BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648- XA865

Takes of Marine Mammals Incidental to Specified Activities; Pier 36/Brannan Street Wharf Project in the San Francisco Bay, CA

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

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA) implementing regulations, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the Port of San Francisco (Port), allowing the take of small numbers of marine mammals, by Level B harassment only, incidental to pile driving during construction of the Brannan Street Wharf.

DATES: Effective May 1, 2012, through April 30, 2013.

ADDRESSES: A copy of the IHA, the application, and the Environmental Assessment are available by writing to Tammy C. Adams, Acting Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910 or by telephoning the contact listed here (see FOR FURTHER INFORMATION CONTACT), or visiting the Internet at: http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications. Documents cited in this notice may be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Michelle Magliocca, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by United States citizens who engage in a specified activity (other than commercial fishing) within a specific geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is published in the Federal Register and provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) further established a 45-day time limit for NMFS' review of an application, followed by a 30-day public notice and comment period on any

proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization.

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Summary of Request

On May 6, 2011, NMFS received an application from the USACE, on behalf of the Port, requesting an IHA for the take, by Level B harassment, of small numbers of Pacific harbor seals (Phoca vitulina), California sea lions (Zalophus californianus), gray whales (Eschrichtius robustus), and Pacific harbor porpoises (Phocoena phocoena) incidental to pile driving activities during construction of the Brannan Street Wharf in San Francisco, California. In accordance with the MMPA and implementing regulations, NMFS issued a notice in the Federal Register on October 26, 2011 (76 FR 66274), requesting comments from the public on the proposed IHA.

Description of the Specified Activity

A complete description of the specified activity may be found in NMFS' proposed IHA notice in the Federal Register (76 FR 66274, October 26, 2011) and a summary is provided here. The project will involve construction of a pile-supported park that will be known as the "Brannan Street Wharf" and will replace the existing Pier 36 and provide recreational space for the public. The project will require installation of 261 steel and concrete piles and 57,000 square feet (ft^2) of new decking. Installation of the 261 steel and concrete piles will require in-water

pile driving that could produce high-intensity sound and has the potential to harass marine mammals. A breakdown of pile size and type is shown in Table 1.

Table 1. Summary of pile types and pile driving activity.

Pile Type	Total Piles	Pile Driver	Max Piles Per Day
24-inch octagonal concrete	141	Impact	8
24-inch steel shell	116	Vibratory and impact	5
36-inch steel shell	4	Vibratory and impact	4

All piles will be driven to a depth of 60 ft below the mudline elevation. Only one pile type is expected to be installed on any given day. Conservatively assuming the maximum vibratory time and number of impact blows required for each pile, a total of 988 minutes of vibratory driving and 150,000 impact blows will be necessary over the 12-month duration of the project. All vibratory pile driving will use a standard frequency hammer similar to an APE 150, which produces up to 1,800 vibrations per minute. All impact pile driving will use a DelMag D46-32 diesel impact hammer, which produces about 122,000 foot-pounds maximum energy blow at 1.5 seconds per blow on average. A bubble curtain will be used as a sound attenuation device during impact pile driving for the 24-in and 36-in steel shell piles.

Region of Activity

The activity will occur in the San Francisco Bay at Pier 36, four blocks south of the San Francisco Oakland Bay Bridge. More specifically, this area is located between Pier 30-32 and Pier 38, directly adjacent to the east side of the Embarcadero and within the South of Market district of San Francisco. San Francisco Bay and the adjacent Sacramento-San Joaquin Delta make up one of the largest estuarine systems on the continent. The Bay has undergone extensive industrialization, but remains an important environment for healthy marine mammal populations

year round. The area surrounding the activity is an intertidal landscape with heavy industrial use and boat traffic.

Dates of Activity

Wharf and pier demolition – which is not expected to harass marine mammals – may begin in January 2012 and last for five months. The new wharf construction, including pile driving, is scheduled to begin in May 2012 and end 13 months later; however, pile driving is expected to be complete by December 2012.

