Public Availability of Comments

Written comments we receive become part of the administrative record associated with this action. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

Next Steps

If we decide to issue a permit to an applicant listed in this notice, we will publish a notice in the **Federal Register**.

Authority

We publish this notice under section 10(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Nicole Rankin,

Acting Deputy Assistant Regional Director, Ecological Services, Southeast Region.

[FR Doc. 2023–24494 Filed 11–3–23; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS–R7–ES–2023–0101; FXES111607MRG01–234–FF07CAMM00]

Marine Mammals; Incidental Take During Specified Activities; Proposed Incidental Harassment Authorization for Southcentral Alaska Stock of Northern Sea Otters in Cordova, Alaska; Draft Environmental Assessment

AGENCY: Fish and Wildlife Service, Interior.

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

SUMMARY: We, the U.S. Fish and Wildlife Service, in response to a request under the Marine Mammal Protection Act of 1972, as amended, from the City of Cordova, Alaska, 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 in Cordova, Alaska. We estimate that this project may result in the nonlethal incidental take by harassment of up to 82 northern sea otters from the Southcentral stock. This proposed authorization, if finalized, will be for up to 30 takes of 5 northern sea otters by Level A harassment and 790 takes of 77 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 December 6, 2023.

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–2023–0101. Alternatively, you may request these documents from the person listed under **FOR FURTHER INFORMATION CONTACT**.

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

- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS–R7–ES–2023–0101, U.S. Fish and Wildlife Service, MS: PRB (JAO/3W), 5275 Leesburg Pike, Falls Church, VA 22041–3803.
- *Electronic submission: https://www.regulations.gov.* Follow the instructions for submitting comments to Docket No. FWS–R7–ES–2023–0101.

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, by email at *R7mmmregulatory@fws.gov* or by telephone at 01–800–362–5148. U.S. Fish and Wildlife Service, MS 341, 1011 East Tudor Road, Anchorage, AK 99503. 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 February 28, 2023, the City of Cordova (hereafter also known as ''the City'' 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 March 24, May 16, and May 30, 2023. We received updated versions of the request on April 27, May 18, and June 8, 2023. The Service determined the June 8, 2023, application to be adequate and complete. The applicant expects take by harassment may occur during the construction of replacements and improvements to the harbor facilities in Cordova, Alaska.

Description of Specified Activities and Specified Geographic Region

The specified activity (hereafter, ''project'') will include the installation and removal of piles and the installation of a bulkhead to rebuild the facilities of the South Harbor in Cordova, Alaska (figure 1) between September 2023 and June 2024. The City will remove 130 existing 30-centimeter (cm) (12-inch (in)) diameter timber piles and 61 existing 30-cm (12-in) diameter steel piles and will permanently install the following types of piles: 155 41-cm (16-in) diameter steel piles, 140 46-cm (18-in) diameter steel piles, 30 76-cm (30-in) diameter steel piles, and 140 steel 41-cm x 226-cm (16-in x 89-in) H piles. Construction will also include the installation and removal of 131 61-cm (24-in) diameter temporary steel piles. Components of the harbor that will be installed out of water include approximately 350 meters (m) (1,150 feet (ft)) of bulkhead wall supported by H piles; main walk floats, end floats, and stall floats; 447 slips; pedestrian gangways; other float components including bull rail, floating fenders, mooring cleats, electricity connections, potable water service, fire suppression waterlines, lighting, wireless connections, and hand rails; and an uplands service area with parking lot expansion, greenspace, and stormwater treatment capabilities. Pile-driving activities will occur over 170 non-consecutive days for approximately 434 hours over 1 year from date of issuance of the IHA. If the IHA is issued after the applicant's intended start date in September 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**.

