



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

MAY 18 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 Effects of Issuing Marine Mammal Scientific Research Permit No. 14534-02

**LOCATION:** Coastal waters of California, especially within the U.S. Navy's Southern California Range Complex, and primarily near San Clemente Island

**SUMMARY:** The National Marine Fisheries Service (NMFS) is issuing Scientific Research Permit No. 14534-02, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*). The permit amends and replaces Permit No. 14534-01, and authorizes takes by harassment of a variety of marine mammal stocks and species, including endangered sperm whales, humpback whales, sei whales, fin whales, and blue whales. The takes are expected to result in transitory and recoverable changes in behavior of some marine mammals and the action is not likely to adversely affect marine mammal populations or species, or other components of the environment.

**RESPONSIBLE OFFICIAL:** Helen M. Golde  
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The environmental review process 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 environmental assessment (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,

Patricia A. Montanio  
NOAA NEPA Coordinator

Enclosure



Environmental Assessment  
on  
Effects of Issuing Marine Mammal Scientific Research Permit No. 14534-02  
{April 2012}

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**Lead Agency:** USDOC National Oceanic and Atmospheric Administration  
National Marine Fisheries Service, Office of Protected  
Resources

**Responsible Official:** Helen M. Golde, Acting Director, Office of Protected  
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Navy's Southern California Range Complex, and primarily  
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**Abstract:** The National Marine Fisheries Service (NMFS) proposes to issue Scientific Research Permit No. 14534-02, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*). The permit would amend and replace Permit No. 14534-01 and authorize takes by harassment of a variety of marine mammal stocks and species, including endangered sperm whales, humpback whales, sei whales, fin whales, and blue whales.

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## 1.0 PURPOSE OF AND NEED FOR ACTION

**Proposed Action:** NMFS proposes to issue an amendment to Permit No. 14534-01 in response to an application from the permit holder, the NOAA Office of Science and Technology, Silver Spring, MD, [Responsible Party: Ned Cyr, Director]. The application was submitted pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*). The permit would exempt the holder from statutory take prohibitions during conduct of research that is consistent with the purposes and policies of the MMPA and ESA and applicable permit issuance criteria.

The objective of the permit holder's research is to determine how human sounds, including active sonar signals, affect marine mammals. The project includes studies of sound production, diving and other behavior, and responses to sound of marine mammals, including endangered species. The results will be integrated with related studies and contribute to conservation management for sound producers and regulatory agencies by identifying characteristics of target species that are critical for passive monitoring, detection, and/or density estimation and by demonstrating how specific sounds, including simulated military sonar, may evoke behavioral responses in marine mammals.

The current permit authorizes harassment of 27 species of marine mammals, including five pinniped stocks, 15 toothed/beaked whale stocks, and seven baleen whale stocks. Six of these species are listed as threatened or endangered under the ESA. The marine mammals that are the focus of the proposed permit amendment are included in the current permit. The permit holder is requesting additional harassment takes of some species to accommodate changes in research protocols.

**Purpose and Need:** The primary purpose of a permit is to provide an exemption from the take prohibitions under the MMPA and ESA to allow "takes" by harassment (including level A and level B harassment as defined under the MMPA) of marine mammals, including endangered species, for bona fide scientific research. The need for issuance of such permits is related to NMFS's mandates under the MMPA and ESA. Specifically, NMFS has a responsibility to implement both the MMPA and the ESA to protect, conserve, and recover marine mammals and threatened and endangered species under its jurisdiction. The MMPA and ESA prohibit takes of marine mammals and threatened and endangered species, respectively, with only a few very specific exceptions, including for scientific research and enhancement purposes.

The applicant's need for the amendment relates to their desire to modify their research protocols in a manner that would result in additional harassment of marine mammals. As noted in their amendment request (on file with NMFS), the proposed modifications are based on their experience and observations during the initial field work, in which they encountered non-target species in mixed aggregations with their focal species. The researchers propose revisions to their protocols to account for the larger than predicted numbers and more frequent occurrences of humpback whales (*Megaptera novaengliae*), minke whales (*Balaenoptera acutorostrata*), and killer whales (*Orcinus orca*) during their study. These are species for which the current permit already authorizes some level of take by harassment.

