



**Billing Code: 4333-15**

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**[FWS-R8-ES-2018-N012; FXES111608MSSO0]**

**Marine Mammals; Incidental Take During Specified Activities; Proposed Incidental Harassment Authorization**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of receipt of application and proposed incidental harassment authorization; request for comments.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), have received an application from the United States Coast Guard (USCG) for authorization to take small numbers of marine mammals by harassment incidental to the replacement of pier piles and the potable water line at USCG Station Monterey in Monterey County, California. In accordance with provisions of the Marine Mammal Protection Act of 1972, as amended, we request comments on our proposed authorization for the applicant to incidentally take, by harassment, small numbers of southern sea otters during a 1-year authorization period beginning on or before June 15, 2018. We anticipate no take by injury or death and include none in this proposed authorization, which would be for take by harassment only.

**DATES:** Comments and information must be received by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** *Comment submission:* You may submit comments by any one of the following methods:

1. *U.S. mail or hand-delivery*: Stephen P. Henry, Field Supervisor, Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, CA 93003.

2. *Fax*: 805–644–3958, attention to Stephen P. Henry, Field Supervisor.

3. *Electronic mail (e-mail)*: R8\_SSO-IHA\_Comment@fws.gov. Please include your name and U.S. mail address in your message.

*Document availability*: Electronic copies of the incidental harassment authorization request, the Marine Mammal Monitoring Plan, the draft supplemental environmental assessment, and other supporting materials, such as the list of references used in this notice, may be obtained by writing to the address specified above, telephoning the contact listed in **FOR FURTHER INFORMATION CONTACT**, or visiting the Internet at <http://www.fws.gov/ventura/endangered/species/info/sso.html>. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned U.S. mail address.

**FOR FURTHER INFORMATION CONTACT**: Lilian Carswell, Southern Sea Otter Recovery & Marine Conservation Coordinator, (805) 677–3325, or by e-mail at [Lilian\\_Carswell@fws.gov](mailto:Lilian_Carswell@fws.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

Sections 101(a)(5)(A) and (D) of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1371 (a)(5)(A) and (D)), authorize the Secretary of the Interior to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region, provided that we make

certain findings and either issue regulations or, if the taking is limited to harassment, provide a notice of a proposed authorization to the public for review and comment.

We may grant authorization to incidentally take small numbers of marine mammals if we find that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses. As part of the authorization process, we prescribe permissible methods of taking and other means of effecting the least practicable impact on the species or stock and its habitat, and requirements pertaining to the monitoring and reporting of such takings.

The term “take,” as defined by the MMPA, means to harass, hunt, capture, or kill, or to attempt to harass, hunt, capture, or kill, any marine mammal. Harassment, as defined by the MMPA, 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 calls this 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 calls this Level B harassment].”

The statutory terms “negligible impact,” “small numbers,” and “unmitigable adverse impact” are defined in the Code of Federal Regulations at 50 CFR 18.27, the Service’s regulations governing take of small numbers of marine mammals incidental to specified activities. “Negligible impact” is defined as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or

survival.” The term “small numbers” is also defined in the regulations as “a portion of a marine mammal species or stock whose taking would have a negligible impact on that species or stock.” However, we do not rely on the definition of “small numbers” here, as it conflates the terms “small numbers” and “negligible impact,” which we recognize as two separate and distinct requirements. *See NRDC v. Evans*, 232 F. Supp. 2d 1003, 1025 (N.D. Cal.). Instead, in our small numbers determination, we evaluate whether the number of marine mammals likely to be taken is small relative to the size of the overall population.

“Unmitigable adverse impact” is determined in reference to impacts on the availability of the species or stock(s) for subsistence uses. It is defined as “an impact resulting from the specified activity (1) that is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by (i) causing the marine mammals to abandon or avoid hunting areas, (ii) directly displacing subsistence users, or (iii) placing physical barriers between the marine mammals and the subsistence hunters; and (2) that cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.” Because this subsistence provision applies only to the taking of any marine mammal by any Indian, Aleut, or Eskimo who resides in Alaska and who dwells on the coast of the North Pacific Ocean or the Arctic Ocean (16 U.S.C. 1371(b)), it is relevant to northern sea otters (*Enhydra lutris kenyoni*) in Alaska but not to southern sea otters.