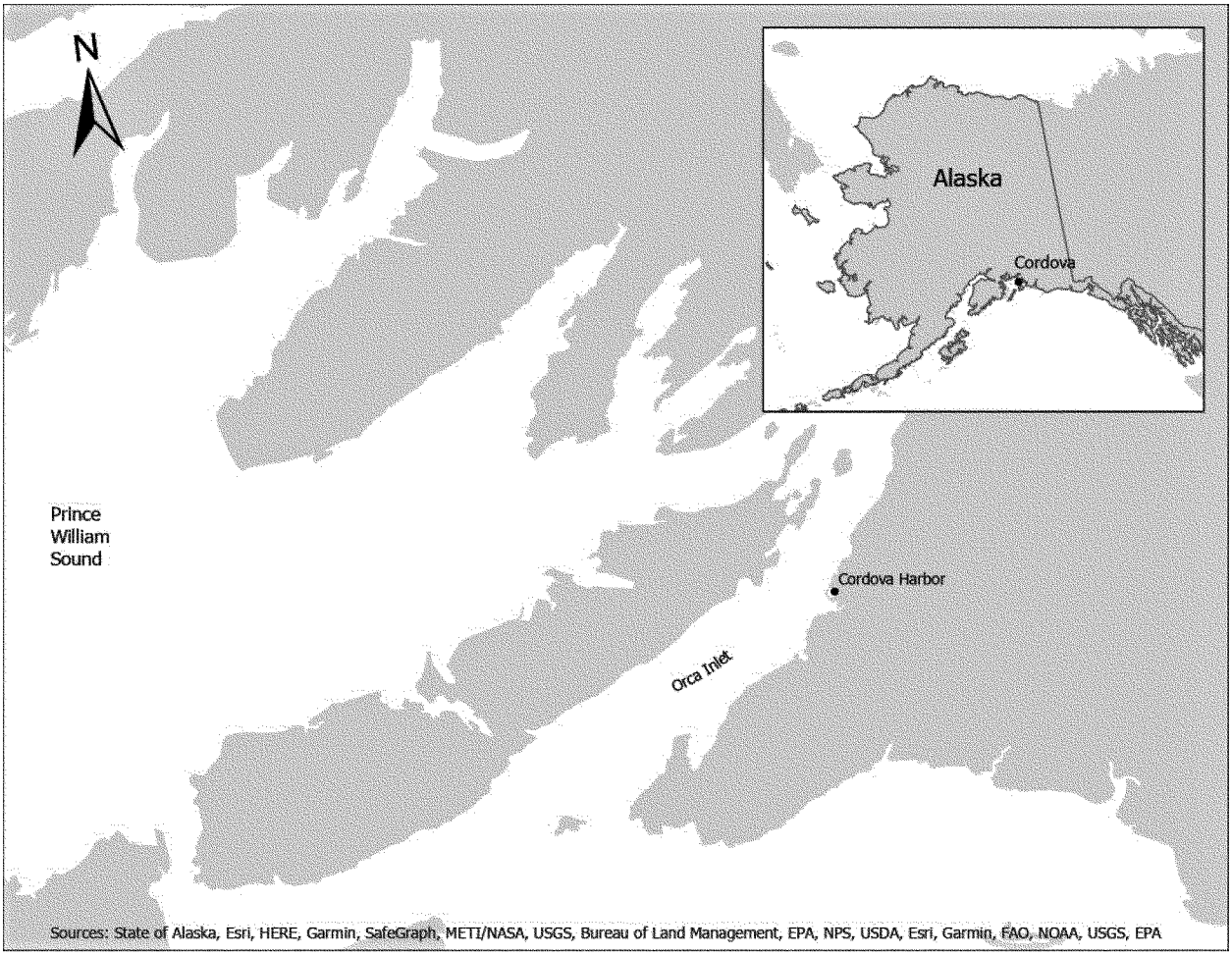

FIGURE 1—SPECIFIED GEOGRAPHIC REGION OF THE PROJECT

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 stock assessment report (USFWS 2023), which can be found at *https://www.regulations.gov/document/FWS-R7-ES-2022-0155-0012* and was announced in the **Federal Register** at 88 FR 53510, August 8, 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). In aerial sea otter abundance surveys of Prince William Sound, Weitzman and Esslinger (2015) found a

density of 21.15 sea otters/km² in the Orca Inlet subregion. Multiple local sources of data (Greenwood 2022; Prince William Sound Science Center 2022; Schinella 2022, 2023; Solstice Alaska Consulting Inc. 2022) indicate a higher density within the Cordova Harbor-approximately 20 sea otters at any given time within the 0.18 km² area of the harbor, or a density of 111.11 sea otters/km². We utilized both sources of data and applied the published density for areas outside the harbor and the local data for areas within the harbor.

