This document is scheduled to be published in the
Federal Register on 05/07/2024 and available online at
https://federalregister.gov/d/2024-09895, and on https://govinfo.gov

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS-R7-ES-2024-0016; FXES111607MRG01–245–FF07CAMM00]

Marine Mammals; Incidental Take During Specified Activities; Proposed Incidental Harassment Authorization for the Southeast Alaska Stock of Northern Sea Otters in Sitka, Alaska

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of application; proposed incidental harassment authorization; draft environmental assessment; request for comments.

SUMMARY: We, the U.S. Fish and Wildlife Service, in response to a request under the Marine Mammal Protection Act of 1972, as amended, from the City and Borough of Sitka, Alaska, propose to authorize nonlethal, incidental take by harassment of small numbers of Southeast Alaska stock of northern sea otters (*Enhydra lutris kenyoni*) between July 1, 2024, and July 1, 2025. The applicant requested this authorization for take by harassment that may result from activities associated with construction of a seaplane base in Sitka Channel, Sitka, Alaska. We estimate that this project may result in the nonlethal, incidental take by harassment of up to 36 sea otters from the Southeast Alaska stock. This proposed authorization, if finalized, will be for up to 36 takes of sea otters by Level B harassment only. No take by injury or mortality is requested, expected, or proposed to be authorized.

DATES: Comments on this proposed incidental harassment authorization and the accompanying draft environmental assessment must be received by [INSERT DATE 30 DAYS AFTER THE DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: *Document availability:* You may view this proposed incidental harassment authorization, the application package, supporting information, draft environmental assessment, and the list of references cited herein at *https://www.regulations.gov* under Docket No. FWS-R7-

ES-2024-0016, or you may request these documents from the person listed under **FOR FURTHER INFORMATION CONTACT**.

Comment submission: You may submit comments on the proposed authorization by one of the following methods:

- *Electronic submission:* Federal eRulemaking Portal at: *https://www.regulations.gov*. Follow the instructions for submitting comments to Docket No. FWS-R7-ES-2024-0016.
- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS-R7-ES-2024-0016, Policy and Regulations Branch, U.S. Fish and Wildlife Service, MS: PRB (JAO/3W), 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We will post all comments at *https://www.regulations.gov*. You may request that we withhold personal identifying information from public review; however, we cannot guarantee that we will be able to do so. See **Request for Public Comments** for more information.

FOR FURTHER INFORMATION CONTACT: Charles Hamilton, U.S. Fish and Wildlife Service, 1011 East Tudor Road MS–341, Anchorage, AK 99503; by email at *r7mmmregulatory@fws.gov*, or by telephone at (907) 786-3800. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(D) of the Marine Mammal Protection Act of 1972 (MMPA; 16 U.S.C. 1361 et seq.) authorizes the Secretary of the Interior (Secretary) to allow, upon request, the incidental, but not intentional, taking by harassment of small numbers of marine mammals in response to requests by U.S. citizens (as defined in title 50 of the Code of Federal Regulations (CFR) in part 18, at 50 CFR 18.27(c)) engaged in a specified activity (other than commercial

fishing) in a specified geographic region during a period of not more than 1 year. The Secretary has delegated authority for implementation of the MMPA to the U.S. Fish and Wildlife Service (FWS, or we). The FWS shall allow this incidental taking for a period of up to 1 year if we find that such taking:

(1) will affect only small numbers of individuals of the species or stock;

(2) will have no more than a negligible impact on the species or stock; and

(3) will not have an unmitigable adverse impact on the availability of the species or stock for taking for subsistence use by Alaska Natives.

If the requisite findings are made, we issue an authorization that sets forth the following, where applicable:

(1) permissible methods of taking;

(2) means of effecting the least practicable adverse impact on the species or stock and its habitat and the availability of the species or stock for subsistence uses; and

(3) requirements for monitoring and reporting of such taking by harassment, including, in certain circumstances, requirements for the independent peer review of proposed monitoring plans or other research proposals.

The term "take" means to harass, hunt, capture, or kill, or to attempt to harass, hunt, capture, or kill any marine mammal. "Harassment" for activities other than military readiness activities or scientific research conducted by or on behalf of the Federal Government means any act of pursuit, torment, or annoyance which (a) has the potential to injure a marine mammal or marine mammal stock in the wild (the MMPA defines this as "Level A harassment"), or (b) 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 (the MMPA defines this as "Level B harassment").

The terms "negligible impact" and "unmitigable adverse impact" are defined in 50 CFR 18.27 (i.e., regulations governing small takes of marine mammals incidental to specified

activities) as follows: "Negligible impact" is 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. "Unmitigable adverse impact" means an impact resulting from the specified activity: (1) that is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by (i) causing the marine mammals to abandon or avoid hunting areas, (ii) directly displacing subsistence users, or (iii) placing physical barriers between the marine mammals and the subsistence hunters; and (2) that cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

The term "small numbers" is also defined in 50 CFR 18.27. However, we do not rely on that definition here as it conflates "small numbers" with "negligible impacts." We recognize "small numbers" and "negligible impacts" as two separate and distinct considerations when reviewing requests for incidental harassment authorizations (IHA) under the MMPA (see *Natural Res. Def. Council, Inc.* v. *Evans*, 232 F. Supp. 2d 1003, 1025 (N.D. Cal. 2003)). Instead, for our small numbers determination, we estimate the likely number of takes of marine mammals and evaluate if that take is small relative to the size of the species or stock.

The term "least practicable adverse impact" is not defined in the MMPA or its enacting regulations. For this IHA, we ensure the least practicable adverse impact by requiring mitigation measures that are effective in reducing the impact of project activities, but they are not so restrictive as to make project activities unduly burdensome or impossible to undertake and complete.

If the requisite findings are made, we shall issue an IHA, which may set forth the following, where applicable: (i) permissible methods of taking; (ii) 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 subsistence uses by coastal-dwelling Alaska Natives (if

applicable); and (iii) requirements for monitoring and reporting take by harassment.

Summary of Request

On August 18, 2023, the City and Borough of Sitka (hereafter "CBS" or "the applicant") submitted a request to the FWS for the nonlethal, incidental harassment of a small number of northern sea otters (*Enhydra lutris kenyoni*) (hereafter, "sea otters" or "otters" unless another species is specified) from the Southeast Alaska stock. The CBS expects that incidental take of sea otters by harassment may occur during the construction of a new seaplane base in Sitka Channel, Sitka, Alaska for the period July 2024 through July 2025. The FWS requested additional information on September 10, 2023, and October 27, 2023. We received revised requests on October 13, 2023, and November 16, 2023. The FWS deemed the November 16, 2023, request adequate and complete (hereafter referred to as the "Request").

Description of Specified Activities and Specified Geographic Region

The specified activity ("the project") involves the construction of a new seaplane base by the CBS on the shore of Japonski Island in Sitka, Alaska. Construction will include creation of an upland approach, storage area and parking, a seaplane ramp float, a drive-down float, a pedestrian and vehicle transfer bridge, and an approach dock. Building these components of the new seaplane base will require pile driving, blasting, excavation, and deposition of fill material.

Twelve 16-inch galvanized steel piles will be temporarily installed as templates to guide permanent piles using a vibratory hammer for both installation and removal, and an impact hammer for installation only. Ten permanent 16-inch-diameter galvanized steel piles and 16 permanent 24-inch galvanized steel piles will be driven using a vibratory hammer, socketed using down-the-hole drilling equipment, and driven with an impact hammer. These piles will support the approach dock, pedestrian and vehicle transfer bridge, drive-down float, and seaplane ramp float.

The upland project area will be developed through blasting and excavation. Over a period of 62 days, approximately 7,263 cubic meters (m^3) (9,500 cubic yards (yd^3)) above the high tide

line will be blasted, and an additional 4,530 cm (5,925 yd^3) of rock, gravel, and sediment will be excavated. Materials will be stored in an upland location to dry, then used to fill both above and below the high tide line to develop the areas needed for a bridge abutment, approach, vehicle turnaround, parking, basic amenities, curb, and vehicle driveway. Up to 26,492 m^3 (34,650 yd^3) of fill will be placed over a period of 87 days using an excavator and dozer, and then compacted using a vibratory soil compactor. Only 275 m^3 (360 yd^3) of fill material will be placed in marine waters.

A material barge, construction barge, and skiff will be used to transport materials, equipment, and personnel to the project location. The materials barge will originate in Seattle, Washington, travelling at an average of 6 knots, and be used on location as a staging area during construction, tied to existing harbor structures. The construction barge will originate in coastal Alaska, travelling at an average of 6 knots, and will be used on location to support construction, and will be secured in place by four mooring anchors. The skiff will be used to transport personnel less than 91 meters (m) (300 feet (ft)) to the barge work platform multiple times a day at a speed no higher than 5 knots. Additionally, standard barges, tugboats, and other equipment may be used to place and position piles on the substrate.

Project activities would begin as early as July 2024 and be completed by July 2025. During this time, piling driving activities are expected to occur for 46 hours over a period of 31 days with 18 days of activity. Vibratory pile driving would occur for approximately 8.4 hours, impact pile driving would occur for approximately 3.1 hours, and down-the-hole drilling would occur for approximately 34 hours. Fill in marine waters would occur over a period of 11 hours and fill in intertidal waters would occur over a period of 641 hours.