### **Summary of Request**

In February 2017, we received a request from the USCG (Applicant) for MMPA authorization to take by harassment southern sea otters (*Enhydra lutris nereis*) incidental

to the replacement of pier piles and the potable water line at USCG Station Monterey in Monterey Harbor, California. We received a revised request on July 11, 2017. The Applicant requested and received incidental harassment authorization (IHA) for the same project in 2014 but was not able to initiate work at that time. Other than revised dates, the project is essentially unchanged. The Applicant proposes to remove and replace 17 timber piles that structurally support the patrol boat pier (Pier), replace the existing potable water line, and improve associated structures to maintain the structural integrity of the Pier and potable water line. Pile-driving activities would be limited to the period from June 15 to October 15. Other construction activities associated with the project are not expected to affect sea otters and may occur at any time. A detailed description of the proposed action is contained in the revised incidental harassment authorization request submitted to us by the USCG (Amec Foster Wheeler 2017). The proposed action is expected to result in take, by Level B Harassment only, of sea otters.

### **Description of the Activity**

The proposed action would involve removing the existing timber deck, timber stringers, steel pile caps, steel support beams, and hardware to access the 17 timber piles that need to be replaced. The timber piles, which are approximately 16 to 18 inches (in) (41 to 46 centimeters (cm)) in diameter and covered with polyvinyl chloride (PVC) wraps, would be removed by means of a vibratory extractor. Each timber pile would be replaced with a steel pipe pile 14 in (36 cm) in diameter installed using a vibratory hammer. Each steel pipe pile would be positioned and installed in the footprint of the extracted timber pile. Pile proofing would be conducted via impact hammer. If, due to substrate or breakwater armor, a pipe pile is unable to be driven to 30 feet (ft) (9 meters

(m)) below the mud line using a vibratory hammer, then an impact hammer would be used. If the pile cannot be driven with an impact hammer, the pipe pile would be posted onto the armor stone. The steel pipe piles would not be filled with concrete. Materials and hardware removed to allow access to conduct pile work would be replaced with in-kind materials.

Sound attenuation measures, including implementation of a bubble curtain and cushion pads during impact pile driving, would be used. Pile extraction and driving equipment would be located on a barge. No staging would be located on the existing wharf. To facilitate supplementary monitoring of effects on sea otters in or near the project area, the Service has requested, and the USCG has agreed to provide, 24-hour advance notice of pile-driving activity and a record of the start and stop times of all pile-driving activities once they are completed.

a. Timing of Activity

Project construction would require a maximum of 60 work days. Pile extraction and driving activities would occur between June 15 and October 15. Pile-driving activities are expected to require 3 to 8 days of the total construction time, with an average of 2 to 3 piles removed and installed per day. Driving time would be approximately 20 minutes per pile for vibratory or impact pile driving. Vibratory extraction of the existing piles would take approximately 10 minutes per pile. In total, approximately 510 minutes (8.5 hours) of underwater and airborne noise are anticipated to be generated by pile driving/extraction activities over the course of the project.

b. Geographic Location of Activity

The USCG Station Monterey is located at 100 Lighthouse Avenue, in the city and county of Monterey, California. The Pier is on the eastern portion of the USCG Station's waterfront facility, along a jetty that extends approximately 1,300 ft (396 m) east into Monterey Harbor. The Pier and floating docks are on the southern side of the jetty.

### **Description of Marine Mammals in the Area of the Activity**

Several species of marine mammals occur in the proposed construction area, including the Pacific harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), harbor porpoise (*Phocoena phocoena*), Risso's dolphin (*Grampus griseus*), bottlenose dolphin (*Tursiops truncatus*), killer whale (*Orcinus orca*), humpback whale (*Megaptera novaeangliae*) and gray whale (*Eschrichtius robustus*). These species are under the jurisdiction of the National Marine Fisheries Service (NMFS) and are considered under a separate proposed IHA notice (82 FR 42986; September 13, 2017). The only marine mammal species under the jurisdiction of the Service that occurs in the proposed construction area is the southern sea otter.

Southern sea otters are listed as threatened under the Endangered Species Act of 1973, as amended (ESA) (42 FR 2965; January 14, 1977), and, because of their threatened status, are automatically considered "depleted" under the MMPA (16 U.S.C. 1362(1)(C)). The State of California also recognizes the sea otter as a fully protected mammal (Fish and Game Code section 4700) and as a protected marine mammal (Fish and Game Code section 4500). All members of the sea otter population in California are descendants of a small group that survived the fur trade and persisted near Big Sur, California. Historically ranging from at least as far north as Oregon (Valentine et al. 2008) to Punta Abreojos, Baja California, Mexico, in the south, sea otters currently occur

in only two areas of California. The mainland population ranges from San Mateo County to Santa Barbara County, and a translocated population exists at San Nicolas Island, Ventura County. The 2017 California-wide index of abundance is 3,186 individuals ([www.werc.usgs.gov/seaottercount](http://www.werc.usgs.gov/seaottercount)). Additional general information on status and trends of the southern sea otter may be found in the 5-year review and stock assessment report, available at <http://www.fws.gov/ventura/endangered/species/info/sso.html>.