**Scope of Environmental Assessment:** This EA focuses on evaluating whether permitting additional harassment of marine mammals, as proposed in the amendment request, would change the manner in which the action may affect the environment compared to the effects documented and analyzed in an Environmental Assessment prepared for issuance of the original permit.

The *Final Environmental Assessment on the Effects of Scientific Research Activities Associated with Behavioral Response Studies of Pacific Marine Mammals Using Controlled Sound Exposure* (NMFS 2010) considered the effects of permit issuance (File No. 14534) on a variety of marine mammals, and on physical and biological features of the action area. The proposed action alternative was issuance of the permit with the terms and conditions that are standard to permits issued by NMFS for harassment of marine mammals, including endangered species.

The 2010 EA summarized the status of the affected species, including seasonal occurrence, population abundance and density, annual productivity, and functional hearing capability as it relates to the sounds associated with the study. The 2010 EA then evaluated the effects of the research activities themselves, including effects of attaching scientific instruments and the potential for stress, pain and suffering associated with exposure to the experimental sounds.

The 2010 EA also considered the effects on stocks of the harassment that could result from the research activities. In addition, NMFS considered the effects of the harassment on threatened and endangered marine mammal species, as listed under the ESA, during consultation under section 7 of the ESA. The results of that consultation were summarized in a Biological Opinion, the conclusions of which were incorporated into the final EA.

As noted in the Finding of No Significant Impact signed on June 29, 2010, and based on the analyses in the 2010 EA (and associated Biological Opinion), issuance of the permit would result in minor short-term adverse effects on a specified number of animals targeted by the research, as well as non-target animals in the immediate vicinity of the research<sup>1</sup>, but would not affect other aspects of the human environment. NMFS further concluded that, given the mitigation measures required by the permit, the adverse effects on marine mammals that are the subject of the permit are likely to result only in transitory and recoverable changes in behavior and physiological parameters of the affected animals, including those listed as threatened or endangered, but are not expected to result in measurable effects on populations, stocks, or species.

The 2010 EA considered the effects of other human activities affecting marine mammals in the action area, including entrapment and entanglement in fishing gear, vessel interactions, habitat degradation, anthropogenic noise, and other permits issued by NMFS for research on the same species and stocks. NMFS concluded that issuance of the permit would not result in individually or cumulatively significant impacts.

The 2010 EA demonstrated that issuance of a permit for harassment of marine mammals would not affect any component of the environment other than the marine mammals themselves. The proposed permit amendment involves harassment of the same species of marine mammals, in the

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<sup>1</sup> Note that the permit authorizes harassment of both marine mammals that are targeted by the research as well as those that may only be affected incidental to it. As such, all marine mammals that may be harassed are considered “target” animals for the permit regardless of whether they are focal/target animals of the research.

same location, at the same times of year, with the same temporal frequency, and by the same research methods as the proposed action in the 2010 EA. This EA only evaluates the effects of permit amendment issuance on marine mammals.

More specifically, this EA evaluates whether permitting additional takes of marine mammals by harassment would result in more than transitory and recoverable changes in behavior and physiological parameters of the affected animals, and if so, whether those changes would impact the affected marine mammals' populations, stocks, or species.

## 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

**Alternative 1 - No Action:** Under the No Action alternative, no permit amendment would be issued for the activities proposed by the applicant. The current permit (No. 14534-01) would remain valid and in effect, allowing takes of marine mammals, including ESA-listed species, by harassment during research involving suction-cup tagging (i.e., temporary attachment of scientific instruments including digital archival recording tags), photo-identification, behavioral observations, and exposure to controlled levels of natural and anthropogenic underwater sounds.

