Finding of No Significant Impact for
ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION FOR THE EXPLORATORIUM RELOCATION PROJECT IN SAN FRANCISCO, CA

Background

In April 2010, the National Marine Fisheries Service (NMFS) received an application from the Exploratorium – a nature, science, art, and technology museum – requesting an Incidental Harassment Authorization (IHA) for the take, by Level B harassment, of small numbers of Pacific harbor seals (*Phoca vitulina richardii*), California sea lions (*Zalophus californianus*), harbor porpoises (*Phoecoena phocoena*), and gray whales (*Eschrichtius robustus*), incidental to the Exploratorium relocation project. In accordance with the National Environmental Policy Act (NEPA), NMFS has prepared an *Environmental Assessment for Issuance of an Incidental Take Authorization for the Exploratorium Relocation Project in San Francisco, CA* (October 2010) (EA) analyzing the impacts on the human environment associated with issuance of an IHA to the Exploratorium incidental to pile driving related to its relocation project. The analyses in the EA, which is hereby incorporated by reference, support the findings and determinations described below.

Analysis

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) 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 below 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?

Response: The proposed action is limited to authorizing harassment to marine mammals; therefore, it is not expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH). However, NMFS did consider findings from NMFS' EFH assessment to aid in its decision making process of impacts to marine mammal habitat.

On May 28, 2010, in accordance with the Magnuson-Stevens Fishery Conservation Act and Endangered Species Act, NMFS Southwest Regional Office

determined that the proposed project would adversely affect EFH for various federally-managed species within the Pacific Groundfish, Coastal Pelagic, and Pacific Salmonid Fishery Management Plans; however, they also determined that the proposed action contains adequate measures to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH.

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.)?

Response: Issuance of the IHA is not expected to substantially impact biodiversity or ecosystem function. The action area is used by marine mammals for opportunistic foraging but is not considered a primary foraging ground. A major foraging opportunity may be afforded to pinnipeds via local herring runs. In compliance with the California Department of Fish and Game, the herring spawning season (December 1 through February 28) is closed to all in-water activities. Therefore, the Exploratorium will not be interfering with marine mammal foraging or herring spawning during this period.

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

Response: Issuance of the IHA is not expected to impact public health or safety as the taking of marine mammals would pose no human risk.

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?

Response: No species are targeted by the proposed action. Issuance of the IHA is not expected to adversely affect marine mammals listed as threatened or endangered under the ESA or any critical habitat designated for such species as there is none present within the action area. On May 28, 2010, the NMFS Southwest Regional Office concluded Section 7 and Essential Fish Habitat (EFH) consultation under the ESA and Magnuson Stevens Fishery Conservation and Management Act (MSFCMA), respectively, with the U.S. Army Corps of Engineers (Corps) on issuance of a Corps permit to the Exploratorium. In summary, NMFS Southwest Regional Office found that the proposed construction activities may affect ESA-listed fish by generating increased levels of turbidity and sound; however, these impacts are expected to be minor, localized, and short-term. As such, NMFS Southwest Regional Office concurred with the Corps determination that impacts from the Exploratorium's project would not result in adverse impacts to ESA-listed fish or their critical habitat. However, there are non-listed marine mammals within the action area. NMFS has thoroughly analyzed the scope of the Exploratorium Relocation Project to assess impacts to these protected species.

Pile driving at the Exploratorium's new location may temporarily impact marine mammals within the action area due to elevated in-water noise levels. As described in

Section 4.2.3 of the accompanying EA, marine mammal impacts may be auditory in nature (e.g., hearing fatigue) or behavioral (e.g., avoidance). NFMS does not anticipate auditory injury (i.e., permanent threshold shift [PTS]), would occur as the Exploratorium would primarily use a vibratory hammer which does not emit sounds loud enough to cause injury. Should the Exploratorium utilize an impact hammer, PSOs would be on-watch and call for pile driving shut down should a cetacean or pinniped approach the 180 dB and 190 dB isopleth, respectively. These thresholds have been set by NMFS as the potential for onset of injury; however, it is likely PTS occurs at much higher levels. Therefore, these thresholds are considered precautionary. While temporary threshold shift is also unlikely due to low vibratory source levels (the primary method of pile driving), short duration of pile driving without a break, and low habitat use by marine mammals within the immediate vicinity (meters) of the piers, it is not discountable.

The likely effects on marine mammals from exposure to pile driving would be causation of disturbance in behavior. The Exploratorium's project site is not used heavily by any marine mammals; however, adjacent waters may be used for foraging and haul out areas for pinnipeds and temporary use areas by harbor porpoises and by gray whales during migration and harbor porpoise. Animals may avoid the area or may cease opportunistically foraging if exposed to pile driving noise. However, the action area is located in a highly developed section of San Francisco Bay and ambient noise levels are estimated to be at least between 120 and 155 dB sound pressure level (SPL). Surrounding human disturbance includes tugboat activities, the San Francisco ferry terminal, and a primary shipping lane for traffic in and out of the Ports of San Francisco and Oakland. The present level of human activity may explain the lack of marine mammals in the immediate vicinity of the action area. As such, behavioral effects on marine mammals are expected to be limited to short term.