Additional project details may be reviewed in the application materials available as described under **ADDRESSES** or may also be requested as described under **FOR FURTHER INFORMATION CONTACT**.

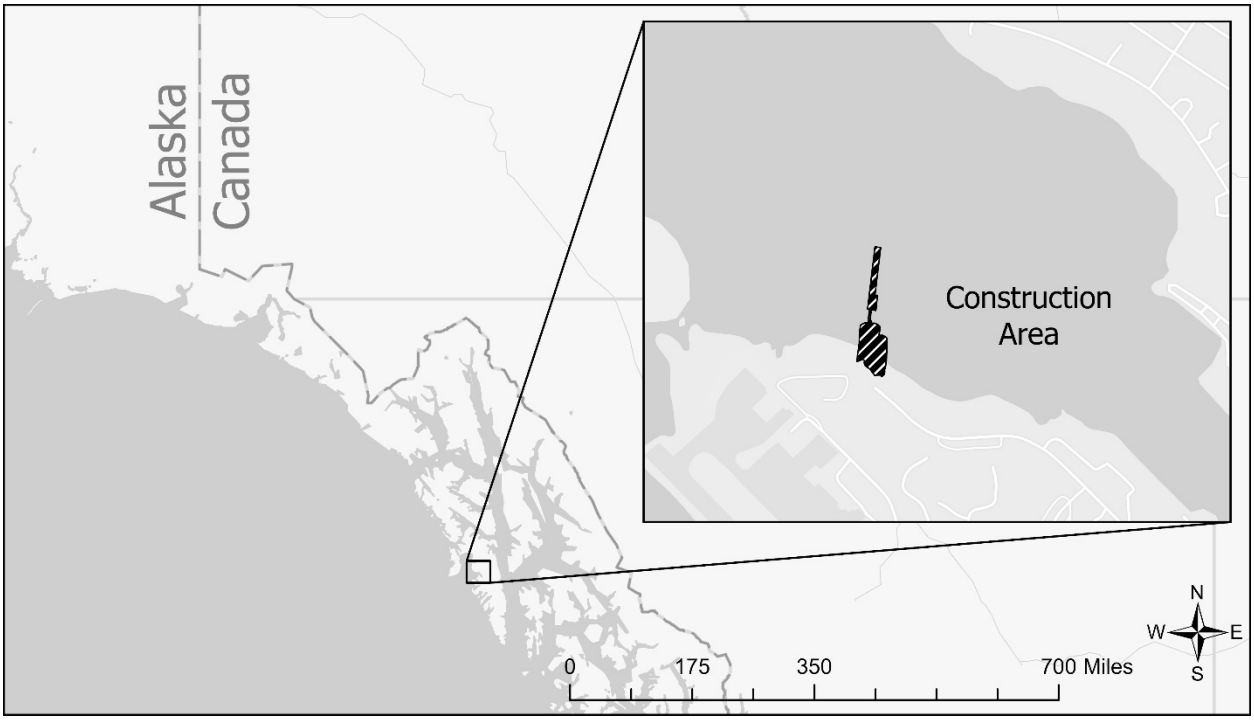

Figure 1—Specified geographic region of City and Borough of Sitka request for incidental harassment authorization for sea otters in 2024-2025 under the Marine Mammal Protection Act.

Description of Marine Mammals in the Specified Geographic Region

The northern sea otter is the only marine mammal under the FWS's jurisdiction that normally occupies the Northeast Pacific Ocean. Sea otters in Alaska are represented by three stocks: the Southwest Alaska stock, the Southcentral Alaska stock, and the Southeast Alaska stock. Those in the Northeast Pacific Ocean belong to the Southeast Alaska stock. Detailed information about the biology of the Southeast Alaska stock can be found in the most recent stock assessment report (88 FR 53510, August 8, 2023), available at: *https://www.fws.gov/project/marine-mammal-stock-assessment-reports*.

Sea otters may be distributed anywhere within the specific geographic region other than upland areas; however, they generally occur in shallow water near the shoreline. They are most commonly observed within the 40-meter (m) (131-foot (ft)) depth contour (88 FR 53510, August 8, 2023), although they can be found in areas with deeper water. Ocean depth is generally correlated with distance to shore, and sea otters typically remain within 1 to 2 kilometers (km) (0.62 to 1.24 miles (mi)) of shore (Riedman and Estes 1990). They tend to be found closer to shore during storms, but they venture farther out during good weather and calm seas (Lensink

1962; Kenyon 1969). In the 14 aerial surveys conducted from 1995 to 2012 in Southeast Alaska, 95 percent of otters were found in areas shallower than 40 m (131 ft) (Tinker et al. 2019). Areas important to mating for the Southeast Alaska stock include marine coastal regions containing adequate food resources within the 40-m (131-ft) depth contour.

The 1995-2012 survey data were combined with results from recent aerial surveys conducted in Glacier Bay National Park and incorporated into a spatiotemporal model of ecological diffusion using a Bayesian hierarchical framework as described in Eisaguirre et al. (2021) (88 FR 53510, August 8, 2023). This model was used to develop the most recent estimate of 27,285 otters in the Southeast Alaska stock and generated otter abundance estimates at a resolution of 1000 m by 1000 m. Abundance values within the project area ranged from 0.065 to 0.65 otters per square kilometer (km^2) (0.39 square miles (mi^2)).

The documented home range sizes and movement patterns of sea otters illustrate the types of movements that could be seen among otters responding to the proposed activities. Sea otters are nonmigratory and generally do not disperse over long distances (Garshelis and Garshelis 1984). They usually remain within a few kilometers of their established feeding grounds (Kenyon 1981). Breeding males stay for all or part of the year in a breeding territory covering up to 1 km (0.62 mi) of coastline while adult females have home ranges of approximately 8 to 16 km (5 to 10 mi), which may include one or more male territories. Juveniles move greater distances between resting and foraging areas (Lensink 1962; Kenyon 1969; Riedman and Estes 1990; Estes and Tinker 1996). Although sea otters generally remain local to an area, they are capable of long-distance travel. Otters in Alaska have shown daily movement distances greater than 3 km (1.9 mi) at speeds up to 5.5 km per hour (km/hr) (3.4 mi per hour (mi/h)) (Garshelis and Garshelis 1984).

Potential Impacts of the Specified Activities on Marine Mammals

Effects of Noise on Sea Otters

The project has the potential to result in take of sea otters by Level B harassment from noise. Here, we characterize "noise" as sound released into the environment from human activities that exceeds ambient levels or interferes with normal sound production or reception by sea otters. The terms "acoustic disturbance" or "acoustic harassment" are disturbances or harassment events resulting from noise exposure. Potential effects of noise exposure are likely to depend on the distance of the sea otter from the sound source, the level and intensity of sound the sea otter receives, background noise levels, noise frequency, noise duration, and whether the noise is pulsed or continuous. The actual noise level perceived by individual sea otters will also depend on whether the sea otter is above or below water and atmospheric and environmental conditions. Temporary disturbance of sea otters or localized displacement reactions are the most likely effects to occur from noise exposure. No lethal take is anticipated, nor was it requested by the applicant. Therefore, none will be authorized.

Sea Otter Hearing

Seaplane base construction activities will fall within the hearing range of sea otters. Controlled sound exposure trials on southern sea otters (*Enhydra lutris nereis*) indicate that sea otters can hear frequencies between 125 hertz (Hz) and 38 kilohertz (kHz), with best sensitivity between 1.2 and 27 kHz (Ghoul and Reichmuth 2014). Aerial and underwater audiograms for a captive adult male southern sea otter in the presence of ambient noise suggest the sea otter's hearing was less sensitive to high-frequency (greater than 22 kHz) and low-frequency (less than 2 kHz) sound than terrestrial mustelids, but was similar to that of a California sea lion (*Zalophus californianus*). However, the sea otter was still able to hear low-frequency sounds, and the detection thresholds for sounds between 0.125 and 1 kHz were between 116 and 101 decibels (dB), respectively. Dominant frequencies of southern sea otter vocalizations are between 3 and 8 kHz, with some energy extending above 60 kHz (McShane et al. 1995; Ghoul and Reichmuth 2012).

Exposure to high levels of sound may cause changes in behavior, masking of communications, temporary or permanent changes in hearing sensitivity, discomfort, and injury to marine mammals. Unlike other marine mammals, sea otters do not rely on sound to orient themselves, locate prey, or communicate under water; therefore, masking of communications by anthropogenic sound is less of a concern than for other marine mammals. However, sea otters, especially mothers and pups, do use sound for communication in air (McShane et al. 1995), and sea otters may monitor underwater sound to avoid predators (Davis et al. 1987).

Exposure Thresholds

Noise exposure criteria for identifying underwater noise levels capable of causing Level A harassment (injury) to marine mammal species, including sea otters, have been established using the same methods as those used by National Marine Fisheries Service (NMFS) (Southall et al. 2019). These criteria are based on estimated levels of sound exposure capable of causing a permanent shift in hearing sensitivity (i.e., a permanent threshold shift [PTS]) (NMFS 2018). PTS occurs when noise exposure causes permanent damage to hair cells within the inner ear system (Ketten 2012).