Sound Propagation

For background, sound is a mechanical disturbance consisting of minute vibrations that travel through a medium, such as air or water, and is generally characterized by several variables. Frequency describes the sound's pitch and is measured in hertz (Hz) or kilohertz (kHz), while sound level describes the sound's loudness and is measured in decibels (dB). Sound level increases or decreases exponentially with each dB of change. For example, 10 dB yields a sound level 10 times more intense than 1 dB, while a 20 dB level equates to 100 times more intense, and a 30 dB level is 1,000 times more intense. Sound levels are compared to a reference sound pressure (micro-Pascal) to identify the medium. For air and water, these reference pressures are "re: 20 μPa" and "re: 1 μPa," respectively. Root mean square (RMS) is the quadratic mean sound pressure over the duration of an impulse. RMS is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick, 1975). RMS accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper, 2005). This measurement is often used in the context of discussing behavioral effects, in

part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units rather than by peak pressures.

A review of numerous pile driving projects with comparable water depth and substrate conditions was conducted to identify source sound level data and estimate potential sound levels for pile driving activities around Pier 36. In their calculations, the Port conservatively assumed that the use of a bubble curtain for steel shell piles will reduce sound levels by 5 dB RMS. A conservative attenuation factor of 16 dB RMS (about 5 dB RMS per doubling of distance) was also assumed in the Port's analysis; sound attenuation would likely be greater than 16 dB RMS for such shallow water pile driving (CalTrans, 2009). Pile driving at Pier 36 is expected to occur in water depths of zero to 15 feet. Maximum sound pressure levels for pile driving activities are shown in Table 2.

Table 2. Measured unattenuated sound pressure levels in the near field (10 m) during pile driving in San Francisco Bay (Caltrans, 2009).

Pile Type	Attenuation Device	Sound Level (impact)	Sound Level (vibratory)
24-in octagonal concrete	None	170 dB	n/a
24-in steel shell	Bubble curtain	190 dB	165 dB
36-in steel shell	Bubble curtain	190 dB	175 dB

Comments and Responses

A notice of receipt and request for public comment on the application and proposed authorization was published on October 26, 2011 (76 FR 66274). During the 30-day public comment period, the Marine Mammal Commission (Commission) provided the only comments.

Comment 1: The Commission recommends that NMFS require the Port to monitor the presence and behavior of marine mammals during all vibratory and impact pile driving activities.

Response: As stated in the proposed IHA, marine mammal monitoring will occur 30 minutes before, during, and 30 minutes after all impact pile driving activities. In addition, at least two NMFS-approved protected species observers will conduct behavioral monitoring out to 1,900 m during all vibratory pile driving for the first two weeks of activity to validate take estimates and evaluate the behavioral impacts pile driving has on marine mammals out to the Level B harassment isopleth. NMFS believes this is an adequate effort of monitoring because sounds from vibratory pile driving will not exceed the Level A harassment threshold and sounds from impact pile driving only exceed the Level A harassment threshold 42 m from the source.

Comment 2: The Commission recommends that NMFS require the Port to monitor before, during, and after all soft-starts of vibratory and impact pile driving activities to gather the data needed to determine the effectiveness of this technique as a mitigation measure.

Response: NMFS disagrees that the Port needs to monitor for marine mammals before, during, and after all soft-starts. Protected species observers will be on-site and monitoring for marine mammals at least 30 minutes prior to, during, and after all impact driving (including during soft-starts) and at least two full days per week during all vibratory pile driving. NMFS believes that monitoring for all impact driving and at least two days per week of vibratory pile driving days per week will allow for adequate interpretation of how marine mammals are behaving in response to pile driving, including during soft-starts.

Comment 3: The Commission recommends that NMFS require the Port to implement soft-start procedures after 15 minutes for pinnipeds and 30 minutes for cetaceans, if pile driving was delayed or shut down due to the presence of a marine mammal within or approaching the Level A harassment zone.

Response: NMFS agrees with the Commission's recommendation and the Port will implement soft-start procedures after 15 minutes if pile driving is delayed or shut down due to the presence of a pinniped within or approaching the Level A harassment zone.

