



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
PROGRAM PLANNING AND INTEGRATION  
Silver Spring, Maryland 20910

OCT 26 2012

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act (NEPA), an environmental review has been performed on the following action.

**TITLE:** Environmental Assessment on the Issuance of an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service to Take Marine Mammals by Harassment Incidental to a Bird Mitigation Research Trial in the Farallon National Wildlife Refuge

**LOCATION:** Southeast Farallon Islands, CA

**SUMMARY:** NMFS proposes to issue an Incidental Harassment Authorization (IHA) to the U.S. Fish and Wildlife Service to allow the take, by Level B harassment, of five marine mammal species, incidental to a research trial. Elevated sound levels and human presence may result in short-term harassment of marine mammals, including avoidance and behavioral changes.

**RESPONSIBLE OFFICIAL:** Helen M. Golde  
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The environmental review process, including preparation of the Environmental Assessment (EA), led us to conclude that this action will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared. A copy of the finding of no significant impact (FONSI), including the supporting EA, is enclosed for your information.

Although NOAA is not soliciting comments on this completed EA/FONSI we will consider any comments submitted that would assist us in preparing future NEPA documents. Please submit any written comments to the responsible official named above.

Sincerely,

for  
Patricia A. Montanio  
NOAA NEPA Coordinator

Enclosure



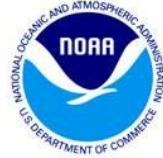
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## ENVIRONMENTAL ASSESSMENT

### Issuance of an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service to Take Marine Mammals by Harassment Incidental to a Bird Mitigation Research Trial in the Farallon National Wildlife Refuge

September 2012



<b>LEAD AGENCY:</b>	USDOC, National Oceanic and Atmospheric Administration National Marine Fisheries Service, Office of Protected Resources 1315 East West Highway Silver Spring, MD 20910
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<b>LOCATION:</b>	Farallon National Wildlife Refuge, California
<b>ABSTRACT:</b>	The National Marine Fisheries Service (NMFS) proposes to issue an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service (USFWS) for the taking, by Level B harassment, of small numbers of marine mammals, incidental to a bird mitigation research trial in the Farallon National Wildlife Refuge.

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## LIST OF ACRONYMS, ABBREVIATIONS, AND INITIALISMS

BiOp	Biological Opinion
CFR	Code of Federal Regulations
CEQ	President's Council on Environmental Quality
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
IHA	Incidental Harassment Authorization
km	kilometer
m	meter
MMPA	Marine Mammal Protection Act
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OMB	Office of Management Budget
PSO	Protected Species Observer
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service

## 1. CHAPTER 1 – PURPOSE AND NEED FOR ACTION

### 1.1 DESCRIPTION OF PROPOSED ACTION

The National Marine Fisheries Service (NMFS) has received an application from the U.S. Fish and Wildlife Service (USFWS) for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to a bird mitigation research trial in the Farallon National Wildlife Refuge. The USFWS plans to conduct a research trial to assess potential bird hazing methods that could be used to minimize the risk of rodent bait ingestion by non-target species, if such an action is chosen, during a proposed house mouse eradication. Removal of the invasive house mice would protect seabirds, assist in the recovery of native plants and endemic species, and prevent the spread of disease to marine mammals. USFWS' activities, which have the potential to behaviorally disturb marine mammals, would require an incidental take authorization from NMFS under section 101(a)(5)(D) of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1631 *et seq.*).

The proposed action considered in this Environmental Assessment (EA) is NMFS' issuance of a 1-year IHA under section 101(a)(5)(D) of the MMPA, for the taking, by Level B harassment only, of small numbers of marine mammals incidental to the research trial. More specifically, this EA, titled *“Issuance of an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service to Take Marine Mammals by Harassment Incidental to a Bird Mitigation Research Trial in the Farallon National Wildlife Refuge”* (hereinafter, EA), addresses the impacts on the human environment that would result from issuance of this IHA for MMPA Level B takes of marine mammals during the research trial, taking into account the mitigation measures required in the IHA.

#### 1.1.1 MMPA PURPOSE AND NEED

The MMPA and Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) prohibit “takes” of marine mammals and of threatened and endangered species, respectively, with only a few specific exceptions. The applicable exceptions in this case are an exemption for incidental take of marine mammals in section 101(a)(5)(D) of the MMPA and 7(a)(4) of the ESA.

Section 101(a)(5)(D) of the MMPA directs the Secretary of Commerce to authorize, upon request, the incidental, but not intentional, taking of small numbers of marine mammals, by United States citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and a notice of a proposed authorization is provided to the public for review. Section 101(a)(5)(D) of the MMPA also establishes a 45-day time limit for NMFS' review of an application for an IHA followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Within 45 days of the close of the public comment period, NMFS must either issue or deny the IHA.

**Purpose:** The primary purpose of NMFS issuing an IHA to the USFWS is to provide an exemption from the take prohibitions contained in the MMPA for the take of marine mammals incidental to USFWS' research trial.