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

Response: The proposed action is issuance of an authorization to take marine mammals; therefore, no physical environmental effects related to harassment would occur. The action area does not support a marine mammal watch community (e.g., no significant whale or seal watching occurs here) nor is there subsistence use of marine mammals within the action area. Therefore, there are no significant social or economic impacts interrelated with natural environmental effects from the proposed action.

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

Response: NMFS has issued numerous IHAs for pile driving activities, including ones for similar projects in the San Francisco Bay area. The anticipated impacts on marine mammals are therefore not uncertain. There has been no substantial dispute with the size, nature, or effect of the proposed action. Nor is there any information to suggest that the IHA may cause substantial degradation to any element of the human environment, including marine mammals. (see response to question 8)

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?

Response: Issuance of the IHA is not 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 as it would only authorize harassment to marine mammals. The action area does not contain, and is not adjacent to, areas of notable visual, scenic, historic, or aesthetic resources that would be substantially impacted. The surrounding water is primarily used for shipping traffic and is already impacted by human development.

While there may be adverse impacts to EFH and habitat for Federally listed species, those impacts are likely to be minor, localized and short-term. (see responses to questions 1, 2 and 4).

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

Response: The potential risks of pile driving are not unique or unknown, nor is there significant uncertainty about impacts. NMFS has issued numerous IHAs for pile driving activities in San Francisco Bay and conducted NEPA analysis on those projects. Each of these projects required marine mammal monitoring and monitoring reports have been reviewed by NMFS to ensure that activities have a negligible impact on marine mammals. In no case have impacts to marine mammals, as determined from monitoring reports, exceeded NMFS' analysis under the MMPA and NEPA. Therefore, the effects on the human environment are not likely to be highly uncertain or involve unique or unknown risks.

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

Response: Issuance of the IHA is not related to other actions with individually insignificant, but cumulatively significant impacts. Currently, the California Department of Transportation (Caltrans) holds two IHAs authorizing the harassment of marine mammals in San Francisco Bay; one for the Dumbarton Bridge and one for the east span of the San Francisco Bay-Oakland Bay Bridge (SF-OBB). While some individual marine mammals may frequent both the Exploratorium relocation site and the Dumbarton Bridge, the distance between the areas is over 25 miles and no more than 2 hours of pile driving would occur daily at each site. The east span of the SF-OBB is less than 3 miles away; however, the short-term Level B behavioral impacts of the SF-OBB project are expected to be minimal, both on their own and cumulatively when added to other marine mammal stressors. Furthermore, mitigation requirements are in place for each of these projects to minimize adverse impacts to marine mammals from pile driving.

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 may cause loss or destruction of significant scientific, cultural or historical resources?

Response: The proposed action would not take place in any areas listed in or eligible for listing in the National Register of Historic Places and would not cause loss or destruction of significant scientific, cultural, or historical resources, as none exist within the action area.

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

Response: The proposed action cannot be reasonably expected to result in the introduction or spread of a non-indigenous species. The spread of non-indigenous species general occurs through ballast water or hull attachment. Support vessels used during construction would likely be small, local vessels that do not make trans-ocean trips. As such, no non-indigenous species are likely to enter the San Francisco Bay through support vessels used during the specified activity.

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

Response: The proposed action will not set a precedent for future actions with significant effects or represent a decision in principle. Each MMPA authorization applied for under 101(a)(5) must contain information identified in NMFS' implementing regulations with no exceptions. NMFS considers each activity specified in an application separately and, if it issues an IHA to the applicant, NMFS must determine that the impacts from the specified activity will result in a negligible impact to the affected species or stocks.

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

Response: Issuance of the proposed IHA would not result in any violation of Federal, State, or local laws for environmental protection. The applicant consulted with the appropriate Federal, State, and local agencies during the application process and would be required to follow associated laws as a condition of the IHA.

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?

Response: The proposed action allows for the taking, by incidental harassment, of marine mammals during the Exploratorium's relocation project. NMFS has determined that marine mammals may exhibit behavioral changes such as avoidance of or changes in foraging patterns within the action area. However, NMFS does not expect the authorized harassment to result in significant cumulative adverse effects on the affected

species or stocks. As discussed in response to question 9, the California Department of Transportation currently holds IHAs to harass marine mammals within San Francisco Bay incidental to pile driving. However, two of these IHA are located within the southern portion of the Bay. The San Francisco-Oakland Bay Bridge is in close proximity to the action area and therefore, marine mammals may be taken by multiple projects in addition to the Exploratorium. However, because each project's impacts would be short term and localized and each Holder is required to comply with mitigation and monitoring measures designed to minimize exposure and impacts. No substantial adverse cumulative impacts are anticipated.

DETERMINATION

In view of the information presented in this document, and the analyses contained in the supporting 2010 EA, prepared for issuance of an IHA to the Exploratorium to take marine mammals incidental to conducting pile driving activities, it is hereby determined that permit issuance will not significantly impact the quality of the human environment. In addition, all beneficial and adverse impacts of the proposed 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.

OCT 13 2010

James H. Lecky
Director, Office of Protected Resources

Date