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

Underwater Sounds

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 (SEL_{CUM}) 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 SEL_{CUM} (db SEL) for impulsive underwater sound and 219 dB SEL 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 SEL. Exposures resulting in TTS in pinnipeds were found to range from 152 to 174 dB (183 to 206 dB SEL) (Kastak et al. 2005), with a persistent TTS, if not a PTS, after 60 seconds of 184 dB SEL (Kastak et al. 2008). Kastelein et al. (2012) found small but statistically significant TTSs at approximately 170 dB SEL (136 dB, 60 minutes (min)) and 178 dB SEL (148 dB, 15 min). Based on these findings, Southall et al. (2019) developed TTS thresholds for sea otters, which are included in the ''other marine carnivores'' category, of 188 dB SEL for impulsive sounds and 199 dB SEL 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. 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.

Southall et al. (2019) have developed TTS and PTS thresholds for other marine carnivores, which include sea otters, for airborne impulsive and non-impulsive sounds (table 1). For project activities that create only airborne sounds, such as pile driving on land, the sound levels are significantly below the TTS thresholds developed by Southall et al. 2019. NMFS has previously used ''a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment'' (April 10, 2019, 84 FR 14314). NMFS predicts that all other pinniped species that are not harbor seals will be behaviorally harassed when exposed to airborne sounds above 100 dB re 20 micropascal (μPa) (84 FR 14314). Since otariid pinnipeds are the closest available physiological and anatomical proxy for sea otters, we used the NMFS criteria for pinniped harassment from exposure to airborne sound to estimate take by Level B harassment from pile driving on shore.

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 INCLUDE SEA OTTERS

[Values are weighted for other marine carnivores' hearing thresholds and given in cumulative sound exposure level (SEL_{CUM} dB re (20 μPa) in air and SEL_{CUM} dB re (1 μPa) in water) for impulsive and nonimpulsive sounds and unweighted peak sound pressure level (SPL) in air (dB re 20 μPa) 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 Orca Inlet 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 two barges for materials and construction, both of which will remain on site, mostly stationary, to support the work; additionally, a skiff will be used during the project for transporting workers short distances to support construction activities. 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 preferred 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 Cordova and the surrounding areas. Since 2013, there have been 914 sea otters harvested by hunters from the Cordova area, and most of those were taken prior to 2016. From 2018 through 2022, 236 sea otters were harvested from the Cordova area.

The planned project would occur within the Cordova 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 notify potentially affected communities and stakeholders of the public comment period on this proposed IHA so they have an opportunity to share any questions, concerns, or potential conflicts regarding subsistence use in those areas. If any conflicts are identified in the future, the applicant 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. Likewise, we assumed that all animals exposed to airborne sound levels that meet the acoustic exposure criteria in Exposure Thresholds will experience take by Level B harassment due to exposure to in-air 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 Weitzman and Esslinger (2015), as well as local sources of data that indicated a higher density of sea otters within the harbor (Greenwood 2022; Prince William Sound Science Center 2022; Schinella 2022, 2023; Solstice Alaska Consulting Inc. 2022).

The project can be divided into five major components: DTH pile driving, vibratory pile driving, impact pile driving, skiff use to support construction, and pile driving on land. Each of these components will generate a different type of noise. Vibratory pile driving and the use of skiffs will produce nonimpulsive or continuous noise; impact pile driving will produce impulsive noise; and DTH pile driving 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 7. 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) to determine the distance at which sound levels attenuate to 160 dB re 1 µPa. Due to limited data of underwater sound pressure levels from DTH pile driving as well as differences in how PTS and TTS thresholds are calculated, the resultant Level A isopleths for DTH pile driving 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 PILE DRIVING