Target species and stocks: Permit No. 14534-01, issued on July 2, 2010, exempts harassment of the following species and stocks of marine mammals during conduct of bona fide scientific research:

Species	Stock (ESA listing status)
Dolphin, bottlenose	California/ Oregon/ Washington Offshore Stock
Dolphin, common, long-beaked	California Stock
Dolphin, common, short-beaked	California/ Oregon/ Washington Stock
Dolphin, northern right whale	California/Oregon/ Washington Stock
Dolphin, Pacific white-sided	California/Oregon/ Washington - Northern and Southern Stocks
Dolphin, Risso's	California/Oregon/ Washington Stock
Dolphin, striped	California/Oregon/ Washington Stock
Porpoise, Dall's	California/Oregon/ Washington Stock
Sea lion, California	US Stock
Seal, Guadalupe fur	Mexico - Southern California (Threatened)
Seal, harbor	California Stock
Seal, northern elephant	California Breeding Stock
Seal, Northern fur	San Miguel Islands Stock
Whale, Baird's beaked	California/Oregon/ Washington Stock
Whale, blue	Eastern North Pacific Stock (Endangered)
Whale, Bryde's	Eastern Tropical Pacific Stock
Whale, Cuvier's beaked	California/Oregon/Washington Stock
Whale, fin	California/Oregon/ Washington Stock (Endangered)
Whale, gray	Eastern North Pacific
Whale, humpback	Eastern North Pacific Stock (Endangered)
Whale, killer	Eastern North Pacific Offshore Stock
Whale, Mesoplodon beaked	California/Oregon/ Washington Stocks
Whale, minke	California/Oregon/ Washington stock
Whale, pilot, short-finned	California/Oregon/ Washington stock

Species	Stock (ESA listing status)
Whale, pygmy sperm	California/Oregon/ Washington stock
Whale, sei	Eastern North Pacific Stock (Endangered)
Whale, sperm	California/Oregon/ Washington stock (Endangered)

Duration and frequency: Permit No. 14534-01 authorizes harassment of marine mammals for a period of five years, beginning on the date of issuance and ending upon permit expiration on July 31, 2015. Harassment of marine mammals resulting from the research may occur over the course of five field seasons that run from late spring through early fall annually. The first field season (called SOCAL-10) was conducted in August and September 2010.

Methods: The research protocols that may result in harassment of marine mammals are described in detail in the application on file for this permit and are briefly summarized here. Some animals are temporarily “tagged” with scientific instruments attached via suction cups. These tags measure and record received sound levels during playback experiments and record animal behaviors such as acceleration and body orientation. Animals are also photographed for later identification and to document behaviors. Tagged and untagged subjects may be exposed to received sound levels up to 180 dB re: 1μPa. Animals are monitored visually and through passive acoustic monitoring (e.g., via an underwater hydrophone array), as well as through data from the tags, for responses to the sounds. Behavior is measured before, during, and after carefully controlled exposures of sound in conventional playback experiments. Sloughed skin samples may be collected from the detached suction cup used to attach tags to cetaceans and exported for analysis.

The primary species of concern are beaked whales, but the responses of other marine mammal species are also monitored. The target animals are purposely exposed to anthropogenic underwater sounds, photo-identified, tagged, and their behavioral responses observed. The permit authorizes harassment of target animals from the close approach necessary for tagging, photo-identification, and behavioral observations, as well as incidental harassment of non-target animals that might be in the vicinity of the target animal. The permit also authorizes harassment of target and non-target animals due to exposure to the controlled sound playback experiments.

Visual and passive acoustic monitoring and other safeguards are implemented to minimize harassment of marine mammals. There are clear sound source shutdown criteria to limit exposure to Level B harassment levels and ensure no marine mammals are injured.

If the permit amendment is not issued, researchers would not have an exemption for the additional harassment that may result from proposed modifications to their protocols. The researchers are expected to limit their activities to the levels of harassment authorized by their current permit. While this may not prevent achieving the study objectives, it could limit their samples sizes within a given field season and possibly delay obtaining sufficient data to validate their hypotheses before the permit expires.

**Alternative 2 - Proposed Permit:** Under the Proposed Action alternative, a new permit (No. 14534-02) that amends and replaces the current permit would be issued for activities as proposed by the applicant, with the permit terms and conditions standard to such permits as issued by NMFS.

