DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS-R7-ES-2023-0030; FXES111607MRG01–234–FF07CAMM00]

Marine Mammals; Incidental Take During Specified Activities; Proposed Incidental Harassment Authorization for Southcentral Alaska Stock of Northern Sea Otters in Whittier, 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 Turnagain Marine Construction, propose to authorize nonlethal, incidental take by harassment of small numbers of the Southcentral Alaska stock of northern sea otters (*Enhydra lutris kenyoni*) for 1 year from the date of issuance of the incidental harassment authorization. The applicant has requested this authorization for take by harassment that may result from activities associated with pile driving and marine construction activities on the western shore of Passage Canal in Whittier, Alaska**.** We estimate that this project may result in the nonlethal incidental take by harassment of up to 44 northern sea otters from the Southcentral stock. This proposed authorization, if finalized, will be for up to 70 takes of 7 northern sea otters by Level A harassment and 544 takes of 37 northern sea otters by Level B harassment. No lethal take is requested, or expected, and no such take will 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-2023-0030 or these documents may be requested 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:

- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS-R7-ES-2023-0030 , U.S. Fish and Wildlife Service, MS: PRB (JAO/3W), 5275 Leesburg Pike, Falls Church, VA 22041–3803.
- *Electronic submission:* Federal eRulemaking Portal at: *https://www.regulations.gov*. Follow the instructions for submitting comments to Docket No. FWS-R7-ES-2023-0030.

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: Sierra Franks, U.S. Fish and Wildlife Service, MS 341, 1011 East Tudor Road, Anchorage, Alaska 99503, by email at *R7mmmregulatory@fws.gov* or by telephone at 1–800–362–5148. 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 ("Service" or "we"). According to the MMPA, the Service shall allow this incidental taking if we make findings that the total of such taking for the 1-year period:

(1) is of small numbers of marine mammals of a species or stock;

(2) will have a negligible impact on such species or stocks; and

(3) will not have an unmitigable adverse impact on the availability of these species or stocks 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:

(a) permissible methods of taking;

(b) 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

(c) 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" means any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (the MMPA defines this as "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 (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 September 16, 2022, Turnagain Marine Construction (hereafter "TMC" or "the applicant") submitted a request to the Service for authorization to take by Level A and Level B harassment a small number of northern sea otters (*Enhydra lutris kenyoni*) (hereafter "sea otters" or "otters" unless another species is specified) from the Southcentral Alaska stock. The Service sent requests for additional information on November 1, November 30, and December 14, 2022. We received updated versions of the request on November 11, November 23, December 1, and December 22, 2022. The Service determined the December 22, 2022, application to be adequate and complete. TMC expects take by harassment may occur during the construction of their cruise ship berth and associated facilities on the western shore of Passage Canal in Whittier, Alaska.

Description of Specified Activities and Specified Geographic Region

The specified activity (hereafter "project") will include installation and removal of piles for the construction of a 152-by-21 meter (m) (500-by-70-foot (ft)) floating cruise ship dock in Whittier, Alaska (figure 1) between April 2023 and April 2024. TMC will install and remove 72 91-centimeter (cm) (36-inch (in)) diameter steel piles and will permanently install the following types of piles: 36 91-cm (36-in) diameter steel piles, 16 107-cm (42-in) diameter steel piles, and 20 122-cm (48-in) diameter steel piles. Dock components that will be installed out of water include bull rail, fenders, mooring cleat, pre-cast concrete dock surface, and mast lights. Pile-driving activities will occur over 129 non-consecutive days for approximately 321 hours during the course of 1 year from date of issuance of the IHA. If the IHA is issued after TMC's intended start date in April 2023, its schedule for conducting the specified activities may be adjusted

accordingly. Pile installation will be done with a combination of impact, vibratory, and down-the-hole (DTH) drilling. Temporary piles will be removed with the vibratory hammer. Materials and equipment will be transported via barges, and workers will be transported to and from the barge work platform via skiff.