Pile size	30 to 61-cm (12-in to 24-in) existing timber pile removal	30 to 61-cm (12-in to 24-in) existing steel pile removal	61-cm (24-inch) template installation	61-cm (24-inch) template removal	41-cm (16-in) permanent pile installation	46-cm (18-in) permanent pile installation	76-cm (30-in) permanent pile installation
Total number of piles	130	61	61	61	155	70	30.
Sound level	162 dB re 1 μPa at 10 m (RMS).	161 dB re 1 μPa at 10 m (RMS)					161.9 dB re 1 μPa at 10 m (RMS).
Source	NMFS 2023	NAVFAC[a] 2013, 2015					Denes et al. 2016.
Timing per pile	10 minutes/pile	10 minutes/pile.	10 minutes/pile.	10 minutes/pile.	15 minutes/pile.	20 minutes/pile.	30 minutes/pile.
Maximum number of piles per day.	25	25	6	10	10	10	6.
Maximum number of days of activity.	6	3	11	7	16	7	5.
Sea otter density	111.11 sea otters/km^2						
Distance to below Level A harassment threshold.	0.9 meters	0.8 meters	0.4 meters	0.4 meters	0.5 meters	0.7 meters	0.7 meters.
Level A area (km^2)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000.
Potential sea otters affected by Level A sound per day.	0	0	0	0	0	0	0.
Potential sea otters affected by Level A sound per day (rounded).	0	0	0	0	0	0	0.
Total potential Level A harassment events.	0	0	0	0	0	0	0.
Distance to below Level B harassment threshold.	14 meters	12 meters	12 meters	12 meters	12 meters	12 meters	13 meters.
Level B area (km^2)	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002.
Potential sea otters affected by Level B sound per day.	0.0333	0.0222	0.0222	0.0222	0.0222	0.0222	0.0222.
Potential sea otters affected by Level B sound per day (rounded).	1	1	1	1	1	1	1.
Total potential Level B harassment events.	6	3	11	7	16	7	5.

[a] Naval Facilities Engineering Command.

TABLE 3—SUMMARY OF SOUND LEVEL, TIMING OF SOUND PRODUCTION, DISTANCE FROM SOUND SOURCE TO BELOW LEVEL A HARASSMENT THRESHOLDS, DAYS OF IMPACT, SEA OTTERS IN LEVEL A HARASSMENT ENSONIFICATION AREA, AND TOTAL OTTERS EXPECTED TO BE TAKEN BY LEVEL A HARASSMENT BY IMPACT PILE DRIVING

Pile size	41-cm (16-in) permanent pile installation	46-cm (18-in) permanent pile installation	76-cm (30-in) permanent pile installation
Total number of piles	73	35	20.
Sound level	168.3 dB (SEL)/181.1 dB (RMS)/192.8 dB (peak) re 1 μPa at 10 m.	168.3 dB (SEL)/181.1 dB (RMS)/192.8 dB (peak) re 1 μPa at 10 m.	177 dB (SEL)/190 dB (RMS)/210 dB (peak) re 1 μPa at 10 m.
Source	Denes et al. 2016		NMFS 2023.
Timing per pile	20 minutes/pile; 240 strikes/pile	20 minutes/pile; 240 strikes/pile	20 minutes/pile; 360 strikes/pile.
Maximum number piles per day	6	6	6.
Maximum number of days of activity	13	6	4.
Sea otter density	111.11 sea otters/km^2		
Distance to below Level A harassment threshold.	5.2 meters	5.2 meters	25.9 meters.
Total Level A area (km^2)	0.0001	0.0001	0.0021.
Level A area (km^2) after excluding 10-m shutdown zone (0.0003 km^2).	0	0	0.0018.
Potential sea otters affected by Level A sound per day.	0	0	0.2000.
Potential sea otters affected by Level A sound per day (rounded).	0	0	1.
Total potential Level A harassment events.	0	0	4.

TABLE 4—SUMMARY OF SOUND LEVEL, TIMING OF SOUND PRODUCTION, DISTANCE FROM SOUND SOURCE TO BELOW LEVEL B HARASSMENT THRESHOLDS, DAYS OF IMPACT, SEA OTTERS IN LEVEL B ENSONIFICATION AREA, AND TOTAL OTTERS EXPECTED TO BE TAKEN BY LEVEL B HARASSMENT BY IMPACT PILE DRIVING