**Need:** As noted above, the MMPA establishes a general moratorium or prohibition on the take of marine mammals, including take by behavioral harassment. The MMPA establishes a process by which individuals engaged in specified activities within a specified geographic area may request an IHA. Specifically, NMFS shall grant the IHA if it finds that the taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). The IHA must, where applicable, set forth the permissible methods of taking, other means of effecting the least practicable adverse impact on the species or stock and its habitat (i.e., mitigation), and requirements pertaining to the monitoring and reporting of such takings.

The USFWS has submitted a complete application demonstrating potential eligibility for issuance of an IHA. NMFS now has a corresponding duty to determine whether and how it can fashion an IHA authorizing take by harassment incidental to the activities described in the application. The need for this action is, therefore, established and framed by the MMPA and NMFS' responsibilities under section 101(a)(5)(D) of that Act, its implementing regulations, and other applicable requirements which will influence its decision making, such as section 7 of the Endangered Species Act (ESA), which is discussed in more detail below this section.

The foregoing purpose and need guide NMFS in developing alternatives for consideration, including alternative means of mitigating potential adverse effects.

## **1.2 NEPA REQUIREMENTS AND SCOPE OF NEPA ANALYSIS**

This EA focuses totally on the environmental effects of authorizing MMPA Level B incidental takes of marine mammals during a bird mitigation research trial in the Farallon National Wildlife Refuge (the USFWS prepared their own EA to analyze broader environmental impacts of this project and other research within the Refuge). The MMPA and its implementing regulations governing issuance of an IHA require that upon receipt of an adequate and complete application for an IHA, NMFS must publish a notice of proposed IHA in the *Federal Register* within 45 days. The notice for the USFWS' proposed action (77 FR 51773, August 27, 2012) summarized the purpose of the requested IHA, included a statement that NMFS would prepare an EA for the proposed action, and invited interested parties to submit written comments concerning the application and NMFS' preliminary analyses and findings including those relevant for consideration in the EA. The notice was made available for public review and comment for 30 days. We only received substantive comments from the Marine Mammal Commission, who supports the issuance of an IHA for this action.

NOAA Administrative Order 216-6 (NAO 216-6) established agency procedures for complying with the National Environmental Policy Act (NEPA) and the implementing regulations issued by the President's Council on Environmental Quality (CEQ). Consistent with the intent of NEPA and the clear direction in NAO 216-6 to involve the public in NEPA decision-making, NMFS requested comments on the potential environmental impacts described in the USFWS' application and the proposed IHA. Comments received on the proposed IHA were considered and informed this EA.

NMFS has prepared this EA to assist in determining whether the direct, indirect, and cumulative impacts related to its issuance of the authorization for incidental take under the MMPA of five marine mammal species are likely to result in significant impacts to the human environment. Given the limited scope of the decision for which NMFS is responsible (i.e., whether or not to issue the authorization including prescribed means of take, mitigation measures, and monitoring requirements) and that this EA is intended to inform, we have limited our NEPA analysis to those living marine resources and their habitat likely to be affected by issuance of an IHA. As described more fully below, the EA identifies all marine mammals that are likely to occur within the action area.

This EA focuses on the environmental impacts that could result from NMFS' decision to authorize the take of marine mammal species incidental to the bird mitigation research trial. We have also described the impacts that could arise from the alternatives presented. Impacts to other marine species and habitat located in the action area were considered unlikely, and thus received less detailed evaluation.

### **1.3 APPLICABLE LAWS AND NECESSARY FEDERAL PERMITS**

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

#### **1.3.1 THE NATIONAL ENVIRONMENTAL POLICY ACT**

NEPA's EIS requirement is applicable to all "major" federal actions significantly affecting the quality of the human environment. Major federal actions include activities that are fully or partially funded, regulated, conducted, or approved by a federal agency. NMFS' issuance of an IHA for incidental harassment of marine mammals is a federal action for which environmental review is required. While NEPA does not dictate a substantive outcome for an IHA, it requires consideration of environmental issues in federal agency planning and decision making, and requires an analysis of alternatives and direct, indirect, and cumulative environmental effects of the NMFS proposed action to authorize MMPA Level B incidental take. As noted, NMFS has prepared this EA to assist in determining whether or not the proposed action would cause significant effects.

#### **1.3.2 THE ENDANGERED SPECIES ACT**

Section 7 of the ESA requires consultation with the appropriate federal agency (either NMFS or the USFWS, depending on the species) for federal actions that "may affect" a listed species or critical habitat. NMFS' issuance of an IHA affecting ESA-listed species or designated critical habitat, directly or indirectly, is a federal action subject to these section 7 consultation requirements. Accordingly, NMFS is required to ensure that its action is not likely to jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of critical habitat for such species. Regulations specify the requirements for these consultations (50 CFR § 402).

The USFWS' action may affect the eastern distinct population segment of Steller sea lion, which is listed as threatened under the ESA. The USFWS initiated section 7 consultation with NMFS Southwest Region and NMFS also initiated section 7 consultation internally.

### **1.3.3 THE MARINE MAMMAL PROTECTION ACT**

Section 101(a)(5)(D) of the MMPA directs the Secretary of Commerce to authorize, upon request, the incidental, but not intentional, taking by harassment of small numbers of marine mammals of a species or population stock, for periods of not more than one year, by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specific geographic region if certain findings are made and a *Federal Register* notice of a proposed authorization is provided to the public for review.