Description of Marine Mammals in the Area of the Specified Activity

Marine mammals with confirmed occurrences in San Francisco Bay are the Pacific harbor seal, California sea lion, gray whale, harbor porpoise, humpback whale (Megaptera noveangliae), and sea otter (Enhydra lutris). However, humpback whales are considered extremely rare in San Francisco Bay and are highly unlikely to be present in the project vicinity during pile driving. Sea otters are managed by the United States Fish and Wildlife Service. Therefore, these two species are not discussed further. Information on the Pacific harbor seal, California sea lion, gray whale, and harbor porpoise was provided in the October 26, 2011 Federal Register notice (76 FR 66274).

Potential Effects on Marine Mammals

The action consists of both in-water and above-water components, but the only activity with the potential to take marine mammals is pile driving. A detailed description of potential impacts to marine mammals can be found in NMFS' October 26, 2011 Federal Register notice (76 FR 66274) and is summarized here.

Marine mammals are continually exposed to many sources of sound. For example, lightning, rain, sub-sea earthquakes, and animals are natural sound sources throughout the marine environment. Marine mammals produce sounds in various contexts and use sound for various biological functions including, but not limited to, (1) social interactions; (2) foraging; (3) orientation; and (4) predator detection. Interference with producing or receiving these sounds may result in adverse impacts. Audible distance or received levels will depend on the sound

source, ambient noise, and the sensitivity of the receptor (Richardson et al., 1995). Marine mammal reactions to sound may depend on sound frequency, ambient sound, what the animal is doing, and the animal's distance from the sound source (Southall et al., 2007).

Hearing Impairment

Marine mammals may experience temporary or permanent hearing impairment when exposed to loud sounds. Hearing impairment is classified by temporary threshold shift (TTS) and permanent threshold shift (PTS). There are no empirical data for when PTS first occurs in marine mammals; therefore, it must be estimated from when TTS first occurs and from the rate of TTS growth with increasing exposure levels. PTS is likely if the animal's hearing threshold is reduced by ≥ 40 dB of TTS. PTS is considered auditory injury (Southall et al., 2007) and occurs in a specific frequency range and amount. Due to required mitigation measures and source levels in the proposed project area, NMFS does not expect marine mammals to be exposed to PTS levels.

Temporary Threshold Shift (TTS)

TTS is the mildest form of hearing impairment that can occur during exposure to a loud sound (Kryter, 1985). While experiencing TTS, the hearing threshold rises and a sound must be louder in order to be heard. TTS can last from minutes or hours to days, occurs in specific frequency ranges (i.e., an animal might only have a temporary loss of hearing sensitivity between the frequencies of 1 and 10 kHz), and can occur to varying degrees (e.g., an animal's hearing sensitivity might be reduced by 6 dB or by 30 dB). For sound exposures at or somewhat above the TTS-onset threshold, hearing sensitivity recovers rapidly after exposure to the sound ends. Few data on sound levels and durations necessary to elicit mild TTS have been obtained for marine mammals. Southall et al. (2007) considers a 6 dB TTS (i.e., baseline thresholds are

elevated by 6 dB) sufficient to be recognized as an unequivocal deviation and thus a sufficient definition of TTS-onset. Because it is non-injurious, NMFS considers TTS as Level B harassment that is mediated by physiological effects on the auditory system; however, NMFS does not consider onset TTS to be the lowest level at which Level B harassment may occur.

Southall et al. (2007) summarizes underwater pinniped data from Kastak et al. (2005), indicating that a tested harbor seal showed a TTS of around 6 dB when exposed to a non-pulse noise at SPL 152 dB re: 1 µPa for 25 minutes. In contrast, a tested sea lion exhibited TTS-onset at 174 dB re: 1 µPa under the same conditions as the harbor seal. Data from a single study on underwater pulses found no signs of TTS-onset in sea lions at exposures up to 183 dB re: 1 µPa (peak-to-peak) (Finneran et al., 2003). There is no information on species-specific TTS for harbor porpoises or gray whales.