The amended permit would retain all of the take authority, and terms and conditions of the current permit, while adding new takes for harassment associated with proposed modifications to the applicant's research.

Target species and stocks: The amendment does not change the species or stocks of marine mammals that may be harassed. The affected species and stocks of marine mammals are the same as listed in the No Action alternative.

The amendment does increase the numbers of individuals within three species/stocks that may be taken annually by adding harassment associated with the same tagging, playback, and observational activities as the species that are focal animals under the current permit.

Species/Stock	Annual takes under Permit No. 14534-01	Annual takes under proposed Permit No. 14534-02
minke whale (California/Oregon/Washington Stock)	2	174
killer whale (Eastern North Pacific Offshore Stock)	14	918
humpback whale (Eastern North Pacific Stock)	2	174

Duration and frequency: The amendment would not affect the expiration date of the permit and would therefore not extend the duration of the temporal scope of the action. The permit amendment would expire on July 31, 2015.

The applicant has not proposed a change in the time of year or duration of their field seasons, and the amendment would not change when or how often the harassment of marine mammals would occur.

Methods: The research protocols are the same as for the proposed action. The difference is that the three species listed above, which are currently only taken incidental to activities directed at target species, would become focal species and be subject to tagging and intentional exposure to sound playbacks with associated observations. In addition to allowing researchers to collect data from these three species in particular, it also allows them to achieve greater sample sizes of other target species overall by allowing harassment of these animals when they occur in mixed groups with or in the vicinity of other target species.

### **3.0 AFFECTED ENVIRONMENT**

#### **Location**

The study would be conducted in the U.S. Navy's Southern California (SOCAL) Range Complex, and primarily near the vicinity of San Clemente Island. The SOCAL Range Complex encompasses 120,000 square nautical miles (nm<sup>2</sup>) of ocean between Dana Point and San Diego, California, and extends southwest from southern California in an approximately 700 by 200 nm



rectangle with the seaward corners at 33°30' N. lat.; 127°10' W. long.; 28°30' N. lat.; and 116°00' W. long.. The harassment of marine mammals would occur at the time and in the place where the study is conducted. Thus, the action area for the proposed permit is the same as the research study area.

The permitted takes of marine mammals do not affect other components of the environment. Thus, the action area is effectively limited to the locations where the research occurs, or, more specifically, to where the marine mammals are at the time they are approached for tagging, observations, or sound exposures.

### **Status of Affected Species**

Non-ESA listed marine mammals: Twenty-one of the 27 stocks of marine mammals that are the subject of the permit amendment are not listed as threatened or endangered under the ESA, or as depleted under the MMPA, or proposed for any such listings. Descriptions of these stocks, including the most current information on distribution, abundance, productivity, and human-caused mortality, are available in NMFS Stock Assessment reports. These reports are available at <http://www.nmfs.noaa.gov/pr/sars/species.htm#>.

ESA-listed marine mammals: Descriptions of the six ESA-listed marine mammals that are the subject of the permit amendment, including the most current estimates of abundance, productivity, and human-caused mortality for these species, are available in NMFS Stock Assessment reports, which are available at <http://www.nmfs.noaa.gov/pr/sars/species.htm#>.

There have been no changes in the listing status of these six species, nor are any changes proposed. The factors affecting the status of these species are the same as described in the 2010 EA.

The amendment would only increase the numbers of individuals harassed for one of these six ESA-listed species: humpback whales. Humpback whales are increasing in abundance throughout much of their range, including in the North Pacific.

### **Non-target species**

In addition to the marine mammal species that are the target of the proposed permit, the action area is home to sea otters, a variety of sea birds, and numerous fish species. The harassment of marine mammals that may result from the proposed permit would not affect sea birds, fish, or other non-target animals. Thus, effects on species that are not the subject of the permit will not be considered further.