Sea otters occur in the Monterey Bay Harbor area year round. Census data indicate that there are, on average, 5.4 sea otters per 1,640 ft (500 m) of coastline within Monterey Harbor and in adjacent shoreline areas from Mussel Point to Del Monte Beach (ATOS 371-382; U.S. Geological Survey (USGS) 2017). The number of sea otters present at any one time in a particular location depends on a number of factors, including the availability of kelp canopy, the location of rafting sites, and individual sea otters' behavior. Sea otters typically use the harbor area to rest and to forage, with some sea otters feeding on mussels under the pier at or near the project location. Sea otters also occasionally use a passage through the rocks near the project location to access the kelp beds north of the jetty from the harbor (M. Staedler, Monterey Bay Aquarium Sea Otter Research and Conservation Program, pers. comm. 2014, 2017).

### **Potential Impacts of the Proposed Action on Sea Otters**

In this section we provide a qualitative discussion of the potential impacts of the proposed project. The “Estimated Take by Incidental Harassment” section later in this document includes a quantitative analysis of the number of individuals that may be taken by Level B harassment as a result of this activity.

Marine mammals exposed to high-intensity sound repeatedly or for prolonged periods can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Kastak et al. 1999; Schlundt et al. 2000; Finneran et al. 2002, 2005). A permanent threshold shift (PTS) is said to occur when the loss of hearing sensitivity is unrecoverable, whereas a temporary threshold shift (TTS) is said to occur when the animal's hearing threshold recovers over time (Southall et al. 2007). Noise exposures resulting in TTS can cause PTS if repeated over time. Chronic exposure to excessive, but not high-intensity, noise can cause masking at the frequency band that some animals utilize for vital biological functions (Clark et al. 2009). Noise can also cause other forms of disturbance when marine mammals alter their normal patterns of behavior to move away from the source.

Many marine mammals depend on acoustic cues for vital biological functions, such as orientation, communication, locating prey, and avoiding predators. Sea otter vocalizations include in-air screams used by mothers and pups to maintain contact when separated and a suite of other low-intensity, short-range, in-air signals that are likely used in close-range social interactions (Kenyon 1969, McShane et al. 1995). However, sea otters are not known to communicate underwater, nor are they known to use acoustic information to orient or to locate prey. Ghoul and Reichmuth (2014) conducted controlled laboratory hearing tests to obtain aerial and underwater audiograms for a captive adult male sea otter and to evaluate his hearing in the presence of ambient noise. In air, the sea otter's hearing was similar to that of a sea lion but less sensitive to high-frequency (greater than 22 kHz) and low-frequency (less than 2 kHz) sounds than terrestrial mustelids. Under water, the sea otter was able to detect signals as low as 0.125

kHz (at 116 dB re 1  $\mu$ Pa) and as high as 38.1 kHz (at 141 dB re 1  $\mu$ Pa), with best hearing sensitivity in the range of 8 and 16 kHz.

Although the sea otter's hearing was most similar to that of a sea lion, the sea otter had a narrower bandwidth of best hearing sensitivity (3.7 octaves) than either the sea lion (6.7 octaves) or harbor seal (8.6 octaves) and a pronounced reduction in sensitivity at frequencies below 1 kHz, where sounds could not be detected at levels below 100 dB re 1  $\mu$ Pa. At frequencies of 2 kHz or lower, the auditory threshold (level at which a sound becomes audible) was 12 to 34 dB higher for the sea otter than for the sea lion. In studies of auditory masking, signal-to-noise ratios required for signal detection (critical ratios) were 25 to 34 dB, more than 10 dB above those measured in pinnipeds, suggesting that sea otters have a poor capacity to detect acoustic signals in background noise relative to other marine carnivores. In particular, critical ratios for the sea otter at frequencies below 2 kHz indicate that low-frequency sounds are likely to be more difficult for sea otters to detect above low-frequency noise relative to other marine mammals.