Section 101(a)(5)(D) of the MMPA established an expedited process by which U.S. citizens can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as:

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

Section 101(a)(5)(D) of the MMPA establishes a 45-day time limit for NMFS' review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Not later than 45 days after the close of the public comment period, if the Secretary of Commerce makes the findings set forth in section 101(a)(5)(D)(i) of the MMPA, the Secretary of Commerce shall issue the authorization with appropriate conditions to meet the requirements of section 101(a)(5)(D)(ii) of the MMPA.

NMFS has promulgated regulations to implement the permit provisions of the MMPA (50 CFR Part 216) and has produced Office of Management and Budget (OMB)-approved application instructions (OMB Number 0648-0151) that prescribe the procedures necessary to apply for permits. All applicants must comply with these regulations and application instructions in addition to the provisions of the MMPA. Applications for an IHA must be submitted according to regulations at 50 CFR § 216.104.

### **1.3.4 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT**

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Congress defined Essential Fish Habitat (EFH) as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 U.S.C. 1802(10)). The EFH provisions of the Magnuson-Stevens Act offer resource managers means to accomplish the goal of giving heightened consideration to fish habitat in resource management. NMFS Office of Protected Resources is required to consult with NMFS Office of Habitat Conservation for any action it authorizes (e.g., incidental take), funds, or undertakes, or proposes to authorize, fund, or undertake that may adversely affect EFH. This includes renewals, reviews, or substantial revisions of actions.

NMFS determined that the USFWS' action would not adversely affect EFH because the activities would take place on shore. The mitigation and monitoring measures that would be required by NMFS' IHA for this action would also not result in adverse effects to EFH.

## **2. CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION**

The NEPA implementing regulations (40 CFR § 1502.14) and NAO 216-6 provide guidance on the consideration of alternatives to a federal proposed action and require rigorous exploration and objective evaluation of all reasonable alternatives. Each alternative must be feasible and reasonable in accordance with the implementing regulations (40 CFR §§ 1500-1508). This chapter describes the range of potential actions (alternatives) determined reasonable with respect to achieving the stated purpose and need, as well as alternatives eliminated from detailed study and also summarizes the expected consequences and any related mitigation for each alternative.

This EA evaluates alternatives that would fulfill NMFS' purpose and need, namely: (1) the issuance of an IHA for the take of marine mammals by Level B behavioral harassment, incidental to the USFWS' activities in the Farallon National Wildlife Refuge; and (2) compliance with the MMPA which sets forth specific standards (i.e., mitigation to effect the least practicable adverse impact, no unmitigable adverse impact on subsistence uses, and negligible impact) that must be met in order for NMFS to issue an IHA.

NMFS' proposed action (preferred) alternative represents the activities proposed by the applicant for the IHA, along with required monitoring and mitigation measures that would minimize potential adverse environmental impacts.

### **2.1 ALTERNATIVE 1 – NO ACTION ALTERNATIVE**

Under the No Action Alternative, NMFS would not issue an IHA to the USFWS for the taking, by Level B harassment, of small numbers of marine mammals, incidental to the research trial. However, NMFS does not have authority to permit or prohibit the research trial itself. The possible consequences of not authorizing incidental take are (1) the entity conducting the activity may be in violation of the MMPA if take occurs, (2) mitigation and monitoring measures cannot be required by NMFS, (3) mitigation measures may or may not be performed voluntarily by the applicant, and (4) the applicant may choose not to conduct the activity.

If an IHA was not issued, the USFWS could decide either to cancel the research trial or to continue the proposed activity. If the latter decision was made, the USFWS could independently implement mitigation and monitoring measures, which potentially would result in the same environmental impacts as the preferred alternative; however, the USFWS would be proceeding without authorization from NMFS pursuant to the MMPA. If the USFWS did not implement mitigation measures during the research trial, takes of marine mammals by harassment (and potentially by injury or mortality) could occur if the activities were conducted when marine mammals were present. Although the No Action Alternative would not meet NMFS' purpose and need to allow incidental takings of marine mammals under certain conditions, CEQ regulations require consideration and analysis of a No Action Alternative for the purposes of presenting a comparative analysis to the action alternatives.

### **2.2 ALTERNATIVE 2 – PROPOSED ACTION (PREFERRED)**

The Proposed Action is the Preferred Alternative. Under this alternative, NMFS would issue an IHA to the USFWS allowing the take, by Level B harassment, of five marine mammal species,

incidental to the research trial with the mitigation, monitoring, and reporting conditions contained within the USFWS' IHA application and NMFS' proposed IHA *Federal Register* notice. Accordingly, the Proposed Action would satisfy the purpose and need of the NMFS MMPA action – issuance of an IHA, along with required mitigation and monitoring measures – and would enable the USFWS to comply with the MMPA.

