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

FINDING OF NO SIGNIFICANT IMPACT FOR THE ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION TO LAMONT-DOHERTY EARTH OBSERVATORY TO TAKE MARINE MAMMALS INCIDENTAL TO CONDUCTING A MARINE GEOPHYSICAL SURVEY IN THE ATLANTIC OCEAN, APRIL - JUNE, 2013.

NATIONAL MARINE FISHERIES SERVICE

BACKGROUND

We (National Marine Fisheries Service, Office of Protected Resources, Permits and Conservation Division) propose to issue an Incidental Harassment Authorization (Authorization) to Lamont-Doherty Earth Observatory of Columbia University (the Observatory) under the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1631 *et seq.*) for the incidental taking of small numbers of marine mammals, incidental to the conduct of a marine geophysical (seismic) survey in international waters in the northwest Atlantic Ocean, April through June, 2013.

Our proposed action is a direct outcome of the Observatory requesting an authorization to take marine mammals, by harassment, incidental to conducting a marine seismic survey within the northwest Atlantic Ocean. The Observatory's seismic survey activities, which have the potential to cause marine mammals to be behaviorally disturbed, warrant an incidental take authorization from us under section 101(a)(5)(D) of the MMPA.

In accordance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), we completed an Environmental Assessment (EA) titled, *Issuance of an Incidental Harassment Authorization to Lamont-Doherty Earth Observatory to Take Marine Mammals by Harassment Incidental to a Marine Geophysical Survey in the Atlantic Ocean, April - June, 2013*. This EA focuses primarily on the environmental effects of authorizing the incidental take of marine mammals incidental to the Observatory's activities.

This EA also incorporates by reference the following documents per 40 CFR 1502.21 and NOAA Administrative Order (NAO) 216-6 § 5.09(d):

- The National Science Foundation's (Foundation) *Draft Environmental Analysis of a Marine Geophysical Survey by the R/V Marcus G. Langseth on the Mid-Atlantic Ridge, April–May 2013*;
- The Foundation's 2011 *Programmatic Environmental Impact Statement/Overseas Environmental Impact Statement for Marine Seismic Research Funded by the National Science Foundation or Conducted by the U.S. Geological Survey.*

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This FONSI presents our selected alternative.—Alternative 1 (Preferred Alternative) titled, "Issuance Of An Authorization With Mitigation Measures," and our conclusions regarding the impacts related to our proposed action. Based on our review of the Observatory's proposed seismic survey and the mitigation and monitoring measures contained in Alternative 1, we have determined that no significant impacts to the human environment would occur from implementing the Preferred Alternative.

ANALYSIS

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 this section is relevant to making a finding of no significant impact (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: Our action of issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey 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 Authorization would not affect ocean and coastal habitats or essential fish 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: We do not expect our action (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey) to have a substantial impact on biodiversity or ecosystem function within the affected environment. Our proposed action of authorizing Level B harassment for the Observatory's seismic survey would be limited to temporary behavioral responses (such as brief masking of natural sounds) and temporary changes in animal distribution. 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: The proposed survey activities would occur in the open ocean away from any populated area. We do not expect that our action (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey) to have a substantial adverse impact on public health or safety as we do not have the authority to permit, authorize, or prohibit the Observatory's seismic survey in the northwest Atlantic Ocean.

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: This EA evaluates the affected environment and potential effects of our action (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey). We have determined that the proposed seismic survey 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 28 species of marine mammals. The impacts of the seismic survey 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.

In addition to the potential incidental harassment of small numbers of marine mammals not listed under the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq*.), the seismic surveys may have the potential to adversely affect the following species listed as threatened or endangered marine mammals pursuant to the ESA: the blue, fin, humpback, north Atlantic right, sei, and sperm whales. An April 2013 Biological Opinion issued under the ESA concluded that the Observatory's project was not likely to jeopardize the continued existence of any listed species or adversely modify or destroy critical habitat, and this determination would not be affected by the issuance of the Authorization.

The following mitigation measures are planned for the survey to minimize adverse effects to protected marine mammals:

(1) proposed exclusion zones;
(2) power-down procedures;
(3) shut-down procedures;
(4) ramp-up procedures;
(5) visual monitoring by Protected Species Visual Observers (observers); and
(6) passive acoustic monitoring.

Taking these measures into consideration, we expect the responses of marine mammals from the preferred alternative to be limited to avoidance of the area around the seismic operation and short-term behavioral changes, falling within the MMPA definition of "Level B harassment."

We do not anticipate that marine mammal take by injury (Level A harassment), serious injury, or mortality would occur and we expect that harassment takes should be at the lowest level practicable due to the incorporation of the mitigation measures required by the Authorization. For each species, the Level B harassment take numbers are small (most estimates are less than or equal to two percent) relative to the regional or overall population size of the marine mammal species or stock.