### **Biodiversity and Ecosystem Function**

The proposed action does not interfere with benthic productivity, predator-prey interactions, or other biodiversity or ecosystem functions. Marine mammals will not be removed from the ecosystem or displaced from habitat, nor will the permitted research affect their diet or foraging patterns. Further, the proposed action does not involve activities known or likely to result in the introduction or spread of nonindigenous species, such as ballast water exchange or movement of

vessels among water bodies. Thus, effects on biodiversity and ecosystem function will not be considered further.

### **Ocean and Coastal Habitats**

The proposed action does not affect habitat. It does not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat. Thus, effects on habitat will not be considered further.

### **Unique Areas**

There are no historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers within the action area, which is limited to coastal and open waters in which no such areas occur. Section 3.2 of the 2010 EA, which is hereby incorporated by reference, describes the Marine Protected Areas, essential fish habitat (EFH), and ESA designated critical habitat that occur in or near the action area. Santa Barbara Island, which is part of the Channel Islands National Marine Sanctuary, is located within the boundaries of the SOCAL Range Complex. EFH has been designated for many of the fish species within the action area. Details of the designations and descriptions of the habitats are available in the Pacific Fishery Management Plans. While critical habitat has been designated for some of the species that may occur in the action area, the habitat designations are all well outside the bounds of the action area.

The proposed action does not alter or affect any components of such protected areas, including EFH or elements of any critical habitat. Thus, effects on such unique areas will not be considered further.

### **Historic Places, Scientific, Cultural, and Historical Resources**

There are no districts, sites, highways or structures listed in or eligible for listing in the National Register of Historic Places in the action area. The proposed action represents non-consumptive use of marine mammals and does not preclude their availability for other scientific, cultural, or historic uses, including subsistence harvest by Alaskan Natives. Thus, effects on such resources will not be considered further.

### **Social and Economic Resources**

The proposed action does not affect distribution of environmental burdens, access to natural or depletable resources or other social or economic concerns. It does not affect traffic and transportation patterns, risk of exposure to hazardous materials or wastes, risk of contracting disease, risk of damages from natural disasters, food safety, or other aspects of public health and safety. Thus, effects on such resources will not be considered further.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

### **Effects of the No Action Alternative**

The effects of the No Action Alternative, in which NMFS does not issue the permit amendment, are the same as the effects of issuing the original permit. The original permit includes harassment takes of the same pinnipeds, toothed and baleen whales, by the same methods proposed for the permit amendment, in the same locations, at the same times of year, and with the same frequency. The effects of issuing the original permit were discussed and evaluated in

the 2010 EA, which is hereby incorporated by reference. Based on that EA, NMFS issued a Finding of No Significant Impact and concluded that permit issuance would not significantly impact the quality of the human environment and that preparation of an Environmental Impact Statement was not necessary.

While there may be adverse effects on individual marine mammals harassed by the research, the harassment is not likely to result in adverse effects on the stocks or populations. The number of marine mammals affected represents a small portion of the individual stocks and populations and the effects are expected to be minor and short-term.

The effects of harassment on individual marine mammals are dependent on the responses of the animals to exposure to the research activity and are constrained by the species' behavioral repertoires and physiology. Physiology and basic behavioral responses are not influenced by a species' listing status under the MMPA. An endangered humpback whale is not likely to respond differently to harassment than a non-endangered minke whale simply because it belongs to a collective designated by a federal agency as "endangered" under a federal statute.

In general, there is the potential for an ESA-listed species to be affected differentially by a human activity compared to an analogous non-ESA listed species, if, for example, the effects on the individual resulted in decreased fitness, reproductive success, or survival, and the number of individuals thusly affected relative to the size of the species was sufficiently large to cause a reduction in the overall reproductive capacity of the species that in turn affects the predicted probability of extinction or recovery.

However, for this action, there is no information to suggest that harassment from tagging, observations, or controlled exposure experiments under the proposed permit amendment would affect individual animals of any species in this way, regardless of their ESA-listing status. At most, the harassment would result in temporary changes in behaviors that are not life-threatening and that are entirely recoverable within minutes to days of completion of the surveys.