### **2.2.1 GULL HAZING METHODS**

NMFS' proposed IHA *Federal Register* notice (77 FR 51773, August 27, 2012) describes in detail the gull hazing techniques that may be used during the research trial: lasers, spotlights, pyrotechnics, biosonics, predator calls, air cannons, Mylar tape, small helicopter, human presence, kites, radio-controlled aircraft, and trained dogs. Marine mammal harassment may result from the presence of researchers and elevated sound levels near pinniped haul-outs. However, part of the USFWS' goal during this research trial is to determine which hazing methods are most effective at (1) deterring birds from roosting on the island and (2) minimizing the impacts to pinnipeds.

### **2.2.2 MITIGATION AND MONITORING MEASURES**

Based on NMFS' analysis of the proposed action and comments received during the 30-day public comment period on the *Federal Register* notice (77 FR 51773, August 27, 2012), the following mitigation and monitoring measures would be in place to reduce the potential for marine mammal disturbance: (1) temporal restriction; (2) limited use of pyrotechnics; (3) limited use of air cannons; (4) slow sequential approaches of helicopters; (5) slow and cautious approaches to haul-outs; (6) limited use and retrieval of kites and radio-controlled aircraft; (7) restricted use of trained dogs; and (8) visual observers.

**Temporal Restriction:** The USFWS would conduct the bird mitigation research trial at a time when there are fewer birds on the island and outside of most pinniped pupping seasons. The timing would greatly reduce the possibility of injury, serious injury, or mortality to pinnipeds resulting from pups being crushed during a stampede. Pregnant northern elephant seals begin to arrive on the island in late December and early January. Remaining pups from the previous breeding season typically leave the island by November. While hazing operations are not expected to overlap with the presence of northern elephant seal pups, the USFWS would actively avoid pregnant females and pups during the research trial by having a biologist identify and map where these individuals are located.

**Limited Use of Pyrotechnics:** The USFWS would place pyrotechnics in locations so as to avoid exceeding the hearing threshold of pinnipeds. Researchers would first use pyrotechnics as far away as possible from haul-out sites and gradually get closer if necessary, while monitoring behavioral reactions of pinnipeds. Researchers would not use pyrotechnics directly over a major haul-out site.

**Limited Use of Air Cannons:** The USFWS would place air cannons in locations so as to avoid exceeding the hearing threshold of pinnipeds. Researchers would use the lowest detonation volume if haul-outs are close, but may experiment with increasing the volume at farther distances. Behavioral response of pinnipeds would be monitored and the air cannon volume would be adjusted at the first sign of large-scale disturbance.

**Slow Sequential Approaches of Helicopters:** To avoid or minimize pinniped disturbance, helicopter flights in areas near haul-outs would use a slow sequential approach of decreasing altitude in order to habituate marine mammals to the sound. This approach has been used successfully during rodent removal operations on Anacapa Island in 2001-2002 and on Rat Island in 2009.

**Slow and Cautious Approaches to Haul-outs:** Any researchers needed to investigate gull roosting areas, conduct hazing, or monitor pinniped responses, would approach haul-outs slowly and cautiously in order to avoid unnecessary disturbance to pinnipeds.

**Limited Use and Retrieval of Kites and Radio-controlled Aircraft:** Kites and radio-controlled aircraft would be used sparingly around harbor seals, as they may be more easily spooked than other pinniped species. If a kite or radio-controlled aircraft falls into a haul-out area, then it would either be: (1) left in place if it could not be retrieved safely or without causing major pinniped disturbance; or (2) retrieved using a slow methodical approach to avoid major pinniped disturbance. Retrieval may also occur at a later time when pinnipeds are either absent or in fewer numbers.

**Restricted Use of Trained Dogs:** Dogs would be trained to not harass pinnipeds and would have the necessary immunizations and certificates to ensure that no diseases are transmittable. Dogs would be kept at least 30 meters away from pinnipeds to avoid unnecessary harassment.

**Visual Observers:** The USFWS would designate at least one NMFS-approved protected species observer to monitor pinnipeds and record information before, during, and after hazing operations. The observer would be located at the peak of the island's center, which provides visibility of about 70 percent of the island. If hazing operations take place in areas not visible from the island's peak, additional observers would be used to monitor and record information from other locations. Observers would be equipped to stop hazing operations if they result in unexpected pinniped reactions (e.g., stampeding).

## **2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY**

NMFS considered whether other alternatives could meet the purpose and need. 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 neither be in compliance with the MMPA nor satisfy the purpose and need. For that reason, this alternative is not analyzed further in this document.

### **3. CHAPTER 3 – AFFECTED ENVIRONMENT**

A summary of the physical and biological environment of the project area was included in the USFWS' IHA application and our notice of proposed IHA (USFWS, 2012; 77 FR 51773, August 27, 2012). In addition to the marine mammal stocks and species that are the subject of the IHA, a number of sea birds may be found in the action area. In the summer, over 200,000 individuals of 13 seabird species nest on the islands: Leach's storm-petrel, ashystorm-petrel, fork-tailed storm-petrel, double-crested cormorant, Brandt's cormorant, pelagic cormorant, black oystercatcher, western gull, common murre, pigeon guillemot, Cassin's auklet, rhinoceros auklet, and tufted puffin. However, the proposed action would occur during winter months when the least number of birds are found on the islands. Mitigation requirements in our IHA would not affect non-marine mammal species. There are not any elements of the social or economic environment that would be affected by the proposed action and therefore, there is no analysis of these elements of the environment. The project area is located in the Farallon National Wildlife Refuge, a group of islands about 30 miles offshore of San Francisco, California.