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 Authorization would not result in inequitable distributions of environmental burdens or access to environmental goods.

We have determined that issuance of the Authorization will not adversely affect low-income or minority populations. Further, there will be no impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses. Therefore, we do not expect significant social or economic effects to result from our issuance of the Authorization.

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

Response: The effects of our action (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey) are not highly controversial. Specifically, we 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 us 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 our analyses 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: The issuance of an Authorization for the take of marine mammals incidental to the conduct of a seismic survey will not impact the survey area. There are no unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas that could potentially be affected by the proposed action.

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

Response: The issuance of an Authorization for the take of marine mammals incidental to the conduct of a seismic survey would not have effects on the human environment that would be highly uncertain or involve unique or unknown risks.

The potential risks of seismic surveys resulting in elevated sound levels are not unique or unknown, nor is there significant uncertainty about impacts. We have issued authorizations for marine mammal take for similar types of oceanographic research seismic surveys for over 10 years, and monitoring reports received pursuant to the requirements of the authorizations have indicated that there were no unanticipated or unauthorized impacts as a result of the seismic surveys. The best available science, including input from prior monitoring reports for seismic surveys, supports our determination that adverse impacts are unlikely and will be minimized through the implementation of the proposed mitigation and monitoring requirements.

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

Response: The EA and the documents it references analyzed the issuance of an Authorization for the take of marine mammals incidental to the conduct of a seismic survey the impacts of the seismic survey in light of other human activities within the study area. We expect the following combination to result in no more than minor and short-term impacts to marine mammals in the survey area in terms of overall disturbance effects: (a) our issuance of an Authorization with prescribed mitigation and monitoring measures for the seismic survey; (b) past, present, and reasonably foreseeable future seismic surveys on the Mid-Atlantic Ridge; (c) vessel traffic and vessel noise; and (d) fishing.

These activities, when conducted separately or in combination with other activities, have the potential to affect marine mammals in the study area. Any cumulative effects caused by the addition of the seismic survey impacts on marine mammals would be extremely limited and would not rise to the level of "significant," especially considering the timeframe of the proposed activities, the location of the proposed survey area away from known areas of importance to marine mammals, and the mitigation and monitoring requirements in the Authorization. The seismic survey is unlikely to co-occur with any additional human activities, and thus the degree of cumulative impact would be minimal.

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: We have determined that the proposed action is not an undertaking with the potential to affect historic resources. The issuance of an Authorization for the take of marine mammals incidental to the conduct of a seismic survey would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources.

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

Response: We have determined that the proposed action (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey) is not an undertaking with the potential to introduce or spread non-indigenous species. The *Langseth* complies with all international and U.S. national ballast water requirements to prevent the spread of a non-indigenous species.

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

Response: Our action of issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey would not set a precedent for future actions with significant effects nor represent a decision in principle.

Each MMPA authorization applied for under section 101(a)(5) must contain information identified in our implementing regulations. We consider each activity specified in an application separately and, if we issue an Authorization, we must determine that the impacts from the specified activity would result in a negligible impact to the affected species or stocks. Our issuance of an Authorization 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 Authorization would not result in any violation of Federal, State, or local laws for environmental protection. We have fulfilled our Section 7 responsibilities under the ESA (see response to Question 4) and the MMPA for this action.

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 (*i.e.*, issuing an Authorization for the take of marine mammals incidental to the conduct of a seismic survey) would not result in any significant cumulative adverse effects on target or non-target species incidentally taken by harassment due to seismic survey activities.

We have determined that marine mammals may exhibit behavioral changes such as avoidance of or changes in movement within the action area. However, we do not expect the authorized harassment to result in significant cumulative adverse effects on the affected species or stocks. We do not expect that our issuance of an Authorization to result in any significant cumulative adverse effects on target or non-target species incidentally taken by harassment due to elevated sound levels.

We have issued incidental take authorizations for other seismic research surveys (to the Observatory and other agencies) that may have resulted in the harassment of marine mammals, but they are dispersed both geographically (throughout the world) and temporally, are short-term in nature, and all use mitigation and monitoring measures to minimize impacts to marine mammals. Because of the relatively short time that the project area will be ensonified (not more than 20 days), the action will not result in synergistic or cumulative adverse effects that could have a substantial effect on any species.

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 Lamont-Doherty Earth Observatory to Take Marine Mammals by Harassment Incidental to a Marine Geophysical Survey in the Atlantic Ocean, April - June, 2013*, and documents that it references, we have determined that issuance of an Incidental Harassment Authorization to the Observatory in accordance with Alternative 1 the 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.

APR 0 8 2013

Helen M. Golde,
Acting Director, Office of Protected Resources,
National Marine Fisheries Service

Date