Pile size	41-cm (16-in) permanent pile installation	46-cm (18-in) permanent pile installation	76-cm (30-in) permanent pile installation
Total number of piles	73	35	20.
Sound level	168.3 dB (SEL)/181.1 dB (RMS)/192.8 dB (peak) re 1 μPa at 10 m.	168.3 dB (SEL)/181.1 dB (RMS)/192.8 dB (peak) re 1 μPa at 10 m.	177 dB (SEL)/190 dB (RMS)/210 dB (peak) re 1 μPa at 10 m.
Source	Denes et al. 2016		NMFS 2023.
Timing per pile	20 minutes/pile; 240 strikes/pile	20 minutes/pile; 240 strikes/pile	20 minutes/pile; 360 strikes/pile.
Maximum number piles per day	6	6	6.
Maximum number of days of activity	13	6	4.
Distance to below Level B harassment threshold [a].	255 meters	255 meters	1,000 meters.
Total Level B area (km^2)	0.2038	0.2038	0.3137.
Level B area (km^2) within harbor	0.18	0.18	0.18.
Sea otter density inside harbor	111.11 sea otters/km^2		
Potential sea otters affected by Level B sound per day within harbor.	19.9998	19.9998	19.9998.
Potential sea otters affected by Level B sound per day within harbor (rounded).	20	20	20.
Potential Level B harassment events within harbor.	260	120	80.
Level B area (km^2) outside harbor	0.0238	0.0238	0.1337.
Sea otter density outside harbor	21.15 sea otters/km^2		
Potential sea otters affected by Level B sound per day outside harbor.	0.5034	0.5034	2.8278.
Potential sea otters affected by Level B sound per day outside harbor (rounded).	1	1	3.
Potential Level B harassment events outside harbor.	13	6	12.
Total potential Level B harassment events.	273	126	92.

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 DOWN-THE-HOLE PILE DRIVING

Pile size	41-cm (16-in) permanent pile installation	46-cm (18-in) permanent pile installation	76-cm (30-in) permanent pile installation
Total number of piles	50	20	16.
Sound level	159 dB (SEL)/167 dB (RMS) re 1 μPa at 10 m		164 dB (SEL)/174 dB (RMS) re 1 μPa at 10 m.
Source	Heyvaert and Reyff 2021		Reyff and Heyvaert 2019, Reyff 2020, Denes et al. 2019.
Timing per pile	75 minutes/pile	75 minutes/pile	75 minutes/pile.
Maximum number piles per day	4	4	4.
Maximum number of days of activity	13	5	4.
Sea otter density	111.11 sea otters/km^2		
Distance to below Level A harassment threshold.	35.2 meters	35.2 meters	67.1 meters.
Total Level A area (km^2)	0.0039	0.0039	0.0141.
Level A area (km^2) after excluding 10-m shutdown zone (0.0003 km^2).	0.0036	0.0036	0.0138.
Potential sea otters affected by Level A sound per day.	0.4000	0.4000	1.5333.
Potential sea otters affected by Level A sound per day (rounded).	1	1	2.
Total potential Level A harassment events	13	5	8.
Distance to below Level B harassment threshold [a].	29 meters	29 meters	86 meters.
Level B area (km^2)	0	0	0.0091.
Potential sea otters affected by Level B sound per day.	0	0	1.0111.
Potential sea otters affected by Level B sound per day (rounded).	0	0	2.

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 DOWN-THE-HOLE PILE DRIVING—Continued

Pile size	41-cm (16-in) permanent pile installation	46-cm (18-in) permanent pile installation	76-cm (30-in) permanent pile installation
Total potential Level B harassment events	0	0	8.

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

TABLE 6—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 A SKIFF

Sound source	Worker transit skiff
Sound level	182 dB (RMS) re 1 μPa at 0.9 m.
Source	Kipple and Gabriele 2007.
Number of days of vessel use	170.
Sea otter density	111.11 sea otters/km^2.
Distance to below Level A harassment threshold	0 meters.
Level A area (km^2)	0.
Potential sea otters affected by Level A sound per day	0.
Potential sea otters affected by Level A sound per day (rounded)	0.
Total potential Level A harassment events	0.
Distance to below Level B harassment threshold	26.4 meters.
Total Level B area (km^2)	0.007.
Level B area after excluding 10-m shutdown zone (0.0003 km^2)	0.0067.
Potential sea otters affected by Level B sound per day	0.7444.
Potential sea otters affected by Level B sound per day (rounded)	1.
Total potential Level B harassment events	170.

