

PROPOSED ACTION:	Issuance of an Incidental Harassment Authorization to the San Francisco Bay Area Water Emergency Transportation Authority for the Central Bay Operations and Maintenance Facility Project		
TYPE OF STATEMENT:	Environmental Assessment		
LEAD AGENCY:	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service		
Responsible Official:	Donna S. Wieting, Director Office of Protected Resources, National Marine Fisheries Service		
FOR FURTHER INFORMATION:	Shane Guan National Marine Fisheries Service Office of Protected Resources Permits and Conservation Division 1315 East West Highway Silver Spring, MD 20910 301-427-8401		
LOCATION:	City of Alameda, California.		
Abstract:	This Environmental Assessment analyzes the environmental impacts of the National Marine Fisheries Service, Office of Protected Resources' proposal to issue an Incidental Harassment Authorization, pursuant to section 101(a)(5)(D) of the Marine Mammal Protection Act, to the San Francisco Bay Area Water Emergency Transportation Authority for the take of small numbers of marine mammals incidental to conducting the Central Bay Operations and Maintenance Facility Project in the City of Alameda, California.		
DATE:	February 2015		

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LIST OF ACRONYMS AND ABBREVIATIONS

California Department of Transportation
California Department of Fish and Game
Council on Environmental Quality
Code of Federal Regulations
decibel
Environmental Assessment
Essential Fish Habitat
Environmental Impact Statement
Finding of No Significant Impact
feet
Federal Register
Incidental Harassment Authorization
meter
miles
Marine Mammal Protection Act
Magnuson-Stevens Fishery Conservation Management Act
NOAA Administrative Order
National Environmental Policy Act
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Office of Management and Budget
Protected Species Observer
Permanent hearing threshold shift
NMFS Marine Mammal Stock Assessment Report
San Francisco and Oakland Bay Bridge
Temporary hearing threshold shift
US Fish and Wildlife Service
San Francisco Bay Area Water Emergency Transportation Authority

Chapter 1 Introduction and Purpose and Need

1.1. Description of Proposed Action

The Marine Mammal Protection Act (MMPA) prohibits the incidental taking of marine mammals. The incidental take of a marine mammal falls under three categories: mortality, serious injury, or harassment, which includes injury and behavioral effects. The MMPA defines harassment as any act of pursuit, torment, or annoyance which: (1) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (2) 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). There are exceptions to the MMPA's prohibition on take, such as the authority at issue here for us to authorize the incidental taking of small numbers of marine mammals by harassment upon the request of a U.S. citizen provided we follow certain statutory and regulatory procedures and make determinations. This exception is discussed in more detail in Section 1.2.

We propose to issue an Incidental Harassment Authorization (IHA) to the San Francisco Bay Area Water Emergency Transportation Authority (WETA) under the MMPA for the taking of small numbers of marine mammals, incidental to WETA's Central Bay Operations and Maintenance Facility Project in the City of Alameda, California. We do not have the authority to permit, authorize, or prohibit WETA's activities under Section 101(a)(5)(D) of the MMPA, as that authority lies with a different Federal agency.

Our proposed action is a direct outcome of WETA requesting an IHA under Section 101(a)(5)(D) of the MMPA to take marine mammals, by harassment, incidental to conducting the Central Bay Operation and Maintenance Facility Project. Pile removal and pile driving activities associated with that Project have the potential to take, by harassment, marine mammals. WETA therefore requires an IHA for incidental take.

Our issuance of an IHA to WETA is a major federal action under the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations in 40 CFR §§ 1500-1508, and NOAA Administrative Order (NAO) 216-6. Thus, we are required to analyze the effects of our proposed action.

This Environmental Assessment (EA), titled "Issuance of an Incidental Harassment Authorization to the San Francisco Bay Area Water Emergency Transportation Authority for the Central Bay Operations and Maintenance Facility Project," addresses the potential environmental impacts of two alternatives, namely:

• Issue the Authorization to WETA under the MMPA for Level B harassment of marine mammals during WETA's construction project, taking into account the prescribed means of take, mitigation measures, and monitoring requirements required in the proposed Authorization; or

• Not issue an Authorization to WETA in which case, for the purposes of NEPA analysis only, we assume that the activities would proceed and cause incidental take, without the mitigation and monitoring measures that would otherwise be prescribed in the proposed Authorization.

1.1.1. Background on WETA's MMPA Application

On April 9, 2014, NMFS received an application from WETA for the taking of marine mammals incidental to the construction of a Central Bay Operations and Maintenance Facility. After NMFS provided comments on the draft IHA application, WETA submitted a revised IHA application on May 15, 2014. NMFS determined that the application was adequate and complete on July 31, 2014.

WETA proposes to construct a Central Bay Operations and Maintenance Facility (Project) to serve as the central San Francisco Bay base for WETA's ferry fleet, Operations Control Center (OCC), and Emergency Operations Center (EOC) in the City of Alameda in California. The proposed activity would occur between December 1, 2015, and November 30, 2016. The following specific aspects of the proposed construction project are likely to result in the take of marine mammals: pile removal, and impact and vibratory pile driving.

1.1.2. Marine Mammals in the Action Area

The proposed construction project could adversely affect the following marine mammal species under our jurisdiction:

- California sea lion (Zalophus californianus)
- Pacific harbor seal (*Phoca vitulina richardsi*)

1.2. Purpose and Need

The MMPA prohibits "takes" of marine mammals, with a number of specific exceptions. The applicable exception in this case is an authorization for incidental take of marine mammals in section 101(a)(5)(D) of the MMPA.

Section 101(a)(5)(D) of the MMPA directs the Secretary of Commerce (Secretary) to authorize, upon request, the incidental, but not intentional, taking of small numbers of marine mammals of a species or population stock, by United States citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if we make certain findings and provide a notice of a proposed authorization to the public for review. Entities seeking to obtain authorization for the incidental take of marine mammals under our jurisdiction must submit such a request (in the form of an application) to us.

We have issued regulations to implement the Incidental Take Authorization provisions of the MMPA (50 CFR Part 216) and have produced Office of Management and Budget (OMB)-approved application instructions (OMB Number 0648-0151) that prescribe the procedures necessary to apply for authorizations. All applicants must comply with the regulations at 50 CFR

§ 216.104 and submit applications requesting incidental take according to the provisions of the MMPA.

Purpose: The primary purpose of our proposed action—the issuance of an Authorization to WETA—is to authorize (pursuant to the MMPA) the take of marine mammals incidental to WETA's proposed activities. The IHA, if issued, would exempt WETA from the take prohibitions contained in the MMPA.

To authorize the take of small numbers of marine mammals in accordance with Section 101(a)(5)(D) of the MMPA, we must evaluate the best available scientific information to determine whether the take would have a negligible impact on marine mammals or stocks and not have an unmitigable adverse impact on the availability of affected marine mammal species for certain subsistence uses. We cannot issue an IHA if it would result in more than a negligible impact on marine mammal species or stocks or if it would result in an unmitigable adverse impact on subsistence.

In addition, we must prescribe, where applicable, the permissible methods of taking and other means of effecting the least practicable impact on the species or stocks of marine mammals and their habitat (i.e., mitigation), paying particular attention to rookeries, mating grounds, and other areas of similar significance. If appropriate, we must prescribe means of effecting the least practicable impact on the availability of the species or stocks of marine mammals for subsistence uses. Authorizations must also include requirements or conditions pertaining to the monitoring and reporting of such taking, in large part to better understand the effects of such taking on the species. Also, we must publish a notice of a proposed Authorization in the *Federal Register* for public notice and comment.

The underlying purpose of this action is therefore to determine whether the take resulting from WETA's Central Bay Operations and Maintenance Facility Project would have a negligible impact on affected marine mammal species or stocks and would not have an unmitigable adverse impact on the availability of marine mammals for taking for subsistence uses, and to develop mitigation and monitoring measures to reduce the potential impacts.

Need: On May 15, 2014, WETA submitted an adequate and complete application demonstrating both the need and potential eligibility for issuance of an IHA in connection with the activities described in section 1.1.1. We now have a corresponding duty to determine whether and how we can authorize take by Level B harassment incidental to the activities described in WETA's application. Our responsibilities under section 101(a)(5)(D) of the MMPA and its implementing regulations establish and frame the need for this proposed action.

Any alternatives considered under NEPA must meet the agency's statutory and regulatory requirements. Our described purpose and need guide us in developing reasonable alternatives for consideration, including alternative means of mitigating potential adverse effects. Thus, we are developing and analyzing alternative means of developing and issuing an Authorization, which

may require the applicant to include additional mitigation and monitoring measures in order for us to make our determinations under the MMPA.

1.3. The Environmental Review Process

NEPA compliance is necessary for all "major" federal actions with the potential to significantly affect the quality of the human environment. Major federal actions include activities fully or partially funded, regulated, conducted, authorized, or approved by a federal agency. Because our issuance of an Authorization would allow for the taking of marine mammals consistent with provisions under the MMPA and incidental to the applicant's activities, we consider this as a major federal action subject to NEPA.

Under the requirements of NAO 216-6 section 6.03(f)(2)(b) for incidental harassment authorizations, we prepared this EA to determine whether the direct, indirect and cumulative impacts related to the issuance of an IHA for incidental take of marine mammals during the conduct of WETA's Central Bay Operations and Maintenance Facility Project in the City of Alameda, California, could be significant. If we deem the potential impacts to be not significant, this analysis, in combination with other analyses incorporated by reference, may support the issuance of a Finding of No Significant Impact (FONSI) for the proposed Authorization.