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.**

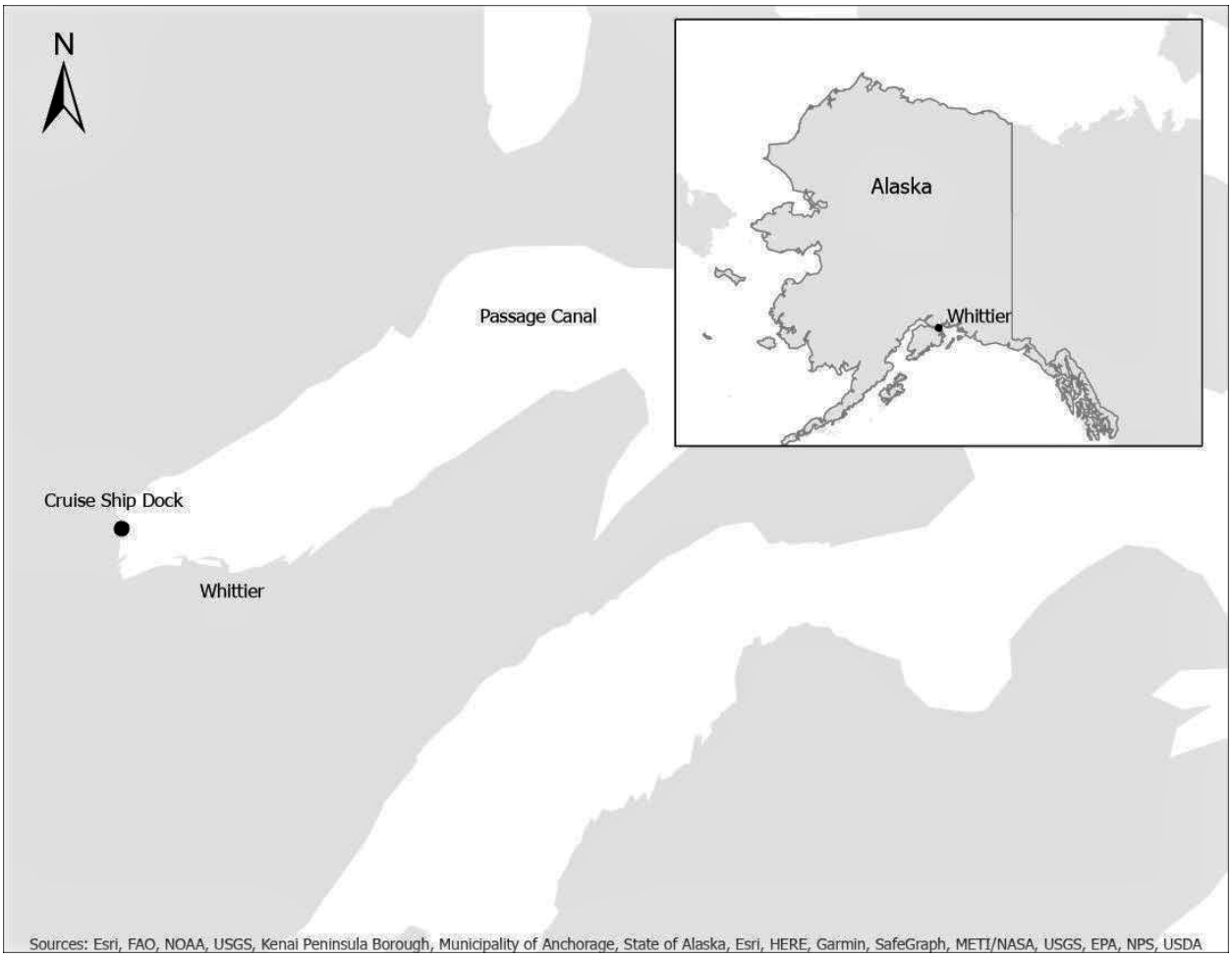

Figure 1. Specified geographic region of the project.

Description of Marine Mammals in the Specified Geographic Region

Sea Otter Biology

There are three sea otter stocks in Alaska: Southeast Alaska stock, Southcentral Alaska stock, and the Southwest Alaska stock. Only the Southcentral Alaska stock is represented in the

project area. Detailed information about the biology of this stock can be found in the most recent Southcentral Alaska draft stock assessment report (USFWS 2023), which can be found at *https://www.regulations.gov/document/FWS-R7-ES-2022-0155-0004* and was announced in the *Federal Register* at 88 FR 7992, February 7, 2023.

Sea otters may be distributed anywhere within the specified project area other than upland areas; however, they generally occur in shallow water near the shoreline. They are most commonly observed within the 40-m (131-ft) depth contour (USFWS 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 venture farther out during good weather and calm seas (Lensink 1962; Kenyon 1969).

Sea otters are nonmigratory and generally do not disperse over long distances (Garshelis and Garshelis 1984), usually remaining 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 maintain 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; Tinker and Estes 1996). Although sea otters generally remain local to an area, they are capable of long-distance travel. Sea otters in Alaska have shown daily movement distances greater than 3 km (1.9 mi) at speeds up to 5.5 km per hour (hr) (km/hr; 3.4 mi/hr) (Garshelis and Garshelis 1984).

Southcentral Alaska Sea Otter Stock

The Southcentral Alaska sea otter stock occurs in the center of the sea otter range in Alaska and extends from Cape Yakataga in the east to Cook Inlet in the west, including Prince William Sound, the eastern Kenai Peninsula coast, and Kachemak Bay (USFWS 2023). Between 2014 and 2019, aerial surveys were conducted in three regions of the Southcentral Alaska sea

otter stock: (1) Eastern Cook Inlet, (2) Outer Kenai Peninsula, and (3) Prince William Sound by aerial transects flown at 91 m (298.56 ft) of altitude. The combined estimates of the three regions resulted in approximately 21,617 (SE = 2,190) sea otters and an average density of 1.96 sea otters per square kilometer (km^2) for the Southcentral Alaska stock (Esslinger et al. 2021). We applied the average density of sea otters in Prince William Sound, 2.03 sea otters/km^2 (Esslinger et al. 2021).

Potential Impacts of the Specified Activities on Marine Mammals

Effects of Noise on Sea Otters

We characterized "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.

Sea Otter Hearing

Pile driving and marine 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 0.125–1 kHz were between 116–101 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 to marine mammal species, including sea otters, have been established using the same methods as those used by the 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 sensitivity of hearing (i.e., a permanent threshold shift (PTS) (NMFS 2018)). PTS occurs when noise exposure causes hairs within the inner ear system to die (Ketten 2012). Although the effects of PTS are, by definition, permanent, PTS does not equate to total hearing loss.

Sound exposure thresholds incorporate two metrics of exposure: the peak level of instantaneous exposure likely to cause PTS and the cumulative sound exposure level (SELcum) during a 24-hour period. 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 (Finneran 2015). Southall and colleagues (2019) predict PTS for sea otters, which are included in the "other marine carnivores" category, will occur at 232 dB peak or 203 dB SELCUM for impulsive underwater sound and 219 dB SELCUM for nonimpulsive (continuous) underwater sound.

Thresholds based on TTS have been used as a proxy for Level B harassment (i.e., 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 SELCUM. 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 SELCUM for impulsive sounds and 199 dB SELCUM for nonimpulsive sounds.

