff and Ambaskar 2023).	19.5
8-inch DTH (Tension Anchor)	156	NA	NA	Reyff & Heyvaert 2019; Reyff 2020; (Reyff and Ambaskar 2023).	17.1
Impact Hammer					
30-inch steel piles	195	183	210	NMFS Analysis—C. Hotchkin April 24, 2023.	15
24-inch steel piles	190	177	203	Caltrans 2015, Caltrans 2020	15
Steel 14″ H-piles [2]	190	177	203	24-inch as proxy	15
DTH of rock sockets and tension anchors—Impulsive					
24-inch (Rock Socket)	NA	159	184	Heyvaert & Reyff 2021; (Reyff and Ambaskar 2023).	19.9
8-inch (Tension anchor)	NA	144	170	Reyff 2020; (Reyff and Ambaskar 2023).	17.1

[1] NMFS recommends a default transmission loss of $15*\log_{10}(R)$ when site-specific data are not available (NMFS, 2020; NMFS, 2022).
[2] For 14-inch H piles, NMFS uses sound source level data from 24-inch piles as a conservative proxy.
NOTE: all SPLs are unattenuated and represent the SPL referenced to a distance of 10 m from the source; NA = Not applicable; dB re 1 μPa = decibels (dB) referenced to a pressure of 1 microPascal, measures underwater SPL; dB re 1 μPa2-sec = dB referenced to a pressure of 1 micro-Pascal squared per second, measures underwater SEL.

All Level B harassment isopleths are reported in Table 6 below. Of note, based on the geography of Tongass Narrows and the surrounding islands, sound would not reach the full distance of the Level B harassment isopleth in most directions. Generally, due to interaction with land, only a thin slice of the possible area would be ensonified to the full distance of the Level B harassment isopleth.

TABLE 6—LEVEL B HARASSMENT ISOPLETHS BY ACTIVITY AND PILE SIZE

Activity	Pile diameter (inch)	Level B harassment isopleth (m)
Vibratory Installation and Removal	30	11,659
	24	7,365
	14	
DTH Rock Sockets	24	2,572
DTH Tension Anchor	8	1,274
Impact Installation	30	2,154
	24	1,000
	14	

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

PTS. Inputs used in the optional User Spreadsheet tool, and the resulting estimated isopleths, are reported in Table 7 and Table 8.

TABLE 7—NMFS USER SPREADSHEET INPUTS

	Vibratory pile driving		DTH		Impact	
	30-inch steel piles	24-inch steel piles or steel H-pile	Rock socket (24-inch)	Tension anchor (8-inch)	30-inch steel piles	24-inch steel piles or steel H-pile
	Installation or removal	Installation or removal	Installation	Installation	Installation	Installation
Spreadsheet Tab Used	A.1) Vibratory Pile Driving.	A.1) Vibratory Pile Driving.	E.2) DTH Pile Driving.	E.2) DTH Pile Driving.	E.1) Impact Pile Driving.	E.1) Impact Pile Driving.
Source Level (SPL)	166 RMS	163 RMS	167 RMS, 159 SEL	156 RMS, 144 SEL	183 SEL	177 SEL.
Transmission Loss Coefficient.	15	15	19.5, 19.9	17.1, 17.1	15	15.
Weighting Factor Adjustment (kHz).	2.5	2.5	2	2	2	2.
Activity Duration (hours) within 24 hours.	*0.5–6	*0.5–8	1–8	1–8.		
Strike rate strike per second.			10	19.		
Number of strikes per pile.					50 (temporary); 200 (permanent).	50 (temporary); 200 (permanent).
Number of piles per day.	1–6	1–8	1	1	1–3	1–3.
Distance of sound pressure level measurement.	10	10	10	10	10	10.

*A range of activity durations (vibratory and DTH), strikes per pile (impact), piles per day are listed because ADOT&PF anticipates that they can install or remove piles of the same size at different rates at different sites. Duration estimates for DTH assume that multiple rock sockets and tension anchors would be installed each day, with a maximum daily duration of 8 hours.

Level A harassment thresholds for impulsive sound sources (impact pile driving and DTH) 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 would 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 ''Average Piles per Day (Range)'' in Table 1). NMFS accounted for this variability in its analysis. For each activity, ADOT&PF provided the minimum and maximum potential durations of the activity. In some cases the difference in the Level A harassment zone size between the minimum and maximum duration anticipated for an activity for a given hearing group is quite large. ADOT&PF expressed concerns about implementing the largest Level A harassment zones for an activity on days where activity levels would be much lower, particularly given that the shutdown zones for an activity (Table 10) are based upon the Level A harassment zone sizes. Therefore, for low frequency cetaceans and phocids, in order to provide flexibility while ensuring the number of Level A harassment zones and associated shutdown zones are manageable, NMFS proposes two Level A harassment isopleths for a given activity in cases where the differences between zone sizes associated with the minimum and maximum potential activity duration spans ≥100 m. At the beginning of each pile driving day, ADOT&PF would determine the maximum number or duration that piles would be driven that day and implement the Level A harassment zone associated with that amount of activity.