1.3.1. Laws, Regulations, or Other NEPA Analyses Influencing the EA's Scope

We have based the scope of the proposed action and nature of the two alternatives considered in this EA on the relevant requirements in section 101(a)(5)(D) of the MMPA. Thus, our authority under the MMPA bounds the scope of our alternatives. We conclude that this analysis—when combined with the analyses in the following documents—fully describes the impacts associated with the proposed construction project with mitigation and monitoring for marine mammals. After conducting a review of the information and analyses for sufficiency and adequacy, we incorporate by reference the relevant analyses on WETA's proposed action as well as discussions of the affected environment and environmental consequences within the following documents, per 40 CFR §1502.21 and NAO 216-6 § 5.09(d):

- Incidental Harassment Authorization Application for the San Francisco Bay Area Water Emergency Transportation Authority Central Bay Operations and Maintenance Facility Project (WETA, 2014),
- Biological Opinion for the San Francisco Bay Water Emergency Transportation Authority, Central Bay Operations and Maintenance Facility, Alameda, California (NMFS, 2012),
- Biological Opinion for the San Francisco Bay Area Water Emergency Transportation Authority Central Bay Operations and Maintenance Facility Project, Alameda, Alameda County, California (USFWS, 2013), and

• Initial Study/Mitigated Negative Declaration for the San Francisco Bay Area Water Emergency Transportation Authority Central Bay Operations and Maintenance Facility (WETA, 2011).

MMPA APPLICATION AND NOTICE OF THE PROPOSED AUTHORIZATION

The CEQ regulations (40 CFR § 1502.25) encourage federal agencies to integrate NEPA's environmental review process with other environmental reviews. We rely substantially on the public process for developing proposed Authorizations and evaluating relevant environmental information and provide a meaningful opportunity for public participation as we develop corresponding EAs. We fully consider public comments received in response to our publication of the notice of proposed Authorization during the corresponding NEPA process.

We considered WETA's proposed mitigation and monitoring measures and determined that they would help ensure that the Project would effect the least practicable impact on marine mammals. These measures include: (1) using pile driving energy attenuators (such as an air bubble curtain system) for all impact pile driving; (2) conducting in-water construction only during daylight hours, when visual monitoring of marine mammals can be conducted; (3) implementing a soft start for all impact and vibratory pile driving; and (4) implementing shutdown measures if a marine mammal within a zone of influence appears disturbed by the work activity. Through the MMPA process, we preliminarily determined that, provided that WETA implements the required mitigation and monitoring measures, the impact of the Project on marine mammals would be, at worst, a temporary modification in behavior of small numbers of certain species of marine mammals that may be hauled out in the vicinity of the proposed activity.

We prepared a *Federal Register* (79 FR 55749; September 17, 2014) notice on the proposed activity and requested that the public submit comments, information, and suggestions concerning WETA's request, the content of our proposed IHA, and potential environmental effects related to the proposed issuance of the Authorization. During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission, the Sierra Club, the San Francisco Bay Conservation and Development Commission, and 40 private citizens. Most comments are related to the concern of the removal of an abandoned floating dock that was periodically used by 10 - 20 harbor seals as a haul-out. NMFS worked with the West Coast Regional Office and determined that the removal of the deteriorating floating dock will have negligible impacts to harbor seal habitat in the area because there are other natural haul-out available nearby. All comments specific to WETA's application that address the statutory and regulatory requirements or findings NMFS must make to issue an IHA will be addressed in the *Federal Register* notice for the issuance of the IHA.

In summary, the analyses referenced above support our conclusion that, with the incorporation of the proposed monitoring and mitigation measures, the issuance of an IHA to WETA for the Central Bay Operations and Maintenance Facility Project would not result in any significant direct, indirect, or cumulative impacts. Based on our MMPA analysis, the intermittent frequency

and short duration of the harassment from the construction project would allow adequate time for the marine mammals to recover from potentially adverse effects. Furthermore, the referenced analyses concluded that additive or cumulative effects of the construction project on its own or in combination with other activities, are not expected to occur. Finally, the environmental analyses did not identify any significant environmental issues or impacts.

1.3.2. Scope of Environmental Analysis

Given the limited scope of the decision for which we are responsible (*i.e.*, issue the IHA including prescribed means of take, mitigation measures, and monitoring requirements, or not issue the IHA), this EA provides more focused information on the primary issues and impacts of environmental concern related specifically to our issuance of the IHA. This EA does not further evaluate effects to the elements of the human environment listed in Table 1, because previous environmental reviews (WETA, 2011; NMFS, 2012; USFWS, 2013) have shown that the issuance of an IHA for activities similar to WETA's proposed construction project would not significantly affect those components of the human environment. Moreover, those analyses are consistent with our MMPA analysis concluding that there would be no significant impacts to marine mammals.

Biological	Physical	Socioeconomic / Cultural	
Amphibians	Air Quality	Commercial Fishing	
Humans	Essential Fish Habitat	Military Activities	
Non-Indigenous			
Species	Geography	Oil and Gas Activities	
Seabirds	Land Use	Recreational Fishing	
	Oceanography	Shipping and Boating	
	State Marine Protected Areas	National Historic Preservation Sites	
		National Trails and	
	Federal Marine Protected Areas	Nationwide Inventory of Rivers	
	National Estuarine		
	Research Reserves	Low Income Populations	
	National Marine Sanctuaries	Minority Populations	
	Park Land	Indigenous Cultural Resources	
	Prime Farmlands	Public Health and Safety	
	Wetlands	Historic and Cultural Resources	
	Wild and Scenic Rivers		
	Ecologically Critical Areas		

Table 1. Components of the human environment not affected by our issuance of an IHA.

1.3.3. Comments on the Draft EA

NAO 216-6 established NOAA procedures for complying with NEPA and the implementing NEPA regulations issued by the CEQ. Consistent with the intent of NEPA and the clear direction in NAO 216-6 to involve the public in NEPA decision-making, we prepared a draft EA

for public comment on the potential environmental impacts of our issuance of an IHA, as well as comment on the activities described in WETA's MMPA application and in the *Federal Register* notice of the proposed IHA. The CEQ regulations further encourage agencies to integrate the NEPA review process with review under other environmental statutes. Consistent with agency practice, we integrated our NEPA review and preparation of the draft EA with the public process required by the MMPA for the proposed issuance of an IHA. During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission, the Sierra Club, the San Francisco Bay Conservation and Development Commission, and 40 private citizens. All comments are addressed in the *Federal Register* notice for the issuance of the IHA.

1.4. Other Permits, Licenses, or Consultation Requirements

This section summarizes federal, state, and local permits, licenses, approvals, and consultation requirements necessary to implement the proposed action.

1.4.1. National Environmental Policy Act

Issuance of an Authorization is subject to environmental review under NEPA. NMFS may prepare an EA, an EIS, or determine that the action is categorically excluded from further review. While NEPA does not dictate substantive requirements for an Authorization, it requires consideration of environmental issues in federal agency planning and decision making. The procedural provisions outlining federal agency responsibilities under NEPA are provided in CEQ's implementing regulations (40 CFR §§ 1500-1508).

1.4.2. Marine Mammal Protection Act

The MMPA and its provisions that pertain to the proposed action are discussed above in section 1.2.

1.4.3. Magnuson-Stevens Fishery Conservation and Management Act

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Federal agencies are required to consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency which may adversely affect essential fish habitat (EFH) identified under the MSFCMA. EFH has been identified in the waters off Alameda, California. EFH is present in the study area for Pacific groundfish, coastal pelagics, and Pacific Coast salmon. Pacific groundfish species include species of rockfishes, flatfishes, sharks, etc. Coastal pelagic species include northern anchovy, Pacific sardine, and jack mackerel. An EFH consultation was conducted by NMFS, which concluded that the outlined construction activities would adversely affect EFH for various federally managed species within the Pacific Groundfish, Pacific Salmon, and Coastal Pelagic Fisheries Management Plans (NMFS 2012).

To avoid, minimize, and/or otherwise mitigate for those adverse effects, NMFS provided the following EFH Conservation Recommendations:

1. To prevent the spread and establishment of invasive species related to boat traffic and new hard structures in the estuary, NMFS recommended ongoing monitoring (and, if necessary, an eradication program) for invasive *Undaria pinnatifida* (Asian Kelp). NMFS encouraged WETA to consult with the Smithsonian Environmental Research Center in Tiburon on this measure and notify them if *Undaria pinnatifida* is identified at the site.

2. NMFS recommended a compensatory mitigation package to compensate for impacts from new dredging. NMFS preferred direct or in-kind mitigation. Because there are limited examples of new dredging in San Francisco Bay and, thus, limited examples for compensatory mitigation for impacts from new dredging, NMFS encouraged coordination of these efforts through San Francisco Bay Joint Venture program (SFBJV) and/or the Dredge Material Management Office (DMMO). Mitigation for this project may be combined with WETA's proposed Berkeley Ferry Terminal dredging mitigation.

While the proposed construction activities would have adverse effects on EFH, NMFS's proposed action of issuing an Authorization for the harassment of marine mammals will not impact EFH. NMFS's proposed action would only allow incidental take of marine mammals, not permitthe construction activities.

Chapter 2 Alternatives

2.1. Introduction

NEPA and the CEQ implementing regulations (40 CFR §§ 1500-1508) require consideration of alternatives to proposed major federal actions and NAO 216-6 provides NOAA policy and guidance on the consideration of alternatives to our proposed action. An EA must consider all reasonable alternatives, including the Preferred Alternative. It must also consider the No Action Alternative, even if it that alternative does not meet the stated purpose and need. This provides a baseline analysis against which we can compare the other alternatives.

To warrant detailed evaluation as a reasonable alternative, an alternative must meet our purpose and need. In this case, as we previously explained in Chapter 1 of this EA, an alternative only meets the purpose and need if it satisfies the requirements under section 101(a)(5)(D) the MMPA. We evaluated each potential alternative against these criteria; identified one action alternative along with the No Action Alternative; and carried these forward for evaluation in this EA. This chapter describes the alternatives and compares them in terms of their environmental impacts and their achievement of objectives.