TABLE 7—SUMMARY OF SOUND LEVEL, TIMING OF SOUND PRODUCTION, DISTANCE FROM SOUND SOURCE TO BELOW LEVEL B HARASSMENT THRESHOLDS, DAYS OF IMPACT, SEA OTTERS IN LEVEL B HARASSMENT ENSONIFICATION AREA, AND TOTAL OTTERS EXPECTED TO BE HARASSED THROUGH BEHAVIORAL DISTURBANCE BY IN-AIR SOUND

Sound source	Vibratory pile driving on shore	Impact pile driving on shore
Sound level	103.2 dB re 20 μPa at 15 m (RMS)	101 dB 20 μPa at 15 m (RMS).
Source	Laughlin 2010	Ghebreghzabiher 2017.
Maximum number of days of activity	45	21.
Sea otter density	111.11 sea otters/km.^{2}	
Distance to below Level B harassment threshold	22 meters	17 meters.
Total Level B area (km^2)	0.0015	0.0009.
Level B area after excluding 10-m shutdown zone (0.0003 km^2)	0.0012	0.0006.
Potential sea otters affected by Level B sound per day	0.1333	0.0667.
Potential sea otters affected by Level B sound per day (rounded)	1	1.
Total potential Level B harassment events	45	21.

Sound levels for all underwater sound sources are unweighted and given in dB re 1 μPa; sound levels for airborne sound sources are unweighted and given in dB re 20 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 outside Cordova Harbor by the density of animals (21.15 sea otters/km^2) derived from surveys conducted of Orca Inlet (Weitzman and Esslinger 2015), whereas the area ensonified to >160 dB re 1μPa within Cordova Harbor was multiplied by the density derived from local knowledge (111.11 sea otters/km^2; Greenwood 2022; Prince William Sound Science Center 2022; Schinella 2022, 2023; Solstice Alaska Consulting Inc. 2022). We applied the same methodology to determine the number of sea otters that may experience sounds capable of causing PTS. Similarly, to determine the number of sea otters that may experience airborne construction sounds >100 dB re 20 μPa due to pile driving, we multiplied the area ensonified to >100 dB re 20 μPa by the density of sea otters within the harbor (111.11 sea otters/km^2; Greenwood 2022; Prince William Sound Science Center 2022; Schinella 2022, 2023; Solstice Alaska Consulting Inc. 2022). The number of sea otters expected to be exposed to such sound levels can be found in tables 2 through 7. To calculate the underwater area ensonified for most types of pile-driving activity, we used πr^2. Given the numerous harbor floats and the number of piles being removed and installed, it was not feasible to calculate the actual area of water

ensonified for most activities, so the area of a circle was used for a conservative estimate for pile driving activities where the ensonified area is entirely within the harbor. Likewise, to calculate the area ensonified by pile-driving activities on shore, we used πr^2. For the Level B underwater area ensonified by impact pile driving 76-cm (30-in) piles, we used ArcGIS Pro to map the zones and calculate the area of the water ensonified, since it is the largest zone and extends beyond the harbor. The applicant proposed a universal 10-m (33-ft) shutdown zone for all project activities so that area was subtracted from all calculated areas when estimating take.

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 91.44 m (300 ft).

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, the applicant will implement shutdown zones ranging from 10 to 100 m (33 to 328 ft), based on the pile size and type of pile driving or 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, the City of Cordova 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 790 takes of 77 sea otters by Level B harassment and 30 takes of 5 sea otters by Level A harassment may occur due to the City's planned harbor 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 Orca Inlet from surveys and analyses conducted by Weitzman and Esslinger (2015) for areas ensonified outside Cordova Harbor. Methods and assumptions for these surveys can be found in the original publication.

Multiple local sources (Greenwood 2022; Prince William Sound Science Center 2022; Schinella 2022, 2023; Solstice Alaska Consulting Inc. 2022) indicated a higher density within the Cordova Harbor—approximately 20 sea otters at any given time within the 0.18 km^2 area of the harbor, or a density of 111.11 sea otters/km^2. We used this density to estimate take for areas ensonified within the harbor.

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 underwater ensonification zones were based on sound attenuation models using a practical spreading loss model; estimation of in-air ensonification zones were based on sound attenuation models using a spherical spreading loss model. These factors may lead to actual sound values differing slightly from those estimated here.

Finally, the in-water 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 increased 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 Cordova, 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 8.