TABLE 8—DISTANCES TO LEVEL A HARASSMENT ISOPLETHS, BY HEARING GROUP, AND LEVEL B HARASSMENT ZONES, DURING PILE INSTALLATION AND REMOVAL

Activity	Pile diameter(s) (inches)	Max. daily duration/ number of piles*	Level A harassment isopleths, by hearing group (meters)					Level B harassment isopleth (meters; hearing groups)
			LF	MF	HF	PW	OW	
			Minke whale, fin whale, humpback whale, gray whale	Pacific white-sided dolphin, killer whale	Harbor porpoise, dall's porpoise	Harbor seal, northern elephant seal	Steller sea lion	
Vibratory Installation or Removal.	30	≤360	48.6	4.3	71.8	29.5	2.1	11,659
	24 or 14	≤480	37.1	3.3	54.9	22.6	1.6	7,356
DTH (Rock Socket)	24	≤120 121–180 181–480	210.3 344.3	27.8	392.8	107.1 214.9	29.8	2,572
DTH (Tension Anchor)	8	≤480	118.7	6.4	138.4	68.6	6.9	

TABLE 8—DISTANCES TO LEVEL A HARASSMENT ISOPLETHS, BY HEARING GROUP, AND LEVEL B HARASSMENT ZONES, DURING PILE INSTALLATION AND REMOVAL—Continued

Activity	Pile diameter(s) (inches)	Max. daily duration/ number of piles*	Level A harassment isopleths, by hearing group (meters)					Level B harassment isopleth (meters; hearing groups)
			LF	MF	HF	PW	OW	
			Minke whale, fin whale, humpback whale, gray whale	Pacific white-sided dolphin, killer whale	Harbor porpoise, dall's porpoise	Harbor seal, northern elephant seal	Steller sea lion	
Impact, 200 strikes	30	1	542.1	25.3	846.2	182.8	27.7	2,154
		2				380.2		
		3	710.4					
	24 or 14	1	136.0	10.1	336.9	72.8	11.0	1,000
		2	282.8			151.4		
		3						
Impact, 50 strikes	24 or 14	1–3	112.2	4.0	133.7	60.1	4.4	1,000

*For low frequency cetaceans and phocids, in cases where the Level A harassment zone spanned ≥100 m between the minimum and maximum duration for the same activity, NMFS analyzed a shorter activity duration to allow for flexibility.

Marine Mammal Occurrence and Take Estimation

In this section we provide information about the occurrence of marine mammals, including density, or group dynamics of marine mammals, that will inform the take calculations. Additionally, we describe how the occurrence information is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization. Note that take estimates included in ADOT&PF's application reflect 152 construction days rather than 131 (see Summary of Request section, in which it is described that one site has been completed since submission of the application). A summary of proposed take, including a percentage of population for each of the species, is shown in Table 9.

Minke Whale

There are no known occurrences of minke whales within the project area. No minke whales where reported during ADOT&PF's previous construction activities at the project site (ADOT&PF 2021, 2023), nor during other recent projects in the Tongass Narrows (*e.g.,* COK Rock Pinnacle Blasting Project, Sitkiewicz 2020, Ward Cove Cruise Ship Dock in 2020, Power Systems and Supplies of Alaska, 2020). However, since their range extends into the project area, and they have been observed in southeast Alaska, including in Clarence Strait (Dahlheim *et al.,* 2009), it is possible the species could occur in the project area. Still, future observations of minke whale in the project area are expected to be rare.

ADOT&PF conservatively requested take by Level B harassment of three minke whales every 4 months across the 12 months that the IHA is active. NMFS concurs with ADOT&PF's estimated group size and frequency, but finds it more appropriate to estimate take according to the number of actual months in which construction is proposed. As such, NMFS conservatively proposes to authorize four takes by Level B harassment (3 minke whales × 1.25 months = 4 takes by Level B harassment).

ADOT&PF is planning to implement shutdown zones for low-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Therefore, especially in combination with the infrequent occurrence of minke whales entering the project area, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of minke whale. Therefore, ADOT&PF did not request take by Level A harassment of minke whale, nor is NMFS is proposing to authorize any.

Fin Whale

Fin whales typically inhabit deep, offshore waters and often travel in open seas away from coasts, and are often observed in social groups of two to seven. However, a single fin whale was recently observed in Clarence Strait (Scheurer, personal communication). Since the ensonified area extends to the mouth of Tongass Narrows, where it meets Clarence Strait, there is a chance that fin whale could occur in the project area during construction. As such, NMFS conservatively proposes to authorize two takes by Level B harassment of fin whale.

ADOT&PF is planning to implement shutdown zones for low-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Therefore, especially given the rare occurrence of fin whale in the surrounding area, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of fin whale. Therefore, ADOT&PF did not request take by Level A harassment of fin whale, nor is NMFS is proposing to authorize any.

Humpback Whale

While no systematic studies have documented humpback whale abundance near Ketchikan, anecdotal information suggests that this species is present in low numbers year-round in Tongass Narrows. Additionally, during ADOT&PF's 215 days of monitoring associated with previous construction, 80 humpback whales were observed, or 0.37 humpback whales per day (ADOT&PF 2021, 2023). According to ADOT&PF, the average group size was 1.25 humpback whales, and the maximum group size was 4.

ADOT&PF conservatively estimates, and NMFS concurs, that one humpback whale may occur in the Level B harassment zone each day of proposed in-water work (1 humpback whale x 131 days = 131 takes by Level B harassment).

ADOT&PF is planning to implement shutdown zones for low-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Therefore, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of humpback whale. Therefore, ADOT&PF did not request take by Level A harassment of humpback whale, nor is NMFS is proposing to authorize any.

Gray Whale

Gray whales are rare in the project area and unlikely to occur in Tongass Narrows. They were not observed during the Dahlheim *et al.* (2009)

surveys of Alaska's inland waters with surveys conducted in the spring, summer and fall months. No gray whales where reported during ADOT&PF's previous construction activities at the project site (ADOT&PF 2021, 2023), nor during other recent projects in the Tongass Narrows (*e.g.,* COK Rock Pinnacle Blasting Project, Sitkiewicz 2020; Ward Cove Cruise Ship Dock in 2020, Power Systems and Supplies of Alaska, 2020). However a gray whale could migrate through or near the project, during November especially. Gray whales are generally solitary and travel together, alone, or in small groups.