As described in Section 1.2, the MMPA requires that we must prescribe the means of effecting the least practicable impact on the species or stocks of marine mammals and their habitat. In order to do so, we must consider WETA's proposed mitigation measures, as well as other potential measures, and assess how such measures could benefit the affected species or stocks and their habitat. Our evaluation of potential measures includes consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, we expect the successful implementation of the measure 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.

Any additional mitigation measure proposed by us beyond what the applicant proposes should be able to or have a reasonable likelihood of accomplishing or contributing to the accomplishment of one or more of the following goals:

- Avoidance or minimization of marine mammal injury, serious injury, or death, wherever possible;
- A reduction in the numbers of marine mammals taken (total number or number at biologically important time or location);
- A reduction in the number of times the activity takes individual marine mammals (total number or number at biologically important time or location);
- A reduction in the intensity of the anticipated takes (either total number or number at biologically important time or location);
- Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base; activities that block or limit passage to or from biologically

important areas; permanent destruction of habitat; or temporary destruction/disturbance of habitat during a biologically important time; and

• For monitoring directly related to mitigation, an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Alternative 1 (the Preferred Alternative) includes a suite of mitigation measures intended to minimize potentially adverse interactions with marine mammals.

2.2. Description of WETA's Proposed Activities

WETA proposes to construct a Central Bay Operations and Maintenance Facility to serve as the central San Francisco Bay base for WETA's ferry fleet, Operations Control Center (OCC), and Emergency Operations Center (EOC). This Project would require the removal of 35 existing concrete piles and the installation of 61 steel piles by impact hammer and 24 plastic piles by vibratory hammer in San Francisco Bay.

Once constructed, the facility would provide maintenance services, such as fueling, engine oil changes, concession supply, and light repair work for WETA ferry boats operating in the central San Francisco Bay. In addition, the facility would be the location for operational activities of WETA, including day-to-day management and oversight of services, crew, and facilities. In the event of a regional disaster, the facility would also function as an emergency operations center, serving passengers and sustaining water transit service for emergency response and recovery.

2.2.1. Dates and Duration

WETA plans to conduct all in-water construction work activities during the period from August 1 to November 30, 2016. Pile removal and installation would occur over only approximately 12 days during that period, and these activities would not be continuous.

For pile removal, the contractor conducting the removal will finalize the most effective method of removing the existing piles. Once the contractor has an effective method in place, it should take approximately 30 minutes to extract each pile. Thirty-five piles would be removed, requiring a total of approximately 17½ hours. This time would be spread over a period of three days and would not be continuous.

For pile installation, the structural steel piles would be driven in place by a diesel impact hammer. Each pile would require approximately 450-600 hammer strikes to be put in place. This is an estimated number of strikes, as limited geotechnical exploration has been performed at the site and the required structural capacity of the piles is yet to be determined. It is estimated that 3 to 12 piles would be driven per day during in-water pile driving operations, with an actual drive time for each pile ranging from 10 to 30 minutes per pile, assuming the hammer operates continuously. Sixty-one steel piles would be installed, requiring a total of approximately 10 to $30\frac{1}{2}$ hours.

The plastic fender piles would likely be driven into place with a vibratory hammer, which would not create significant underwater noise. It would require 15 to 30 minutes of vibration to put each plastic pile in place. Twenty-four plastic piles would be installed, requiring a total of approximately 6 to 12 hours. All of the pile driving, including installation of the steel and plastic piles, will be spread over a period of ten days and would not be continuous.

2.2.2. Specified Geographic Region

The Project site is located southeast of the intersection of West Hornet Avenue and Ferry Point Road near Pier 3 in the City of Alameda (see Figure 1 of the IHA application). The Project site is within the Alameda Naval Air Station (NAS) Base Realignment and Closure (BRAC) area, now known as Alameda Point (see Figure 2 of the IHA application). The former Alameda NAS, which was closed in 1997, occupied roughly 1,700 acres of land and roughly 1,000 acres of water. The Project site is owned by the City of Alameda and was leased to the United States Navy as part of the NAS.

The Project site includes approximately 21,500 square feet (0.5 acre) of landside space and approximately three acres of waterside space in San Francisco Bay. The Project site is designated as Mixed Use Planned Development District (MX) and is zoned General Industrial District (M-2) by the City of Alameda.

2.2.3. Detailed Description of Activities

The Project has three elements involving noise production that may impact marine mammals:

- Removal of 35 existing concrete piles;
- Installation of 61 steel piles (twenty-six 30" epoxy coated steel guide piles for floats, eleven 24" piles for shoreline deck, sixteen 24" epoxy coated steel dolphin piles, and eight 18" epoxy coated steel fender panel piles) via impact hammer; and
- Installation of 24 plastic piles (18" plastic fender piles) via vibratory hammer.

Detailed descriptions of these activities are provided below.

Pile Removal

Thirty-five (35) existing concrete piles will be removed as part of the Project. In general, the piles will be removed by attaching a choker to the pile and pulling. If necessary, a vibrating extractor will be used. Once the contractor conducting the removal has an effective method in place, it should take about 30 minutes to extract each pile. To remove all 35 existing piles, noise impacts associated with driving will occur over a period of three days, will be limited to daylight hours, and will not be continuous. As a vibrating extractor may be used, for the purposes of managing potential impacts to marine mammals, the same zones of influence applied to vibratory hammer operations for pile installation will be applied to pile removal operations.

Pile Installation

A total of 61 steel piles will be installed as part of the Project. These piles will be installed by impact hammer. The largest piles to be installed are 30-inch diameter steel piles, and these would produce the highest sound levels. Twenty-six 30-inch diameter piles will be installed, and noise impacts associated with driving these piles will occur over a period of six days, will be limited to daylight hours, and will not be continuous. In addition, twenty-seven 24-inch steel piles (sixteen of which will be epoxy coated) will be installed for construction of the new ferry maintenance facility, and the driving of these piles will occur over a period of six days, overlapping with the days driving the 30-in diameter piles, will be limited to daylight hours, and will not be continuous. Finally, eight 18-inch epoxy coated steel piles will be installed, and pile driving for these piles will occur over a single day, will be limited to daylight hours, and will not be continuous.

The Project will also include installation of 24 plastic piles, which are 18 inches in diameter. A vibratory hammer will be used to install these plastic piles. Sound pressure waves resulting from the driving of plastic piles are different than those of steel piles. In comparison to steel piles, pressure levels produced from plastic piles hit with a hammer have lesser extremes in overpressure and underpressure in the sound waveform. Vibratory hammers produce sound pressure levels (SPLs) that are considerably lower than those produced by impact hammers. Specific data on vibratory hammer sound levels for driving plastic piles could not be located, but installation of the plastic piles with a vibratory hammer, instead of an impact hammer, is less likely to produce sound that would result in injury to or mortality of marine mammals. In total, the installation of all of the piles, including the steel piles and the plastic piles, will occur over a period of ten days, will be limited to daylight hours, and will not be continuous.



Figure 1. Proposed Project Location.



Figure 2. Proposed Site at Alameda Point.

2.3. Description of Alternatives

2.3.1. Alternative 1 – Issuance of an Authorization with Mitigation Measures

The proposed action constitutes Alternative 1 and is the Preferred Alternative. Under this alternative, we would issue an IHA (valid from December 1, 2015, through November 30, 2016) to WETA allowing the incidental take, by Level B harassment, of two species of marine mammals, subject to the mandatory mitigation and monitoring measures and reporting requirements set forth in the proposed IHA, if issued, along with any additions based on consideration of public comments.

PROPOSED MITIGATION MEASURES

For WETA's proposed Central Bay Operations and Maintenance Facility Project, WETA worked with NMFS and proposed the following mitigation measures to minimize the potential impacts to marine mammals in the Project vicinity. The primary purposes of these mitigation measures are to minimize sound levels from the activities, to monitor marine mammals within designated zones of influence corresponding to NMFS' current Level B harassment thresholds and, if marine mammals with the ZOI appear disturbed by the work activity, to initiate immediate shutdown or power down of the piling hammer, making it very unlikely potential injury or TTS to marine mammals would occur and ensuring that Level B behavioral harassment of marine mammals would be reduced to the lowest level practicable.

Use of Noise Attenuation Devices

Noise attenuation systems (i.e., bubble curtains) will be used during all impact pile driving of steel piles to dampen the acoustic pressure and reduce the impact on marine mammals. By reducing underwater sound pressure levels at the source, bubble curtains would reduce the area over which Level B harassment would occur, thereby potentially reducing the numbers of marine mammals affected. In addition, the bubble curtain system would reduce sound levels below the threshold for injury (Level A harassment), and thus eliminate the need for an exclusion zone for Level A harassment.

Time Restriction

Work would occur only during daylight hours, when visual monitoring of marine mammals can be conducted. In addition, all in-water construction will be limited to the period between August 1 and November 30, 2016.

Establishment of Exclusion Zone and Level B Harassment Zones of Influence

Before the commencement of in-water pile driving activities, WETA shall establish Level B behavioral harassment zones of influence (ZOIs) where received underwater sound pressure levels (SPLs) are higher than 160 dB (rms) and 120 dB (rms) re 1 μ Pa for impulse noise sources (impact pile driving) and non-impulses noise sources (vibratory pile driving and mechanic dismantling), respectively. The ZOIs delineate where Level B harassment would occur.

Because of the relatively low source levels from vibratory pile driving and from impact pile driving with air bubble curtains, there will be no area where the noise level would exceed the threshold for Level A harassment for pinnipeds, which is 190 dB (rms) re 1 μ Pa. The modeled maximum isopleths for ZOIs are listed in Table 2.