TABLE 8—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:					
30-to-61-cm (12-in-to-24-in) existing timber pile removal	6	0	0	1	6
30-to-61-cm (12-in-to-24-in) existing steel pile removal	3	0	0	1	3
61-cm (24-in) template installation	11	0	0	1	11
61-cm (24-in) template removal	7	0	0	1	7
41-cm (16-in) permanent pile installation	16	0	0	1	16
46-cm (18-in) permanent pile installation	7	0	0	1	7
76-cm (30-in) permanent pile installation	5	0	0	1	5
Impact drilling:					
41-cm (16-in) permanent pile installation	13	0	0	21	273
46-cm (18-in) permanent pile installation	6	0	0	21	126
76-cm (30-in) permanent pile installation	4	1	4	23	92
Down-the-hole drilling:					
41-cm (16-in) permanent pile installation	13	1	13	0	0
46-cm (18-in) permanent pile installation	5	1	5	0	0
76-cm (30-in) permanent pile installation	4	2	8	2	8
Skiff use:					
Worker transit skiff	170	0	0	1	170

TABLE 8—TOTAL ESTIMATED TAKES BY SOURCE OF LEVEL A AND LEVEL B HARASSMENT OF SEA OTTERS—Continued

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
In-air Sound:					
Vibratory pile driving on shore	45	0	0	1	45
Impact pile driving on shore	21	0	0	1	21
Totals	336	5	30	77	790

Over the course of the project, we estimate 790 instances of take by Level B harassment of 77 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 protected species observers (PSOs) will be able to reliably detect and prevent take by Level A harassment of sea otters up to 10 m (33 ft) away; conversely, we anticipate that at distances greater than 10 m, sea otters will at times avoid detection. Throughout the project, we estimate 30 instances of take by Level A harassment of 5 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, startle reactions, or temporary displacement. While mitigation measures incorporated into the applicant'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 5.2 to 67.1 m (17 to 220 ft).

With the adoption of the mitigation measures incorporated in the applicant'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 that the City's specified activities in the specified geographic region will result in no more than 790 takes of 77 sea otters by Level B harassment and 30 takes of 5 sea otters by Level A harassment during the 1-year period of this proposed IHA (see *Sum of Harassment from All Sources*). Take of 82 animals is 0.4 percent of the best available estimate of the current Southcentral Alaska stock size of 21,617 animals (Esslinger et al. 2021) ($(82 \div 21{,}617) \times 100 \approx 0.4$) 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 3 and 170 days per year, resulting in repeated exposures.

However, injuries (*i.e.,* Level A harassment or PTS) due to chronic sound exposure are estimated to occur over a longer time scale (Southall et al. 2019). The area that will experience noise greater than Level B thresholds due to pile driving is small (less than 0.0141 km^2), and an animal that may be disturbed could escape the noise by moving to nearby quiet areas. Further, sea otters spend over half of their time above the surface during the summer months (Esslinger et al. 2014), and likely no more than 70 percent of their time foraging during winter months (Gelatt et al. 2002); thus, their ears will not be exposed to continuous noise, and the amount of time it may take for permanent injury is considerably longer than that of mammals primarily under water. Some animals may exhibit some of the stronger responses typical of Level B harassment, such as fleeing, interruption of feeding, or flushing from a haulout. These responses could have temporary biological impacts for affected individuals, but are not anticipated to result in measurable changes in survival or reproduction.

The total number of animals affected and severity of impact are not sufficient to change the current population dynamics at the stock scale. Although the specified activities may result in approximately 820 incidental takes of 82 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 the applicant'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 affect 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, the City of Cordova will implement mitigation measures, including the following:

- Using a project design that incorporates the smallest diameter piles and footprint practicable while minimizing the overall number of piles and area;
- Using a project design that does not include dredging or excavating below the high tide line;
- Using a project design that does not include blasting;
- Using pile driving equipment with muffler systems to reduce in-air noise generation;
- Using a vibratory hammer equipped with a suppressor to reduce rattling;
- Using dampeners to eliminate steel-on-steel in-air noise;
- Employing a sediment curtain during all DTH pile driving to contain drill spoils and to minimize turbidity;
- 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 the applicant's request) mitigation or monitoring measures that are practicable and would further reduce potential impacts to sea otters and their habitat.

Impact on Subsistence Use

The project will not preclude access to harvest areas or interfere with the availability of sea otters for harvest. Additionally, the construction activities take place within the Cordova Harbor, where firearm use is prohibited. We therefore propose a finding that the applicant'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. The applicant 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 790 takes of 77 sea otters and by Level A harassment of up to 30 takes of 5 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**.

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 Tribal organizations and communities. 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 Cordova, 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 820 takes of 82 sea otters from the Southcentral Alaska stock. Authorized take may be caused by pile driving and marine construction activities conducted by the City of Cordova in Cordova, 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 request from the City of Cordova 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 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 820 takes of 82 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), the City of Cordova 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 the City of Cordova's request. Changes to the specified project without prior authorization may invalidate the IHA.