Sound exposure thresholds incorporate two metrics of exposure: the peak level of instantaneous exposure likely to cause PTS and the cumulative sound exposure level during a 24-hour period (SEL_{CUM}). They also include weighting adjustments for the sensitivity of different species to varying frequencies. PTS-based injury criteria were developed from theoretical extrapolation of observations of temporary threshold shifts (TTS) detected in lab settings during sound exposure trials. The TTS is a noise-induced threshold shift in hearing sensitivity that fully recovers over time (Finneran 2015). Southall and colleagues (2019) predict that PTS for sea otters, which are included in the "other marine carnivores" category, will occur at 232 dB peak or 203 dB cumulative sound exposure (SEL_{CUM}) for impulsive underwater sound, and at 219 dB SEL_{CUM} for nonimpulsive (continuous) underwater sound.

Thresholds based on TTS have been used as a proxy for Level B harassment (70 FR

1871, January 11, 2005; 71 FR 3260, January 20, 2006; 73 FR 41318, July 18, 2008). Southall et al. (2007) derived TTS thresholds for pinnipeds based on 212 dB peak and 171 dB SEL_{CUM}. Exposures resulting in TTS in pinnipeds were found to range from 152 to 174 dB (183 to 206 dB SEL) (Kastak et al. 2005), with a persistent TTS, if not a PTS, after 60 seconds of 184 dB SEL (Kastak et al. 2008). Kastelein et al. (2012) found small but statistically significant TTSs at approximately 170 dB SEL (136 dB, 60 minutes [min]) and 178 dB SEL (148 dB, 15 min). Based on these findings, Southall et al. (2019) developed TTS thresholds for sea otters, which are included in the "other marine carnivores" category, of 188 dB SEL_{CUM} for impulsive sounds and 199 dB SEL_{CUM} for nonimpulsive sounds.

The NMFS (2018) criteria do not identify sound level thresholds for avoidance of Level B harassment. For pinnipeds under their jurisdiction (seals and sea lions), the NMFS has adopted a 160-dB threshold for Level B harassment from exposure to impulsive noise and a 120-dB threshold for continuous noise (81 FR 51693, August 4, 2016; NMFS 2022). These thresholds were developed from observations of mysticete (baleen) whales responding to airgun operations (Malme et al. 1983a, b; Richardson et al. 1986, 1995) and from equating Level B harassment with noise levels capable of causing TTS in lab settings. Southall et al. (2007, 2019) assessed behavioral response studies and found considerable variability among pinnipeds. The authors determined that exposures between approximately 90 to 140 dB generally do not appear to induce strong behavioral responses from pinnipeds in water. However, they found behavioral effects, including avoidance, become more likely in the range between 120 to 160 dB, and most marine mammals showed some, albeit variable, responses to sound between 140 to 180 dB. Wood et al. (2012) adapted the approach identified in Southall et al. (2007) to develop a probabilistic scale for marine mammal taxa at which 10 percent, 50 percent, and 90 percent of individuals exposed are assumed to produce a behavioral response. For many marine mammals, including pinnipeds, these response rates were set at sound pressure levels of 140, 160, and 180 dB, respectively.

We have evaluated these thresholds and determined that a Level B harassment threshold of 120 dB for nonimpulsive noise is not applicable to sea otters. The 120-dB threshold is based on studies in which gray whales (*Eschrichtius robustus*) were exposed to experimental playbacks of industrial noise (Malme et al. 1983a, b). During these playback studies, southern sea otter responses to industrial noise were also monitored (Riedman 1983, 1984). Gray whales exhibited avoidance to industrial noise at the 120-dB threshold; however, there was no evidence of disturbance reactions or avoidance in southern sea otters. Thus, given the different range of frequencies to which sea otters and gray whales are sensitive, the NMFS 120-dB threshold based on gray whale behavior is not appropriate for predicting sea otter behavioral responses, particularly for low-frequency sound.

Based on the best available scientific information about sea otters, and closely related marine mammals when sea otter data are limited, the FWS has set 160 dB of received underwater sound as a threshold for Level B take by disturbance for sea otters for this IHA. Exposure to unmitigated in-water noise levels between 125 Hz and 38 kHz that are greater than 160 dB—for both impulsive and nonimpulsive sound sources—will be considered by the FWS as Level B harassment. Thresholds for potentially injurious Level A take will be 232-dB peak or 203-dB SEL for impulsive sounds and 219-dB SEL for continuous sounds (table 1).

Table 1—Temporary threshold shift (TTS) and permanent threshold shift (PTS) thresholds established by Southall et al. (2019) through modeling and extrapolation for "other marine carnivores," which includes sea otters

	TTS			PTS		
	Nonimpulsive	Impulsive		Nonimpulsive	Impulsive	
	SEL_{CUM}	SEL_{CUM}	Peak SPL	SEL_{CUM}	SEL_{CUM}	Peak SPL
Air	157	146	170	177	161	176
Water	199	188	226	219	203	232

NOTE: Values are weighted for other marine carnivores' hearing thresholds and given in cumulative sound exposure level (SEL_{CUM} dB re 20 micropascal (µPa) in air and SELCUM dB re 1 µPa in water) for impulsive and nonimpulsive sounds, and unweighted peak sound pressure level in air (dB re 20µPa) and water (dB 1µPa) (impulsive sounds only).

Airborne Sounds

The NMFS (2018) guidance neither addresses thresholds for preventing injury or disturbance from airborne noise, nor provides thresholds for avoidance of Level B harassment.

Southall et al. (2007) suggested thresholds for PTS and TTS for sea lions exposed to non-pulsed airborne noise of 172.5 and 159 dB re (20 µPa)2-s SEL. Conveyance of underwater noise into the air is of little concern since the effects of pressure release and interference at the water's surface reduce underwater noise transmission into the air. For activities that create both in-air and underwater sounds, we will estimate take based on parameters for underwater noise transmission. This estimation will also account for exposures to sea otters at the surface, as sound energy travels more efficiently through water than through air.

Evidence from Sea Otter Studies

Sea otters may be more resistant to the effects of sound disturbance and human activities than other marine mammals. For example, southern sea otters were observed to not change their presence, density, or behavior in response to underwater sounds from industrial noise recordings at 110 dB and a frequency range of 50 Hz to 20 kHz, even at the closest distance of 0.5 nautical miles (<1 km or 0.6 mi) (Riedman 1983). Southern sea otters did not respond noticeably to noise from a single 1,638 cubic centimeter (cm^3) (100 cubic inch (in^3)) airgun, and no sea otter disturbance reactions were evident when a 67,006 cm^3 (4,089 in^3) airgun array was as close as 0.9 km (0.6 mi) to sea otters (Riedman 1983, 1984). However, southern sea otters displayed slight reactions to airborne engine noise (Riedman 1983). Northern sea otters were observed to exhibit a limited response to a variety of airborne and underwater sounds, including a warble tone, sea otter pup calls, killer whale (*Orcinus orca*) calls (which are predators to sea otters), air horns, and an underwater noise harassment system designed to drive marine mammals away from crude oil spills (Davis et al. 1988). These sounds elicited reactions from northern sea otters, including startle responses and movement away from noise sources. However, these reactions were only observed when northern sea otters were within 100–200 m (328–656 ft) of noise sources. Further, northern sea otters appeared to become habituated to the noises within 2 hours or, at most, 3–4 days (Davis et al. 1988).

Noise exposure may be influenced by the amount of time sea otters spend at the water's

surface. Noise at the water's surface can be attenuated by turbulence from wind and waves more quickly compared to within deeper water, reducing potential noise exposure (Greene and Richardson 1988, Richardson et al. 1995). Additionally, turbulence at the water's surface limits the transference of sound from water to air. A sea otter with its head above water will be exposed to only a small fraction of the sound energy traveling through the water beneath it. The average amount of time that sea otters spend above the water each day while resting and grooming varies between males and females and across seasons (Esslinger et al. 2014, Zellmer et al. 2021). For example, female sea otters foraged for an average of 8.78 hours per day compared to male sea otters, which foraged for an average of 7.85 hours per day during the summer months (Esslinger et al. 2014). Male and female sea otters spend an average of 63 to 67 percent of their day at the surface resting and grooming during the summer months (Esslinger et al. 2014). Few studies have evaluated foraging times during the winter months. Garshelis et al. (1986) found that foraging times increased from 5.1 hours per day to 16.6 hours per day in the winter; however, Gelatt et al. (2002) did not find a significant difference in seasonal foraging times. It is likely that seasonal variation is determined by seasonal differences in energetic demand and the quality and availability of prey sources (Esslinger et al. 2014). These findings suggest that the large portion of the day sea otters spend at the surface may help limit sea otters' exposure during noise-generating operations.

Sea otter sensitivity to industrial activities may be influenced by the overall level of human activity within the sea otter population's range. In locations that lack frequent human activity, sea otters appear to have a lower threshold for disturbance. Sea otters in Alaska exhibited escape behaviors in response to the presence and approach of vessels (Udevitz et al. 1995). Behaviors included diving or actively swimming away from a vessel, sea otters on haulouts entering the water, and groups of sea otters disbanding and swimming in multiple directions (Udevitz et al. 1995). Alaskan sea otters were observed to avoid areas with heavy boat traffic and return to these areas during seasons with less vessel traffic (Garshelis and Garshelis

1984). In Cook Inlet, sea otters drifting on a tide trajectory that would have taken them within 500 m (0.3 mi) of an active offshore drilling rig were observed to swim in order to avoid a close approach of the drilling rig despite near-ambient noise levels (BlueCrest 2013). Sea otter responses to disturbance can result in energetic costs, which increases the amount of prey required by sea otters (Barrett 2019). This increased prey consumption may impact sea otter prey availability and cause sea otters to spend more time foraging and less time resting (Barrett 2019).