Pile Driving Methods	Pile Material and Size	Distance to 120 dB re	Distance to 160 dB re
0		1 μPa (rms) (m)	$1 \mu Pa (rms) (m)$
Impact pile driving	30" epoxy coated steel piles	NA	250
with air bubble	24" epoxy coated steel piles	NA	185
curtain	18" epoxy coated steel piles	NA	93
Vibratory pile driving	18" plastic fender piles	2,154	NA

Table 2. Modeled Level B harassment zones of influence for various pile driving activities

Once the underwater acoustic measurements are conducted during initial test pile driving, WETA shall adjust the sizes of the ZOIs, and monitor these zones as described under the Proposed Monitoring section below.

Soft Start

A "soft-start" technique is intended to allow marine mammals to vacate the area before the pile driver reaches full power. Whenever there has been downtime of 30 minutes or more without pile driving, the contractor will initiate the driving with ramp-up procedures described below.

For vibratory hammers, the contractor will initiate the driving for 15 seconds at reduced energy, followed by a 1-minute waiting period. This procedure shall be repeated two additional times before continuous driving is started. This procedure would also apply to vibratory pile extraction.

For impact driving, an initial set of three strikes would be made by the hammer at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three-strike sets at 40 percent energy, with 1-minute waiting periods, before initiating continuous driving.

Shutdown Measures

Although no marine mammal exclusion zone exists, due to the implementation of noise attenuation devices (i.e., bubble curtains), WETA shall discontinue pile driving or pile removal activities if a marine mammal within a ZOI appears disturbed by the work activity. Work may not resume until the animal is seen to leave the ZOI or 30 minutes have passed since the disturbed animal was last sighted.

PROPOSED MONITORING AND REPORTING MEASURES

Proposed Monitoring Measures

WETA shall employee NMFS-approved protected species observers (PSOs) to conduct marine mammal monitoring for its Central Bay Operations and Maintenance Facility Project. The PSOs will observe and collect data on marine mammals in and around the project area for 30 minutes before, during, and for 30 minutes after all pile removal and pile installation work. If a PSO observes a marine mammal within a ZOI that appears to be disturbed by the work activity, the PSO will notify the work crew to initiate shutdown measures.

Monitoring of marine mammals around the construction site shall be conducted using highquality binoculars (e.g., Zeiss, 10 x 42 power). Marine mammal visual monitoring shall be conducted from the best vantage point available, including the pier, breakwater, and adjacent docks within the harbor, to maintain an excellent view of the ZOIs and adjacent areas during the survey period. Monitors would be equipped with radios or cell phones for maintaining contact with work crews.

Data collection during marine mammal monitoring will consist of a count of all marine mammals by species, a description of behavior (if possible), location, direction of movement, type of construction that is occurring, time that pile replacement work begins and ends, any acoustic or visual disturbance, and time of the observation. Environmental conditions such as weather, visibility, temperature, tide level, current, and sea state would also be recorded.

Reporting Measures

WETA would be required to submit weekly monitoring reports to NMFS that summarize the monitoring results, construction activities, and environmental conditions.

A final monitoring report would be submitted to NMFS within 90 days after completion of the construction work. This report would detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed. NMFS would have an opportunity to provide comments on the report, and if NMFS has comments, WETA would address the comments and submit a final report to NMFS within 30 days.

In addition, NMFS would require WETA to notify NMFS' Office of Protected Resources and NMFS' Stranding Network within 48 hours of sighting an injured or dead marine mammal in the vicinity of the construction site. WETA shall provide NMFS with the species or description of the animal(s), the condition of the animal(s) (including carcass condition, if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

In the event that WETA finds an injured or dead marine mammal that is not in the vicinity of the construction area, WETA would report the same information as listed above to NMFS as soon as operationally feasible.

2.3.2. Alternative 2 – No Action Alternative

We are required to evaluate the No Action Alternative per CEQ NEPA regulations. The No Action Alternative serves as a baseline to compare the impacts of the Preferred and other Alternatives. Under the No Action alternative, we would not issue an IHA to WETA for the proposed construction project.

Under the No Action Alternative, WETA could choose not to proceed with their proposed activities or to proceed without an IHA. If they choose the latter, WETA would not be exempt from the MMPA prohibitions against the take of marine mammals and would be in violation of the MMPA if take of marine mammals occurs.

For purposes of this EA, we characterize the No Action Alternative as WETA not receiving an IHA and WETA conducting construction activities for its proposed Central Bay Operations and Maintenance Facility Project without the protective measures and reporting requirements required by an IHA under the MMPA. We take this approach to meaningfully evaluate the primary environmental issues—the impact on marine mammals from these activities in the absence of protective measures.

2.4. Alternatives Considered but Eliminated from Further Consideration

NMFS considered whether other alternatives could meet the purpose and need and support WETA's proposed construction project. An alternative that would allow for the issuance of an IHA with no required mitigation or monitoring was considered but eliminated from consideration, as it would not be in compliance with the MMPA and therefore would not meet the purpose and need. For that reason, this alternative is not analyzed further in this document. No other alternatives that would meet the purpose and need of the Project were identified.

Chapter 3 Affected Environment

This chapter describes existing conditions in the proposed action areas. Complete descriptions of the physical, biological, and social environment of the action area are contained in the documents listed in Section 1.3.1 of this EA. We incorporate those descriptions by reference and briefly summarize or supplement the relevant sections for marine mammals in the following subchapters.

3.1. Physical Environment

We are required to consider impacts to the physical environment under NOAA NAO 216-6. As discussed in Chapter 1, our proposed action and alternatives relate only to the authorization of incidental take of marine mammals and not to the physical environment. Certain aspects of the physical environment are not relevant to our proposed action (see subchapter 1.3.2 - Scope of Environmental Analysis). Because of the requirements of NAO 216-6, we briefly summarize the physical components of the environment here.

3.1.1. Marine Mammal Habitat

Harbor seals use the tip of Breakwater Island as a haul-out site and forage extensively in the Breakwater Gap area. Although it is not considered a primary haul-out site for San Francisco Bay, Breakwater Island is reportedly the only haul-out site in the central Bay that is accessible to seals throughout the full tidal range. Aerial surveys of seal haul-outs conducted in 1995-97 and incidental counts made during summer tern foraging studies conducted in 1984-93 usually counted fewer than 10 seals present at any one time. There is some evidence that more harbor seals have been using Breakwater Island in recent years, or that it is more important as a winter haul-out. Seventy-three seals were counted on Breakwater Island in January 1997, and 20 were observed hauled-out on April 4, 1998. A small pup was observed during May 1997; however, site characteristics are not ideal for the island to be a major pupping area (USFWS 1998).

Harbor seals have also been using an abandoned small craft marina dock located at the Project site for haulout purposes. This dock was previously connected to land, which may have decreased its desirability for use by seals, due to access by people, dogs, and other animals. The dock has been deteriorating over time, because it is not maintained. In 2010, the portion connecting the floating dock to land broke off and sank, leaving remnant parts of the floating dock isolated from land. Since 2010, additional remnant parts of the marina have also been lost. At present, seals have been observed by local residents hauling out on the portion of the dock that is furthest from shore.

3.2. Biological Environment

The primary component of the biological environment that would be impacted by the proposed action and alternatives would be marine mammals, which would be directly impacted by the authorization of incidental take. We briefly summarize this component of the biological environment here.

3.2.1. Marine Mammals

We provide information on the occurrence of marine mammals most likely present in the proposed activity areas in section 1.1.2 of this EA. The marine mammals most likely to be harassed incidental to conducting the Central Bay Operations and Maintenance Facility Project are: California sea lions and Pacific harbor seals. Neither of these species is listed as threatened or endangered under the Endangered Species Act.

3.2.1.1.California Sea Lions

California sea lions in San Francisco Bay are part of the U.S. stock, which begins at the U.S./Mexico border and extends northward into Canada. The U.S. stock was estimated at 296,750 in the 2012 Stock Assessment Report (SAR) and may be at carrying capacity, although more data are needed to verify that determination (Carretta *et al.*, 2013). Because different age and sex classes are not all ashore at any given time, the population assessment is based on an estimate of the number of births and number of pups in relation to the known population. The current population estimate is derived from visual surveys conducted in 2007 of the different age and sex classes observed ashore at the primary rookeries and haul-out sites in southern and central California, coupled with an assessment done in 2008 of the number of pups born in the southern California rookeries (Carretta *et al.*, 2013). California sea lions occurrence at the proposed project area is not common, but their presence is expected.

3.2.1.2.Pacific Harbor Seals

Harbor seals are members of the true seal family (Phocidae). For management purposes, differences in mean pupping date, movement patterns, pollutant loads, and fishery interactions have led to the recognition of three separate harbor seal stocks along the west coast of the continental U.S. The three distinct stocks are: (1) inland waters of Washington State (including Hood Canal, Puget Sound, Georgia Basin and the Strait of Juan de Fuca out to Cape Flattery), (2) outer coast of Oregon and Washington, and (3) California (Carretta *et al.*, 2013). Harbor seals found in the vicinity of the proposed action area belong to the California stock.

Pacific harbor seals display year-round site fidelity, though they have been known to swim several hundred miles to find food or suitable breeding habitat. Although generally solitary in the water, harbor seals come ashore at haul-outs that are used for resting, thermoregulation, birthing, and nursing pups. Haul-out sites are relatively consistent from year to year (Kopec and Harvey, 1995), and females have been recorded returning to their own natal haul-out when breeding (Green *et al.*, 2006).

NMFS' <u>2012 Stock Assessment Report</u> (Carretta *et al.*, 2013) also provides the latest abundance and life history information about each species/stock in California.