ADOT&PF requested 24 takes by Level B harassment of gray whales (1 group × 2 gray whales × 12 months that the IHA is active). NMFS concurs with ADOT&PF's estimated group size and frequency, but finds it more appropriate to base take estimates on proposed duration of in-water work. As such, NMFS proposes to authorize 10 takes by Level B harassment (1 group × 2 gray whales × 5 months = 10 takes by Level B harassment).

ADOT&PF is planning to implement shutdown zones for low-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Therefore, especially in combination with the low occurrence of gray whales in the project area, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of gray whale. Therefore, ADOT&PF did not request take by Level A harassment of gray whale, nor is NMFS is proposing to authorize any.

Pacific White-Sided Dolphin

Pacific white-sided dolphins were not observed during the 215 days of marine mammal monitoring associated with ADOT&PF's previous construction activities at this site (ADOT&PF 2021, 2023). There were also no sightings of Pacific white-sided dolphins during previous monitoring conducted during other recent construction projects in the Tongass Narrows (Sitkiewicz 2020, Power Systems and Supplies of Alaska, 2020).

While rare in the inside passageways of Southeast Alaska, a group of 164 Pacific white-sided dolphins were observed in the Dixon entrance to the south of Tongass Narrows during aerial surveys in 1997 (Muto *et al.* 2018), and this species was also documented in Revillagigedo Channel, Behm Canal, and Clarence Strait during surveys conducted from April to May between 1991 and 1993 (Dahlheim and Towell 1994). Finally, Dalheim *et al.* (2009) frequently encountered Pacific white-sided dolphins in Clarence Strait. Observations were noted most typically in open strait environments, near the open ocean. Mean group size was over 20, with no recorded winter observations nor observations made in the Nichols Passage or Behm Canal, located on either side of the Tongass Narrows. This observational data, combined with anecdotal information, indicates that while Pacific white-sided dolphins are rare in the area, they could occur in the project area during construction.

ADOT&PF requested Level B harassment take of one group of 50 Pacific white-sided dolphins. However, to remain consistent with mean groups sizes detected near Tongass Narrows (Dalheim *et al.,* 2009), NMFS finds it more appropriate to propose to authorize three groups of 20 pacific white sided dolphins (60 takes by Level B harassment of Pacific white-sided dolphin).

ADOT&PF is planning to implement shutdown zones for mid-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Additionally, the Level A harassment isopleths for mid-frequency cetaceans are quite small, and therefore, shutdown zones should be easily implemented. Therefore, especially in combination with the low occurrence of pacific white-sided dolphins in the project area, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of Pacific white-sided dolphin. Therefore, ADOT&PF did not request take by Level A harassment of Pacific white-sided dolphin, nor is NMFS is proposing to authorize any..

Killer Whale

While no systematic studies of killer whales have been conducted in or around Tongass Narrows, killer whales are observed in Tongass Narrows year-round, and anecdotal reports suggest they are most common during the summer Chinook salmon run (May-July) (84 FR 36891, July 30, 2019). Across the 215 days of monitoring during ADOT&PF's previous Tongass Narrows construction activities, a total of 78 killer whales were observed, for an observation rate of 0.36 per day (ADOT&PF 2021, 2023). According to ADOT&PF, the average group size observed was 4.6 killer whales and the maximum group size was 8.

While ADOT&PF requested 180 takes by Level B harassment [(1 group × 12 killer whales × 9 months) + (2 groups × 12 killer whales × 3 months = 180 takes by Level B harassment)], NMFS finds it more appropriate to base take estimates off the maximum group size (8 killer whales) observed during monitoring of previous construction activities and the proposed duration of in-water work (5 months). As such, NMFS proposes to authorize 64 takes by Level B harassment [(2 pods × 8 killer whales × 3 months) + (1 pod × 8 killer whales × 2 months) = 64 takes by Level B harassment)].

ADOT&PF is planning to implement shutdown zones for mid-frequency cetaceans that exceed the Level A harassment isopleth for all activities. Additionally, the Level A harassment isopleths for mid-frequency cetaceans are quite small and therefore shutdown zones should be easily implemented. Therefore, implementation of the proposed shutdown zones is expected to eliminate the potential for take by Level A harassment of killer whale. Therefore, ADOT&PF did not request take by Level A harassment of killer whale, nor is NMFS is proposing to authorize any.

Harbor Porpoise

Abundance data for harbor porpoise in Southeast Alaska were collected during 18 seasonal surveys spanning 22 years, from 1991 to 2012 (Dahlheim *et al.* 2015). The project area falls within the Clarence Strait to Ketchikan region, as identified by this study for the survey effort. Harbor porpoise densities in this region in summer were low, ranging from 0.01 to 0.02 harbor porpoises/kilometers^2. During ADOT&PF's 215 days of monitoring during previous construction activities at this project site, the daily average observations of harbor porpoise in the project area was 0.1 (ADOT&PF 2021, 2023). According to ADOT&PF, the maximum group size observed during this monitoring was five.