Behavioral Effects

There are limited data available on the behavioral effects of non-pulse noise (for example, vibratory pile driving) on pinnipeds while underwater; however, field and captive studies to date collectively suggest that pinnipeds do not react strongly to exposures between 90 and 140 dB re: 1 microPa; no data exist from exposures at higher levels. Jacobs and Terhune (2002) observed wild harbor seal reactions to high-frequency acoustic harassment devices around nine sites. Seals came within 44 m of the active acoustic harassment devices and failed to demonstrate any behavioral response when received SPLs were estimated at 120-130 dB. In a captive study (Kastelein, 2006), scientists subjected a group of seals to non-pulse sounds between 8 and 16 kHz. Exposures between 80 and 107 dB did not induce strong behavioral responses; however, a single observation from 100 to 110 dB indicated an avoidance response. The seals returned to baseline conditions shortly following exposure. Southall et al. (2007) notes

contextual differences between these two studies; the captive animals were not reinforced with food for remaining in the noise fields, whereas free-ranging animals may have been more tolerant of exposures because of motivation to return to a safe location or approach enclosures holding prey items. Vibratory and impact pile driving may result in anticipated hydroacoustic levels between 165 and 190 dB root mean square. Southall et al. (2007) reviewed relevant data from studies involving pinnipeds exposed to pulse sounds and concluded that exposures to 150 to 180 dB generally have limited potential to induce avoidance behavior.

No known data exist for sound levels resulting from the type of vibratory hammer and pile sizes that will be used at the proposed project site; however, measured sound levels for the "King Kong" vibratory hammer used in Richmond, California ranged between 163 and 180 dB RMS (Illingworth and Rodkin, 2007). Sound levels at the proposed project site are expected to be lower because the vibratory hammer being used has an expected sound level of 165 dB for 24-in piles and 175 dB for 36-in piles. In addition, San Francisco Bay is highly industrialized and masking of the pile driver by other vessels and anthropogenic noise within the action area may, especially in the nearby shipping channel, make construction sounds difficult to hear at greater distances. Underwater ambient noise levels along the San Francisco waterfront may be around 133 dB RMS, based on measurements from the nearby Oakland Outer Harbor (Caltrans, 2009). Seals will likely also exhibit tolerance or habituation (Richardson et al., 1999) due to the amount of anthropogenic noise within the proposed project area and San Francisco Bay as a whole.

No impacts to marine mammal reproduction are anticipated because there are no known pinniped haul-outs or rookeries within the proposed project area and San Francisco Bay is not a known breeding ground for cetaceans. Marine mammals may avoid the area around the hammer,

thereby reducing their exposure to elevated sound levels. NMFS expects any impacts to marine mammal behavior to be temporary, Level B harassment (for example, avoidance or alteration of behavior).

Anticipated Effects on Habitat

No permanent detrimental impacts to marine mammal habitat are expected to result from the proposed project. Pile driving (resulting in temporary ensonification) may impact prey species and marine mammals by resulting in avoidance or abandonment of the area; however these impacts are expected to be local and temporary. Site conditions are expected to be improved or substantively unchanged from existing conditions. The proposed project will result in the net removal of approximately 3,550 ft^2 of pile fill and clearing of 47,000 ft^2 of timber debris that has collapsed at the end of Pier 36. This debris includes 350-400 creosote-treated wood pilings. Creosote can leach out of the wood over time, potentially causing long-term impacts to marine species. The proposed project will also result in a net reduction of 47,000 ft^2 of shadow fill (shading over the water). This increase of unshaded water is expected to be beneficial to benthic invertebrates, fish, and marine mammals through restoration of ambient light conditions and increased biological productivity. Overall, the proposed activity is not expected to cause significant or long-term adverse impacts on marine mammal habitat.

Mitigation Measures

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability

of such species or stock for taking for certain subsistence uses. There are no relevant subsistence uses of marine mammals implicated by this action.

Sound Attenuation Device

When using impact pile driving to install steel piles in water depths greater than two feet, an unconfined bubble curtain will be used to reduce hydroacoustic sound levels to avoid the potential for injury. The bubble curtain is expected to reduce sound levels by at least 5 dB.