Controlled behavioral studies of responses of sea otters to noise have not been conducted, but observational studies have not indicated any particular behavioral sensitivity to noise, (Riedman 1983, 1984). Observed responses of wild sea otters to disturbance are highly variable, probably reflecting the level of noise and activity to which they have been exposed and become acclimated over time and the particular location and social or behavioral state of that individual. Sea otters appeared to be relatively undisturbed by pile-driving activities in Elkhorn Slough during the construction of the Parsons Slough Sill, with many showing no response to pile driving and generally

reacting more strongly to passing vessels associated with construction than to the sounds of machinery (Elkhorn Slough National Estuarine Research Reserve (ESNERR) 2011). However, these animals were likely acclimated to loud noises, as they occupied an area near an active railroad track, which produced in-air sound levels comparable to those produced by the vibratory driving of H piles (ESNERR 2011).

The most likely effect of the proposed project on sea otters is behavioral disturbance due to pile-driving noise and activity. Potentially affected areas include the harbor and the area immediately north of the jetty. Underwater and airborne noise generated by pile replacement work may cause sea otters that rest or forage within or near the harbor to relocate temporarily to nearby areas. Behavioral changes resulting from disturbance could include startle responses, the interruption of resting behaviors (while in water or hauled out on nearby docks), and changes in foraging patterns. Most likely, sea otters would move away from the noise source and would be temporarily displaced from the pile replacement work area.

NMFS has developed acoustic exposure criteria to define Level A harassment (injury) and Level B harassment (disturbance) resulting from project-related noise for the marine mammals under its jurisdiction (i.e., cetaceans and pinnipeds other than walruses). Since the Coast Guard first received an IHA for this project, NMFS has adopted new criteria for assessing Level A impacts, which the Service adopts for use here. For otariid pinnipeds (sea lions and fur seals) exposed to non-impulsive underwater noise (such as vibratory pile driving and removal), NMFS currently uses a cumulative 24-hour sound exposure level of  $219 \text{ dB re } 1 \mu\text{Pa}^2\text{s}$  as the threshold for Level A harassment, which is based on the estimated onset of physical injury as defined by the onset of PTS

(NMFS 2016), and 120 dB re 1  $\mu$ Pa as the threshold for Level B harassment, although this threshold is not based on direct data.

For otariid pinnipeds exposed to impulsive underwater noise (such as impact hammering of piles), NMFS uses an unweighted peak sound pressure level of 232 dB re 1  $\mu$ Pa or cumulative 24-hour sound exposure level of 203 dB re 1  $\mu$ Pa<sup>2</sup>s as the threshold for Level A harassment (NMFS 2016) and 160 dB re 1  $\mu$ Pa as the threshold for Level B harassment. For pinnipeds other than harbor seals exposed to airborne noise, NMFS uses 100 dB re 20  $\mu$ Pa as a guideline, but not formal threshold, for the onset of Level B harassment (79 FR 13991; March 12, 2014). NMFS does not have a guideline for the onset of Level A harassment of pinnipeds by airborne noise (A. Scholik-Schlomer, Office of Protected Resources, Marine Mammal and Sea Turtle Conservation Division, pers. comm. 2014). However, Southall et al. (2007) propose an injury criterion (estimated PTS onset) for sea lions exposed to airborne noise of 172.5 dB re 20  $\mu$ Pa.

In the absence of formal noise exposure thresholds specific to sea otters, but in light of evidence suggesting that the hearing of sea otters is generally comparable to that of other marine carnivores (e.g., sea lions), although with relatively poorer sensitivity (higher hearing thresholds) at low frequencies, we generally use the thresholds, guidelines, and criteria developed by NMFS for sea lions (otariid pinnipeds) as proxies. However, since the Coast Guard first received an IHA for this project, we have determined that the Level B threshold of 120 dB re 1  $\mu$ Pa for non-impulsive noise such as vibratory pile driving is not applicable to sea otters. The 120 dB re 1  $\mu$ Pa threshold is based on studies conducted by Malme et al. in the 1980s, during which gray whales were exposed to experimental playbacks of industrial noise. Based on the behavioral responses

of gray whales to the playback of drillship noise during a study at St. Lawrence Island, Alaska, Malme et al. (1988) concluded that “exposure to levels of 120 dB or more would probably cause avoidance of the area by more than one-half of the gray whales.” Sea otters do not occur at St. Lawrence Island, Alaska, but similar playback studies that were conducted off the coast of California (Malme 1983, 1984) included a sea otter monitoring component (Riedman 1983, 1984). The 1983 and 1984 studies detected probabilities of avoidance in gray whales comparable to those reported in Malme et al. (1988), but there was no evidence of disturbance reactions or avoidance in sea otters.