#### **3.1 PHYSICAL ENVIRONMENT**

The research trial would be conducted in the South Farallon Islands, which are composed of Southeast Farallon Island, West End Island, Aulon Islets, and Saddle Rock. The Farallones are a rocky, granitic formation that is part of the Farallon Ridge. The terrain is rugged with shallow soils scattered on some of the South Farallon Islands and vegetation is dominated by Farallon weed. The authorized take of marine mammals or mitigation measures required by the IHA would not affect the physical environment, and therefore it will not be described further.

#### **3.2 BIOLOGICAL ENVIRONMENT**

The refuge was established in 1909 specifically to protect sea birds and pinnipeds and it currently sustains the largest sea bird breeding colony south of Alaska, including 30 percent of California's nesting sea birds. The majority of the islands' perimeters are considered potential haul-outs for pinnipeds. NMFS' limited action of issuing an IHA would allow for the harassment of marine mammals incidental to the research trial and, therefore, is the focus of this section. Critical habitat has been defined for Steller sea lions as a 20 nautical mile buffer around all major haul-outs and rookeries, as well as associated terrestrial, air, and aquatic zones, which includes Southeast Farallon Island. Human presence or elevated sound levels may temporarily make pinniped haul-outs undesirable, but no significant or permanent impacts to marine mammal habitat are expected to result from the proposed action.

##### **3.2.1 MARINE MAMMALS**

There are five marine mammal species with confirmed or potential occurrence on the islands of the Farallon National Wildlife Refuge. Northern elephant seals (*Mirounga angustirostris*), harbor seals (*Phoca vitulina richardii*), Steller sea lions (*Eumetopias jubatus*), California sea lions (*Zalophus californianus*), and Northern fur seals (*Callorhinus ursinus*) all use the islands as haul-outs. Information on these species was provided in the proposed IHA notice (77 FR 51773, August 27, 2012) and is incorporated here for reference. In summary, all five

species have ranges from Alaska to southern California or Mexico with multiple breeding colonies. Only Steller sea lions are listed as threatened under the ESA. Pinnipeds likely to be affected by the bird mitigation trial are those that are hauled out on land at or near the location of gull hazing.

## **4. CHAPTER 4 –ENVIRONMENTAL CONSEQUENCES**

NMFS has evaluated the potential impacts of the USFWS' proposed action in order to determine whether to authorize incidental take of marine mammals under the MMPA. NMFS' evaluation indicates that any direct or indirect effects of the action would not result in a substantial impact to living marine resources or their habitats and would not have any adverse impacts on biodiversity or ecosystem function. Effects of the proposed action are considered to be short-term, temporary in nature, and negligible, and unlikely to affect normal ecosystem function or predator/prey relationships; therefore, there would not be a substantial impact on marine life biodiversity or on the normal function of the near shore marine environment. NMFS has determined that appropriate mitigation measures would be in place to minimize impacts to marine mammals and other marine species.

### **4.1 EFFECTS OF ALTERNATIVE 1 – NO ACTION ALTERNATIVE**

Under the No Action Alternative, NMFS would not issue an IHA to the USFWS for their proposed action. In this case, the USFWS would decide whether or not to continue with the research trial. If the USFWS chose not to conduct the activity, then there would be no effects to marine mammals. Conducting the activity without an MMPA authorization (i.e., an IHA) could result in a violation of federal law if marine mammal takes occur.

If the USFWS decided to conduct some or all of the activity without implementing any mitigation measures, and if activities occur when marine mammals are present in the action area, there is the potential for unauthorized and increased harassment of marine mammals. The sounds produced by certain hazing techniques have the potential to cause behavioral harassment of marine mammals in the action area, while some marine mammals may avoid the area altogether. Additionally, the presence of researchers and other hazing equipment may cause behavioral harassment. If no mitigation or monitoring measures are implemented, harassment may occur to a higher degree. For instance, instead of animals simply becoming alert or changing the direction of their movement, they could completely flush from a haul-out or form a stampede. Auditory impacts (i.e., temporary and permanent threshold shifts) could also occur if no mitigation or monitoring measures are implemented to reduce received levels of sound. Without monitoring measures in place, unexpected marine mammal reactions to the research trial may go unseen. If the USFWS decided to implement mitigation measures similar to those described in section 2.3.2, then the impacts would most likely be similar to those described for Alternative 2 below.