Individual sea otters in Sitka will likely show a range of responses to noise from pile driving activities. Some sea otters will likely show startle responses, change direction of travel, dive, or prematurely surface. Sea otters reacting to survey activities may divert time and attention from biologically important behaviors, such as feeding and nursing pups. Some sea otters may abandon the project area and return when the disturbance has ceased. Based on the observed movement patterns of sea otters (Lensink 1962; Kenyon 1969, 1981; Garshelis and Garshelis 1984; Riedman and Estes 1990; Tinker and Estes 1996), we expect some individuals will respond to pile driving activities by dispersing to nearby areas of suitable habitat; however, other sea otters, especially territorial adult males, will not be displaced.

Vessel Activities

Vessel collisions with marine mammals can result in death or serious injury. Wounds resulting from vessel strike may include massive trauma, hemorrhaging, broken bones, or propeller lacerations (Knowlton and Kraus 2001). An individual may be harmed by a vessel if the vessel runs over the animal at the surface, the animal hits the bottom of a vessel while the animal is surfacing, or the animal is cut by a vessel's propeller. Mortality associated with vessel strike has been determined based on recovery of carcasses with lacerations indicative of propeller injuries (Wild and Ames 1974; Morejohn et al. 1975). Vessel strike has been documented as a cause of death across all three stocks of northern sea otters in Alaska. In a review of sea otter mortality that occurred during a 10-year period (2002-12), 10 individuals out of 483 with an identifiable cause of death were determined to die due to trauma from a boat

strike (Burek-Huntington et al. 2021). These events occurred in across central and southeast Alaska, with fatalities occurring in the specified geographic region of Sitka. In many boat strike cases, trauma was determined to be the ultimate cause of death; however, there was a contributing factor, such as disease or biotoxin exposure, which incapacitated the sea otter and made it more vulnerable to vessel strike (88 FR 53510, August 8, 2023).

Vessel speed influences the likelihood of vessel strikes involving sea otters. The probability of death or serious injury to a marine mammal increases as vessel speed increases (Laist et al. 2001; Vanderlaan and Taggart 2007). Sea otters spend a considerable portion of their time at the water's surface (Esslinger et al. 2014), and are typically visually aware of approaching vessels and can move away if a vessel is not traveling too quickly. The CBS has committed to speeds of 6 knots for their materials and construction barges and 5 knots for their personnel skiffs. These speeds are slow enough to allow nearby sea otters to move away from vessels if needed, and significantly reduce the risk of potential boat strike.

Sea otters exhibit behavioral flexibility in response to vessels, and their responses may be influenced by the intensity and duration of the vessel's activity. For example, sea otter populations in Alaska were observed to avoid areas with heavy vessel traffic but return to those same areas during seasons with less vessel traffic (Garshelis and Garshelis 1984). Sea otters have also shown signs of disturbance or escape behaviors in response to the presence and approach of survey vessels, including: sea otters diving and/or actively swimming away from a vessel; sea otters on haulouts entering the water; and groups of sea otters disbanding and swimming in multiple different directions (Udevitz et al. 1995).

Additionally, sea otter responses to vessels may be influenced by the sea otter's previous experience with vessels. Sea otters in different study locations in California were found to exhibit markedly different responses to kayakers, suggesting a different level of tolerance between the groups (Gunvalson 2011). Benham (2006) found evidence that the sea otters exposed to high levels of recreational activity may have become more tolerant than individuals in

less-disturbed areas. Sea otters off the California coast showed only mild interest in vessels passing within hundreds of meters and appeared to have habituated to vessel traffic (Riedman 1983, Curland 1997). The project area is within an active harbor used year-round by commercial and recreational vessels and is immediately adjacent to the flight path of aircraft landing at Sitka Rocky Gutierrez Airport. As such, it is probable that sea otters in the area have been frequently exposed to boating and aircraft activity and would not regard the project's vessel activities as novel stimuli.

Consequences of Disturbance

The reactions of wildlife to disturbance can range from short-term behavioral changes to long-term impacts that affect survival and reproduction. When disturbed by noise, animals may respond behaviorally (e.g., escape response) or physiologically (e.g., increased heart rate, hormonal response) (Harms et al. 1997, Tempel and Gutierrez 2003). The energy expense and associated physiological effects could ultimately lead to reduced survival and reproduction (Gill and Sutherland 2000, Frid and Dill 2002). For example, South American sea lions (*Otaria byronia*) visited by tourists exhibited an increase in the state of alertness and a decrease in maternal attendance and resting time on land, thereby potentially reducing population size (Pavez et al. 2015). In another example, killer whales that lost feeding opportunities due to vessel traffic faced a substantial (18 percent) estimated decrease in energy intake (Williams et al. 2002). Such disturbance effects can have population-level consequences. Increased disturbance rates have been associated with a decline in bottlenose dolphin (*Tursiops* spp.) abundance (Bejder et al. 2006, Lusseau et al. 2006).

These examples illustrate direct effects on survival and reproductive success, but disturbances can also have indirect effects. Response to noise disturbance is considered a nonlethal stimulus that is similar to an antipredator response (Frid and Dill 2002). Sea otters are susceptible to predation, particularly from killer whales and eagles, and have a well-developed antipredator response to perceived threats. For example, the presence of a harbor seal (*Phoca*

vitulina) did not appear to disturb sea otters, but they demonstrated a fear response in the presence of a California sea lion by actively looking above and beneath the water (Limbaugh 1961).

Although an increase in vigilance or a flight response is nonlethal, a tradeoff occurs between risk avoidance and energy conservation. An animal's reactions to noise disturbance may cause stress and direct an animal's energy away from fitness-enhancing activities such as feeding and mating (Frid and Dill 2002, Goudie and Jones 2004). For example, southern sea otters in areas with heavy recreational boat traffic demonstrated changes in behavioral time budgeting, showing decreased time resting and changes in haulout patterns and distribution (Benham et al. 2006, Maldini et al. 2012). Chronic stress can also lead to weakened reflexes, lowered learning responses (Welch and Welch 1970, van Polanen Petel et al. 2006), compromised immune function, decreased body weight, and abnormal thyroid function (Seyle 1979).

Changes in behavior resulting from anthropogenic disturbance can include increased agonistic interactions between individuals or temporary or permanent abandonment of an area (Barton et al. 1998). The extent of previous exposure to humans (Holcomb et al. 2009), the type of disturbance (Andersen et al. 2012), and the age or sex of the individuals (Shaughnessy et al. 2008, Holcomb et al. 2009) may influence the type and extent of response.

Effects on Sea Otter Habitat and Prey

Physical and biological features of habitat essential to the conservation of sea otters include the benthic invertebrates (e.g., red sea urchins (*Mesocentrotus franciscanus*), blue mussels (*Mytilus* spp.), butter clams (*Saxidomus giganteus*), etc.) eaten by sea otters, shallow rocky areas, and kelp (e.g., bull kelp (*Nereocystis luetkeana*) and dragon kelp (*Eualaria fistulosa*)) beds that provide cover from predators. Important sea otter habitat in the project area includes coastal areas within the 40-m (131-ft) depth contour where high densities of sea otters have been detected.

Construction activities, such as pile driving and fill placement, may generate in-water noise at levels which can temporarily displace sea otters from important habitat and impact sea otter prey species. The primary prey species for sea otters are sea urchins, abalone, clams, mussels, crabs, and squid (Tinker and Estes 1996). When preferential prey are scarce, sea otters will also eat kelp, slow-moving benthic fishes, sea cucumbers, egg cases of rays, turban snails (*Tegula* spp.), octopuses (e.g., *Octopus* spp.), barnacles (*Balanus* spp.), sea stars (e.g., *Pycnopodia helianthoides*), scallops (e.g., *Patinopecten caurinus*), rock oysters (*Saccostrea* spp.), worms (e.g., *Eudistylia* spp.), and chitons (e.g., *Mopalia* spp.) (Riedman and Estes 1990; Davis and Bodkin 2021). Several studies have addressed the effects of noise on invertebrates (Tidau and Briffa 2016; Carroll et al. 2017). Behavioral changes, such as an increase in lobster (*Homanus americanus*) feeding levels (Payne et al. 2007), an increase in avoidance behavior by wild-caught captive reef squid (*Sepioteuthis australis*) (Fewtrell and McCauley 2012), and deeper digging by razor clams (*Sinonovacula constricta*) (Peng et al. 2016) have been observed following experimental exposures to sound. Physical changes have also been observed in response to increased sound levels, including changes in serum biochemistry and hepatopancreatic cells in lobsters (Payne et al. 2007) and long-term damage to the statocysts required for hearing in several cephalopod species (André et al. 2011; Solé et al. 2013, 2019). De Soto et al. (2013) found impaired embryonic development in scallop (*Pecten novaezelandiae*) larvae when exposed to 160 dB. Christian et al. (2004) noted a reduction in the speed of egg development of bottom-dwelling crabs following exposure to noise; however, the sound level (221 dB at 2 m (6.6 ft)) was far higher than the proposed project activities will produce. Industrial noise can also impact larval settlement by masking the natural acoustic settlement cues for crustaceans and fish (Pine et al. 2012, Simpson et al. 2016, Tidau and Briffa 2016).