ADOT&PF estimates that two groups of five harbor porpoise may occur in the Level B harassment zone across the 12 months that the IHA is active. NMFS concurs with ADOT&PF's estimated group size but finds it appropriate to increase the frequency of occurrence estimate in the Level B harassment zone from two groups per month to three groups per month of work. Additionally, NMFS finds it more appropriate to estimate take by Level B harassment according to proposed duration of in-water work (3 groups × 5 harbor porpoises × 5 months = 75 takes by Level B harassment). Additionally, ADOT&PF requested take by Level A harassment of one group of five harbor porpoise every 4 months across 12 months that the IHA is active. However, NMFS finds it more appropriate to estimate take by Level A harassment

according to the number of months in which the Level A harassment zone may extend beyond the proposed shutdown zone (*i.e.,* 2.9 months, when DTH systems may be employed to install 24-inch piles, or 24-inch and 30-inch piles may be installed with an impact pile driver (200 strikes)]. As such, NMFS proposes to authorize 15 takes by Level A harassment of harbor porpoise (1 group × 5 harbor porpoise × 2.9 months = 15 takes by Level B harassment) and 60 takes by Level B harassment ((3 groups × 5 harbor porpoise × 5 months) − 15 takes by Level A harassment = 60 takes by Level B harassment).

Dall's Porpoise

Dall's porpoise have occasionally been observed during previous construction projects completed in Tongass Narrows (Power Systems and Supplies of Alaska, 2020), including during ADOT&PF's 215 days of monitoring (ADOT&PF 2021, 2023). ADOT&PF reported that the average group size observed was 5.6 and the maximum group size was 10. To estimate take, ADOT&PF has assumed that Dall's porpoise may occur in pods of 15 and across the 12 months that the IHA is active. NMFS finds it more appropriate to base take estimates off the maximum group size (10 Dall's porpoise) observed during monitoring of previous construction activities and according to estimated duration of proposed pile driving and DTH activities.

As such, while ADOT estimates that one pod of 15 Dall's porpoise may occur within the Level B harassment zone across each of the 12 months that the IHA would be active, NMFS finds it more appropriate to conservatively estimates that two pods of 10 Dall's porpoise may occur in the Level B harassment zone each month in which in-water work is proposed (2 pod × 10 Dall's porpoise × 5 months = 100).

Additionally, ADOT&PF has estimated that one pod of 15 Dall's porpoise may occur within the Level A harassment zone across the 12 months that the IHA would be active. However, NMFS finds it more appropriate to estimate 10 takes by Level A harassment of Dall's porpoise across the 2.9 months in which the Level A harassment zone may extend beyond the shutdown zone for this species, which could occur when DTH systems are employed to install 24-inch piles or an impact pile driver (200 strikes) is used to install 24-inch and 30-inch piles (1 group × 10 Dall's porpoise = 10 takes by Level A harassment). Finally, take by Level B harassment proposed for authorization has been calculated as the total calculated Dall's porpoise takes by Level B harassment minus the takes by Level A harassment (100 takes by Level B harassment − 10 takes by Level A harassment = 90 takes by Level B harassment).

Steller Sea Lion

Steller sea lions may be found in Tongass Narrows year-round, with anecdotal reports suggesting an increase in abundance from March to early May during the herring spawning season, and another increase in late summer associated with salmon runs. During the 215 days of marine mammal monitoring that took place during construction of previous components of the Tongass Narrows Project, a total of 322 Steller sea lions were observed (ADOT&PF 2021, 2023). According to ADOT&PF, the average group size was 1.25 individuals and maximum group size observed was five individuals. At least one Steller sea lion was observed during each month that monitoring took place. Monitoring during construction of the nearby Ward Cove Dock recorded 4.1 individuals per day (Power Systems & Supplies of Alaska, 2020).

ADOT&PF estimates that one group of 10 Steller sea lions may be taken by Level B harassment each day that in-water work is proposed. Based on ADOT&PF's 215 days of project-related monitoring, NMFS finds it more appropriate to estimate that one group of five Steller sea lions may be present in the Level B harassment zone each day (1 group × 5 Steller sea lion × 131 construction days = 655 takes by Level B harassment).

ADOT&PF is required to implement a shutdown zone that exceeds the Level A harassment zone for Steller sea lions during all project activities. However, ADOT&PF expects that Steller sea lions could enter the Level A harassment zone undetected on rare occasions. As such, ADOT&PF requests take by Level A harassment of 5 percent of Steller sea lions authorized for take by Level B harassment. NMFS concurs that, given the various structures along the shoreline in the project area, Steller sea lions could enter the Level A harassment zone and remain in the zone undetected for a long enough duration to incur PTS before a shutdown occurs. However, NMFS anticipates that 5 percent of the take by Level B harassment would result in an overestimate of Level A harassment. NMFS anticipates that10 Steller sea lions could enter the Level A harassment zone and remain in the zone undetected for a long enough duration to incur PTS before a shutdown occurs across the 131 days of proposed in-water work. As such, NMFS proposes to authorize 10 takes by Level A harassment and 645 takes by Level B harassment (1 group × 5 individuals × 131 construction days − 10 takes by Level A harassment = 645 takes by Level B harassment).

Northern Elephant Seal

Although northern elephant seals are known to visit the Gulf of Alaska to feed on benthic prey, they rarely occur on the beaches of Alaska. Despite the low probability of northern elephant seals entering the project area, there have been recent reports of elephant seals occurring in and near the Tongass Narrows, and two northern elephant seals were observed during ADOT&PF's Tongass Narrows construction in 2022. As such, ADOT&PF requests take by Level B harassment of one elephant seal per 6-day work week. NMFS concurs that one take by Level B harassment per work week is appropriate. However, because ADOT&PF proposes 7-day work weeks, NMFS calculates the total number of work weeks to occur within 131 construction days as 19 weeks rather than ADOT&PF's proposed 22 weeks (1 Northern elephant seal × 19 work weeks = 19 takes by Level B harassment).