### **4.2 EFFECTS OF ALTERNATIVE 2 – PREFERRED ALTERNATIVE**

The proposed IHA *Federal Register* notice, incorporated by reference (77 FR 51773, August 27, 2012), describes in detail the potential effects of the research trial on marine mammals. The Biological Opinion, incorporated here by reference, also analyzes the potential effects of the proposed action on ESA-listed species (NMFS, 2012). In summary, NMFS expects any impacts to be temporary, behavioral harassment (such as avoidance or alteration or behavior). Incidental harassment may result if hauled out animals are disturbed by elevated sound levels or the presence of lasers, spotlights, humans, helicopters, or dogs. Disturbance may result in behavioral reactions ranging from an animal simply becoming alert (e.g., turning the head, assuming a more

upright posture) to flushing from the haul-out site into the water. Pinnipeds are unlikely to incur significant impacts to their survival because potential harassment would be sporadic and of low intensity. The Biological Opinion concluded that the research trial is not likely to jeopardize the continued existence of ESA listed species or result in the destruction of adverse modification of their critical habitat.

In analyzing the effects of the preferred alternative, we considered the mitigation and monitoring measures detailed in section 2.3.2:

- (1) temporal restriction
- (2) limited use of pyrotechnics
- (3) limited use of air cannons
- (4) slow sequential approaches of helicopters
- (5) slow and cautious approaches to haul-outs
- (6) limited use and retrieval of kites and radio-controlled aircraft
- (7) restricted use of trained dogs
- (8) visual observers

Inclusion of these monitoring and mitigation measures is anticipated to minimize and/or avoid impacts to marine resources. Any unavoidable impacts to marine mammals are expected to be short-term, localized changes in behavior (such as moving in a different direction). At worst, effects on marine mammals may be interpreted as falling within the MMPA definition of “Level B behavioral harassment.” Under the proposed action, NMFS expects no long-term or substantial adverse effects on marine mammals, the populations to which they belong, or on their habitats.

NMFS does not anticipate that take by injury (Level A harassment), serious injury, or mortality would occur and expects that harassment takes would be at the lowest level practicable due to the incorporation of the above mitigation and monitoring measures, nor is take by injury, serious injury, or mortality authorized by the proposed IHA.

#### **4.2.1 COMPLIANCE WITH NECESSARY LAWS – NECESSARY FEDERAL PERMITS**

NMFS has determined that the IHA is consistent with the applicable requirements of the MMPA, ESA, and NMFS’ implementing regulations. The applicant is responsible for complying with all other applicable laws and regulations.

#### **4.2.2 UNAVOIDABLE ADVERSE IMPACTS**

A summary of unavoidable adverse impacts to marine mammals occurring in the proposed action area and their habitats was summarized earlier in this chapter and detailed in NMFS’ notice of proposed IHA (77 FR 51773, August 27, 2012).

NMFS does not expect the USFWS’ activities to have adverse consequences on the viability of marine mammals in the proposed project area. Further, NMFS does not expect any changes to annual rates of recruitment or survival of marine mammals exposed to elevated sound levels. Numbers of individuals of all species taken by harassment are expected to be small (relative to species or stock abundance), and gull hazing operations 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 is no subsistence use in the area.

#### **4.3 CUMULATIVE EFFECTS**

Cumulative effects are defined 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 may occur when there is a relationship between a proposed action and other actions expected to occur in a similar location or during a similar time period, or when past or future actions may result in impacts that would additively or synergistically affect a resource of concern. These relationships may or may not be obvious. Actions overlapping within close proximity to the proposed action can reasonably be expected to have more potential for cumulative effects on “shared resources” than actions that may be geographically separated. Similarly, actions that coincide temporally will tend to offer a higher potential for cumulative effects.

Actions that might permanently remove a resource would be expected to have a potential to act additively or synergistically if they affected the same population, even if the effects were separated geographically or temporally. Note that the proposed action considered here would not be expected to result in the removal of individual cetaceans or pinnipeds from the population or to result in harassment levels that might cause animals to permanently abandon preferred feeding areas or other habitat locations, so concerns related to removal of viable members of the populations are not implicated by the proposed action. This cumulative effects analysis focuses on those activities that may temporally or geographically overlap with the proposed activity such that repeat harassment effects warrant consideration for potential cumulative impacts to the affected four marine mammal species and their habitats.

Human activities in the Farallon National Wildlife refuge are limited to research personnel. All of the islands are closed to public access due to the presence of nesting sea birds, pinnipeds, and other wildlife. There are also no docking facilities at any island and vessel traffic and aircraft proximity is restricted. The USFWS’ proposed action is unlikely to add an increment of disturbance that would cumulatively, when combined with other research activities on the islands, result in significant adverse impacts to marine mammals. Previous research activities on the islands have not resulted in significant adverse impacts to marine mammals. We have received two other IHA applications for activities in the Southeast Farallon Islands. The first application is from the National Ocean Service’s Office of National Marine Sanctuaries, Gulf of the Farallones National Marine Sanctuary, to take marine mammals incidental to rocky intertidal monitoring surveys on the South Farallon Islands. This study would take place at four sites for periods of 4 to 8 days during November 2012 and February 2013. The second application is from PRBO Conservation Science to take marine mammals incidental to seabird and pinniped research activities. It is unlikely that these activities and the USFWS’ proposed action would overlap since the USFWS’ goal is to determine which gull hazing techniques are best suited for both sea birds and marine mammals (without other stressors skewing their observations). Furthermore, the PRBO Conservation Science research would take place over a 1-year period and includes islands outside of the Farallon National Wildlife Refuge. Because these actions are

not likely to overlap in time, there does not appear to be a potential for a significant cumulative effect to marine mammals, as the effects of one action would dissipate before the onset of effects from another action.