Gray whales are in the group of marine mammals (baleen whales) believed to be most sensitive to low-frequency sounds, with an estimated audible frequency range of approximately 10 Hz to 30 kHz (Finneran 2016). In contrast, sea otters have relatively poor hearing sensitivity at frequencies below 2 kHz (Ghoul and Reichmuth 2014). Most of the acoustic energy generated by vibratory pile driving is limited to frequencies lower than 2 kHz, with greatest pressure spectral densities at frequencies below 1 kHz (Dahl et al. 2015). As a result, much of the noise generated by vibratory pile driving is expected to be inaudible or marginally audible to sea otters. During a previous project that occurred in Elkhorn Slough, Monterey County, project-related monitoring of sea otter behavior in areas exposed to underwater sound levels ranging from approximately 135–165 dB re 1  $\mu$ Pa during vibratory pile driving (ESNERR 2011) showed no clear pattern of disturbance or avoidance in relation to these levels of underwater sound exposure.

Based on the lack of disturbance or any other reaction by sea otters to the 1980s playback studies and the absence of a clear pattern of disturbance or avoidance behaviors attributable to underwater sound levels up to about 160 dB re 1  $\mu$ Pa resulting from

vibratory pile driving, we use 160 dB re 1  $\mu\text{Pa}$  as the threshold for Level B harassment underwater for both impulsive and non-impulsive sources. For Level A harassment resulting from non-impulsive underwater noise, we use a threshold of 219 dB re 1  $\mu\text{Pa}^2\text{s}$  (cumulative 24-hour sound exposure level). For Level A harassment resulting from impulsive underwater noise, we use a threshold of 232 dB re 1  $\mu\text{Pa}$  (unweighted peak sound pressure level) or 203 dB re 1  $\mu\text{Pa}^2\text{s}$  (cumulative 24-hour sound exposure level). For Level B harassment resulting from airborne noise, we use the 100 dB re 20  $\mu\text{Pa}$  guideline that NMFS uses for in-air Level B harassment of pinnipeds other than harbor seals. For Level A harassment resulting from airborne noise, we use the Southall et al. (2007) criterion of 172.5 dB re 20  $\mu\text{Pa}$  for sea lions to approximate the airborne noise levels that may cause injury to sea otters.

Underwater and airborne sound levels expected to be produced during the proposed project are analyzed in Appendix A to Amec Foster Wheeler (2017). Figures 5-1 and 5-2 of Amec Foster Wheeler (2017) approximate the modeled extent of underwater noise resulting from vibratory pile driving and extraction and impact pile driving. This analysis has been revised slightly to reflect the following changes: the source sound pressure level has been revised downward to 182 dB for impact hammering (originally 195 dB, but 187 dB was determined to be more representative for 14-in (36-cm) piles based on WSDOT (2010), which is further reduced by 5 dB by use of a sound curtain) and to 162 dB for vibratory extraction/driving (originally 168 dB, but 162 dB was determined to be more representative for 14-in (36-cm) piles based on Caltrans (2015)). The distance to the 160-dB threshold (i.e., the radius of the area exposed to sound levels equal to or exceeding 160 dB) for vibratory pile driving is 46 ft (14 m). The distance to

the 160-dB threshold for impact pile driving, based on modeled attenuated noise transmission, is 249 ft (76 m) to the north and northeast (through the breakwater) and 961 ft (293 m) in all other directions. The distance to the 219-dB threshold for vibratory pile driving is 3 ft (0.9 m), whereas the distance to the 203-dB cumulative 24-hour sound exposure level threshold for impact pile driving is 6.6 ft (2.0 m).

Expected levels of airborne noise are based on measurements made during the Navy Test Pile Project in Bangor, Washington, for 18-in (46-cm) piles. Because airborne noise data for 14-in (36-cm) piles were not available, the modeled distances to the Level B 100-dB guideline (66 ft (20 m) for vibratory pile driving and 197 ft (60 m) for impact driving) (Amec Foster Wheeler 2017) are overestimates. Nevertheless, anticipated maximum noise levels based on 18-in (46-cm) piles (102 dB for vibratory driving and extraction and 112 dB for impact driving at a distance of 33 ft (10 m)) are well below the noise levels that may cause injury to sea otters. Noise thresholds and the modeled extent of sound pressure levels for underwater and airborne noise are summarized in Table 1.

Table 1. Noise Thresholds and Modeled Extent of Sound Pressure Levels (SPLs) for Underwater and Airborne Noise				
	Threshold, underwater (dB re 1 $\mu$ Pa)	Modeled extent of underwater SPLs (distance to threshold) (m)	Guideline, airborne (dB re 20 $\mu$ Pa)	Modeled extent of airborne SPLs (distance to threshold) (m)
Level A non-impulsive	219	0.9	172.5	n/a
Level A impulsive	203	2.0	172.5	n/a
Level B non-impulsive	160	14	100	20***
Level B impulsive	160	76* 293**	100	60***
*North and northeast through breakwater **All other directions ***Distances are overestimates because they are based on data for 18-in (46-cm) piles; airborne sound data for 14-in (36-cm) piles were not available.				