The NMFS (2018) criteria do not identify thresholds for avoidance of Level B harassment. For pinnipeds (seals and sea lions), NMFS has adopted a 160-dB threshold for Level B harassment from exposure to impulsive noise and a 120-dB threshold for continuous noise (NMFS 1998, HESS 1999, NMFS 2018). These thresholds were developed from observations of mysticete (baleen) whales responding to airgun operations (e.g., Malme et al. 1983; Malme and Miles 1983; 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 the Level B 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. 1983; Malme and Miles 1983). 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 lack of sea otter disturbance response or any other reaction to the playback studies from the 1980s, as well as the absence of a clear pattern of disturbance or avoidance behaviors attributable to underwater sound levels up to about 160 dB resulting from low-frequency broadband noise, we assume 120 dB is not an appropriate behavioral response threshold for sea otters exposed to continuous underwater noise.

Based on the best available scientific information about sea otters, and closely related marine mammals when sea otter data are limited, the Service has set 160 dB of received underwater sound as a threshold for Level B harassment by disturbance for sea otters for this proposed 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 Service as Level B harassment. Thresholds for Level A harassment (which

entails the potential for injury) will be 232 dB peak or 203 dB SEL for impulsive sounds and 219 dB SEL for continuous sounds (table 1).

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 nonpulsed 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. Considering sound energy travels more efficiently through water than through air, this estimation will also account for exposures to sea otters at the surface.

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.

[Values are weighted for other marine carnivores' hearing thresholds and given in cumulative sound exposure level (SELCUM 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 (SPL) in air (dB re 20µPa) and water (dB 1µPa) (impulsive sounds only).]

	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

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, observers have noted no changes from southern sea otters in regard to 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 and airguns, 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 centimeters (cm^3) (100 cubic inches [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, calls from killer whales (*Orcinus orca*) (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 observed only when northern sea otters were within 100 to 200 m (328 to 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 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, entering the water from haulouts, and disbanding groups with sea otters swimming in multiple different directions (Udevitz et al. 1995). Sea otters in Alaska were also observed to avoid areas with heavy boat traffic in the summer 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).

Individual sea otters in Passage Canal will likely show a range of responses to noise from pile-driving activities. Some sea otters will likely dive, show startle responses, change direction of travel, or prematurely surface. Sea otters reacting to pile-driving activities may divert time and attention from biologically important behaviors, such as feeding and nursing pups. 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). Some sea otters may abandon the project area and return when the disturbance has ceased. Based on the observed movement patterns of sea otters (i.e., 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, are less likely to be displaced.

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 Gutiérrez 2003). Theoretically, the energy expense and associated physiological effects from repeated disturbance 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 boat traffic faced a substantial (18 percent) estimated decrease in energy intake (Williams et al. 2006). In severe cases, such disturbance effects could have population-level consequences. For example, increased disturbance by tourism vessels has been associated with a decline in abundance of bottlenose dolphins (*Tursiops* spp.) (Bejder et al. 2006; Lusseau et al. 2006). However, these examples evaluated sources of disturbance that were longer term and more consistent than the temporary and intermittent nature of the specified project activities.

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 southern 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 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 (Selye 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). Additionally, 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 in individual sea otters.

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 animal may be harmed by a vessel when 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.

Vessel strike has been documented as a cause of death across all three stocks of northern sea otters in Alaska. Since 2002, the Service has conducted 1,433 sea otter necropsies to determine cause of death, disease incidence, and the general health status of sea otters in Alaska. Vessel strike or blunt trauma was identified as a definitive or presumptive cause of death in 65 cases (4 percent) (USFWS 2020). In most of these 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 (USFWS 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). They are typically visually aware of approaching vessels and can move away if a vessel is not traveling too quickly. Mitigation measures to be applied to vessel operations to prevent collisions or interactions are included below in the proposed authorization portion of this document under *Avoidance and Minimization*.

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. As noted above, 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. Groups of southern sea otters in two locations in California showed markedly different responses to kayakers approaching to within specific distances, 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). These findings indicate that sea otters may adjust their responses to vessel activities depending on the level of activity. Vessel activity during the project includes the transit of three barges for materials and construction, all of which will remain onsite, mostly stationary, to support the work; additionally, two skiffs will be used during the project: one for transporting workers short distances to the crane barge and the other for marine mammal monitoring during pile driving. Vessels will not be used extensively or over a long duration during the planned work; therefore, we do not anticipate that sea otters will experience changes in behavior indicative of tolerance or habituation.

Effects on Sea Otter Habitat and Prey

Physical and biological features of habitat essential to the conservation of sea otters include the benthic invertebrates that sea otters eat and the shallow rocky areas and kelp beds that provide cover from predators. 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.

Industrial activities, such as pile driving, may generate in-water noise at levels that can temporarily displace sea otters from important habitat and impact sea otter prey species. The primary prey species for sea otters are sea urchins (*Strongylocentrotus* spp. and *Mesocentrotus* spp.), abalone (*Haliotis* spp.), clams (e.g., *Clinocardium nuttallii, Leukoma staminea*, and *Saxidomus gigantea*), mussels (*Mytilus* spp.), crabs (e.g., *Metacarcinus magister, Pugettia* spp., *Telemessus cheiragonus*, and *Cancer* spp.), and squid (*Loligo* spp.) (Tinker and Estes 1996, LaRoche et al. 2021). When preferential prey are scarce, sea otters will also eat kelp, slow-moving benthic fishes, sea cucumbers (e.g., *Apostichopus californicus*), 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 (*Homarus 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). De Soto et al. (2013) found impaired embryonic development in scallop (*Pecten novaezelandiae*) larvae when exposed to 160 dB. Christian et al. (2003) 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 or 6.6 ft) was far higher than the planned 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 planned 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 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). Although sea otter foraging could be impacted by industrial activities that cause vibrations and increased sedimentation, it is more likely that sea otters would be temporarily displaced from the project area due to impacts from noise rather than vibrations and sedimentation.