Establishment of an Exclusion Zone

During all in-water impact pile driving, the Port will establish a preliminary marine mammal exclusion zone with 50 m (164 ft) radius around each pile to avoid exposure to sounds at or above 180 dB. This includes an 8-m (26-ft) buffer zone to further avoid marine mammals from entering the 180 dB isopleth. The exclusion zone will be monitored during all impact pile driving to ensure that no marine mammals enter the 50-m (164-ft) radius. The purpose of this area is to prevent Level A harassment (injury) of any marine mammal species. Once underwater sound measurements are taken, the exclusion zone may be adjusted accordingly so that marine mammals are not exposed to Level A harassment sound pressure levels. An exclusion zone for vibratory pile driving or installation of concrete piles is unnecessary as source levels will not exceed the Level A harassment threshold.

Pile Driving Shut Down and Delay Procedures

If a protected species observer sees a marine mammal within or approaching the exclusion zone prior to start of impact pile driving, the observer will notify the on-site resident engineer (or other authorized individual) who will then be required to delay pile driving until the marine mammal has moved outside of the exclusion zone or if the animal has not been resighted within 15 minutes for pinnipeds or 30 minutes for cetaceans. If a marine mammal is sighted

within or on a path toward the exclusion zone during pile driving, pile driving should cease until that animal has cleared and is on a path away from the exclusion zone or 15/30 minutes (pinnipeds/cetaceans) has lapsed since the last sighting.

Soft-start Procedures

A "soft-start" technique will be used at the beginning of each pile installation to allow any marine mammal that may be in the immediate area to leave before the pile hammer reaches full energy. For vibratory pile driving, the soft-start procedure requires contractors to initiate noise from the vibratory hammer for 15 seconds at 40-60 percent reduced energy followed by a 1-minute waiting period. The procedure will be repeated two additional times before full energy may be achieved. For impact hammering, 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. Soft-start procedures will be conducted prior to driving each pile if hammering ceases for more than 30 minutes.

Monitoring for Herring

Monitoring for herring spawning events will be conducted on a daily basis between December 1 and February (although pile driving is expected to be complete in December). If a herring spawning event is observed, in-water work will cease for a period of two weeks following the spawning event (a measure designed to reduce impacts to fish). Pinniped presence can be sporadic and unpredictable during herring runs in San Francisco Bay; therefore, this mitigation measure will minimize impacts to marine mammals.

NMFS has carefully evaluated the above mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable adverse impact on the affected marine mammal species and stocks and their habitat.

Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals; (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation.

Based on our evaluation of the applicant's proposed measures and the Commission's comments, NMFS has determined that the above mitigation measures provide the means of effecting the least practicable adverse impacts on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth "requirements pertaining to the monitoring and reporting of such taking". The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for IHAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present.

Hydroacoustic monitoring will be performed at the initial installation of each pile type (24-in concrete, 24-in steel, and 36-in steel) to ensure that the harassment isopleths are not extending past the calculated distances described in this notice. The Port must designate at least one biologically-trained, on-site individual, approved in advance by NMFS, to monitor the Level B harassment zone area for marine mammals 30 minutes before, during, and 30 minutes after all

impact pile driving activities and call for shut down if any marine mammal is observed within or approaching the designated exclusion zone (preliminarily set at 50 m [164 ft]). In addition, at least two NMFS-approved protected species observers will conduct behavioral monitoring out to 1,900 m during all vibratory pile driving for the first two weeks of activity to validate take estimates and evaluate the behavioral impacts piles driving has on marine mammals out to the Level B harassment isopleth. If there are no observations of marine mammals within the Level B harassment isopleth during this time, behavioral monitoring may be reduced to a level agreed upon by the applicant and NMFS. Note that for impact hammering, the initial Level B (160 dB) harassment isopleths are 42 m (138 ft) for the concrete piles and 750 m (2,460 ft) for the steel piles. For vibratory hammering, the initial estimated distance is 1,900 m (6,233 ft). If light condition is low (such as early morning or late afternoon), protected species observers will use infrared scopes to conduct their observations.