NMFS' proposed action of issuing an IHA for the incidental take of marine mammals by Level B harassment in the Southeast Farallon Islands is only expected to result in minimal impacts to marine species in the area. This limited action and any temporary, behavioral effects to marine mammals that may result from the USFWS' proposed action, are not expected to contribute substantially to other impacts from activities in the area.

#### **4.4 CONCLUSION**

The inclusion of the mitigation and monitoring requirements in the IHA, as described in the Preferred Alternative, would ensure that the USFWS' proposed action and mitigation measures under Alternative 2 (Preferred Alternative) are sufficient to minimize any potential adverse impacts to the human environment, particularly marine mammal species or stocks and their habitat. With the inclusion of the required mitigation and monitoring requirements, NMFS has determined that the proposed action, and NMFS' proposed issuance of an IHA to the USFWS, would result at worst in a temporary modification of behavior (Level B harassment) of some individuals of five species of marine mammals. In addition, no take by injury, serious injury, and/or mortality is anticipated, nor would it be authorized, and the potential for temporary or permanent hearing impairment would be avoided through the incorporation of the mitigation and monitoring measures described earlier in this document.

## **5. LIST OF PREPARERS AND AGENCIES CONSULTED**

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Permits and Conservation Division  
Office of Protected Resources, NOAA/National Marine Fisheries Service

## **6. REFERENCES**

U.S. Fish and Wildlife Service. (2012). Application to National Marine Fisheries Service for an Incidental Harassment Authorization for Marine Mammals. 84 pp.

**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION  
TO THE U.S. FISH AND WILDLIFE SERVICE TO TAKE MARINE MAMMALS  
BY HARASSMENT INCIDENTAL TO A BIRD MITIGATION RESEARCH TRIAL  
IN THE FARALLON NATIONAL WILDLIFE REFUGE**

**NATIONAL MARINE FISHERIES SERVICE**

**BACKGROUND**

The National Marine Fisheries Service (NMFS) received an application from the U.S. Fish and Wildlife Service (USFWS) for an Incidental Harassment Authorization (IHA) to take marine mammals, by Level B harassment, incidental to a bird mitigation research trial in the Southeast Farallon Islands. Pursuant to the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1631 *et seq.*), authorization for incidental taking shall be granted provided that NMFS: (1) determines that the action would have a negligible impact on the affected species or stocks of marine mammals; (2) finds the action would not have an unmitigable adverse impact on the availability of those species or stocks of marine mammals for taking for subsistence uses; and (3) sets forth the permissible methods of taking, other means of effecting the least practicable impact on affected species and stocks and their habitat, and requirements pertaining to the mitigation, monitoring, and reporting of such takes.

In accordance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), NMFS completed an Environmental Assessment (EA) titled *“Issuance of an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service to Take Marine Mammals by Harassment Incidental to a Bird Mitigation Research Trial in the Farallon National Wildlife Refuge.”*

NMFS has prepared this Finding of No Significant Impact (FONSI) to evaluate the significance of the impacts of NMFS’ action. It is specific to Alternative 2 in the EA, identified as the Preferred Alternative. Under this alternative, NMFS would issue an IHA with required mitigation, monitoring, and reporting measures. Based on NMFS’ review of the USFWS’ proposed action and the measures contained in Alternative 2, NMFS has determined that no significant impacts to the human environment would occur from implementing the Preferred Alternative.

**ANALYSIS**

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) (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 CFR § 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 FONSI 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)?**

Response: NMFS' limited action of issuing an IHA is not expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat. The mitigation and monitoring measures required by the IHA would not affect habitat.

**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: NMFS does not expect our action (i.e., issuing an IHA to the USFWS that authorizes Level B harassment) to have a substantial impact on biodiversity or ecosystem function within the affected environment. NMFS' proposed action may result in temporary disturbance of pinnipeds hauled out on the perimeter of the islands, but these effects would be short-term and localized.

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

Response: NMFS does not expect our action (i.e., issuing an IHA to the USFWS) to have a substantial adverse impact on public health or safety. The Farallon National Wildlife Refuge is not open to public access and the researchers involved in the proposed action would take the necessary precautions to ensure their safety.

**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: The EA evaluates the affected environment and potential effects of NMFS' action (i.e., issuing an IHA to the USFWS). NMFS has determined that the proposed activity may result in some Level B harassment (in the form of short-term and localized changes in behavior) of small numbers, relative to the population sizes, of five species of marine mammals, one of which is listed under the Endangered Species Act (ESA; 16 U.S.C. 1531 *et seq.*). The USFWS initiated section 7 consultation with NMFS Southwest Region and NMFS also consulted internally on the issuance of an IHA to authorize the take of an ESA-listed species. A Biological Opinion concluded that the USFWS project is not likely to jeopardize the continued existence of any listed species or adversely modify or destroy critical habitat.