While these studies provide evidence of deleterious effects to invertebrates as a result of increased sound levels, Carroll et al. (2017) caution that there is a wide disparity between results obtained in field and laboratory settings. In experimental settings, changes were observed only

when animals were housed in enclosed tanks and many were exposed to prolonged bouts of continuous, pure tones. We would not expect similar results in open marine conditions. It is unlikely that noises generated by project activities will have any lasting effect on sea otter prey given the short-term duration of sounds produced by each component of the proposed work.

Noise-generating activities that interact with the seabed can produce vibrations, resulting in the disturbance of sediment and increased turbidity in the water. Although turbidity is likely to have little impact on sea otters and prey species (Todd et al. 2015), there may be some impacts from vibrations and increased sedimentation. For example, mussels (*Mytilus edulis*) exhibited changes in valve gape and oxygen demand, and hermit crabs (*Pagurus bernhardus*) exhibited limited behavioral changes in response to vibrations caused by pile driving (Roberts et al. 2016). Increased sedimentation is likely to reduce sea otter visibility, which may result in reduced foraging efficiency and a potential shift to less-preferred prey species. These outcomes may cause sea otters to spend more energy on foraging or processing the prey items; however, the impacts of a change in energy expenditure are not likely to be seen at the population level (Newsome et al. 2015). Additionally, the benthic invertebrates may be impacted by increased sedimentation, resulting in higher abundances of opportunistic species that recover quickly from industrial activities that increase sedimentation (Kotta et al. 2009). The impacts of increased turbidity at the project site will be temporary. Conversely, placement of fill below the high tide line and construction of a new upland peninsula will result in the permanent removal of 1.3 acres of sea otter habitat. However, sea otter habitat is abundant throughout the Sitka area, and loss of a small amount of habitat is unlikely to apply density-dependent pressure on the population, as it is estimated to be well below carrying capacity (estimated K=47 percent (Tinker et al. 2019).

Potential Impacts on Subsistence Uses

The proposed specified activities will occur near marine subsistence harvest areas used by Alaska Native Peoples from Sitka and the surrounding areas. Subsistence harvest of sea otters in the Sitka subregion has been consistent over time. Between 1988 and 2015, it is estimated that

12,546 sea otters were harvested in southeast Alaska. Of these harvests, 2,744, or roughly 22 percent, occurred in the Sitka subregion.

The proposed project is immediately adjacent to Sitka Airport and the Sitka harbor. Active subsistence harvest does not typically occur in these heavily used areas. Construction activities will not preclude access to hunting areas or interfere in any way with individuals wishing to hunt. In September 2018, the Alaska Harbor Seal Commission, the Alaska Sea Otter and Steller Sea Lion Commission, and the Sitka Tribe of Alaska were contacted by CBS to discuss a project in Sitka Channel and request comments. The Commissions and Sitka Tribe of Alaska did not express concerns with the project impacting the harvest of marine mammals. However, the Sitka Tribe of Alaska did request that no pile driving be conducted from March 15 to May 31 to protect herring, and the CBS will honor the request. If any conflicts are identified in the future, the CBS will develop a plan of cooperation (POC) specifying the particular steps necessary to minimize any effects the project may have on subsistence harvest.

Mitigation Measures

If an IHA for the project is issued, it must specify means for effecting the least practicable adverse impact on sea otters and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance and the availability of sea otters for subsistence uses by coastal-dwelling Alaska Natives.

In evaluating what mitigation measures are appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses, we considered the manner and degree to which the successful implementation of the measures are expected to achieve this goal. We considered the nature of the potential adverse impact being mitigated (likelihood, scope, range), the likelihood that the measures will be effective if implemented, and the likelihood of effective implementation. We also considered the practicability of the measures for applicant implementation (e.g., cost, impact on operations).

To reduce the potential for disturbance from acoustic stimuli associated with the activities, the applicants have proposed mitigation measures including the following:

- Development of a marine mammal monitoring and mitigation plan;
- Establishment of shutdown and monitoring zones;
- Monitoring by designated protected species observers (PSOs);
- Clearance of the site before startup;
- Limiting in-water activity to daylight hours;
- Use of silt curtains to prevent sedimentation and turbidity during down-the-hold drilling;
- Adherence to soft-start procedures; and
- Shutdown procedures.

These measures are further specified under **Proposed Authorization**, part *B. Avoidance and Minimization*. The FWS has not identified any additional (i.e., not already incorporated into the CBS's request) mitigation or monitoring measures that are practicable and would further reduce potential impacts to sea otters and their habitat.

Estimated Take

Definitions of Incidental Take under the Marine Mammal Protection Act

Below we provide definitions of three potential types of take of sea otters. The FWS does not anticipate and is not authorizing lethal take or Level A harassment as a part of this proposed IHA; however, the definitions of these take types are provided for context and background. *Lethal Take*—Human activity may result in biologically significant impacts to sea otters. In the most serious interactions human actions can result in the mortality of sea otters. *Level A Harassment*—Human activity may result in the injury of sea otters. Level A harassment for nonmilitary readiness activities is defined as any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild. The specified action is not anticipated to result in Level A harassment due to exposure of sea otters to noise

capable of causing PTS.

Level B Harassment—The applicant requested authorization for only take by Level B harassment, and the FWS is proposing to authorize only take by Level B harassment for this IHA. Level B harassment for nonmilitary readiness activities means any act of pursuit, torment, or annoyance that has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behaviors or activities, including, but not limited to, migration, breathing, nursing, feeding, or sheltering. Human-caused changes in behavior that disrupt biologically significant behaviors or activities for the affected animal indicate take by Level B harassment under the MMPA.

The FWS has identified the following sea otter behaviors as indicating possible Level B harassment:

- Swimming away at a fast pace on belly (i.e., porpoising);
- Repeatedly raising the head vertically above the water to get a better view (spyhopping) while apparently agitated or while swimming away;
- In the case of a pup, repeatedly spyhopping while hiding behind and holding onto its mother's head;
- Abandoning prey or feeding area;
- Ceasing to nurse and/or rest (applies to dependent pups);
- Ceasing to rest (applies to independent animals);
- Ceasing to use movement corridors;
- Ceasing mating behaviors;
- Shifting/jostling/agitation in a raft so that the raft disperses;
- Sudden diving of an entire raft; or
- Flushing animals off a haulout.

This list is not meant to encompass all possible behaviors; other behavioral responses may also be indicative of Level B harassment. Relatively minor changes in behavior such as the

animal raising its head or temporarily changing its direction of travel are not likely to disrupt biologically important behavioral patterns, and the FWS does not view such minor changes in behavior as indicative of a take by Level B harassment. It is also important to note that eliciting behavioral responses that equate to take by Level B harassment repeatedly may result in Level A harassment. For example, while a single flushing event would likely indicate Level B harassment, repeatedly flushing sea otters from a haulout may constitute Level A harassment.

Calculating Take

The FWS does not anticipate, nor do we propose to authorize, the Level A or Level B harassment of sea otters as a result of vessel operations or placement of fill in the waterway. Vessels will be operated in areas with year-round boat traffic at conservatively slow speeds, significantly reducing the probability of sea otter harassment. Deposition of fill material is not anticipated to generate appreciable underwater noise (Dickerson et al. 2001, Nedwell and Howell 2004). Finally, otters are not anticipated to be physically injured due to fill deposition due to the use of protected species observers and shutdown zones.

We assumed all animals exposed to underwater sound levels from pile driving operations that meet the acoustic exposure criteria shown in table 1 will experience, at a minimum, take by Level B harassment due to exposure to underwater noise. Spatially explicit zones of ensonification were established around the proposed construction location to estimate the number of otters that may be exposed to these sound levels.

The project can be divided into three major components: down-the-hole drilling, vibratory hammering, and pile-driving using an impact hammer. Each of these components will generate a different type of in-water noise. Vibratory hammering will produce nonimpulsive or continuous noise, impact driving will produce impulsive noise, and down-the-hole drilling is considered to produce both impulsive and continuous noise (NMFS 2020).

The level of sound anticipated from each project component was established using recorded data from pile-driving in Friday Harbor, Washington, Bangor Naval Base, Washington,

and Trinidad Bay, California (a proxy for vibratory hammering; NAVFAC 2015); Rodeo, California (a proxy for impact hammering of 24-inch piles; Caltrans 2020); Anderson, California (a proxy for impact hammering of 16-inch piles; Caltrans 2020); Tenakee Springs, Alaska (a proxy for down-the-hole drilling of 16-inch and 24-inch piles; Heyvaert and Reyff 2021); and Biorka Island, Alaska (a proxy for down-the-hole drilling of 24-inch piles; Guan and Miner 2020). The NMFS Technical Guidance and User Spreadsheet (NMFS 2018, 2020) was used to determine the distance at which sound levels would attenuate to Level A harassment thresholds, and we used the NMFS Multi-species pile driving calculator to determine the distance at which sound levels would attenuate to Level B harassment thresholds (table 2). The weighting factor adjustment included in the NMFS User Spreadsheet accounts for sound created in portions of an organism's hearing range where they have less sensitivity. We used the weighting factor adjustment for otariid pinnipeds (2), as they are the closest available physiological and anatomical proxy for sea otters. Both tools incorporate a transmission loss coefficient, which accounts for the reduction in sound level outward from a sound source. We used the NMFS-recommended transmission loss coefficient of 15 for coastal pile-driving activities to indicate simple spread (NMFS 2020).