An animal's responses may be species-specific, and influenced by factors such as age, sex, reproductive status, season, and the behavioral pattern in which they were engaged at the time of exposure. These factors were considered in the analysis of effects in the 2010 EA. The annual report submitted by the permit holder at the conclusion of the 2010 field season confirmed that the responses of animals to the research were as predicted in that analysis.

The mitigation measures incorporated into the methods are intended to minimize the potential for adverse impacts and mitigate the extent of any unavoidable adverse impacts. Researchers are required to submit annual reports in which they must provide an accounting of the numbers of marine mammals encountered and observed effects of the research. NMFS can revoke, suspend or modify the permit if there is reason to believe the research is having or has the potential to have an adverse effect on a stock or species.

For issuance of the original permit, NMFS determined that the take of marine mammals results in transitory and recoverable adverse effects on individual marine mammals targeted by the research. Those effects on individual animals, because they are temporary and not biologically

significant, do not result in adverse effects on marine mammal stocks, populations, or species. Further, authorizing such take of marine mammals does not adversely affect other aspects of the human environment, including land, air, or water resources.

### **Effects of the Proposed Action Alternative**

The nature of the effects of the Proposed Action Alternative, in which NMFS would issue a permit amendment to allow harassment of additional marine mammals, are effectively the same as the effects of the No Action alternative. The proposed permit amendment would be valid for the same duration as the current permit, and would affect the same marine mammal species/stocks in the same location by the same research methods. Increasing the numbers of individuals harassed for three species by making them focal species intentionally targeted for tagging, playbacks, and observations does not change the manner in which the action would affect the environment.

As discussed for the No Action alternative, the 2010 EA considered the effects of harassment from close approach and playback associated with the research activities on the three species. It did not specifically consider the effects of tagging humpback whales, as this was not an activity proposed for those species. However, the 2010 EA did discuss the effects of tagging on marine mammals in general, and much of the information on marine mammal responses to tagging comes from prior studies on humpback whales. There is no information to suggest that the humpback whales, minke whales, and killer whales that would be tagged under the proposed permit amendment would react to or be affected differently than described for the No Action alternative.

NMFS engaged in consultation on issuance of the permit, as required under section 7 of the ESA. The consultation process was concluded after close of the comment period on the application and draft EA to ensure that no relevant issues or information were overlooked. For the purpose of the consultation, the draft EA represented NMFS' assessment of the potential biological impacts. A Biological Opinion summarizing the consultation concluded that issuance of the permit is not likely to jeopardize the continued existence of the species or result in adverse modification of designated critical habitat.

The effects of permit amendment issuance on the environment would not differ from the effects of issuance of the original permit.

### **Cumulative Impacts**

The stocks and species of marine mammals that are the subject of the permit are exposed to a variety of human activities throughout their ranges, including entanglement in fishing gear, noise from vessel traffic and military readiness exercises, and harassment from oil and gas development.

Entanglement is not believed to be a significant source of mortality for any of these species. The harassment from military readiness exercises and oil and gas development is authorized pursuant to Section 101(a)(5) of the MMPA and has been found to have a negligible impact on the stocks.

The frequency and duration of the surveys under the proposed permit would allow adequate time for animals to recover from adverse effects such that additive or cumulative effects of the research on its own are not expected.

These stocks and populations of marine mammals are the subject of other research permits issued by NMFS, each of which was subject to analysis under NEPA and found to have no significant adverse impacts. The combined effects of the total amount of permits relative to the status of the populations were considered. Further, the take numbers in the proposed permit are conservative estimates of the potential maximum numbers of animals that may be present during a survey and they assume that 100% of animals taken are affected, which may not be the case. There are no other NMFS-issued or proposed research permits for the SOCAL Range Complex.

Researchers working under NMFS permits are required to notify the appropriate NMFS Regional Office in advance of field work. The Alaska Regional Office is tasked with coordinating activities under multiple permits for Alaska to ensure there is not unnecessary duplication.