The following mitigation and monitoring measures are planned for the proposed action to minimize adverse effects to protected species:

- (1) Temporal restriction;
- (2) Limited use of pyrotechnics;
- (3) Limited use of air cannons;
- (4) Slow sequential approaches of helicopters;
- (5) Slow and cautious approaches and haul-outs;
- (6) Limited use and retrieval of kites and radio-controlled aircraft

- (7) Restricted use of trained dogs; and
- (8) Visual observers.

Taking these measures into consideration, responses of marine mammals from the preferred alternative are expected to be limited to temporary avoidance of the area around the sound source and short-term behavioral changes, falling within the MMPA definition of “Level B harassment.”

NMFS does not anticipate that marine mammal take by injury (Level A harassment), serious injury, or mortality would occur and expects that harassment takes would be at the lowest level practicable due to the incorporation of the mitigation measures required by the IHA. Numbers of individuals of all marine mammal species taken by harassment are expected to be small (relative to species or stock abundance), and the take is anticipated to have a negligible impact on any species or stock. The impacts of the proposed action on marine mammals are specifically related to acoustic activities, and these are expected to be temporary in nature, negligible, and would not result in substantial impact to marine mammals or to their role in the ecosystem.

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

Response: The primary impacts to the natural and physical environment are expected to be acoustic and temporary in nature (and not significant), and not interrelated with significant social or economic impacts. 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 would not adversely affect low-income or minority populations. Further, there would be no impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses. Therefore, no significant social or economic effects are expected to result from issuance of the IHA.

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

Response: The effects of NMFS’ issuance of an IHA for the take of marine mammals incidental to the research trial are not highly controversial. Specifically, NMFS did not receive any comments raising substantial questions or concerns about the size, nature, or effect of potential impacts from NMFS’s proposed action. Previous projects of this type required marine mammal monitoring and monitoring reports, which 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.

**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. While pinniped haul-outs may be temporarily undesirable to the animals due to elevated sound levels, use of those gull hazing techniques would be localized and short-term.

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

Response: The potential risks of equipment resulting in elevated sound levels are not unique or unknown, nor is there significant uncertainty about impacts. NMFS has issued numerous IHAAs for activities resulting elevated sound levels (e.g., rocket launches, pile driving, etc.) 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 an IHA to the USFWS is not related to other actions with individually insignificant, but cumulatively significant impacts. While other research projects on the Farallones may result in harassment to marine mammals, the impacts are not expected to be cumulatively significant. Any future authorizations would have to undergo the same permitting process and would take the USFWS' proposed action into consideration when addressing cumulative effects.

**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: NMFS has determined that the proposed action is not an undertaking with the potential to affect historic resources. The proposed action is limited to the authorization to harass marine mammals consistent with the MMPA definition of "Level B harassment."

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

Response: NMFS' action of issuing an IHA cannot be reasonably expected to result in the introduction or spread of a non-indigenous species because we are only authorizing the incidental take of marine mammals.

**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?**

Response: NMFS' action of issuing an IHA would 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. 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 would result in a negligible impact to the affected species or stocks. NMFS's issuance of an IHA may inform the environmental review for future projects, but would not establish a precedent or represent a decision in principle about a future consideration.

**13) Can the proposed action reasonably be expected to threaten a violation of any 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 proposed research trial. NMFS has determined that marine mammals may exhibit behavioral changes such as avoidance of or changes in movement 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. Issuance of an IHA is not expected to result in any significant cumulative adverse effects on target or non-target species incidentally taken by harassment due to elevated sound levels or human presence.

Cumulative effects refer to the impacts on the environment that result from a combination of past, existing, and reasonably foreseeable human activities and natural processes. Human activities in the region of the proposed action are limited to research because the Farallones are not open to public access. Because of the relatively small area of potential ensonification and the corresponding mitigation measures, the action would not result in synergistic or cumulative adverse effects that could have a substantial effect on any species.

NMFS' action of issuing an IHA does not target any marine species and is not expected to result in any individual, long-term, or cumulative adverse effects on the species incidentally taken by harassment due to these activities. The potential temporary behavioral disturbance of marine species might result in short-term behavioral effects for these marine species within the ensonified or disturbed areas, but no long-term displacement of marine mammals or endangered species is expected as a result of the proposed action conducted under the requirements of the IHA. Therefore, NMFS does not expect any cumulative adverse effects on any species as a result of our action.

**DETERMINATION**

In view of the information presented in this document and the analysis contained in the supporting EA titled *“Issuance of an Incidental Harassment Authorization to the U.S. Fish and Wildlife Service to Take Marine Mammals by Harassment Incidental to a Bird Mitigation Research Trial in the Farallon National Wildlife Refuge,”* and documents that it references, NMFS has determined that issuance of an IHA to the USFWS for the take, by Level B harassment only, of small numbers of marine mammals incidental to conducting a research trial in the Farallon National Wildlife Refuge in accordance with Alternative 2 in NMFS' 2012 EA would not significantly impact the quality of the human environment, as described in this FONSI 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.

OCT 23 2012

Helen M. Golde  
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National Marine Fisheries Service.

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Date