Table 2—Summary by project component of sound level, timing of sound production, distance from sound source to below Level B Harassment thresholds, days of impact, otters in Level B Harassment ensonification area, and total otters expected to be harassed through behavioral disturbance

Sound Source		Down-the-Hole Drilling (16-inch steel piles)	Down-the-Hole Drilling (24-inch steel piles)	Vibratory hammering (16 and 24-inch steel piles)	Impact Hammer (16-inch steel piles)	Impact Hammer (24-inch steel piles)
Sound level at 10 meters	dB RMS	167	173	161	185	190
	dB SEL	146	159	—	175	177
	dB peak	172	184	—	200	203
Literature reference		Heyvaert and Reyff 2021 (dB RMS); Guan and Miner 2020 (dB SEL and dB peak)	Heyvaert and Reyff 2021	NAVFAC 2015	Caltrans 2020	Caltrans 2020
Timing per pile		60 minutes/pile	90 minutes/pile	10 minutes/pile	5 minutes/pile	5 minutes/pile
Strikes per pile		36,000 strikes/pile	54,000 strikes/pile	—	175 strikes/pile	175 strikes/pile
Maximum piles per day		2	2	6	4	4

Maximum number of days	5	8	9	6	4
Distance to below Level A harassment threshold in meters	2.3	22.2	0.3	9	12.2
Distance to below Level B harassment threshold in meters	30	75	20	465	1,000
Estimated sea otter density in affected area	0.85	0.85	0.85	0.85	0.85
Potential sea otters affected by sound	0*	2	0*	2	2
Days of activity	5	8	9	6	4
Potential harassment events	0	16	0	12	8

*The project shutdown zone extends 30 meters from the sound source. Therefore, we do not anticipate sea otters to experience Level B harassment as a result of down-the-hole drilling of 16-inch steel piles or vibratory hammering of 16-inch or 24-inch steel piles.
NOTE: Sound levels for all sources are unweighted and given in dB re 1 µPa. Nonimpulsive sounds are in the form of mean maximum root mean square (RMS) sound pressure level (SPL) as it is more conservative than cumulative sound exposure level (SEL) or peak SPL for these activities. Impulsive sound sources are in the form of SEL for a single strike (s-s).

Recent estimates of the number of sea otters in the project area are less than one otter per square kilometer. Tinker et al. (2019) estimated an average of 0.85 otters/km^2 in the sub-region that includes the project area (N05). Similarly, fine-scale ecological diffusion models have estimated 0.062 otters/km^2 inside the harbor breakwater and 0.65 otters/km^2 outside the harbor breakwater Eisaguirre et al. (2023). Given these values, we assume up to one otter per square kilometer may be in the area during construction activities. However, the project is within an area that may provide refuge for mom-pup pairs. Northern sea otters enter estrus immediately following pup loss or weaning (Monson et al. 2000) and may have pups year-round. Thus, when estimating the number of potential Level B harassment events, we account for the possibility of the otter having a dependent pup by assuming two otters per square kilometer during project activities.

To determine the number of sea otters that may experience in-water sound greater than 160 dB, we calculated the area of potential impact for each project activity (i.e., down-the-hole drilling and impact hammering) that would generate noise > 160 dB beyond the project's 30-meter shutdown zone. Impact areas were drawn and their area calculated in ArcPro 3.1.4 using

geospatial files of the project location, adjacent coastline, and the harbor breakwater to account for sound attenuation by land shadows (figure 2). These impact areas were multiplied by the number of otters/km^2 and rounded to account for the possibility of a mom-pup pair (table 1).

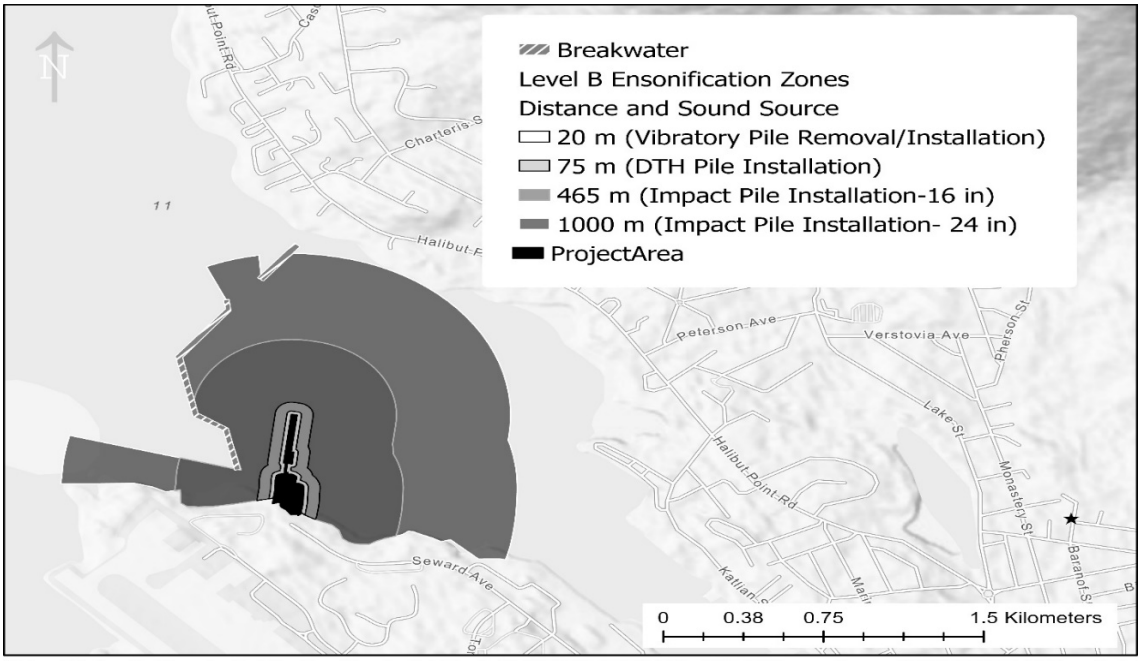

Figure 2 – Project area, source locations, and Level B harassment ensonification zones for each project component.

Although sea otters are non-migratory, they typically move amongst focal areas within their home ranges to rest and forage (Garshelis and Garshelis 1984, Laidre et al. 2009). It is possible that given the density of sea otters in the region, the large variability in individual home range sizes, and the potential for up to daily movement in and out of foraging or resting areas, that a different mom-pup pair could be found within the ensonification zone each day of the project. Thus, the FWS conservatively assumes that the 36 estimated harassment events may impact up to 36 different sea otters. However, should an individual or mom-pup pair remain in the impact area more than one day, and therefore experience Level B harassment more than once, we do not anticipate repeated exposure events to lead to harassment greater than Level B. No Level A harassment (i.e., injury) is anticipated or proposed to be authorized. While in-water noise will be at a level capable of causing PTS from up to 22.2 m from the source location

(during down-the-hole drilling of 24-inch piles), operations will be shut down should any marine mammal come within 30 m of project activities.

Critical Assumptions

We estimate 36 takes of 36 sea otters by Level B harassment will occur due to the proposed specified activities. To conduct this analysis and estimate the potential amount of Level B harassment, several critical assumptions were made.

Otter density was calculated using a state-space model created by Tinker et al. (2019) and a Bayesian hierarchical model created by Eisaguirre et al. (2021), which includes assumptions that can be found in the original publications. The northern sea otter southeast stock Stock Assessment Report (88 FR 53510, August 8, 2023) also elaborates on the inclusion of Glacier Bay National Park aerial surveys into the most recent iteration of the Eisaguirre et al. (2021) Bayesian hierarchical model.

Sound level estimates for construction activities were generated using sound source verification from recent pile-driving activities in several locations in California, Washington, and Alaska. Environmental conditions in these locations, including water depth, substrate, and ambient sound levels are similar to those in the project location but not identical. Further, estimation of ensonification zones were based on sound attenuation models using a simple spreading loss model. These factors may lead to actual sound values differing slightly from those estimated here.

Finally, the pile-driving activities described here will also create in-air noise. Because sea otters spend over half of their day with their heads above water (Esslinger et al. 2014), they will be exposed to increases in in-air noise from construction equipment. However, we have calculated Level B harassment with the assumption that an individual may be harassed only one time per 24-hour period, and underwater sound levels will be more disturbing and extend farther than in-air noise. Thus, while sea otters may be disturbed by noise both in air and underwater, we have relied on the more conservative underwater estimates.

Determinations and Findings

Sea otters exposed to project-produced sounds are likely to respond with temporary behavioral modification or displacement. Project activities could temporarily interrupt the feeding, resting, and movement of sea otters. Because activities will occur during a limited amount of time and in a localized region, the impacts associated with the project are likewise temporary and localized. The anticipated effects are primarily short-term behavioral reactions and displacement of sea otters near active operations.