Potential Impacts of the Specified Activities on Subsistence Uses

The planned specified activities will occur near marine subsistence harvest areas used by Alaska Natives from Whittier and the surrounding areas. The majority of sea otter harvest in this area occurs more than 3.2 km (2 mi) outside of Whittier. Since 2012, there have been 75 sea otters harvested in the Whittier area, and most of those were taken prior to 2017. From 2018 through 2021, only eight sea otters were harvested from the Whittier area.

The planned project would occur within the Whittier city limits, where firearm use is prohibited. The area potentially affected by the planned project does not significantly overlap with current subsistence harvest areas. Construction activities will not preclude access to hunting areas or interfere in any way with individuals wishing to hunt. Despite no conflict with subsistence use being anticipated, the Service will conduct outreach with potentially affected communities to see whether there are any questions, concerns, or potential conflicts regarding subsistence use in those areas. If any conflicts are identified in the future, TMC will develop a

plan of cooperation specifying the steps necessary to minimize any effects the project may have on subsistence harvest.

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 Service does not anticipate and is not authorizing lethal take 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 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.

Level B Harassment—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 behavioral patterns, including, but not limited to, migration, breathing, nursing, feeding, or sheltering. Changes in behavior that disrupt biologically significant behaviors or activities for the affected animal are indicative of take by Level B harassment under the MMPA.

The Service has identified the following sea otter behaviors as indicative of 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 equate to take by Level B harassment. Relatively minor changes in behavior such as increased vigilance or a short-term change in direction of travel are not likely to disrupt biologically important behavioral patterns, and the Service does not view such minor changes in behavior as indicative of a take by Level B harassment.

Calculating Take

We assumed all animals exposed to underwater sound levels that meet the acoustic exposure criteria defined above in Exposure Thresholds will experience take by Level A or Level B harassment due to exposure to underwater noise. Spatially explicit zones of ensonification were established around the planned construction location to estimate the number of otters that may be exposed to these sound levels. We determined the number of otters present in the ensonification zones using density information generated by Esslinger et al. (2021).

The project can be divided into four major components: DTH drilling, vibratory drilling, pile driving using an impact driver, and skiff use to support construction. Each of these components will generate a different type of in-water noise. Vibratory drilling and the use of skiffs will produce nonimpulsive or continuous noise; impact driving will produce impulsive noise; and DTH 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 several sources listed in tables 2 through 5. We used the NMFS Technical Guidance and User Spreadsheet (NMFS 2018, 2020) to determine the distance at which sound levels would attenuate to Level A harassment thresholds, and empirical data from the proxy projects were used to determine the distance at which sound levels would attenuate to Level B harassment thresholds (table 1). The weighting factor adjustment included in the NMFS user spreadsheet accounts for sounds created in portions of an organism's hearing range where they have less sensitivity. We used the weighting factor adjustment for otariid pinnipeds as they are the closest available physiological and anatomical proxy for sea otters. The spreadsheet also incorporates 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 practical spread (NMFS 2020).

We calculated the harassment zones for DTH drilling with input from NMFS. The sound pressure levels produced by DTH drilling were provided by NMFS in 2022 via correspondence with Solstice Alaska Consulting, who created the application for this IHA on behalf of TMC. We then used the NMFS Technical Guidance and User Spreadsheet (NMFS 2018, 2020) to determine the distance at which these sounds would attenuate to Level A harassment thresholds. To estimate the distances at which sounds would attenuate to Level B harassment thresholds, we used the NMFS-recommended transmission loss coefficient of 15 for coastal pile-driving activities in a practical spreading loss model (NMFS 2020) to determine the distance at which sound levels attenuate to 160 dB re 1 µPa. However, due to the differences in how PTS and TTS thresholds are calculated, as well as limited data of underwater sound pressure levels from DTH drilling, the resultant Level A isopleths are larger than the Level B isopleths.

Table 2—Summary of sound level, timing of sound production, distance from sound source to below Level A harassment and Level B harassment thresholds, days of impact, sea otters in Level A and Level B harassment ensonification area, and total otters expected to be harassed through behavioral disturbance by vibratory drilling.

Pile size	91-cm (36-in) (temporary)–installation	91-cm (36-in) (temporary)–removal	91-cm (36-in) (permanent)	107-cm (42-in)	122-cm (48-in)
Total number of piles	72	72	36	16	20

Sound level	166 dB re 1µPa at 10 m (RMS)			168.2 dB re 1µPa at 10 m (RMS)	
Source	NAVFAC[a] 2015			Austin et al. 2016	
Timing per pile	10 minutes/pile	10 minutes/pile	15 minutes/pile	15 minutes/pile	15 minutes/pile
Maximum number of piles per day	4	4	4	4	2
Maximum number of days of activity	18	18	9	4	10
Sea otter density	2.03 sea otters/km^2				
Distance to below Level A harassment threshold	0.5 meters	0.5 meters	0.6 meters	0.9 meters	0.6 meters
Level A area (km^2)	0.000001	0.000001	0.000001	0.000003	0.000001
Potential sea otters affected by Level A sound per day	0.000002	0.000002	0.000002	0.00001	0.000002
Potential sea otters affected by Level A sound per day (rounded)	0	0	0	0	0
Total potential Level A harassment events	0	0	0	0	0
Distance to below Level B harassment threshold	25 meters	25 meters	25 meters	35 meters	35 meters
Level B area (km^2)	0.0020	0.0020	0.0020	0.0038	0.0038
Potential sea otters affected by Level B sound per day	0.0041	0.0041	0.0041	0.0077	0.0077
Potential sea otters affected by Level B sound per day (rounded)	0	0	0	0	0
Total potential Level B harassment events	0	0	0	0	0

[a] Naval Facilities Engineering Command

Table 3—Summary of sound level, timing of sound production, distance from sound source to below Level A harassment and Level B harassment thresholds, days of impact, sea otters in Level A and Level B harassment ensonification area, and total otters expected to be harassed through behavioral disturbance by impact pile driving.