For most project activities, the proposed shutdown zone would exceed the Level A harassment zone for Northern elephant seal. However, the Level A harassment zone may extend beyond the proposed shutdown zone for this species on 37 days (when DTH systems may be employed to install 24-inch piles or 30-inch piles may be installed with an impact pile driver (200 strikes). While unlikely given the already low occurrence of Northern elephant seals, on those days, a Northern elephant seal could occur in the Level A harassment zone and remain in the zone for a long enough duration to incur PTS, and NMFS conservatively proposes to authorize five takes by Level A harassment. As such, NMFS proposes to authorize 14 takes by Level B harassment (1 Northern elephant seal × 19 work weeks − 5 takes by Level A harassment = 14 takes by Level B harassment).

Harbor Seal

During marine mammal monitoring associated with ADOT&PF's previous Tongass Narrows construction activities, 550 harbor seals were observed with an average of 1.2 harbor seals per day and a maximum group size of 5. The COK pinnacle rock blasting project recorded a total of 21 harbor seal sightings of 24 individuals over 76.2 hours of pre- and

post-blast monitoring (Sitkiewicz 2020). Additionally, information from PSOs associated with on-going construction indicates that a small number of harbor seals are regularly sighted at about 820 feet (250 meters) from the project location (Wyatt, personal communication). Additionally, there are two key harbor seal haulouts about 7.1 miles (11.5 kilometers) from the project area on a mid-channel island to the southeast of the project site. Each haulout was monitored in 2022 with 10 harbor seals observed at one haulout and 50 harbor seals observed at the other (Richland personal communication).

ADOT&PF estimates, and NMFS concurs, that up to 2 groups of 3 harbor seals could enter the Level B harassment zone per day (2 groups × 3 harbor seals × 131 days = 786). Further, NMFS also estimates that half the harbor seals occurring at the haulout sites within the project area could enter the Level B harassment zone on days when the ensonified area (during 30″ vibratory pile driving) reaches these haulout sites (30 harbor seals × 13 days = 390).

ADOT&PF also estimates that 1 harbor seal could be taken by Level A harassment on each day of in-water work (1 harbor seal × 131 days =131 takes by Level A harassment). For most project activities, the shutdown zone exceeds the Level A harassment zone. However, when an impact pile driver (200 strikes) is used to install 30-inch piles, the Level A harassment zone exceeds the associated shutdown zone. This could occur on 13 days. NMFS anticipates that three harbor seals could be taken by Level A harassment on each day that the Level A harassment isopleth for this species extends beyond the shutdown zone. Therefore, NMFS proposes to authorize 39 takes by Level A harassment (3 harbor seal × 13 days = 39 takes by Level A harassment) and 1,137 takes by Level B harassment (786 takes by Level B harassment + 390 takes by Level B harassment − 39 takes by Level A harassment = 1,137 takes by Level B harassment).

TABLE 9—PROPOSED TAKE BY STOCK AND HARASSMENT TYPE AND AS A PERCENTAGE OF STOCK ABUNDANCE

Species	Stock	Proposed authorized take		Proposed take as a percentage of stock abundance
		Level B harassment	Level A harassment	
Minke whale	Alaska	4	0	.....
Fin whale	Northeast Pacific	2	0	0.1
Humpback whale	Central North Pacific	131	0	1.3
Gray whale	Eastern North Pacific	10	0	0.04
Pacific white-sided dolphin	North Pacific	60	0	0.2
Killer whale	Eastern North Pacific Alaska Resident	64	0	3.3
	Eastern North Pacific Northern Resident			21.2
	West Coast Transient			16.3
Harbor porpoise	Southeast Alaska	60	15	5.8
Dall's porpoise	Alaska	90	10	0.8
Steller sea lion	Eastern U.S	645	10	1.5
Northern Elephant seal	California Breeding	14	5	<0.1
Harbor seal	Clarence Strait	1,137	39	4.3

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses. NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

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

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, and impact on operations.

ADOT&PF must ensure that construction supervisors and crews, the monitoring team and relevant ADOT&PF staff are trained prior to the start of all pile driving and DTH activity, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.

Protected Species Observers

ADOT&PF must employ PSOs and establish monitoring locations as described in the NMFS-approved Marine Mammal Monitoring Plan and Section 5 of the IHA. ADOT&PF must monitor the project area to the maximum extent possible based on the required number of PSOs, required monitoring locations, and environmental conditions. For all vibratory pile driving and removal and DTH, ADOT&PF must employ at least three PSOs. For all impact pile driving, ADOT&PF must employ at least two PSOs. The placement of the PSOs during all pile driving and removal and DTH activities will ensure that the entire shutdown zone is visible.

Pre- and Post-Activity Monitoring

Monitoring must take place from 30 minutes prior to initiation of pile driving or DTH activity (*i.e.,* pre-

clearance monitoring) through 30 minutes post-completion of pile driving or DTH activity. Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones indicated in Table 10 are clear of marine mammals. Pile driving may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals. Further, while not a requirement in the IHA, the 2019 Biological Opinion requires that if a work stoppage occurs and PSOs do not monitor the boundaries of the Level B harassment zone continuously during the work stoppage, the entire Level B harassment zone must be surveyed again for the presence of ESA-listed species before work may resume. Additionally, the 2019 Biological Opinion requires that in-water activities take place only between civil dawn and civil dusk when PSOs can effectively monitor for the presence of marine mammals and when the entire shutdown zone and adjacent waters are visible (*e.g.,* monitoring effectiveness is not reduced due to rain, fog, snow, etc.). The 2019 Biological Opinion allows for pile driving to continue for up to 30 minutes after sunset during evening civil twilight, as necessary to secure a pile for safety prior to demobilization for the evening. PSO(s) will continue to observe shutdown and monitoring zones during this time. The length of the post-activity monitoring period may be reduced if darkness precludes visibility of the shutdown and monitoring zones. As noted in the Endangered Species Act section, the Alaska Region has reinitiated Section 7 consultation, and these measures from the 2019 Biological Opinion are subject to change.