Protected species observers will be provided with the equipment necessary to effectively monitor for marine mammals (for example, high-quality binoculars, spotting scopes, compass, and range-finder) in order to determine if animals have entered into the exclusion zone or Level B harassment isopleth and to record species, behaviors, and responses to pile driving. If hydroacoustic monitoring indicates that threshold isopleths are greater than originally calculated, the Port will contact NMFS within 48 hours and make the necessary adjustments. Likewise, if threshold isopleths are actually less than originally calculated, adjustments may be made. Protected species observers will be required to submit a report to NMFS within 90 days of completion of pile driving. The report will include data from marine mammal sightings (such as species, group size, and behavior), any observed reactions to construction, distance to operating pile hammer, and construction activities occurring at time of sighting.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury, or mortality (e.g., ship-strike, gear interaction, and/or entanglement), CWA shall immediately cease the specified activities and report the incident to the Acting Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and Michelle.Magliocca@noaa.gov and the Southwest Regional Stranding Coordinator at 562-980-3230 (Sarah.Wilkin@noaa.gov). The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to 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, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities will not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with CWA to determine what is necessary to minimize the

likelihood of further prohibited take and ensure MMPA compliance. CWA may not resume their activities until notified by NMFS via letter, email, or telephone.

In the event that CWA discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), CWA will immediately report the incident to the Acting Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and Michelle.Magliocca@noaa.gov and the Southwest Regional Stranding Coordinator at 562-980-3230 (Sarah.Wilkin@noaa.gov). The report must include the same information identified in the paragraph above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with CWA to determine whether modifications in the activities are appropriate.

In the event that CWA discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), CWA will report the incident to the Acting Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and Michelle.Magliocca@noaa.gov and the Southwest Regional Stranding Coordinator at 562-980-3230 (Sarah.Wilkin@noaa.gov), within 24 hours of the discovery. CWA will provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Based on the application and subsequent analysis, the impact of the described pile driving operations (including mitigation and monitoring) may result in, at most, short-term modification of behavior by small numbers of marine mammals within the action area. Marine mammals may avoid the area or temporarily alter their behavior at time of exposure.

Current NMFS practice regarding exposure of marine mammals to anthropogenic noise is that in order to avoid the potential for injury (PTS), cetaceans and pinnipeds should not be exposed to impulsive sounds of 180 and 190 dB or above, respectively. This level is considered precautionary as it is likely that more intense sounds would be required before injury would actually occur (Southall et al., 2007). Potential for behavioral harassment (Level B) is considered to have occurred when marine mammals are exposed to sounds at or above 160 dB for impulse sounds (such as impact pile driving) and 120 dB for non-pulse noise (such as vibratory pile driving). These levels are also considered precautionary.

Distances to NMFS' harassment thresholds were calculated based on the sound levels at each source and the expected attenuation rate of sound (Table 3). Two sets of threshold distances were identified: one for concrete piles and one for steel piles. The threshold distances listed for the steel piles are those expected from the 36-in steel pile driving activities, as they will also encompass the isopleths for the 24-in steel piles. The 42-m (268-ft) distance to the Level A

harassment threshold provides protected species observers plenty of time and adequate visibility to prevent marine mammals from entering the area during impact pile driving. This will prevent marine mammals from being exposed to sound levels that reach the Level A harassment threshold. In-air sound from pile driving also has the potential to affect marine mammals. However, in-air sound is not a concern here because there are no pinniped haul-outs near the project area.

Table 3. Calculated underwater distances to NMFS' marine mammal harassment threshold levels.