Pile size	91-cm (36-in) (permanent)	107-cm (42-in)	122-cm (48-in)
Total number of piles	36	16	20
Sound level	184 dB (SEL)/ 192 dB (RMS)/ 211 dB (peak) re 1µPa at 10 m	186.7 dB (SEL)/ 198.6 dB (RMS) re 1µPa at 10 m	186.7 dB (SEL)/ 198.6 dB (RMS)/ 212 dB (peak) re 1µPa at 10 m
Source	NAVFAC 2015	Austin et al. 2016	
Timing per pile	45 minutes/pile; 1,800 strikes/pile	60 minutes/pile; 2,400 strikes/pile	60 minutes/pile; 2,400 strikes/pile
Maximum number piles per day	4	3	2
Maximum number of days of activity	9	5.3	10
Sea otter density	2.03 sea otters/km^2		
Distance to below Level A harassment threshold	169.2 meters	256.0 meters	195.4 meters
Level A area (km^2)	0.0718	0.1786	0.1199
Potential sea otters affected by Level A sound per day	0.1458	0.3626	0.2434
Potential sea otters affected by Level A sound per day (rounded)	1	1	1
Total potential Level A harassment events	9	6	10
Distance to below Level B harassment threshold	1,359 meters	3,744 meters	3,744 meters
Level B area (km^2)	1.9161	7.3224	7.8846

Potential sea otters affected by Level B sound per day	3.8897	14.8645	16.0057
Potential sea otters affected by Level B sound per day (rounded)	4	15	16
Total potential Level B harassment events	36	80	160

Table 4—Summary of sound level, timing of sound production, distance from sound source to below Level A harassment and Level B harassment thresholds, days of impact, sea otters in Level A and Level B harassment ensonification area, and total otters expected to be harassed through behavioral disturbance by down-the-hole drilling.

Pile size	91-cm (36-in) (temporary)	91-cm (36-in) (permanent)	107-cm (42-in)	122-cm (48-in)
Total number of piles	36 (installation only)	36	16	20
Sound level	164 dB (SEL)/ 167 dB (RMS) re 1µPa at 10 m			171 dB (SEL)/ 167 (RMS) dB re 1µPa at 10 m
Source	Reyff and Heyvaert 2019; Reyff 2020; Denes et al. 2019; Heyvaert and Reyff 2021			SolsticeAK 2022; Heyvaert and Reyff 2021
Timing per pile	60 minutes/pile	150 minutes/pile	150 minutes/pile	150 minutes/pile
Maximum number piles per day	4	2	2	2
Maximum number of days of activity	9	18	8	10
Sea otter density	2.03 sea otters/km^2			
Distance to below Level A harassment threshold[a]	57.9 meters	67.1 meters	67.1 meters	196.6 meters
Level A area (km^2)	0.0105	0.0141	0.0141	0.1214
Potential sea otters affected by Level A sound per day	0.0213	0.0286	0.0286	0.2464
Potential sea otters affected by Level A sound per day (rounded)	1	1	1	1
Total potential Level A harassment events	9	18	8	10
Distance to below Level B harassment threshold[a]	29 meters	29 meters	29 meters	29 meters
Level B area (km^2)	0.0026	0.0026	0.0026	0.0026
Potential sea otters affected by Level B sound per day	0.0053	0.0053	0.0053	0.0053
Potential sea otters affected by Level B sound per day (rounded)	0	0	0	0
Total potential Level B harassment events	0	0	0	0

[a] Due to differences in how PTS and TTS thresholds are calculated, the Level A isopleths are larger than the Level B isopleths.

Table 5—Summary of sound level, timing of sound production, distance from sound source to below Level A harassment and Level B harassment thresholds, days of impact, sea otters in Level A and Level B harassment ensonification area, and total otters expected to be harassed through behavioral disturbance by use of skiffs.

Sound source	Monitoring skiff	Worker transit skiff
Sound level	175 dB (RMS) re 1µPa at 1 m	175 dB (RMS) re 1µPa at 1 m
Source	Richardson et al. 1995; Kipple and Gabriele 2007	

Number of days of vessel use	129	129
Sea otter density	2.03 sea otters/km^2	
Distance to below Level A harassment threshold	0 meters	0 meters
Level A area (km^2)	0	0
Potential sea otters affected by Level A sound per day	0	0
Potential sea otters affected by Level A sound per day (rounded)	0	0
Total potential Level A harassment events	0	0
Distance to below Level B harassment threshold	10 meters	10 meters
Level B area (km^2)	0.2832	0.0095
Potential sea otters affected by Level B sound per day	0.5748	0.0192
Potential sea otters affected by Level B sound per day (rounded)	1	1
Total potential Level B harassment events	129	129

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.