### Potential Effects of the Proposed Action on Sea Otter Habitat

No permanent impacts on habitat are proposed or would occur as a result of this project. The Proposed Action would not increase the Pier's existing footprint, and no new structures would be installed that would result in the loss of additional habitat. Therefore, no restoration of habitat would be necessary. A temporary, small-scale loss of foraging habitat may occur if sea otters leave the area during pile extraction and driving activities.

### **Potential Impacts on Subsistence Needs**

The subsistence provision of the MMPA does not apply.

### **Mitigation Measures**

The USCG has proposed the following measures to prevent Level A harassment (injury) and to reduce the extent of potential effects from Level B harassment (disturbance) to marine mammals.

1. *Timing restrictions.* All work would be conducted during daylight hours to facilitate visual observation of the Level A and Level B zones.

2. *Noise attenuation.* A bubble curtain and cushion pads would be used during all impact pile driving to reduce underwater sound levels. Prior to impact driving, pre-drilling would be used to create a hole for the new pile to a depth of approximately 5 ft (1.5 m) above the required pile tip elevation to reduce friction, noise, and turbidity during installation.

3. *Exclusion zones and shutdown measures.* Exclusion zones based on the area exposed to sound levels equal to or exceeding those expected to cause PTS would be implemented to protect marine mammals from Level A harassment. If a sea otter is observed in the exclusion zone, pile extraction or driving would not commence until the

individual has been observed outside of the zone or has not been observed for at least 15 minutes. If the sea otter entered the exclusion zone, a stop-work order would be issued. Work would not re-commence until the sea otter was sighted well outside of the exclusion zone or was not observed for at least 15 minutes. The modeled PTS isopleths relevant to sea otters are only 3 ft (0.9 m) for vibratory driving and extraction and 6.6 ft (2 m) for impact driving (Table 1); these would be verified based on in-situ source level and sound propagation measurements. However, the radius of the Level A exclusion zone for sea otters would be extended to at least 33 ft (10 m) to prevent injury from machinery. USCG would implement shutdown measures if the number of authorized takes reached the limit under the IHA and if sea otters were sighted within the vicinity of the project area and were approaching the Level B harassment zone during in-water construction activities.

4. *Level B harassment zone.* USCG would monitor the Level B harassment zone. Because impact hammering and vibratory driving would both be used in the project, the Level B harassment zone for all pile-driving activities would be set based on the greatest extent of sound pressure levels equal to or exceeding the thresholds summarized in Table 1. Because the distance to the threshold is greatest for underwater noise produced by impact hammering, the Level B harassment zone would have a minimum radius of 249 ft (76 m) to the north and northeast (through the breakwater) and 961 ft (293 m) in all other directions based on the modeled extent of underwater SPLs. This zone would be adjusted, as necessary, based in-situ source level and sound propagation measurements.

5. *Soft-start for impact pile driving.* For impact pile installation, contractors will provide an initial set of three strikes from the impact hammer at 40 percent energy,

followed by a 1-minute waiting period, then two subsequent three-strike sets. Each day, USCG will use the soft-start technique at the beginning of impact pile driving and before resuming work if impact pile driving has ceased for more than 30 minutes.

### **Monitoring and Reporting**

The USCG would implement two detailed monitoring plans prior to and during pile replacement activities: an acoustic monitoring plan and a marine mammal monitoring plan. The acoustic monitoring plan would ensure that measurements are recorded to provide data on actual noise levels during construction and to ensure that the marine mammal exclusion zone and Level B harassment zone are sized appropriately relative to acoustic thresholds. Specifically, USCG would conduct in-situ monitoring during the installation of five piles and removal of five piles (see the acoustic monitoring plan for more details). The marine mammal monitoring plan would provide details on data collection for each marine mammal species observed in the project area during the construction period.

Monitoring would be conducted by Service-approved observers who are familiar with sea otters and their behavior. The observers would conduct baseline monitoring for 2 days during the week prior to pile removal and driving. During pile removal and driving activities, three observers would monitor the exclusion zone and Level B harassment zone from the best vantage point possible (the Pier itself, the jetty, or adjacent boat docks in the harbor) to determine if sea otters were approaching the exclusion zone and to record behavioral responses to noise within the Level B harassment zone. The exclusion zone would be monitored for 30 minutes prior to, during, and after pile removal and

driving. If a sea otter is within the exclusion zone, the start of extraction or driving would be delayed until no sea otters were sighted within the zone for a minimum of 15 minutes. If a sea otter approached the exclusion zone, the observation would be reported to the construction manager, and the individual would be watched closely. If the sea otter entered the exclusion zone, a stop-work order would be issued. The lead monitor would not allow work to re-commence until the sea otter was sighted well outside of the exclusion zone or was not observed for at least 15 minutes.