No measurable effects on population demographics are anticipated because any sub-lethal (disturbance) effects are likely to be short-term, with the animals recovering within hours to days and the proposed action is not expected to result in mortality of any endangered whales.

## **5.0 Mitigation Measures**

There are no additional mitigation measures beyond those that are part of the applicant's protocols or standard conditions that would be required by permit.

Given that the research is directed at marine mammals, mitigation measures that avoid or reduce their exposure to the research in general are not appropriate. It is necessary for researchers to closely approach the whales to attach instruments, make observations, and make photo-identification. It is necessary for researchers to expose animals to sound playbacks in a controlled experiment to collect data on how animals are affected by these sounds. However, researchers only approach as closely as necessary to achieve these ends, and limit sound exposure levels to the minimum that will result in a behavioral change. The MMPA requires the research methods to be humane, resulting in the least possible degree of pain and suffering practicable to the animal involved. The permit mitigation measures are consistent with best practices for humane research on wildlife.

Review of monitoring reports of previous permits for the same or similar research protocols indicate that these types of mitigation measures are effective at minimizing stress, pain, injury, and mortality. In the first field season for this permit, no animals were injured and the behavioral responses observed were consistent with those anticipated by the 2010 EA and covered by the permit.

## **6.0 List of Preparers and Agencies Consulted**

Prepared by: Permits and Conservation Division, Office of Protected Resources, National  
Marine Fisheries Service, Silver Spring, MD

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



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

## **Finding of No Significant Impact Issuance of Scientific Research Permit No. 14534-02**

### Background

In July 2011, the National Marine Fisheries Service (NMFS) received an application for an amendment to Permit No. 14534-01 from the NOAA Office of Science and Technology, Silver Spring, MD (Responsible Party: Ned Cyr, Director), to take marine mammals during conduct of research in coastal waters of California. In accordance with the National Environmental Policy Act, NMFS has prepared an Environmental Assessment (EA) analyzing the impacts on the human environment associated with permit issuance (Environmental Assessment on Effects of Issuing Marine Mammal Scientific Research Permit No. 14534-02; 2012). The analyses in the EA support the findings and determination below. NMFS has chosen to issue a permit for activities as described in Alternative 2 of the EA.

### 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?

Issuance of an amendment to a permit for takes of marine mammals as described in Alternative 2 of the EA will not cause substantial damage to ocean and coastal habitats or essential fish habitat (EFH). The “takes” of marine mammals authorized by the permit will not affect components of ocean and coastal habitat, including EFH. The takes will consist of harassment of individual marine mammals which may result in behavioral changes. However, these changes will have no impact on any component of the physical environment.

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.)?



Issuance of the permit will not affect biodiversity or ecosystem function. The takes of marine mammals authorized by the permit will not alter foraging patterns, dietary preferences, or relative distribution or abundance of species groups within the area. The takes of marine mammals will not affect nutrient flux, primary productivity, or other factors related to ecosystem function in the area.

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

Issuance of the permit will not affect public health or safety. The takes of marine mammals authorized by the permit will not affect things typically associated with impacts on public health and safety such as traffic and transportation patterns; noise levels; risks of exposure to hazardous materials and wastes; risks of contracting disease; risks of damages from natural disasters; or food 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?

Issuance of the permit will not adversely affect endangered or threatened species, marine mammals, critical habitat, etc. The takes of a specified number of marine mammals, as authorized by the permit, will directly and indirectly result in adverse effects on the individual marine mammals targeted by the research, as well as non-target marine mammals in the immediate vicinity of the research. Given the mitigation measures required by the permit, these adverse effects are likely to result only in transitory and recoverable changes in behavior and physiological parameters of the affected animals, including those listed as threatened or endangered, but are not expected to result in measurable effects at the level of marine mammal populations, stocks, or species.

Issuance of the permit, and associated takes of marine mammals, will not adversely affect critical habitat because none is designated within the area.