Soft Start

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

Shutdown Zones

For all pile driving/removal and DTH activities, ADOT&PF will establish shutdown zones (Table 10). The purpose of a shutdown zone is generally to define an area within which shutdown of activity will occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones vary based on the activity type and duration and marine mammal hearing group (Table 10). In most cases, shutdown zones are based on the estimated Level A harassment isopleth distances for each hearing group. However, in cases where ADOT&PF asserted that it would be impracticable to shut down at the Level A harassment isopleth due to excessive work stoppages, a smaller shutdown zone is proposed (*e.g.,* for high-frequency cetaceans and phocids during DTH rock socketing of 24-inch piles). Note that some of the proposed shutdown zones differ from those proposed by the ADOT&PF in their application (see Table 6–5 of ADOT&PF's application) due to our incorporation of sound source levels and DTH TL coefficients from ADOT&PF's SSV report.

ADOT&PF anticipates that the maximum amount of activity within a given day may vary significantly (Table 7), with large differences in maximum zones sizes possible (Table 8). Given this uncertainty and concerns related to ESA-listed humpback whales and fin whales, and practicability concerns with shutting down, ADOT&PF proposes a tiered system to identify and monitor the appropriate Level A harassment zones and shutdown zones for large frequency cetaceans and phocids. This tiered system is based on the maximum expected number of piles to be installed (impact or vibratory pile driving) or the maximum expected DTH duration in a given day. At the start of each work day, ADOT&PF will determine the maximum scenario possible for that day (according to the defined duration intervals in Tables 8 and 10), which will determine the appropriate Level A harassment isopleth and associated shutdown zone for that day. This Level A harassment zone (Table 8) and associated shutdown zone (Table 10) must be implemented for the entire work day.

The placement of PSOs during all pile installation and removal, and DTH activities (described in detail in the Proposed Monitoring and Reporting section) will ensure that the entire shutdown zones are visible during pile installation. If a marine mammal is observed entering or within the shutdown zones indicated in Table 10, pile driving must be delayed or halted. If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone (Table 10) or 15 minutes (non-ESA-listed species) or 30 minutes (humpback whales and fin whales) have passed without re-detection of the animal. Further, pile driving activity must be halted upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the harassment zone.

ADOT&PF must also avoid direct physical interaction with marine mammals during construction activity. If a marine mammal comes within 10 m of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions.

TABLE 10—PROPOSED SHUTDOWN ZONES AND LEVEL B HARASSMENT ZONES

Activity	Pile diameter(s) (inches)	Duration (min; vibratory/ DTH)/# of piles (impact)	Shutdown distances (m)					Level B harassment isopleth (m)
			LF	MF	HF	PW	OW	
Vibratory Installation or Removal, temporary and permanent.	30	≤360	50	10	80	30	10	11,659
	24 or 14	≤480	40	10	60	30	10	7,365
DTH (Rock Socket)	24	≤120	220	30	300	110	30	2,572
		121–180				220		
		181–480	350					
DTH (Tension Anchor) ..	8	≤480	170	10	140	70	10	1,274

TABLE 10—PROPOSED SHUTDOWN ZONES AND LEVEL B HARASSMENT ZONES—Continued

Activity	Pile diameter(s) (inches)	Duration (min; vibratory/ DTH)/# of piles (impact)	Shutdown distances (m)					Level B harassment isopleth (m)
			LF	MF	HF	PW	OW	
Impact permanent	30	1	550	30	300	190	30	2,154
		2				300		
		3	720					
	24 or 14	1	140	10	300	80	20	1,000
		2	290			160		
		3						
Impact, temporary	24 or 14	1–3	120	10	140	60	10	1,000

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

Proposed Monitoring and Reporting

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

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

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

Visual Monitoring

Monitoring must be conducted by qualified, NMFS-approved PSOs, who will be present during all pile installation and removal activities, including vibratory, impact, and DTH methods, in according with the following:

- PSOs must be independent (*i.e.,* not construction personnel) and have no other assigned tasks during monitoring periods;
- At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued IHA;
- Other PSOs may substitute other relevant experience, education (degree in biological science or related field), or training for prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued IHA;
- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization; and
- PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.

PSOs should have the following additional qualifications:

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

ADOT&PF must employ two PSOs during all impact pile driving. ADOT&PF must employ three PSOs during all vibratory pile driving and DTH. A minimum of one PSO (the lead PSO) must be assigned to the active pile driving or DTH location to monitor the shutdown zones and as much of the harassment zones as possible. The observation points of the additional PSOs may vary depending on the construction activity and location of the piles. During impact pile driving, the second PSO would select the best location to observe as much of the Level A harassment and Level B harassment zones as possible. To select the best observation locations during vibratory installation and removal and DTH activities, prior to start of construction, the lead PSO will stand at the construction site to monitor the shutdown zones while two or more PSOs travel in opposite directions from the project site along Tongass Narrows until they have reached the edge of the

Level B harassment zone, where they will identify suitable observation points from which to observe. If visibility deteriorates so that the entire width of Tongass Narrows at the harassment zone boundary is not visible, additional PSOs may be positioned so that the entire width is visible, or work will be halted until the entire width is visible to ensure that any humpback whales or fin whales entering or within the harassment zone are detected by PSOs.

PSOs must record all observations of marine mammals, regardless of distance from the pile being driven. PSOs shall document any behavioral reactions in concert with distance from piles being driven or removed.

Reporting

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

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

ADOT&PF must also submit all PSO datasheets and/or raw sighting data with the draft report, as specified in condition 6(b) of this IHA.