Sea otters that encounter the specified activity may exert more energy than they would otherwise due to temporary cessation of feeding, increased vigilance, and retreat from the project area. We expect that affected sea otters will tolerate this exertion without measurable effects on health or reproduction. Most of the anticipated takes will be due to short-term Level B harassment in the form of TTS, startling reactions, or temporary displacement. Chronic exposure to sound levels that cause TTS may lead to PTS (which would constitute Level A harassment). While more research into the relationship between chronic noise exposure and PTS is needed (Finneran 2015), it is likely that the transition from temporary effects to permanent cellular damage occurs over a longer time period than the proposed project activities (Southall et al. 2019). With the adoption of the mitigation measures proposed in the request and required by this proposed IHA, estimated take was reduced.

Small Numbers

For our small numbers determination, we consider whether the estimated number of sea otters to be subjected to incidental take is small relative to the population size of the species or stock. We estimate the CBS's specified activities in the specified geographic region will take no more than 36 takes of sea otters by Level B harassment during the 1-year period of this proposed IHA (see *Calculating Take*). Take of 36 animals is 0.13 percent of the best available estimate of the current Southeast Alaska stock size of 27,285 animals ((36 ÷ 27,285) × 100 ≈ 0.13), and represents a "small number" of sea otters of that stock.

Negligible Impact

We propose a finding that any incidental take by Level B harassment resulting from the specified activities cannot be reasonably expected to, and is not reasonably likely to, adversely affect the Southeast Alaska stock of northern sea otters through effects on annual rates of recruitment or survival and will, therefore, have no more than a negligible impact on the stock. In making this finding, we considered the best available scientific information, including the biological and behavioral characteristics of the species, the most recent information on species distribution and abundance within the area of the specified activities, the current and expected future status of the stock (including existing and foreseeable human and natural stressors), the potential sources of disturbance caused by the project, and the potential responses of marine mammals to this disturbance. In addition, we reviewed applicant-provided materials, information in our files and datasets, published reference materials, and species experts.

Sea otters are likely to respond to planned activities with temporary behavioral modification or temporary displacement. These reactions are not anticipated to have consequences for the long-term health, reproduction, or survival of affected animals. Most animals will respond to disturbance by moving away from the source, which may cause temporary interruption of foraging, resting, or other natural behaviors. Affected animals are expected to resume normal behaviors soon after exposure, with no lasting consequences. Sea otters may move in and out of the project area during pile driving activities, leading to as many as 36 individuals experiencing one day of exposure. However, it is possible that an individual or a mom-pup pair may enter the ensonification area more than once during the project. At most, if the same mom-pup pair enters the ensonification area every day pile driving occurs, the mom-pup pair would experience Level B harassment for 18 days. However, injuries (i.e., Level A harassment or PTS) due to chronic sound exposure are estimated to occur over a longer time scale (Southall et al. 2019). The greatest area that will experience noise greater than Level B thresholds due to pile driving is small (less than 0.7 km^2), and an animal that may be disturbed

could escape the noise by moving to nearby quiet areas. Further, sea otters spend over half of their time above the surface during the summer months (Esslinger et al. 2014), and likely no more than 70 percent of their time foraging during winter months (Gelatt et al. 2002); thus, their ears will not be exposed to continuous noise, and the amount of time it may take for permanent injury is considerably longer than that of mammals primarily under water. Some animals may exhibit some of the stronger responses typical of Level B harassment, such as fleeing, interruption of feeding, or flushing from a haulout. These responses could have temporary biological impacts for affected individuals, but are not anticipated to result in measurable changes in survival or reproduction.

The total number of animals affected and severity of impact are not sufficient to change the current population dynamics at the stock scale. Although the specified activities may result in approximately 36 incidental takes of up to 36 sea otters from the Southeast Alaska stock, we do not expect this level of harassment to affect annual rates of recruitment or survival or result in adverse effects on the stock.

Our proposed finding of negligible impact applies to incidental take associated with the specified activities as mitigated by the avoidance and minimization measures identified in the City and Borough of Sitka's mitigation and monitoring plan. These mitigation measures are designed to minimize interactions with and impacts to sea otters. These measures and the monitoring and reporting procedures are required for the validity of our finding and are a necessary component of the proposed IHA. For these reasons, we propose a finding that the specified project will have a negligible impact on the Southeast Alaska stock of northern sea otters.

Least Practicable Adverse Impacts

To reduce the potential for disturbance from their specified activities, the CBS will implement mitigation measures as described in **Mitigation Measures** and further specified under **Proposed Authorization**, part *B. Avoidance and Minimization*. We find that the mitigation

measures required by this proposed IHA will affect the least practicable adverse impacts on the stock from any incidental take likely to occur in association with the specified activities. In making this finding, we considered the biological characteristics of sea otters, the nature of the specified activities, the potential effects of the activities on sea otters, the documented impacts of similar activities on sea otters, and alternative mitigation measures.

We evaluated the manner and degree to which the successful implementation of the measures are expected to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses. We considered the nature of the potential adverse impact being mitigated (likelihood, scope, range), the likelihood that the measures will be effective if implemented, and the likelihood of effective implementation. We also considered the practicability of the measures for applicant implementation (e.g., cost, impact on operations). We assessed whether any additional practicable requirements could be implemented to further reduce effects and did not identify any.

During the IHA application process, the FWS coordinated closely with the applicant to discuss potential mitigation measures and their practicability. A comprehensive list of these measures can be found in the supplemental information for this proposed IHA. One notable measure considered by both the FWS and CBS but deemed to be impracticable was the use of bubble curtains during pile driving. The CBS has stated the small-diameter piles used in this project will be placed closely together, and this close placement will not allow enough space to deploy bubble curtains, sound mitigation screens, or nets to dampen sound.

Following the discussion of potential mitigation measures with the applicant, the FWS has not identified any additional (i.e., not already incorporated into the applicant's request) mitigation or monitoring measures that are practicable and would further reduce potential impacts to sea otters and their habitat.

Impact on Subsistence Use

We propose a finding that the CBS's anticipated harassment will not have an unmitigable adverse impact on the availability of the Southeast Alaska stock of northern sea otters for taking for subsistence uses. In making this finding, we considered the timing and location of the proposed activities and the timing and location of subsistence harvest activities in the area of the proposed project. We also considered the applicant's consultation with subsistence communities, proposed measures for avoiding impacts to subsistence harvest, and commitment to development of a POC, should any concerns be identified.

Required Determinations

National Environmental Policy Act (NEPA)

We have prepared a draft environmental assessment in accordance with the NEPA (42 U.S.C. 4321 *et seq.).* We have preliminarily concluded that authorizing the nonlethal, incidental, unintentional take by Level B harassment of up to 36 northern sea otters from the Southeast Alaska stock during the specified activities would not significantly affect the quality of the human environment and, thus, preparation of an environmental impact statement for this incidental harassment authorization is not required by section 102(2) of NEPA or its implementing regulations. We are accepting comments on the draft environmental assessment as specified above in **DATES** and **ADDRESSES**.

Endangered Species Act

Under the Endangered Species Act (ESA) (16 U.S.C. 1536(a)(2)), all Federal agencies are required to ensure the actions they authorize are not likely to jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of critical habitat. The specified activities would occur entirely within the range of the Southeast Alaska stock of northern sea otters, which is not listed as threatened or endangered under the ESA.

The authorization of incidental take of sea otters and the measures included in the proposed IHA would not affect other listed species or designated critical habitat.

Government-to-Government Consultation

It is our responsibility to communicate and work directly on a Government-to-Government basis with federally recognized Alaska Native Tribes and organizations in developing programs for healthy ecosystems. We seek their full and meaningful participation in evaluating and addressing conservation concerns for protected species. It is our goal to remain sensitive to Alaska Native culture, and to make information available to Alaska Natives. Our efforts are guided by the following policies and directives:

(1) *The Native American Policy of the Service* (January 20, 2016);

(2) *The Alaska Native Relations Policy* (currently in draft form);

(3) *Executive Order 13175* (January 9, 2000);

(4) *Department of the Interior Secretarial Orders 3206* (June 5, 1997), *3225* (January 19, 2001), *3317* (December 1, 2011), and *3342* (October 21, 2016);

(5) *The Alaska Government-to-Government Policy* (a departmental memorandum issued January 18, 2001); and

(6) the Department of the Interior's policies on consultation with Alaska Native Tribes and organizations.

We have evaluated possible effects of the specified activities on federally recognized Alaska Native Tribes and organizations. Through the IHA process identified in the MMPA, the applicant has presented a communication process, culminating in a POC if needed, with the Native organizations and communities most likely to be affected by their work. The FWS does not anticipate impacts to Alaska Native Tribes or Alaska Native Claims Settlement Act corporations and does not anticipate requesting consultation; however, we invite continued discussion, either about the project and its impacts or about our coordination and information exchange throughout the IHA/POC process.

Paperwork Reduction Act

This rule does not contain any new collection of information that require approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). OMB has previously approved the information collection requirements associated with IHAs and assigned OMB Control Number 1018–0194 (expires 08/31/2026). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Proposed Authorization

We propose to authorize the nonlethal, incidental take by Level B harassment of 36 Southeast Alaska stock northern sea otters. Authorized take will be limited to disruption of behavioral patterns that may be caused by construction of a seaplane base, and support activities conducted by the City and Borough of Sitka in the Sitka Channel, Sitka, Alaska, between July 1, 2024 and July 1, 2025. We do not anticipate or propose to authorize any lethal take or Level A harassment.