To determine the number of sea otters that may experience in-water sounds >160 dB re 1µPa due to pile driving, we multiplied the area ensonified to >160 dB re 1µPa by the density of animals (2.03 sea otters/ km^2) derived from surveys conducted of Prince William Sound (Esslinger 2021). We applied the same methodology to determine the number of sea otters that may experience sounds capable of causing PTS. The number of sea otters expected to be exposed to such sound levels can be found in tables 2 through 5. To calculate the area ensonified for each type of pile-driving activity, the coordinates of the piles were mapped in ArcGIS Pro. We used a representative pile of each size around which to map the Level A and Level B harassment zones. We chose representative piles that were farthest from shore so that the zones that are intercepted by land have the largest in-water areas possible. The majority of these radii are small enough that their defined circles will fall entirely in the water, and in these instances, the area was calculated as πr^2. The exceptions are the Level A and Level B zones generated by impact pile driving the 36-in permanent and 42-in piles, as well as the Level B zone generated by impact pile driving the

48-in piles; for these, we used ArcGIS Pro to map and calculate the area of the water ensonified by those activities.

The area ensonified by the worker transit skiff was estimated by multiplying the vessel's anticipated daily track length by twice the 160 dB radius plus πr^2 to account for the rounded ends of the track line. It was estimated that the distance of each trip would be no more than 457.2 m (1,500 ft).

The monitoring skiff will travel in a triangle of perimeter approximately 7 km (4.3 mi) between Emerald Island, the north shore of Passage Canal, and Gradual Point. To estimate the area ensonified by the monitoring skiff, we used ArcGIS Pro to plot the points of the triangle, map the track line between those points, and apply a buffer of 10 m (33 ft; the 160-dB radius) on either side of the track line.

We assumed that the different types of activities would occur sequentially and that the total number of days of work would equal the sum of the number of days required to complete each type of activity. While it is possible that on some days more than one type of activity will take place, which would reduce the number of days of exposure within a year, we cannot know this information in advance. As such, the estimated number of days and, therefore, exposures per year is the maximum possible for the planned work. Where the number of exposures expected per day was zero to three or more decimal places (i.e., <0.00X), the number of exposures per day was assumed to be zero.

In order to minimize exposure of sea otters to sounds above Level A harassment thresholds, TMC will implement shutdown zones ranging from 10 to 260 m (33 to 853 ft), based on the pile size and type of pile driving or marine construction activity, where operations will cease should a sea otter enter or approach the specified zone. Soft-start and zone clearance prior to startup will also limit the exposure of sea otters to sound levels that could cause PTS. However, TMC has requested, and the Service proposes to authorize, small numbers of take by Level A harassment during impact pile driving and DTH drilling.

Critical Assumptions

We estimate that 544 takes of 37 sea otters by Level B harassment and 70 takes of 7 sea otters by Level A harassment may occur due to TMC's planned cruise ship dock construction activities. In order to conduct this analysis and estimate the potential amount of take by harassment, several critical assumptions were made.

Level B harassment is equated herein with behavioral responses that indicate harassment or disturbance. There is likely a portion of animals that respond in ways that indicate some level of disturbance but do not experience significant biological consequences.

We used the sea otter density for the Whittier area from surveys and analyses conducted by Esslinger (2021). Methods and assumptions for these surveys can be found in the original publication.

We used sound source verification from recent pile-driving activities in a number of locations within and beyond Alaska to generate sound level estimates for construction activities. 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 practical spreading loss model. These factors may lead to actual sound values differing slightly from those estimated here.

We assumed that all piles will be installed and removed while submerged in water. Some of the 36-in permanent piles supporting the approach trestle, and the associated temporary 36-in piles used for the templates to install the permanent piles, will be located in the intertidal zone. Work performed at lower tidal heights would likely result in decreased transmission of sounds to the water column. However, as the timing of pile installation and removal was not known in advance, we accounted for the possibility that all work may occur at a tidal height that allows for full sound transmission.

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 an increase 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.

Sum of Harassment from All Sources

The applicant plans to conduct pile driving and marine construction activities in Whittier, Alaska, over the course of a year from the date of issuance of the IHA. A summary of total estimated take during the project by source is provided in table 6.

TABLE 6—TOTAL ESTIMATED TAKES BY SOURCE OF LEVEL A AND LEVEL B HARASSMENT OF SEA OTTERS

Source		Number of days of activity	Sea otters exposed per day to Level A harassment	Total takes of sea otters by Level A harassment	Sea otters exposed per day to Level B harassment	Total takes of sea otters by Level B harassment
Vibratory drilling	36-inch piles (temporary)-installation	18	0	0	0	0
	36-inch piles (temporary)-removal	18	0	0	0	0
	36-inch piles (permanent)	9	0	0	0	0
	42-inch piles	4	0	0	0	0
	48-inch piles	10	0	0	0	0
Impact drilling	36-inch piles (permanent)	9	1	9	4	36
	42-inch piles	6	1	6	15	90
	48-inch piles	10	1	10	16	160
Down-the-hole drilling	36-inch piles (temporary)-installation	9	1	9	0	0
	36-inch piles (permanent)	18	1	18	0	0
	42-inch piles	8	1	8	0	0
	48-inch piles	10	1	10	0	0
Skiff use	Monitoring skiff	129	0	0	1	129
	Worker transit skiff	129	0	0	1	129
Totals		387	7	70	37	544

Over the course of the project, we estimate 544 instances of take by Level B harassment of 37 northern sea otters from the Southcentral Alaska stock due to behavioral responses of TTS

associated with noise exposure. Although multiple instances of Level B harassment of individual sea otters are possible, these events are unlikely to have significant consequences for the health, reproduction, or survival of affected animals and therefore would not rise to the level of an injury or Level A harassment.