The following information would be documented for each sea otter observed at any range while pile driving or extraction activities are occurring:

- (A) Date and time that monitored activity begins and ends;
- (B) Construction activities occurring during each observation period;
- (C) Weather parameters (e.g., percent cover, visibility);
- (D) Water conditions (e.g., sea state, tide state);
- (E) Numbers of individuals, sex and age class (if possible), and flipper tag color and location;
- (F) Description of behavioral patterns, including bearing and direction of travel, distance from pile-driving activity, and specific activity (swimming at surface, swimming below surface, spyhopping, foraging, grooming, interacting with another sea otter, resting on water, resting while hauled out, etc.);
- (G) Distance from pile-driving activities to sea otters and distance from the sea otters to the observation point;
- (H) Locations of all marine mammal observations; and
- (I) Other human activity in the area.

Daily observation sheets would be compiled on a weekly basis and submitted with a weekly monitoring report that summarized the monitoring results, construction activities, and environmental conditions. USCG would be required to submit a draft marine mammal monitoring report within 90 days after completion of the in-water construction work or the expiration of the IHA (if issued), whichever comes earlier. The report would include data from marine mammal sightings as described above. The marine mammal monitoring report would also include total takes, takes by day, and stop-work orders for each species. The Service would have an opportunity to provide comments on the report, and if the Service had comments, USCG would address the comments and submit a final report to the Service within 30 days.

In the unanticipated event that the specified activity clearly causes the take of a sea otter in a manner prohibited by the IHA (if issued), such as an injury (Level A harassment), serious injury, or mortality, USCG would immediately cease the specified activities and immediately report the incident to the Service's Southern Sea Otter Recovery Coordinator and Monterey Bay Aquarium's sea otter 24-hour emergency line. The report would be required to include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (e.g., wind speed and direction, sea state, cloud cover, and visibility);

- Description of all marine mammal observations in the 24 hours preceding the incident;

- Description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s).

Activities would not resume until the Service reviewed the circumstances of the prohibited take. The Service would work with USCG to determine what is necessary to minimize the likelihood of additional prohibited take and ensure MMPA compliance. USCG would not be permitted to resume activities until it implemented any necessary measures to minimize the likelihood of additional prohibited take and received notification by the Service via letter, email, or telephone.

In the event that the USCG discovered an injured or dead sea otter, and the lead monitor determined that the cause of the injury or death was unknown or unrelated to the specified activities, USCG would immediately report the incident to the Service's Southern Sea Otter Recovery Coordinator and Monterey Bay Aquarium's sea otter 24-hour emergency line. The report would be required to include the same information identified in the paragraph above. Activities would be permitted to continue while the Service reviewed the circumstances of the incident. The Service would work with USCG to provide for the implementation of measures, if appropriate, to minimize the likelihood of prohibited take.

### **Estimated Take by Incidental Harassment**

Based on the proposed construction methodology and mitigation, including use of an exclusion zone, no Level A harassment is anticipated as a result of the proposed project. Behavioral harassment (Level B) will be considered to have occurred when sea otters enter the Level B harassment zone. We use the greatest modeled extent of sound pressure levels from Table 1 (the Level B zone for impulsive underwater noise) as the area within which to estimate the maximum number of sea otters that could be exposed to noise exceeding Level B thresholds during the estimated maximum 8 days of pile extraction and removal. An average of two or three piles would be installed and removed per day, totaling an estimated 60 to 70 minutes of pile driving per day. Assuming that an individual sea otter can be taken only once during a 24-hour period, we calculate the number of takes using the following formula: Take Estimate =  $n$  multiplied by area of influence multiplied by 8 days of activity, where:  $n$  is the number of sea otters per linear km of coastline and area of influence is the Level B harassment zone for impulsive underwater noise. Because the final take estimate must be a whole number, values are rounded up to the next whole number before multiplying by the number of days of exposure.

The area of influence encompasses the harbor area and the area immediately to the north and northeast of the breakwater, less than one linear km of coastline. Because, on average, 5.4 sea otters are expected per 1,640 ft (500 m) of coastline (USGS 2017), a maximum of 11 sea otters are expected to be exposed to pile-driving noise per day over 8 days, for a total of 88 takes.