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

Reporting Injured or Dead Marine Mammals

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the IHA-holder must immediately cease the specified activities and report the incident to the Office of Protected Resources (OPR), NMFS and to the NMFS 24-hour Stranding Hotline as soon as feasible. If the death or injury was clearly caused by the specified activity, ADOT&PF must immediately cease the specified activities until NMFS is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of the IHA. The IHA-holder must not resume their activities until notified by NMFS. The report must include the following information:

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

Negligible Impact Analysis and Determination

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

To avoid repetition, the majority of our analysis applies to all the species listed in Table 2, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, NMFS has identified species-specific factors to inform the analysis.

Pile driving and DTH activities associated with the project, as outlined previously, have the potential to disturb or displace marine mammals.

Specifically, the specified activities may result in take, in the form of Level B harassment and, for some species Level A harassment, from underwater sounds generated by pile driving and DTH. Potential takes could occur if marine mammals are present in zones ensonified above the thresholds for Level B harassment or Level A harassment, identified above, while activities are underway.

NMFS does not anticipate that serious injury or mortality will occur as a result of ADOT&PF's planned activity given the nature of the activity, even in the absence of required mitigation. Further, no take by Level A harassment is anticipated for Pacific white-sided dolphin, killer whale, humpback whale, gray whale, fin whale, or minke whale, due to the likelihood of occurrence and/or required mitigation measures. As stated in the mitigation section, ADOT&PF would implement shutdown zones that equal or exceed many of the Level A harassment isopleths shown in Table 10. Take by Level A harassment is authorized for some species (Steller sea lion, harbor seal, northern elephant seal, harbor porpoise, and Dall's porpoise) to account for the potential that an animal could enter and remain within the area between a Level A harassment zone and the shutdown zone for a duration long enough to be taken by Level A harassment, and in some cases, to account for the possibility that an animal could enter a shutdown zone without detection given the various obstructions along the shoreline, and remain in the Level A harassment zone for a duration long enough to be taken by Level A harassment before being observed and a shutdown occurring. 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, and as noted previously, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. Because of the small degree anticipated, though, any PTS or TTS potentially incurred here is not expected to adversely impact individual fitness, let alone annual rates of recruitment or survival.

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

Behavioral responses of marine mammals to pile driving, pile removal, and DTH at the sites in Tongass Narrows are expected to be mild, short term, and temporary. Marine mammals within the Level B harassment zones may not show any visual cues they are disturbed by activities or they could become alert, avoid the area, leave the area, or display other mild responses that are not visually observable such as changes in vocalization patterns. Given that pile driving, pile removal, and DTH would occur for only a portion of the project's duration and often on nonconsecutive days, any harassment 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 species would be exposed to even shorter periods of noise-generating activity, further decreasing the impacts.

As previously described, a UME has been declared for gray whales. However, we do not expect the takes proposed for authorization herein to exacerbate the ongoing UME. No serious injury or mortality of gray whales is expected or proposed for authorization, and take by Level B harassment is limited (10 takes over the duration of the authorization). As such, the proposed take by Level B harassment of gray whale would not exacerbate or compound upon the ongoing UME.

For all species except humpback whales, there are no known BIAs near the project zone that will be impacted by ADOT&PF's planned activities. For humpback whales, the inland waters of Southeast Alaska is a seasonal feeding BIA from May through September (Wild *et al.,* 2023), however, the mouth of Tongass Narrows is a small passageway and represents a very small portion of the total available habitat. Also, while southeast Alaska is considered an important area for feeding humpback whales during this time, it is not currently designated as critical habitat for humpback whales (86 FR 21082, April 21, 2021).

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 and Clarence Strait 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 could occur during any season, takes may occur during important feeding times. However, the project area represents a small portion of available foraging habitat and impacts on marine mammal feeding for all species, including humpback whales, should be minimal.

Any impacts on marine mammal prey that occur during ADOT&PF's planned activity would have, at most, short-term effects on foraging of individual marine mammals, and likely no effect on the populations of marine mammals as a whole. Indirect effects on marine mammal prey during the construction are expected to be minor, and these effects are unlikely to cause substantial effects on marine mammals at the individual level, with no expected effect on annual rates of recruitment or survival.

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

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

- No serious injury or mortality is anticipated or authorized;
- Take by Level A harassment of Pacific white-sided dolphin, killer whale, humpback whale, fin whale, gray whale, or minke whale is not anticipated or authorized;
- ADOT&PF will implement mitigation measures including soft-starts for impact pile driving and shutdown zones to minimize the numbers of marine mammals exposed to injurious levels of sound, and to ensure that any take by Level A harassment is, at most, a small degree of PTS;
- The intensity of anticipated takes by Level B harassment is relatively low for all stocks and will not be of a duration or intensity expected to result in impacts on reproduction or survival;
- There are 10 known areas of specific biological importance, covering a broad area of southeast Alaska, for humpback whales. The project area overlaps a very small portion of one of these BIAs. No other known areas of particular biological importance to any

of the affected species or stocks are impacted by the activity, including ESA-designated critical habitat;

- The project area represents a very small portion of the available foraging area for all potentially impacted marine mammal species and stocks and anticipated habitat impacts are minor; and
- Monitoring reports from similar work in Tongass Narrows have documented little to no effect on individuals of the same species impacted by the specified activities.

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

Small Numbers

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

The instances of take NMFS proposes to authorize is below one-third of the estimated stock abundance for all stocks (see Table 9). The number of animals that we expect to authorize to be taken from these stocks would be considered small relative to the relevant stocks' abundances even if each estimated taking occurred to a new individual, which is an unlikely scenario. Some individuals may return multiple times in a day, but PSOs would count them as separate takes if they cannot be individually identified.