A. *General Conditions for this IHA*

(1) Activities must be conducted in the manner described in the revised Request dated November 16, 2023, for an IHA and in accordance with all applicable conditions and mitigations measures. The taking of sea otters whenever the required conditions, mitigation, monitoring, and reporting measures are not fully implemented as required by the IHA is prohibited. Failure to follow the measures specified both in the Request and within this proposed authorization may result in the modification, suspension, or revocation of the IHA.

(2) If project activities cause unauthorized take (i.e., take of more than 36 Southeast Alaska stock northern sea otters, a form of take other than Level B harassment, or take of one or more sea otters through methods not described in the IHA), the City and Borough of Sitka must take the following actions:

(i) cease its activities immediately (or reduce activities to the minimum level necessary to maintain safety);

(ii) report the details of the incident to the FWS within 48 hours; and

(iii) suspend further activities until the FWS has reviewed the circumstances and determined whether additional mitigation measures are necessary to avoid further unauthorized taking.

(3) All operations managers, vehicle operators, and vessel operators must receive a copy of this IHA and maintain access to it for reference at all times during project work. These personnel must understand, be fully aware of, and be capable of implementing the conditions of the IHA at all times during project work.

(4) This IHA will apply to activities associated with the specified project as described in this document and in the City and Borough of Sitka's Request. Changes to the specified project without prior authorization may invalidate the IHA.

(5) The City and Borough of Sitka's Request is approved and fully incorporated into this IHA unless exceptions are specifically noted herein. The Request includes:

(i) The City and Borough of Sitka's original request for an IHA, dated August 18, 2023;

(ii) Revised requests, dated October 13, 2023, and November 16, 2023; and

(iii) Geospatial files of the project location and ensonification areas.

(6) Operators will allow FWS personnel or the FWS's designated representative to visit project work sites to monitor for impacts to sea otters and subsistence uses of sea otters at any time throughout project activities so long as it is safe to do so. "Operators" are all personnel operating under the City and Borough of Sitka's authority, including all contractors and subcontractors.

B. *Avoidance and Minimization*

(7) Construction activities must be conducted using equipment that generates the lowest practicable levels of underwater sound within the range of frequencies audible to sea otters.

(8) During all pile-installation activities, regardless of predicted sound levels, a physical interaction shutdown zone of 30 m (98 ft) must be enforced. If a sea otter enters the shutdown

zone, in-water activities must be delayed until either the animal has been visually observed outside the shutdown zone, or 30 minutes have elapsed since the last observation time without redetection of the animal.

(9) If the impact driver has been idled for more than 30 minutes, an initial set of 3 strikes from the impact driver must be delivered at reduced energy, followed by a 1-minute waiting period, and then two subsequent 3-strike sets before full-powered proofing strikes.

(10) In-water activity must be conducted in daylight. If environmental conditions prevent visual detection of sea otters within the shutdown zone, in-water activities must be stopped until visibility is regained.

C. *Mitigation Measures for Vessel Operators*

Vessel operators must take every precaution to avoid harassment of sea otters when a vessel is operating near these animals. The applicant must carry out the following measures:

(11) Vessels must remain at least 500 m (0.3 mi) from rafts of 10 or more sea otters, unless safety is a factor. Vessels must reduce speed and maintain a distance of 100 m (328 ft) from all sea otters, unless safety is a factor.

(12) Vessels must not be operated in such a way as to separate members of a group of sea otters from other members of the group, and must avoid alongshore travel in shallow water (<20 m (66 ft)) whenever practicable.

(13) When weather conditions require, such as when visibility drops, vessels must adjust speed accordingly to avoid the likelihood of injury to sea otters.

(14) Vessel operators must be provided written guidance for avoiding collisions and minimizing disturbances to sea otters. Guidance will include measures identified in paragraphs (C)(11) through (13) of this section.

D. *Monitoring*

(15) Operators shall work with protected species observers (PSO) to apply mitigation measures and shall recognize the authority of PSOs up to and including stopping work, except

where doing so poses a significant safety risk to personnel.

(16) Duties of the PSOs include watching for and identifying sea otters, recording observation details, documenting presence in any applicable monitoring zone, identifying and documenting potential harassment, and working with operators to implement all appropriate mitigation measures.

(17) A sufficient number of PSOs will be available to meet the following criteria: 100 percent monitoring of exclusion zones during all daytime periods of underwater noise-generating work; a maximum of 4 consecutive hours on watch per PSO; a maximum of approximately 12 hours on watch per day per PSO.

(18) All PSOs will complete a training course designed to familiarize individuals with monitoring and data collection procedures. A field crew leader with prior experience as a sea otter observer will supervise the PSO team. Initially, new or inexperienced PSOs will be paired with experienced PSOs so that the quality of marine mammal observations and data recording is kept consistent. Resumes for candidate PSOs will be made available for the FWS to review.

(19) Observers will be provided with reticule binoculars (7×50 or better), big-eye binoculars or spotting scopes (30×), inclinometers, and range finders. Field guides, instructional handbooks, maps, and a contact list will also be made available.

(20) Observers will collect data using the following procedures:

(i) All data will be recorded onto a field form or database.

(ii) Global positioning system data, sea state, wind force, and weather will be collected at the beginning and end of a monitoring period, every hour in between, at the change of an observer, and upon sightings of sea otters.

(iii) Observation records of sea otters will include date; time; the observer's locations, heading, and speed (if moving); weather; visibility; number of animals; group size and composition (adults/juveniles); and the location of the animals (or distance and direction from the observer).

(iv) Observation records will also include initial behaviors of the sea otters, descriptions of project activities and underwater sound levels being generated, the position of sea otters relative to applicable monitoring and mitigation zones, any mitigation measures applied, and any apparent reactions to the project activities before and after mitigation.

(v) For all sea otters in or near a mitigation zone, observers will record the distance from the sound source to the sea otter upon initial observation, the duration of the encounter, and the distance at last observation in order to monitor cumulative sound exposures.

(vi) Observers will note any instances of animals lingering close to or traveling with vessels for prolonged periods of time.

(21) Monitoring of the shutdown zone must continue for 30 minutes following completion of pile installation.

E. Measures to Reduce Impacts to Subsistence Users

(22) Prior to conducting the work, the City and Borough of Sitka will take the following steps to reduce potential effects on subsistence harvest of sea otters:

(i) Avoid work in areas of known sea otter subsistence harvest;

(ii) Discuss the planned activities with subsistence stakeholders including Southeast Alaska villages and traditional councils;

(iii) Identify and work to resolve concerns of stakeholders regarding the project's effects on subsistence hunting of sea otters; and

(iv) If any concerns remain, develop a POC in consultation with the FWS and subsistence stakeholders to address these concerns.

F. *Reporting Requirements*

(23) The City and Borough of Sitka must notify the FWS at least 48 hours prior to commencement of activities.

(24) Reports will be submitted to the FWS's MMM weekly during project activities. The reports will summarize project work and monitoring efforts.

(25) A final report will be submitted to the FWS's MMM within 90 days after completion of work or expiration of the IHA. It will summarize all monitoring efforts and observations, describe all project activities, and discuss any additional work yet to be done. Factors influencing visibility and detectability of marine mammals (e.g., sea state, number of observers, fog, and glare) will be discussed. The report will describe changes in sea otter behavior resulting from project activities and any specific behaviors of interest. Sea otter observation records will be provided in the form of electronic database or spreadsheet files. The report will assess any effects the City and Borough of Sitka's operations may have had on the availability of sea otters for subsistence harvest and if applicable, evaluate the effectiveness of the POC for preventing impacts to subsistence users of sea otters.

(26) Injured, dead, or distressed sea otters that are not associated with project activities (e.g., animals found outside the project area, previously wounded animals, or carcasses with moderate to advanced decomposition or scavenger damage) must be reported to the FWS within 24 hours of discovery. Photographs, video, location information, or any other available documentation shall be provided to the FWS.

(27) All reports shall be submitted by email to *fw7_mmm_reports@fws.gov*.

(28) The City and Borough of Sitka must notify the FWS upon project completion or end of the work season.

Request for Public Comments

If you wish to comment on this proposed authorization, the associated draft environmental assessment, or both documents, you may submit your comments by either of the methods described in **ADDRESSES**. Please identify if you are commenting on the proposed authorization, draft environmental assessment, or both, make your comments as specific as possible, confine them to issues pertinent to the proposed authorization, and explain the reason for any changes you recommend. Where possible, your comments should reference the specific section or paragraph that you are addressing. The FWS will consider all comments that are

received before the close of the comment period (see **DATES**). The FWS does not anticipate extending the public comment period beyond the 30 days required under section 101(a)(5)(D)(iii) of the MMPA.

Comments, including names and street addresses of respondents, will become part of the administrative record for this proposal. Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comments to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Peter Fasbender,
Assistant Regional Director for Fisheries and Ecological Services, Alaska Region.

[FR Doc. 2024-09895 Filed: 5/6/2024 8:45 am; Publication Date: 5/7/2024]