3.3. Social Environment

Because our proposed action and alternatives relate only to the authorization of incidental take of marine mammals, the components of the social environment are not relevant to our proposed action (see subchapter 1.3.2 - Scope of Environmental Analysis). Therefore, no further analysis of the social environment is required here.

Chapter 4 Environmental Consequences

This chapter of the EA analyzes the impacts of the two alternatives and addresses the potential direct, indirect, and cumulative impacts of our issuance of an IHA. WETA's application and other related environmental analyses identified previously facilitate this analysis.

Under the MMPA, we have evaluated the potential impacts of WETA's construction program activities in order to determine whether to authorize incidental take of marine mammals. Under NEPA, we have determined that an EA is appropriate to evaluate the potential significance of environmental impacts resulting from the issuance of an IHA.

4.1. Effects of Alternative 1 – Issuance of an IHA with Mitigation Measures

Alternative 1 is the Preferred Alternative, under which we would issue an IHA to WETA allowing the incidental take, by Level B harassment, of two species of marine mammals from December 1, 2015, through November 30, 2016, subject to the mandatory mitigation and monitoring measures and reporting requirements set forth in the IHA, if issued. We would incorporate the mitigation and monitoring measures and reporting described earlier in this EA into a final IHA.

4.1.1. Impacts to Marine Mammal Habitat

No permanent impacts to marine mammal habitat are proposed to or would occur as a result of the proposed Project. The WETA's proposed Central Bay Operations and Maintenance Facility Project would not modify the existing habitat. Therefore, no restoration of the habitat would be necessary. A temporary, small-scale loss of foraging habitat may occur for marine mammals, if the marine mammals leave the area during pile extraction and driving activities.

Acoustic energy created during pile replacement work would have the potential to disturb fish within the vicinity of the pile replacement work. As a result, the affected area could temporarily lose foraging value to marine mammals. During pile driving, high noise levels may exclude fish from the vicinity of the pile driving. Hastings and Popper (2005) identified several studies that suggest fish will relocate to avoid areas of damaging noise energy. The acoustic frequency and intensity ranges that have been shown to negatively impact fish (FHWG 2008) and an analysis of the potential noise output of the proposed Project indicate that Project noise has the potential to cause temporary hearing loss in fish over a distance of approximately 42 meters from pile driving activity. If fish leave the area of disturbance, pinniped foraging habitat in that area may have temporarily decreased foraging value when piles are driven using impact hammering.

The duration of fish avoidance of this area after pile driving stops is unknown. However, the affected area represents an extremely small portion of the total foraging range of marine mammals that may be present in and around the project area.

Because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammals and the food sources that they utilize are not

expected to cause significant or long-term consequences for individual marine mammals or marine mammal populations.

A harbor seal haul-out site that would be affected is a small craft dock located at the project site and was abandoned by the Navy when it vacated the Naval Air Station-Alameda in 1997. The unmaintained dock has been deteriorating slowly over the last 17 years and the deterioration has appeared to be accelerating in the last five years. Later in 2010, the portion connecting the floating dock to land broke off and sank, leaving remnant parts of the floating dock isolated from land. Since 2010, additional remnant parts of the marina have also been lost. During this period of time harbor seals have been opportunistically using the dock for haul-out purposes. At present, seals have been observed by local residents hauling out on the portion of the dock that is furthest from shore.

It is observed that on an average, about 10 to 20 harbor seals use the floating dock as haul-out periodically. Although during the spring of 2014, one pup was observed reared at the floating dock, the site is not a known breeding area for harbor seal. Because the dock has been in a gradual state of decay since the closure of the naval base and will likely continue to fall apart, the haul-out area on the dock provided for harbor seals is expected to decrease and eventually disappear.

Finally, several nearby haul-out sites are available in the Bay that are available to resident harbor seals in the area. These areas include the tip of Breakwater Island (1 mile from the WETA project site) and the haul-out at Yerba Buena Island (4 to 5 miles from the WETA project site) which is identified as one of the five major haul-out sites for harbor seals in the San Francisco Bay (Gibble 2011).

Therefore, the removal of the remnant abandoned dock would have negligible impact to harbor seal habitat in the proposed WETA construction site.

4.1.2. Impacts to Marine Mammals

We expect that behavioral disturbance or displacement resulting from the activities associated with the Project have the potential to impact marine mammals. The majority of impacts are likely to occur from pile driving and pile removal activities. Pile driving and removal activities associated with the construction could cause pinniped behavioral modification and temporary displacement within the vicinity of the action area through: (1) noise generated from pile removal and pile driving; and (2) visual disturbance from construction activities and crew. These activities are not anticipated to result in injury, serious injury, or mortality of any marine mammal species and none is proposed to be authorized.

4.1.2.1.Acoustic Impacts

When considering the influence of various kinds of sound on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of

sound. Based on available behavioral data, audiograms have been derived using auditory evoked potentials, anatomical modeling, and other data, Southall <u>et al.</u> (2007) designate "functional hearing groups" for marine mammals and estimate the lower and upper frequencies of functional hearing of the groups. The functional groups and the associated frequencies are indicated below (though animals are less sensitive to sounds at the outer edge of their functional range and most sensitive to sounds of frequencies within a smaller range somewhere in the middle of their functional hearing range):

- Low frequency cetaceans (13 species of mysticetes): functional hearing is estimated to occur between approximately 7 Hz and 22 kHz (however, a study by Au *et al.*, (2006) of humpback whale songs indicate that the range may extend to at least 24 kHz);
- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): functional hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High frequency cetaceans (eight species of true porpoises, six species of river dolphins, Kogia, the franciscana, and four species of cephalorhynchids): functional hearing is estimated to occur between approximately 200 Hz and 180 kHz; and
- Pinnipeds in Water: functional hearing is estimated to occur between approximately 75 Hz and 75 kHz, with the greatest sensitivity between approximately 700 Hz and 20 kHz.

As mentioned previously in this document, two marine mammal species (both of which are pinniped species) are likely to occur in the proposed seismic survey area. WETA and NMFS determined that in-water pile removal and pile driving during the Central Bay Operations and Maintenance Facility Project has the potential to result in behavioral harassment of the marine mammal species and stocks in the vicinity of the proposed 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). TS can be permanent (PTS), in which case the loss of hearing sensitivity is unrecoverable, or temporary (TTS), in which case the animal's hearing threshold will recover over time (Southall et al. 2007). Since marine mammals depend on acoustic cues for vital biological functions, such as orientation, communication, finding prey, and avoiding predators, hearing impairment could result in the reduced ability of marine mammals to detect or interpret important sounds. Repeated noise exposure that causes TTS could lead to PTS.

Experiments on a bottlenose dolphin (Tursiops truncates) and beluga whale (Delphinapterus leucas) showed that exposure to a single watergun impulse at a received level of 207 kPa (or 30 psi) peak-to-peak (p-p), which is equivalent to 228 dB (p-p) re 1 μ Pa, resulted in a 7 and 6 dB TTS in the beluga whale at 0.4 and 30 kHz, respectively. Thresholds returned to within 2 dB of

the pre-exposure level within 4 minutes of the exposure (Finneran et al. 2002). No TTS was observed in the bottlenose dolphin. Although the source level of one hammer strike for pile driving is expected to be much lower than the single watergun impulse cited here, animals being exposed for a prolonged period to repeated hammer strikes could receive more noise exposure in terms of sound exposure level (SEL) than from the single watergun impulse (estimated at 188 dB re 1 μ Pa2-s) in the aforementioned experiment (Finneran et al. 2002).

Chronic exposure to excessive, though not high-intensity, noise could cause masking at particular frequencies for marine mammals that utilize sound for vital biological functions (Clark et al. 2009). Masking is the obscuring of sounds of interest by other sounds, often at similar frequencies. Masking generally occurs when sounds in the environment are louder than, and of a similar frequency as, auditory signals an animal is trying to receive. Masking can interfere with detection of acoustic signals, such as communication calls, echolocation sounds, and environmental sounds important to marine mammals. Therefore, under certain circumstances, marine mammals whose acoustical sensors or environment are being severely masked could also be impaired.

Masking occurs at the frequency band which the animals utilize. Since noise generated from inwater vibratory pile removal and driving is mostly concentrated at low frequency ranges, it may have little effect on high-frequency echolocation sounds by odontocetes (toothed whales), which may hunt California sea lion and harbor seal. However, the lower frequency man-made noises are more likely to affect the detection of communication calls and other potentially important natural sounds, such as surf and prey noise. The noises may also affect communication signals when those signals occur near the noise band, and thus reduce the communication space of animals (e.g., Clark et al. 2009) and cause increased stress levels (e.g., Foote et al. 2004; Holt et al. 2009).

Unlike TS, masking can potentially impact the species at community, population, or even ecosystem levels, as well as individual levels. Masking affects both senders and receivers of the signals and could have long-term chronic effects on marine mammal species and populations. Recent science suggests that low frequency ambient sound levels in the world's oceans have increased by as much as 20 dB (more than 3 times, in terms of SPL) from pre-industrial periods, and most of these increases are from distant shipping (Hildebrand 2009). All anthropogenic noise sources, such as those from vessel traffic and pile removal and driving, contribute to the elevated ambient noise levels, thus intensifying masking.

Nevertheless, the sum of noise from WETA's proposed Central Bay Operations and Maintenance Facility Project construction activities is confined to a limited area by surrounding landmasses; therefore, the noise generated is not expected to contribute to increased ocean ambient noise. In addition, due to shallow water depths in the project area, underwater sound propagation of low-frequency sound (which is the major noise source from pile driving) is expected to be poor. Finally, in addition to TS and masking, exposure of marine mammals to certain sounds could lead to behavioral disturbance (Richardson et al. 1995), such as: changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities, such as socializing or feeding; visible startle response or aggressive behavior, such as tail/fluke slapping or jaw clapping; avoidance of areas where noise sources are located; and/or flight responses (e.g., pinnipeds flushing into water from haulouts or rookeries).