The Alaska stock of Dall's porpoise has no official NMFS abundance estimate for this area, as the most recent estimate is greater than 8 years old. The most recent estimate was 13,110 animals for just a portion of the stock's range. Therefore, the 100 takes of this stock proposed for authorization clearly represent small numbers of this stock.

Likewise, the Southeast Alaska stock of harbor porpoise has no official NMFS abundance estimate as the most recent estimate is greater than 8 years old. The most recent estimate was 1,302 animals (Muto *et al.* 2021) and it is highly unlikely this number has drastically declined. Therefore, the 75 authorized takes of this stock proposed for authorization clearly represent small numbers of this stock.

There is no current or historical estimate of the Alaska minke whale stock, but there are known to be over 1,000 minke whales in the Gulf of Alaska (Muto *et al.* 2018), so the 4 takes proposed for authorization is small relative to estimated survey abundance, even if each proposed take occurred to a new individual. Additionally, the range of the Alaska stock of minke whales is extensive, stretching from the Canadian Pacific coast to the Chukchi Sea, and ADOT&PF's proposed project area would impact a small portion of this range.

The best available abundance estimate for fin whale is not considered representative of the entire stock as surveys were limited to a small portion of the stock's range, but there are known to be over 2,500 fin whales in the northeast Pacific stock (Muto *et al.* 2021). As such, the 2 takes proposed for authorization is small relative to the estimated survey abundance, even if each proposed take occurred to a new individual.

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

Unmitigable Adverse Impact Analysis and Determination

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

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). NMFS is not aware of more recent data. Hunting usually occurs in October and November (Alaska Department of Fish and Game (ADF&G) 2009), but there are also records of relatively high harvest in May (Wolfe *et al.* 2013). The Alaska Department of Fish and Game (ADF&G) has not recorded harvest of cetaceans from Ketchikan or Saxman (ADF&G 2023).

All project activities would take place within the industrial area of Tongass Narrows immediately adjacent to Ketchikan where subsistence activities do not generally occur. Both harbor seals and the Steller sea lions may be temporarily displaced from the project area. The project would also not have an adverse impact on the availability of marine mammals for subsistence use at locations farther away where these construction activities are not expected to take place. Some minor, short-term harassment of the harbor seals could occur, but given the information above, we would not expect such harassment to have effects on subsistence hunting activities.

Based on the description of the specified activity, the measures described to minimize adverse effects on the availability of marine mammals for subsistence purposes, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from ADOT&PF's proposed activities.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 *et seq.*) requires that each Federal

agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species, in this case with NMFS' Alaska Regional Office (AKRO).

On February 6, 2019, NMFS AKRO completed consultation with NMFS OPR for the Tongass Narrows Project and issued a Biological Opinion. Formal consultation was later reinitiated due to changes to ADOT&PF's action that were not considered in the February 2019 opinion (PCTS# AKR–2018–9806/ECO# AKRO–2018–01287). NMFS' AKRO issued a revised Biological Opinion to NMFS OPR on December 19, 2019 which concluded that the take NMFS proposed to authorize through IHAs would not jeopardize the continued existence of any endangered or threatened species or destroy or adversely modify any designated critical habitat. NMFS AKRO determined that issuance of the 2022 IHA to ADOT&PF for work in Tongass Narrows did not require reinitiation of the December 2019 Biological Opinion.

NMFS OPR is proposing to authorize take of fin whale and Central North Pacific stock of humpback whales, of which a portion belong to the Mexico DPS of humpback whales, which are ESA-listed. The December 19, 2019 Biological Opinion reinitiation clause (2) and (3), state that formal consultation should be reinitiated if ''new information reveals effects of the agency action that may affect ESA-listed species or critical habitat in a manner or to an extent not previously considered'' and ''the agency action is subsequently modified in a manner that causes an effect on the listed species or critical habitat not considered in this biological opinion.'' Given the additional take that NMFS OPR proposes to authorize, as described herein, NMFS has reinitiated consultation internally on the issuance of this proposed IHA under section 101(a)(5)(D) of the MMPA.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to ADOT&PF for conducting ferry berth construction in Tongass Narrows in Ketchikan, Alaska provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The IHA would be valid for 1 year from the date of issuance. A draft of the proposed IHA can be found at: *www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities.*

Request for Public Comments

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

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

- A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA).
- The request for renewal must include the following:

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

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

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

Dated: July 17, 2023.

Angela Somma,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[Docket No. 2307014–0168]

RTID 0648–XV193

Request for Information on Equitable Delivery of Climate Services

AGENCY: Department of Commerce, National Oceanic and Atmospheric Administration.

ACTION: Request for information.

SUMMARY: The U.S. Department of Commerce (Department), via the National Oceanic and Atmospheric Administration (NOAA), requests additional input from interested parties on how to enhance NOAA's delivery of climate data, information, science, and tools (''climate services'') and ensure that this delivery is equitable and accounting for the needs and priorities of a diverse set of user communities as they engage in climate preparedness, adaptation, and resilience planning. Building on the work that NOAA is already doing to prepare communities for increasing climate impacts, the input from this Request for Information (RFI) will be used to create an Action Plan that will inform more equitable and inclusive design, production, and delivery of climate services for users of all disciplines and backgrounds.

DATES: Responses are due on or before September 21, 2023.

NOAA will host virtual public listening sessions during the months of August and September for participants to provide comments. See **ADDRESSES** below for more information on dates, times, and registration.

ADDRESSES: You may submit comments on this document by any of the following methods:

- *Email Submission:* Interested individuals and organizations should submit written or recorded comments by email to *climate.input@noaa.gov.* If submitting via email, include the title of this RFI, ''Request for Information on Equitable Delivery of Climate Services'' in the subject line of the email.