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

(i) The City of Cordova's original request for an IHA, dated February 28, 2023;

(ii) Revised requests, dated April 27, May 18, and June 8, 2023;

(iii) Marine Mammal Mitigation and Monitoring Plan; and

(iv) Google Earth package;

(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 the City of Cordova'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 10 m (33 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 (66 ft)) 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 (PSO) to apply mitigation measures and shall recognize the authority of PSOs up to and including stopping work, except where doing so poses a significant safety risk to personnel.

(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, the City of Cordova 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) If any concerns remain, develop a plan of cooperation in consultation with the Service and subsistence stakeholders to address these concerns.

F. Reporting Requirements

(24) The City of Cordova 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), 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) The City of Cordova 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 whether 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 Fisheries and Ecological Services, Alaska Region.

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BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[Docket No. FWS–HQ–IA–2023–0207; FXIA16710900000–234–FF09A30000]

Foreign Endangered Species; Receipt of Permit Applications

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of permit applications; request for comments.

SUMMARY: We, the U.S. Fish and Wildlife Service, invite the public to comment on applications to conduct certain activities with foreign species that are listed as endangered under the Endangered Species Act (ESA). With some exceptions, the ESA prohibits activities with listed species unless Federal authorization is issued that allows such activities. The ESA also requires that we invite public comment before issuing permits for any activity otherwise prohibited by the ESA with respect to any endangered species.

DATES: We must receive comments by December 6, 2023.

ADDRESSES:

Obtaining Documents: The applications, application supporting materials, and any comments and other materials that we receive will be available for public inspection at *https://www.regulations.gov* in Docket No. FWS–HQ–IA–2023–0207.

Submitting Comments: When submitting comments, please specify the name of the applicant and the permit number at the beginning of your comment. You may submit comments by one of the following methods:

- *Internet: https://www.regulations.gov.* Search for and submit comments on Docket No. FWS–HQ–IA–2023–0207.
- *U.S. mail:* Public Comments Processing, Attn: Docket No. FWS–HQ–IA–2023–0207; U.S. Fish and Wildlife Service Headquarters, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

For more information, see Public Comment Procedures under **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: Brenda Tapia, by phone at 703–358–2185 or via email at *DMAFR@fws.gov.* 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:

I. Public Comment Procedures

A. How do I comment on submitted applications?

We invite the public and local, State, Tribal, and Federal agencies to comment on these applications. Before issuing any of the requested permits/, we will take into consideration any information that we receive during the public comment period.

You may submit your comments and materials by one of the methods in **ADDRESSES**. We will not consider comments sent by email or to an address not in **ADDRESSES**. We will not consider or include in our administrative record comments we receive after the close of the comment period (see **DATES**).

When submitting comments, please specify the name of the applicant and the permit number at the beginning of your comment. Provide sufficient information to allow us to authenticate any scientific or commercial data you include. The comments and recommendations that will be most useful and likely to influence agency decisions are: (1) Those supported by quantitative information or studies; and (2) those that include citations to, and analyses of, the applicable laws and regulations.

B. May I review comments submitted by others?

You may view and comment on others' public comments at *https://www.regulations.gov* unless our allowing so would violate the Privacy Act (5 U.S.C. 552a) or Freedom of Information Act (5 U.S.C. 552).

C. Who will see my comments?

If you submit a comment at *https://www.regulations.gov,* your entire comment, including any personal identifying information, will be posted on the website. If you submit a hardcopy comment that includes personal identifying information, such as your address, phone number, or email address, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. Moreover, all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public disclosure in their entirety.

II. Background

To help us carry out our conservation responsibilities for affected species, and in consideration of section 10(c) of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), we invite public comments on permit applications before final action is taken. With some exceptions, the ESA prohibits certain activities with listed species unless Federal authorization is issued that allows such activities. Permits issued under section 10(a)(1)(A) of the ESA allow otherwise prohibited activities for scientific purposes or to enhance the propagation or survival of the affected species. Service regulations regarding prohibited activities with endangered species, captive-bred wildlife registrations, and permits for any activity otherwise prohibited by the ESA with respect to any endangered species are available in title 50 of the Code of Federal Regulations in part 17.