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be expected to be biologically significant if the change affects growth, survival, or reproduction. Some of these types of significant behavioral modifications include:

- Drastic change in diving/surfacing patterns (such as those thought to be causing beaked whale strandings due to exposure to military mid-frequency tactical sonar);
- Habitat abandonment due to loss of desirable acoustic environment; and
- Cessation of feeding or social interaction.

The onset of behavioral disturbance from anthropogenic noise depends on both external factors (characteristics of noise sources and their paths) and the receiving animals (hearing, motivation, experience, demography), and is therefore difficult to predict (Southall et al. 2007).

The proposed project area is not a prime habitat for marine mammals, nor is it considered an area frequented by marine mammals. Therefore, behavioral disturbances that could result from anthropogenic noise associated with WETA's construction activities are expected to affect only a small number of marine mammals on an infrequent and limited basis.

4.1.2.2.Visual Disturbance

The activities of workers in the project area may also cause behavioral reactions by marine mammals, such as pinnipeds flushing from the jetty or pier or moving farther from the disturbance to forage. There is a riprap breakwater that starts at the Alameda shoreline southeast of the proposed facility that harbor seals use as a haul-out site and to forage in the breakwater gap area. However, observations of the area show that it is unlikely that more than 10 to 20 individuals of harbor seals (or California sea lions) would be present in the project vicinity at any one time. Therefore, even if pinnipeds were flushed from the haul-out, a stampede is very unlikely, due to the relatively low number of animals onsite. In addition, proposed mitigation and monitoring measures would minimize the startle behavior of pinnipeds and prevent the animals from flushing into the water.

4.1.2.3.Estimated Take of Marine Mammals by Level B Incidental Harassment

As discussed above, in-water pile removal and pile driving (vibratory and impact) generate loud noises that could potentially harass marine mammals in the vicinity of WETA's proposed Central Bay Operations and Maintenance Facility Project.

Currently, NMFS uses 120 dB re 1 μ Pa and 160 dB re 1 μ Pa at the received levels for the onset of Level B harassment from non-impulse (vibratory pile driving and removal) and impulse sources (impact pile driving) underwater, respectively. Table 3 summarizes the current NMFS marine mammal take criteria.

Criterion	Criterion Definition	Threshold
Level A Harassment (Injury)	Permanent Threshold Shift (PTS) (Any level above that which is known to cause TTS)	180 dB re 1 μPa (cetaceans) / 190 dB re 1 μPa (pinnipeds) root mean square (rms)
Level B Harassment	Behavioral Disruption (for impulse noises)	160 dB re 1 µPa (rms)
Level B Harassment	Behavioral Disruption (for non-impulse noise)	120 dB re 1 µPa (rms)

 Table 3. Current Acoustic Exposure Criteria for Non-explosive Sound Underwater

As explained above, ZOIs will be established that encompass the areas where received underwater SPLs exceed the applicable thresholds for Level B harassment. There will not be a zone for Level A harassment in this case, because the bubble curtain system will keep all underwater noise below the threshold for Level A harassment.

Incidental take is estimated for each species by estimating the likelihood of a marine mammal being present within a ZOI during active pile removal or driving. Expected marine mammal presence is determined by past observations and general abundance near the project area during the construction window. Typically, potential take is estimated by multiplying the area of the ZOI by the local animal density. This provides an estimate of the number of animals that might occupy the ZOI at any given moment. However, this type of calculation is not applicable in this case, because the ZOI will be relatively small and there is no specific local animal density for harbor seals or California sea lions. Based on observational data, the maximum number of harbor seals observed along the closest breakwater near the project vicinity ranges from 10 to 20 individuals. Observational data on California sea lions are not available, but they are generally less abundant than harbor seals; therefore, the number of harbor seals will be used to estimate impacts for both species.

While it is unlikely that 10 to 20 individuals would be present inside the ZOI at any one time, given the distance from the nearest haul-out site, as a worst-case, this analysis assumes that up to 20 individuals might be present.

For the Project, the total number of pile removal hours is estimated to not exceed 18 hours over 3 days, and the total number of pile driving hours is estimated to not exceed 60 hours over 10 days. Therefore, the estimated total number of days of activities that might impact marine mammals is 13 days. For the exposure estimate, it is assumed that the highest count of harbor seals observed, and the same number of California sea lions, will be foraging within the ZOI and be exposed multiple times during the Project.

The calculation for marine mammal exposures for this Project is estimated by:

Exposure estimate = N * (10 days of pile driving activity + 3 days of pile removal activity), where:

N = # of animals potentially present = 20.

This formula results in the following exposure estimate:

Exposure estimate = 20 animals * 13 days = 260 animals.

Therefore, WETA is requesting authorization for Level B acoustical harassment of up to 260 harbor seals and up to 260 California sea lions due to pile removal and driving. A summary of the take estimates and the proportions of the stocks potentially affected is provided in Table 4.

	Estimated	Estimated Take by	Abundance	Percentage of	Population
	Density	Level B	of Stock	Stock Potentially	Trend
	-	Harassment		Affected	
California sea lion	NA	260	396,750	0.06%	Stable
Harbor seal	NA	260	30,196	0.86%	Stable

 Table 4. Summary of potential marine mammal takes and percentage of stocks affected.

4.2. Effects of Alternative 2 – No Action Alternative

Under the No Action Alternative, we would not issue an IHA to WETA. As a result, WETA would not receive an exemption from the MMPA prohibitions against the take of marine mammals and would be in violation of the MMPA if take of marine mammals occurs.

The impacts to elements of the human environment resulting from the No Action Alternative conducting the Central Bay Operations and Maintenance Facility Project in the absence of required protective measures for marine mammals under the MMPA—would be greater than those impacts resulting from Alternative 1, the Preferred Alternative.

4.2.1. Impacts to Marine Mammal Habitat

Under the No Action Alternative, the construction project would have no additional effects on the physical environment beyond those resulting from WETA's activities, which we evaluated earlier in this document (see Section 4.1.1). Even if there are no mitigation measures imposed, impacts to marine mammal habitat would be minimal at the action area. This Alternative would result in similar effects on the physical environment as Alternative 1.

4.2.2. Impacts to Marine Mammals

Under the No Action Alternative, WETA's activities could result in increased amounts of Level B harassment to marine mammals and possibly takes by injury (Level A harassment), serious injury, or mortality due to the absence of mitigation and monitoring measures that would be required under the IHA. While it is difficult to provide an exact number of takes that might

occur under the No Action Alternative, the numbers would be expected to be larger than those presented in Table 4 above, because WETA would not be required to follow mitigation measures to reduce the number of takes.

If the activities proceeded without the protective measures and reporting requirements required by a final Authorization under the MMPA, the direct, indirect, and cumulative effects on the human or natural environment of not issuing the IHA would include the following:

- Marine mammals within the construction project area could experience injury (Level A harassment) and potentially serious injury or mortality. If WETA is not required to use noise attenuation devices, the sound pressure levels during impact pile driving would be higher, and could potentially be loud enough to cause injury or worse to marine mammals. In addition, animals disturbed by the work activity that would be protected from additional harm by shutdown measures could suffer more severe harm if those mitigation measures are not in place;
- There could be increases in the number of behavioral responses because of the lack of mitigation measures required in the IHA. If WETA does not use soft starts while conducting the pile driving and removal activities, the incidental take of marine mammals would likely occur at higher levels than we have already identified and evaluated above, because animals would not be warned to leave the area before full power driving or removal occurs; and
- We would not be able to obtain the monitoring and reporting data needed to assess the anticipated impact of the activity upon the species or stock and to increase knowledge of the species, as required under the MMPA.

4.3. Compliance with Necessary Laws – Necessary Federal Permits

We have determined that the issuance of an IHA is consistent with the applicable requirements of the MMPA, MSFMCA, and our regulations. Please refer to Section 1.4 of this EA for more information.

4.4. Unavoidable Adverse Impacts

WETA's application and the other environmental analyses identified previously (WETA, 2011; NMFS, 2012; USFWS, 2013) summarize unavoidable adverse impacts to marine mammals or to their populations to which they belong or on their habitats occurring in the proposed project area. We incorporated those documents by reference to include potential effects on other species. NMFS and USFWS Biological Opinions (NMFS 2012; USFWS 2013) all conclude that the WETA's proposed construction activities are not likely to jeopardize the continued existence of listed species in the action area.

We acknowledge that the incidental take authorized would potentially result in unavoidable adverse impacts to individual animals that would be harassed as a result of the Project. However, we do not expect WETA's activities to have adverse consequences on the viability of marine mammals in the Pacific Ocean or in San Francisco Bay, and we do not expect the marine mammal populations in that area to experience reductions in reproduction, numbers, or distribution that might appreciably reduce their likelihood of surviving in the wild. We expect that the numbers of individuals of all species taken by harassment would be small (relative to species or stock abundance) and that the proposed Central Bay Operations and Maintenance Facility Project and the take resulting from the proposed project activities would have a negligible impact on the affected species or stocks of marine mammals.

The MMPA requirement of ensuring the proposed action has no unmitigable adverse impact to subsistence uses does not apply here because there are no permitted subsistence uses of marine mammals in the region.

4.5. Cumulative Effects

NEPA defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR §1508.7). Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time.

Past, present, and foreseeable impacts to marine mammal populations include the following: commercial whaling; climate change affecting the prey base and habitat quality as a result of global warming; ship strikes; fishing gear entanglement; exposure to biotoxins and the resulting bioburden; acoustic masking from anthropogenic noise; competition with commercial fisheries; and killer whale predation. These activities account for cumulative impacts to regional and worldwide populations of marine mammals, many of whom are a small fraction of their former abundance. However, quantifying the biological costs for marine mammals within an ecological framework is a critical missing link to our assessment of cumulative impacts in the marine environment and assessing cumulative effects on marine mammals (Clark *et al.*, 2009). Despite these regional and global anthropogenic and natural pressures, available trend information indicates that most local populations of marine mammals in the Pacific Ocean are stable or increasing (Carretta *et al.*, 2013).