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

There are no significant social or economic impacts interrelated with potential natural or physical impacts of the action. The takes of marine mammals authorized by the permit will result in insignificant effects on the natural and physical environment, and there are no significant social or economic impacts interrelated with these effects. The action does not involve and is not associated with factors typically related to effects on the social and economic environment such as inequitable distributions of environmental burdens, or differential access to natural or depletable resources in the action area.



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

The effects of the action are not uncertain; they are predictable based on information about marine mammal hearing, sound propagation in water, and monitoring reports from permit for similar research activities. Research involving exposing marine mammals to sound has been the subject of public controversy for previous permits. That controversy was not related to uncertainty about impacts but represented opposition to the research in general. The likely adverse effects of the techniques in the subject permit are limited to a specified number of marine mammals targeted by the research and are predicted to involve only transitory stress, but no pain or injury. Although the precise levels of a sound that will provoke a behavioral response may be uncertain, and the research seeks to provide answers to this question, there is no substantial dispute as to what resources will be affected, or the temporal and geographic scale of those effects.

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?

Issuance of the permit is not expected to affect unique or ecologically critical areas. Takes of marine mammals authorized by the permit will not impact unique or ecologically critical areas. The action does not involve contact with or activities that may indirectly impact physical structures or features of the environment.

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

The effects of permit issuance on the human environment are not highly uncertain and the takes of marine mammals authorized by the permit do not involve unique or unknown risks. The applicant's action does not involve techniques for which the risks to and effects on the biological and physical environment cannot reasonably be predicted based on monitoring reports from previous permits and published literature on the effects of human activities on marine mammals and other wildlife.

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

Issuance of the permit will not result in individually or cumulatively significant impacts. The EA considered the other activities affecting the resources in the area. The impacts of this action are expected to be short-term and transitory.

Issuance of the permit and subsequent takes of marine mammals, are not related to other federal actions. Results of the applicant's research may inform future

management actions. However, those future actions are too speculative to evaluate at this time and would themselves be subject to consideration under NEPA.

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?

Issuance of the permit will not adversely affect the above mentioned places and resources. The takes of marine mammals authorized by the permit will not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places because none are present in the action area and the effects of the action are limited to resources within the action area. Taking marine mammals by level B harassment represents non-consumptive use and will not cause loss or destruction of significant resources as none are present.

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

Issuance of the permit is not expected to result in the spread or introduction of non-indigenous species. The takes of marine mammals authorized by the permit will not result in the spread or introduction of non-indigenous species. The action does not involve handling animals in the wild, or transporting animals among locations. The action does not involve movement of vessels, or researchers and their equipment, among water bodies. There are no routes by which non-indigenous organisms can be transmitted or introduced by the research.

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?

The proposed action does not establish a precedent for future actions with significant effects nor represent a decision in principle about a future consideration. Issuance of the permit enables the applicant to take marine mammals by harassment during conduct of research consistent with provisions of the Marine Mammal Protection Act, Endangered Species Act, and applicable regulations. These provisions are applicable to all such permits and decision to issue. It does not involve an irreversible or irretrievable commitment of resources, limit the choice of reasonable alternatives for future decisions, or otherwise represent a decision in principle about future considerations.

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?

Issuance of the permit will be consistent with applicable provisions of the Marine Mammal Protection Act, Endangered Species Act, and NMFS regulations. NMFS engaged in consultation under Section 7 of the ESA and obtained a

Biological Opinion which concluded the action was not likely to jeopardize the continued existence of listed species. There are no other permits, licenses, consultations, etc. necessary for NMFS issuance of the permit.

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?

Issuance of the permit will not result in cumulative adverse effects substantially affecting target or non-target species. The takes of marine mammals authorized by the permit will result in adverse impacts on a specified number of marine mammals in the immediate vicinity of the research. These adverse impacts are expected to be transitory and recoverable and, when considered in combination with other actions or factors affecting the populations, stocks, and species, not likely to result in significant impacts on the species or the environment.

#### DETERMINATION

In view of the information presented in this document, and the analyses contained in the EA prepared for issuance of Permit No. 14534-02, 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.



Helen M. Golde  
Acting Director, Office of Protected Resources

**MAY 14 2012**

Date