The use of soft-start procedures, zone clearance prior to startup, and shutdown zones is likely to decrease both the number of sea otters exposed to sounds above Level A harassment thresholds and the exposure time of any sea otters venturing into a Level A harassment zone. This reduces the likelihood of losses of hearing sensitivity that might impact the health, reproduction, or survival of affected animals. Despite the implementation of mitigation measures, it is anticipated that some sea otters will experience Level A harassment via exposure to underwater sounds above threshold criteria during impact and DTH pile-driving activities. Due to sea otters' small body size and low profile in the water, as well as the relatively large size of the Level A harassment zone associated with these activities, we anticipate that sea otters will at times avoid detection before entering Level A harassment zones for those activities. We anticipate that PSOs will be able to reliably detect and prevent take by Level A harassment of sea otters up to 20 m away; conversely, we anticipate that at distances greater than 20 m, sea otters will at times avoid detection. Throughout the project, we estimate 70 instances of take by Level A harassment of 7 sea otters.

Determinations and Findings

Sea otters exposed to sound from the specified activities are likely to respond with temporary behavioral modification or displacement. The specified 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 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 retreating 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. While mitigation measures incorporated into TMC's request will reduce occurrences of Level A harassment to the extent practicable, a small number of takes by Level A harassment would be authorized for impact and DTH pile-driving activities, which have Level A harassment zone radii ranging in size from 57.9 to 256 m (190 to 840 ft).

With the adoption of the mitigation measures incorporated in TMC's request and required by this proposed IHA, anticipated take was reduced. Those mitigation measures are further described below.

Small Numbers

To assess whether the authorized incidental taking would be limited to "small numbers" of marine mammals, the Service uses a proportional approach that considers whether the estimated number of marine mammals to be subjected to incidental take is small relative to the population size of the species or stock. Here, predicted levels of take were determined based on the estimated density of sea otters in the project area and ensonification zones developed using empirical evidence from similar geographic areas.

We estimate TMC's specified activities in the specified geographic region will take no more than 544 takes of 37 sea otters by Level B harassment and 70 takes of 7 sea otters by Level A harassment during the 1-year period of this proposed IHA (see *Sum of Take from All Sources*). Take of 44 animals is 0.2 percent of the best available estimate of the current Southcentral Alaska stock size of 21,617 animals (Esslinger et al. 2021) ((44÷21,617)×100≈0.2) and represents a "small number" of sea otters of that stock.

Negligible Impact

We propose a finding that any incidental take by harassment resulting from the specified activities cannot be reasonably expected to, and is not reasonably likely to, adversely affect the sea otter through effects on annual rates of recruitment or survival and will, therefore, have no more than a negligible impact on the Southcentral Alaska stock of northern sea otters. 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. Each sea otter is estimated to be exposed to construction noise for between 4 and 129 days per year, resulting in repeated exposures. However, injuries (i.e., Level A harassment or PTS) due to chronic sound exposure is estimated to occur at a longer time scale (Southall et al. 2019). The area that will experience noise greater than Level B thresholds due to pile driving is small (less than 0.18 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 is not sufficient to change the current population dynamics at the stock scale. Although the specified activities may result in approximately 614 incidental takes of 44 sea otters from the Southcentral 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 TMC'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 Southcentral Alaska stock of northern sea otters.

Least Practicable Adverse Impacts

We find that the mitigation measures required by this proposed IHA will effect the least practicable adverse impacts on the stocks 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.

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). We assessed whether any additional, practicable requirements could be implemented to further reduce effects, but did not identify any.

To reduce the potential for disturbance from acoustic stimuli associated with the activities, TMC will implement mitigation measures, including the following:

- Using the smallest diameter piles practicable while minimizing the overall number of piles;
- Using a project design that does not include dredging or blasting;
- Using pile caps made of high-density polyethylene or ultra-high-molecular-weight polyethylene softening materials during impact pile driving;
- Minimizing the use of the impact hammer to the extent possible by using a vibratory hammer to advance piles as deeply as possible;
- Employing an 18-m (60-ft) deep bubble curtain during all impact pile driving as well as during all pile-driving activities in less than 18 m (60 ft) of water to reduce noise impacts;
- Not reducing sound source levels due to the planned use of pile caps and a bubble curtain to calculate the most conservative harassment and shutdown zones;
- Development of a marine mammal monitoring and mitigation plan;
- Establishment of shutdown and monitoring zones;
- Visual mitigation monitoring by designated protected species observers (PSO);
- Site clearance before startup;
- Soft-start procedures; and
- Shutdown procedures.

The Service has not identified any additional (i.e., not already incorporated into TMC'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

The project will not preclude access to harvest areas or interfere with the availability of sea otters for harvest. Additionally, the planned cruise ship berth and associated facilities are located within the City of Whittier, where firearm use is prohibited. We therefore propose a finding that TMC's anticipated harassment will not have an unmitigable adverse impact on the availability of any stock of northern sea otters for taking for subsistence uses. In making this finding, we considered the timing and location of the planned activities and the timing and location of subsistence harvest activities in the project area.

Monitoring and Reporting

The purposes of the monitoring requirements are to document and provide data for assessing the effects of specified activities on sea otters; to ensure that take is consistent with that anticipated in the small numbers, negligible impact, and subsistence use analyses; and to detect any unanticipated effects on the species. Monitoring plans include steps to document when and how sea otters are encountered and their numbers and behaviors during these encounters. This information allows the Service to measure encounter rates and trends and to estimate numbers of animals potentially affected. To the extent possible, monitors will record group size, age, sex, reaction, duration of interaction, and closest approach to the project activity.

As proposed, monitoring activities will be summarized and reported in formal reports. TMC must submit monthly reports for all months during which noise-generating work takes place as well as a final monitoring report that must submitted no later than 90 days after the expiration of the IHA. We will require an approved plan for monitoring and reporting the effects

of pile driving and marine construction activities on sea otters prior to issuance of an IHA. We will require approval of the monitoring results for continued operation under the IHA.