The proposed construction project would add another, albeit localized and temporary, activity in central California. This activity would be limited to a small area in the City of Alameda for a relatively short period of time. This section provides a brief summary of the human-related activities affecting the marine mammal species in the action area.

4.5.1. Climate Change

The U.S. Fish and Wildlife Service's (USFWS') draft EIS on the South Farallon Islands Invasive House Mouse Eradication Project (USFWS, 2013) summarizes the potential cumulative effects of climate change on marine mammals near the proposed construction project area. We incorporate the draft EIS and its climate change analyses by reference and briefly summarize impacts here. Climate change has the potential to indirectly impact marine mammals in central California in several different ways, including: loss of suitable breeding habitat and food resources; a reduction in the foraging or breeding ranges; and a decrease in the overall population size in the region. Climate change would likely alter the ecosystem's food web, which could affect marine mammals in San Francisco Bay. Increased temperatures could push populations to a more suitable climate and impact adult survival and breeding (USFWS, 2013).

The primary threat to marine mammals is from loss of habitat and potential changes in food supply due to climate change. Sea level rise due to climate change could flood pinniped haul-out sites negatively impacting breeding success. Moreover, researchers anticipate that there would be long-term impacts to marine mammals resulting from climate change that could alter their composition and distribution in central California (USFWS, 2013).

With the large degree of uncertainty on the impact of climate change to marine mammals in central California, we recognize that warming of this region could affect the prey base and habitat quality for marine mammals. Nonetheless, we expect that ongoing and future WETA activities off the City of Alameda and the issuance of an IHA to WETA would not result in any noticeable contributions to climate change. Furthermore, there would be no additive or synergistic effects from climate change on the marine mammals listed in the Authorization resulting from the authorization of take.

4.5.2. Past, Present, and Reasonably Foreseeable Future Actions

The other environmental analyses identified previously (WETA, 2011; NMFS, 2012; USFWS, 2013) summarize the potential cumulative effects to marine mammals or the populations to which they belong or to their habitats occurring in the action area, including summarizing potential cumulative effects from past, present, and reasonably foreseeable future actions in the area. We incorporate those documents and analyses by reference and briefly summarize them in this document. Thus, this cumulative effects analysis focuses on the activities that may temporally or geographically overlap with WETA's activities and would most likely impact the marine mammals present in the proposed area.

4.5.3. San Francisco-Oakland Bay Bridge Construction Activity

Since November 2003, the California Department of Transportation (CALTRANS) has been conducting construction of a replacement bridge for the East Span of the San Francisco-Oakland Bay Bridge (SF-OBB), in San Francisco Bay (SFB), California. Specific activities that have the potential to impact marine mammals include vibratory and impact pile driving. In addition, the next phase of the demolition work of the existing bridge would also involve underwater detonation.

NMFS has issued annual IHAs to CALTRANS for its construction activities every year, beginning in 2003. The most recent IHA was issued to CALTRANS on January 8, 2014, and

expires on January 7, 2015 (79 FR 2421, January 14, 2014). CALTRANS indicates that it will request another IHA for the 2015 season.

However, the CALTRANS SF-OBB work has a small noise footprint and is located approximately 3 miles west of the City of Alameda. Furthermore, noise-generating in-water construction activities, such as pile driving and removal, only occur sporadically (e.g., they only occurred on 5 days in 2013). Monitoring reports from CALTRANS indicate that impacts on marine mammals from CALTRANS SF-OBB construction activities are negligible, and that there is no long-term displacement of marine mammals observed. Based on these, we concludes that the combined effects from CALTRANS and WETA on the environment are expected to be non-significant due to the small scale of these activities and the separation in location.

4.5.4. Ocean Pollution

Environmental contaminants in the form of waste materials, sewage, and toxins are present in, and continue to be released into, the oceans off central California. Polluted runoff, or non-point source pollution, is considered the major cause of impairment of California's ocean waters. Storm-water runoff from coastal urban areas and beaches carries waste such as plastics and Styrofoam into coastal waters. Sewer outfalls also are a source of ocean pollution in central California. Sewage can be treated to eliminate potentially harmful releases of contaminants; however, releases of untreated sewage occur due to infrastructure malfunctions, resulting in releases of bacteria usually associated with feces, such as *Escerichia coli* and *enterococci*. Bacteria levels are used routinely to determine the quality of water at recreational beaches, and as indicators of the possible presence of other harmful microorganisms. Marine mammals sometimes mistake plastics and other marine debris as food and ingest the garbage, which can ultimately lead to mortality, because of malnutrition, choking, or other problems. Nevertheless, WETA's proposed pile driving and pile removal activities are not expected to release pollutants into the water column.

4.5.5. Marine Mammal Research and Geophysical Seismic Surveys

Marine mammal research and geophysical seismic survey cruises operate within the Pacific Ocean along the California coast. While some marine mammal surveys introduce no more than increased vessel traffic impacts to the environment, seismic surveys use various methods (e.g., airgun arrays) to conduct research. The use of airguns during seismic surveys does not impact pinnipeds while they are hauled out, only when they are in the water. Other studies that involve biopsy sampling and tagging might result in Level B or even Level A harassment to marine mammals. There are several active research permits along the California coastline that allow activities that have the potential to result in either Level A or Level B harassment (e.g., vessel/aerial surveys, photo-identification, collection of sloughed skin, tagging, capture and handling, etc.). Many of these permits only allow the incidental harassment of California sea lions, Pacific harbor seals, and northern elephant seals during studies of other marine mammal species in the vicinity. NMFS has authorized seismic surveys along the Pacific coast in the past,

but there are currently no active geophysical seismic surveys occurring in central California waters, and none are proposed to occur in the foreseeable future. Results from research studies conducted in the area indicate that the activities only have temporary, short-term impacts on the behavior of the animals. The activities do not result in the injury or mortality of the animals.

4.5.6. Other Scientific Research Activities

Research on other animal species, such as seabirds, has historically occurred along the California coastline. There is currently only one active Authorization for the incidental harassment of pinnipeds during scientific research studies for seabird research; however, these research activities do not occur in the vicinity of the proposed Project.

4.5.7. Commercial and Recreational Fishing

Commercial and recreational fishing constitute a significant use of the ocean area along the California coastline. There are 519 recognized California marine fish species. According to the California Department of Fish and Game (CDFG), in 2013, the three top commercial finfish species by landing in the San Francisco port were Dover sole (629,466 pounds), chinook salmon (565,537 pounds), and swordfish (522,594 pounds). The total commercial landings for all species brought into the San Francisco port in 2013 were valued at almost 20 million dollars, with dockside landings totaling over 11 million pounds (CDFG, 2014). In addition, recreational and charter fishing activities are popular along the waters of central California. These activities could result in by-catch of marine mammals, entanglement in fishing gear, and reduced prey availability for marine mammals.

4.5.8. Conclusion

Based on the summation of activity in the area provided in this section, NMFS determined that the incremental impact of an Authorization for the proposed WETA Central Bay Operations and Maintenance Facility Project in the City of Alameda would not be expected to result in a significant cumulative impact to the human environment, taking into account past, present, and reasonably foreseeable future activities. The potential impacts to marine mammals, their habitats, and the human environment in general are expected to be minimal, based on the limited and temporary footprint of the proposed Project and the mitigation and monitoring requirements of the IHA.

Chapter 5 List of Preparers and Agencies Consulted

Agencies Consulted

No other persons or agencies were consulted in preparation of this EA.

Prepared By

Shane Guan Fishery Biologist Permits and Conservation Division Office of Protected Resources, NOAA/National Marine Fisheries Service

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FINDING OF NO SIGNIFICANT IMPACT FOR THE ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION TO THE SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY FOR THE CENTRAL BAY OPERATIONS AND MAINTENANCE FACILITY PROJECT

NATIONAL MARINE FISHERIES SERVICE

BACKGROUND

On April 9, 2014, the San Francisco Bay Area Water Emergency Transportation Authority (WETA) submitted a request to the National Oceanic and Atmospheric Administration (NOAA) requesting an incidental harassment authorization (IHA) for the possible harassment of small numbers of harbor seals and California sea lions incidental to construction associated with the Central Bay Operations and Maintenance Facility Project (Project) in the City of Alameda, California. On May 15, 2014, WETA submitted a revised IHA application with updated information. NOAA Fisheries (NMFS) determined that the application was adequate and complete on July 31, 2014.

In response to a receipt of the request from the WETA, NMFS proposes to issue an IHA that authorizes takes by level B harassment of marine mammals in the wild pursuant to section 101(a)(5)(D) of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. §§ 1631 *et seq.*), and the regulations governing the taking and importing of marine mammals (50 Code of Federal Regulations (CFR) Part 216). A proposed IHA was published in the Federal Register notice on September 17, 2014 (79 FR 55749), along with a draft EA, for public comments.

NMFS' IHA issuance criteria require that the taking of marine mammals authorized by an IHA will have a negligible impact on the species or stock(s), and, where relevant, will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses. In addition, the IHA must set forth, where applicable, the permissible methods of taking, other means of effecting the least practicable adverse impact on the species or stock and its habitat, and requirements pertaining to the monitoring and reporting of such takings.

In accordance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. §§ 4321 et seq.), NMFS has prepared an Environmental Assessment (EA) titled, "Issuance of an Incidental Harassment Authorization to the San Francisco Bay Area Water Emergency Transportation Authority for the Central Bay Operations and Maintenance Facility Project" (hereinafter, EA). NMFS proposes to issue the IHA with mitigation measures, as described in Alternative 1 of the EA.