## **Findings**

We propose the following findings regarding this action:

Negligible Impact

We find that any incidental take by harassment that is reasonably likely to result from the proposed project would not adversely affect the sea otter by means of effects on rates of recruitment or survival and would, therefore, have no more than a negligible impact on the stock. In making this finding, we considered the best available scientific information, including: (1) The biological and behavioral characteristics of the species; (2) information on distribution and abundance of sea otters within the area of the proposed activity; (3) the potential sources of disturbance during the proposed activity; and (4) the potential response of sea otters to disturbance.

The estimated 88 takes (for approximately 11 sea otters) are expected to result in negligible impact because sea otters do not appear to be particularly sensitive to noise (and often do not react visibly to it) and because any behavioral reactions to noise are expected to be temporary and of short duration.

The mitigation measures outlined above are intended to minimize the number of sea otters that could be harassed by the proposed activity. Any impacts to individuals are expected to be limited to Level B harassment of short duration. Responses of sea otters to project-related noise would most likely be common behaviors such as diving and/or swimming away from the source of the disturbance. No take by injury or death is anticipated. Because any Level B harassment that occurs would be of short duration, and because no take by injury or death is anticipated, we find that the anticipated harassment caused by the proposed activities is not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival.

Our finding of negligible impact applies to incidental take associated with the proposed activity as mitigated through this authorization process. This authorization establishes monitoring and reporting requirements to evaluate the potential impacts of the authorized activities, as well as mitigation measures designed to minimize interactions with, and impacts to, sea otters.

### Small Numbers

For small numbers take analysis, the statute and legislative history do not expressly require a specific type of numbers analysis, leaving the determination of “small” to the agency’s discretion. The sea otter population in California consists of approximately 3,186 animals. The number of sea otters that could potentially be taken by harassment in association with the proposed project is approximately 11 animals (0.3 percent of the population size). While many of the same sea otters are likely to remain in the area throughout the duration of pile-driving activities, some turnover may occur, particularly if the 8 days of pile-driving activity are interspersed over several months. Turnover of sea otters in the area would slightly increase the total number of animals exposed to project-related noise; however, we expect that number would remain small. We find that the number of sea otters utilizing the affected area is small relative to the size of the population.

### Impact on Subsistence

The subsistence provision of the MMPA does not apply to southern sea otters.

### **Endangered Species Act**

The proposed activity will occur within the range of the southern sea otter, which is listed as threatened under the ESA. The Applicant has initiated interagency

consultation under section 7 of the ESA with the Service's Ventura Fish and Wildlife Office. We will complete intra-Service section 7 consultation on our proposed issuance of the IHA.

### **National Environmental Policy Act (NEPA)**

The impacts associated with the project are described in a draft supplemental environmental assessment (EA) prepared on behalf of the USCG. The Service will review the EA and decide either to adopt it or prepare its own NEPA document before making a determination on the issuance of an IHA. Our analysis will be completed prior to issuance or denial of the IHA and will be available at <http://www.fws.gov/ventura/endangered/species/info/sso.html>.

### **Government-to-Government Relations with Native American Tribal Governments**

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, Secretarial Order 3206, the Department of the Interior's manual at 512 DM 2, and the Native American Policy of the Service (January 20, 2016), we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes on a Government-to-Government basis. We have evaluated possible effects on federally recognized Indian Tribes and have determined that there are no effects.

### **Proposed Authorization**

The Service proposes to issue an IHA for small numbers of sea otters harassed incidentally by the Applicant while the Applicant is completing waterfront repairs at USCG Station Monterey during a 1-year authorization period beginning on or before

June 15, 2018. Authorization for incidental take beyond this period would require a request for renewal.

The final IHA would incorporate the mitigation, monitoring, and reporting requirements discussed in this proposal. The Applicant would be responsible for following those requirements. These authorizations would not allow the intentional taking of sea otters.

If the level of activity exceeded that described by the Applicant, or the level or nature of take exceeded those projected here, the Service would reevaluate its findings. The Secretary may modify, suspend, or revoke an authorization if the findings are not accurate or the conditions described in this notice are not being met.

#### **Request for Public Comments**

The Service requests interested persons to submit comments and information concerning this proposed IHA. Consistent with section 101(a)(5)(D)(iii) of the MMPA, we are opening the comment period on this proposed authorization for 30 days (see **DATES**).

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.

**Dated:            March 1, 2018.**

**Angela Picco,**

*Acting Regional Director,*

*Pacific Southwest Region.*

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