We find that these proposed monitoring and reporting requirements to evaluate the potential impacts of planned activities will ensure that the effects of the activities remain consistent with the rest of the findings.

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 544 takes of 37 sea otters and by Level A harassment of up to 70 takes of 7 sea otters from the Southcentral Alaska stock in the specified geographic region during the specified activities during the regulatory period would not significantly affect the quality of the human environment and, thus, preparation of an environmental impact statement for this proposed IHA 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 (ESA)

Under the 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 Southcentral 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 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 Secretary's 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. The Service has determined that, due to this project's locations and activities, the Tribal organizations and communities near Whittier, Alaska, as well as relevant Alaska Native Claims Settlement Act corporations, will not be impacted by this project. Regardless, we will be reaching out to them to inform them of the availability of this proposed IHA and offer them the opportunity to consult.

We invite continued discussion, either about the project and its impacts or about our coordination and information exchange throughout the IHA process.

Proposed Authorization

We propose to authorize the nonlethal, incidental take by Level A and Level B harassment of 614 takes of 44 sea otters from the Southcentral Alaska stock. Authorized take may be caused by pile driving and marine construction activities conducted by Turnagain Marine Construction (TMC) in Whittier, Alaska, over the course of a year from the date of issuance of the IHA. We do not anticipate or authorize any lethal take to sea otters resulting from these activities.

A. *General Conditions for the Incidental Harassment Authorization (IHA)*

(1) Activities must be conducted in the manner described in the December 22, 2022, revised request from TMC for an IHA and in accordance with all applicable conditions and mitigation 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 revised 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., greater than 614 takes of 44 of the Southcentral Alaska stock of northern sea otters, a form of take other than Level A or Level B harassment, or take of one or more sea otters through methods not described in the IHA), TMC 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 Service within 48 hours; and

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

(3) All operations managers, vehicle operators, and machine 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 TMC's revised request. Changes to the specified project without prior authorization may invalidate the IHA.

(5) TMC's revised request is approved and fully incorporated into this IHA unless exceptions are specifically noted herein. The request includes:

(i) TMC's original request for an IHA, dated September 16, 2022;

(ii) Revised applications, dated November 11, November 23, December 1, and December 22, 2022;

(iii) Marine Mammal Mitigation and Monitoring Plan;

(iv) Google Earth package;

(v) Bubble curtain schematics; and

(vi) Pile coordinates.

(6) Operators will allow Service personnel or the Service's designated representative to visit project worksites 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 TMC'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 20 m (66 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 15 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 three strikes from the impact driver must be delivered at reduced energy, followed by a 1-minute waiting period, 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.

(11) All in-water work along the shoreline must be conducted during low tide when the site is dewatered to the maximum extent practicable.

C. *Mitigation Measures for Vessel Operations*

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:

(12) Vessels must remain at least 500 m (0.3 mi) from rafts of 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.

(13) 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) whenever practicable.

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

(15) Vessel operators must be provided written guidance for avoiding collisions and minimizing disturbances to sea otters. Guidance will include measures identified in paragraphs (C)(12) through (15) of this section.

D. Monitoring

(16) Operators shall work with protected species observers (PSOs) 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.

(17) 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.

(18) 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.

(19) 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 Service to review.

(20) 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.

(21) 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.

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

E. *Measures To Reduce Impacts to Subsistence Users*

(23) Prior to conducting the work, TMC 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 Southcentral 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 Service and subsistence stakeholders to address these concerns.

F. *Reporting Requirements*

(24) TMC must notify the Service at least 48 hours prior to commencement of activities.

(25) Monthly reports will be submitted to the Service's Marine Mammal Management

office (MMM) for all months during which noise-generating work takes place. The monthly report will contain and summarize the following information: dates, times, weather, and sea conditions (including the Beaufort Scale sea state and wind force conditions) when sea otters were sighted; the number, location, distance from the sound source, and behavior of the sea otters; the associated project activities; and a description of the implementation and effectiveness of mitigation measures with a discussion of any specific behaviors the sea otters exhibited in response to mitigation.

(26) A final report will be submitted to the Service's MMM within 90 days after completion of work or expiration of the IHA. The report will include:

(i) A summary of monitoring efforts (hours of monitoring, activities monitored, number of PSOs, and, if requested by the Service, the daily monitoring logs).

(ii) A description of all project activities, along with any additional work yet to be done. Factors influencing visibility and detectability of marine mammals (e.g., sea state, number of observers, and fog and glare) will be discussed.

(iii) A description of the factors affecting the presence and distribution of sea otters (e.g., weather, sea state, and project activities). An estimate will be included of the number of sea otters exposed to noise at received levels greater than or equal to 160 dB (based on visual observation).

(iv) A description of changes in sea otter behavior resulting from project activities and any specific behaviors of interest.

(v) A discussion of the mitigation measures implemented during project activities and their observed effectiveness for minimizing impacts to sea otters. Sea otter observation records will be provided to the Service in the form of electronic database or spreadsheet files.

(27) Injured, dead, or distressed sea otters that are not associated with project activities (e.g., animals known to be from outside the project area, previously wounded animals, or carcasses with moderate to advanced decomposition or scavenger damage) must be reported to

the Service within 24 hours of the discovery to either the Service's MMM (1–800–362–5148, business hours); or the Alaska SeaLife Center in Seward (1–888–774–7325, 24 hours a day); or both. Photographs, video, location information, or any other available documentation must be provided to the Service.

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

(29) TMC must notify the Service 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 Service will consider all comments that are received before the close of the comment period (see **DATES**). The Service 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.

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