Threshold	Distance from Source (24-in concrete piles)	Distance from Source (36-in steel piles)
120 dB RMS (Level B – continuous)	n/a	1,900 m (6,233 ft)
160 dB RMS (Level B – impulse)	42 m (138 ft)	750 m (2,460 ft)
180/190 dB RMS (Level A)	n/a	42 m (138 ft)

The estimated number of marine mammals potentially taken is based on marine mammal monitoring reports prepared by the California Department of Transportation during similar activities in San Francisco Bay and on discussions with the NMFS Southwest Regional Office. The California Department of Transportation's San Francisco-Oakland Bay Bridge marine mammal monitoring reports were used to estimate the number of pinnipeds near the Pier 36/Brannan Street Wharf area as both sites are relatively close in distance and are similar in bathymetric features. However, monitoring conducted for the San Francisco-Oakland Bay Bridge project was in close proximity to a haul-out area, while the Pier 36/Brannan Street Wharf location is in an area of high commercial boat activity and no adjacent haul-outs. Therefore, the Caltrans data likely overestimate marine mammal abundance for the Pier 36/Brannan Street Wharf location. Based on consultation with the NMFS Southwest Regional Office, review of the

monitoring reports described above, and the estimated number of pile driving days, the Port requested authorization for the incidental take of 138 harbor seals (an average of 2 per day), 69 California sea lions (an average of 1 per day), 69 harbor porpoises (an average of 1 per day), and 2 gray whales (2 annually). Based on further consultation with the NMFS Southwest Regional Office and previous authorizations in this region, and included in the Federal Register notice of proposed IHA (76 FR 66274, October 26, 2011), NMFS is authorizing the take of five gray whales annually, rather than two. These numbers indicate the maximum number of animals expected to occur within the largest Level B harassment isopleth (1,900 m).

Negligible Impact and Small Numbers Analysis and Determination

NMFS has defined "negligible impact" as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." In making a negligible impact determination, NMFS considers a number of factors which include, but are not limited to, number of anticipated injuries or mortalities (none of which are authorized here), number, nature, intensity, and duration of Level B harassment, and the context in which takes occur.

As described above, marine mammals will not be exposed to activities or sound levels which will result in injury (PTS), serious injury, or mortality. Pile driving will occur in shallow coastal waters of San Francisco Bay. The closest pinniped haul-out is 3.2 km (2 mi) away, which is well outside the project area's largest harassment zone. Marine mammals approaching the action area will likely be traveling or opportunistically foraging. The amount of take authorized is considered small (less than one percent each) relative to the estimated populations of 34,233 Pacific harbor seals, 238,000 California sea lions, 9,189 harbor porpoises, and 18,813

gray whales. Marine mammals may be temporarily impacted by pile driving noise. However, marine mammals are expected to avoid the area, thereby reducing exposure and impacts. Pile driving activities are expected to occur for approximately 69 days. Furthermore, San Francisco Bay is a highly industrialized area, so animals are likely tolerant or habituated to anthropogenic disturbance, including low level vibratory pile driving operations, and noise from other anthropogenic sources (such as vessels) may mask construction related sounds. There is no anticipated effect on annual rates of recruitment or survival of affected marine mammals.

Based on the analysis contained in this notice, the proposed IHA notice (76 FR 66274, October 26, 2011), and the IHA application, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS has determined that the Port's proposed pile driving activities will result in the incidental take of small numbers of marine mammals, by Level B harassment only, and that the total taking from will have a negligible impact on the affected species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action.

Endangered Species Act (ESA)

No marine mammal species listed under the ESA are anticipated to occur within the action area. Therefore, section 7 consultation under the ESA is not required.

National Environmental Policy Act (NEPA)

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500-1508), and NOAA Administrative Order 216-6, NMFS prepared an Environmental Assessment (EA) to consider the direct, indirect, and cumulative effects to marine

mammals and other applicable environmental resources resulting from issuance of a one-year IHA and the potential issuance of future authorizations for incidental harassment for the ongoing project. NMFS made a finding of no significant impact (FONSI) and the EA and FONSI are available on the NMFS website listed in the beginning of this document (see ADDRESSES).

Dated: March 29, 2012

_____

James H. Lecky,
Director,
Office of Protected Resources,
National Marine Fisheries Service.

[FR Doc. 2012-8105 Filed 04/03/2012 at 8:45 am; Publication Date: 04/04/2012]