ANALYSIS

National Oceanic and Atmospheric Administration Administrative Order (NAO) 216-6 contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. § 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed is relevant to making a finding of no significant impact and has been considered individually, as well as in



combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in Fishery Management Plans (FMP)?

<u>Response</u>: The proposed action (i.e., issuing an IHA to WETA as described in Alternative 1 of the EA) cannot reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH). The footprint of the action area is very small in relation to fish habitat. The in-water construction work would be conducted at the current ferry facility. Therefore, no additional natural habitat would be affected.

The Central Bay Operations and Maintenance Facility Project will result in temporary disturbance to fish species in the close vicinity of the construction site, but the elevated sound pressure levels (SPLs) are not expected to reach sufficient magnitude to cause injury to fish from of most of the construction activities, due to that (1) attenuation devices will be used during all impact pile driving; (2) in-water piling activities will be restricted to August 1 to November 30, thus avoid fish spawning season, and (3) many pile driving will be conducted by vibratory hammer.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

<u>Response</u>: The proposed action cannot be expected to have a substantial impact on biodiversity and/or ecosystem functions in the vicinity of the proposed Central Bay Operations and Maintenance Facility Project at the existing ferry dock because NMFS does not expect the issuance of the IHA to WETA to significantly (1) affect the susceptibility of any of the animals found in the vicinity of the project area to predation, (2) alter dietary preferences or foraging behavior, (3) change distribution or abundance of predators or prey, or (4) disturb the behaviors of marine mammals.

The impacts of the action on marine mammals are only related to disturbance of marine mammals from vibratory pile removal and pile driving noise. The construction noise levels would be minimized by limiting pile driving and pile removal to vibratory hammer only, and by using noise attenuation devices. NMFS considers the disturbances from construction noise to be localized and short-term. NMFS expects that these acoustic disturbances would not result in substantial impact to marine mammals or to their role in the ecosystem.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

<u>Response</u>: The proposed action cannot reasonably be expected to have a substantial adverse impact on public health or safety because the authorized activity does not pose a risk to public health or human safety. The Central Bay Operations and Maintenance Facility Project is a dock construction work that is performed by construction crews in other project areas on a regular basis. All construction debris and demolishing materials will be shipped off site and will be disposed of properly.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

<u>Response</u>: The proposed action cannot reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species because NMFS has made a determination that potential impacts from the proposed activities on marine mammals and other affected species range from negligible and minor to none. In addition, there is no ESA-listed species present in the vicinity of the proposed Central Bay Operations and Maintenance Facility Project.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

<u>Response</u>: NMFS does not expect the issuance of an IHA to WETA to result in significant social or economic impacts interrelated with natural or physical environmental effects. Effects of the Central Bay Operations and Maintenance Facility Project would be limited to the short-term harassment of the marine mammals authorized by the permit. Authorization of the proposed Central Bay Operations and Maintenance Facility Project could result in a low level of economic benefit to construction companies performing the work. However, such impacts would likely be negligible and on a regional or local level.

The activities authorized would not substantially impact use of the environment or use of natural or depletable resources, such as might be expected from large scale construction or resource extraction activities. Further, issuance of the IHA would not result in inequitable distributions of environmental burdens or access to environmental goods.

NMFS has determined that issuance of the IHA will not adversely affect low-income or minority populations. There will be no impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses, as there are no subsistence uses that take place in the areas affected.

6) Are the effects on the quality of the human environment likely to be highly controversial?

<u>Response</u>: The effects of issuing an IHA to WETA as described in Alternative 1 of the EA on the quality of the human environment are not likely to be highly controversial because: (1) there is no substantial dispute regarding the size, nature, or effect of the proposed action; and (2) there is no known scientific controversy over the potential impacts of the proposed action.

To allow other agencies and the public the opportunity to review and comment on the actions, NMFS published a notice of receipt of the WETA application and proposed IHA in the *Federal Register* on September 17, 2014 (79 FR 55749). During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission, the Sierra Club, the San Francisco Bay Conservation and Development Commission, and 40 private citizens. Most comments are related to the concern of the removal of an abandoned floating dock that was periodically used by 10 - 20harbor seals as a haul-out. NMFS worked with the West Coast Regional Office and determined that the removal of the deteriorating floating dock will have negligible impacts to harbor seal habitat in the area because there are other natural haul-out available nearby. All comments specific to WETA's application that address the statutory and regulatory requirements or findings NMFS must make to issue an IHA will be addressed in the *Federal Register* notice for the issuance of the IHA. None of the comments are considered controversial and all will be addressed in the *Federal Register* notice for the issuance of the IHA.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

<u>Response</u>: The proposed action cannot reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas because none of these are found in the project areas. Similarly, as described in the response to question 1 above, no substantial impacts to EFH, designated critical habitat (DCH) or ecologically critical areas are expected as the construction activities would have a limited footprint for a short duration. The natural processes in the environment are expected to fully recover from any impacts resulting from the construction and demolishing activities within the short term.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

<u>Response</u>: The action of issuing an IHA to the WETA for the incidental take, by Level B harassment only, of small numbers of marine mammals is not expected to have significant effects on the human environment that would be unique or involve unknown risks because this type of construction work has been performed routinely.

While NMFS' judgments on impact thresholds for marine mammals in the vicinity of the project area are based on limited data, the risks are known and would involve the temporary, minimal harassment of marine mammals. No deaths or injuries to animals have been documented due to past coastal construction activities using vibratory hammer for pile removal or pile driving in general. The most common response to construction noise is for marine mammals to depart the construction area temporarily.

The construction activities associated with the Central Bay Operations and Maintenance Facility Project are well planned to minimize any impacts to the biological and physical environment of the areas by implementing mitigation and monitoring protocols which ensure the least practicable adverse impact on the affected species or stocks of marine mammals.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

<u>Response:</u> The proposed action is not related to other actions with individually insignificant, but cumulatively significant impacts. While the stocks of marine mammals to which the animals in the vicinity of the Project site have the potential to be impacted by other human activities in San Francisco Bay (i.e., shipping and boating activities development) described in the cumulative impacts analysis in the EA, these activities are generally separated both geographically and temporally from the proposed actions in the Central Bay Operations and Maintenance Facility Project site and are not occurring simultaneously on the same individuals of the population within the action area.

The short-term stresses (separately and cumulatively when added to other stresses the marine mammals in the vicinity of construction site face in the environment) resulting from the proposed Central Bay Operations and Maintenance Facility Project would be expected to be minimal. Thus, NMFS concluded that the impacts of issuing an IHA to the WETA for the incidental take, by Level B harassment only, of small numbers of marine mammals are expected to be no more than minor and short-term.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources?

<u>Response</u>: The issuance of an IHA is not expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources either because such resources do not exist within the project area or are not expected to be adversely affected. In particular, the Central Bay Operations and Maintenance Facility Project area is not considered a significant scientific, cultural or historical resource, nor is it listed in the National Register of Historic Places.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

<u>Response</u>: The issuance of an IHA cannot reasonably be expected to lead to the introduction or spread of any non-indigenous species into the environment because the activities associated with the proposed project are not likely to introduce or spread any non-indigenous species.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or does it represent a decision in principle about a future consideration?

<u>Response</u>: The issuance of an IHA is not expected to set a precedent for future actions with significant effects nor represent a decision in principle regarding future considerations. The issuance of an IHA to take marine mammals incidental to in-water construction activities in the coastal environment is a routine process under the MMPA. To ensure compliance with statutory and regulatory standards, NMFS' actions under section 101(a)(5)(D) of the MMPA must be considered individually and be based on the best available information, which is continuously evolving. Issuance of an IHA to a specific individual or organization for a given activity does not guarantee or imply that NMFS will authorize others to conduct similar activities. Subsequent requests for incidental take authorizations would be evaluated upon their own merits relative to the criteria established in the MMPA, ESA, and NMFS implementing regulations on a case-by-case basis.

The project has no unique aspects that would suggest it would be a precedent for any future actions. For these reasons, the issuance of an IHA to the WETA to conduct the Central Bay Operations and Maintenance Facility Project is not precedent setting.

13) Can the proposed action reasonably be expected to violate any Federal, State, or local law or requirements imposed for the protection of the environment?

<u>Response</u>: The issuance of an IHA would not violate any federal, state, or local laws for environmental protection. The WETA has fulfilled its responsibilities under MMPA for this action and the IHA currently contains language stating that the applicant is required to obtain any state and local permits necessary to carry out the action which would remain in effect upon issuance of the proposed amendment.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

<u>Response</u>: The issuance of an IHA is not expected to result in any significant cumulative adverse effects that could have a substantial effect on target or non-target species because the minor and short-term stresses (separately and cumulatively when added to other stresses experienced by the marine mammals in the vicinity of the construction site) resulting from the Central Bay Operations and Maintenance Facility Project would be expected to be minimal.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Final Environmental Assessment titled, "Issuance of an Incidental Harassment Authorization to the San Francisco Bay Area Water Emergency Transportation Authority for the Central Bay Operations and Maintenance Facility Project" prepared by NMFS, it is hereby determined that the issuance of an IHA for the take, by harassment, of small numbers of marine mammals incidental to the WETA's Central Bay Operations and Maintenance Facility Project in the City of Alameda, California, will not significantly impact the quality of the human environment, as described in this document and in the EA.

In addition, all beneficial and adverse impacts of the action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary. The EA, thereby, provides a supporting analysis for this FONSI.

Parry CAY AND U Donna S. Wieting,

FE3 1 0 2015 Date

Donna S. Wieting, ¹ Çur Director, Office of Protected Resources, National Marine Fisheries Service