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 CAPE WIND ASSOCIATES TO TAKE MARINE MAMMALS BY HARASSMENT INCIDENTAL TO A HIGH RESOLUTION GEOPHYSICAL SURVEY IN NANTUCKET SOUND, MASSACHUSETTS

NATIONAL MARINE FISHERIES SERVICE

BACKGROUND

The National Marine Fisheries Service (NMFS) received an application from Cape Wind Associates, LLC (CWA), requesting an incidental harassment authorization (IHA) to take small numbers of marine mammals, by Level B harassment, incidental to a high resolution geophysical survey in Nantucket Sound, Massachusetts. 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 will have a negligible impact on the affected species or stocks of marine mammals; (2) finds the action will 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 affecting 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 Cape Wind Associates to Take Marine Mammals by Harassment Incidental to a High Resolution Geophysical Survey in Nantucket Sound, Massachusetts.*"

This EA incorporates the Bureau of Ocean Energy Management, Regulation, and Enforcement's (BOEMRE's) Cape Wind Energy Project Final Environmental Impact Statement (hereinafter, EIS) (BOEMRE, 2009) pursuant to 40 CFR 1502.21 and NOAA Administrative Order (NAO) 216-6 § 5.09(d).

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 CWA's proposed activities 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

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."

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Each criterion listed below this section 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 does not anticipate that either CWA's proposed action (i.e., the high resolution geophysical survey) or NMFS' proposed action (i.e., issuing an IHA to CWA) would cause substantial damage to ocean and coastal habitats. The proposed NMFS action would authorize Level B harassment of marine mammals, incidental to a high resolution geophysical survey lasting approximately 5 months in Nantucket Sound, Massachusetts.

NMFS believes that the proposed survey conducted under the requirements of the IHA would have no more than minimal adverse impacts to fish or invertebrates and their habitats, and would have no potential for population-level impacts to any fish or invertebrate species. These temporary acoustic activities would not affect physical habitat features, such as substrates and water quality. The Magnuson-Stevens Fishery Conservation and Management Act (MSFCA) governs marine fisheries management in waters within the U.S. Exclusive Economic Zone, and requires federal agencies to consult with NMFS with respect to actions that may adversely impact Essential Fish Habitat (EFH). EFH has been identified and described in the proposed action area for several species of fish. NMFS Northeast Regional Office provided conservation recommendations regarding CWA's long-term energy project, but none pertained specifically to the high resolution geophysical survey.

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 either the CWA's proposed action or NMFS' proposed action (i.e., issuing an IHA to CWA that authorizes Level B harassment) to have a substantial impact on biodiversity or ecosystem function within the affected environment.

The EA incorporated the EIS by reference to analyze the potential for the survey activity to affect other ecosystem features and biodiversity components, including fish, invertebrates, seabirds, and sea turtles. NMFS expects that any direct, indirect, or cumulative effects of the action would not result in a substantial impact on biodiversity or ecosystem function. Most effects are considered to be short-term, temporary in nature, and minimal, and would be highly unlikely to affect normal ecosystem function or predator/prey relationships; therefore, there will not be a substantial impact on marine life biodiversity or on the normal function of the marine environment within the area affected by the proposed action.

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

Response: NMFS does not expect either CWA's proposed action or NMFS' proposed action (i.e., issuing an IHA to CWA) to have a substantial adverse impact on public health or safety. The

proposed survey would occur during daylight hours near the center of Nantucket Sound, at least five miles offshore. The constant monitoring for marine mammals and other marine life during survey operations effectively eliminates the possibility of any humans being inadvertently exposed to levels of sound that might have adverse effects. Although the conduct of the survey may carry some risk to the personnel involved (i.e., boat or mechanical accidents during surveys), the applicant and those individuals working with the applicant would be required to be adequately trained or supervised in performance of the underlying activity to minimize such risk to personnel. The survey is not expected to have any adverse impacts on traffic and transportation, as this is only a single working sound source vessel that will be in the Sound during daylight hours for a limited period of time over a relatively small geographic area. Also, there is little risk of exposure to hazardous materials or wastes, risk of contracting diseases, or risk of damage from a natural disaster.

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' (i.e., issuing an IHA to CWA) and CWA's (i.e. the high resolution geophysical survey) actions, indicating that only the acoustic activities have the potential to affect marine mammals in a way that requires authorization under the MMPA. These temporary acoustic activities would not affect physical habitat features, such as substrates and water quality. Additionally, the effects from vessel transit and routine operation of source vessels would not result in substantial damage to ocean and coastal habitats that might constitute marine mammal habitats. The potential for striking marine mammals and sea turtles is a concern with vessel traffic. The probability of a ship strike resulting in an injury or mortality of an animal has been associated with ship speed; however, survey vessels would travel at a slow speed while conducting survey activities, thus minimizing the potential for ship strikes.

CWA did not request authorization for take of marine mammals that might occur incidental to vessel ship strike while transiting to and from the survey site. However, the probability of marine mammal interactions occurring during transit to and from the survey area is unlikely due to the low marine mammal densities within Nantucket Sound, the relatively short distance from port to the survey site, the limited number of vessels, and the small vessel size.

NMFS has 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 five species of marine mammals, none of which are listed under the Endangered Species Act (ESA; 16 U.S.C. 1531 *et seq.*).

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

(1) 500-m exclusion zone;
(2) shut-down and delay procedures;
(3) soft-start procedures;
(4) visual monitoring by Protected Species Observers (PSOs); and
(5) hydroacoustic monitoring.

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 survey vessel 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 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.

Pursuant to section 7 of the ESA, BOEMRE (formerly MMS) engaged in formal section 7 consultation with NMFS Northeast Regional Office, regarding potential effects to ESA-listed species. A Biological Opinion (BiOp) was issued on December 30, 2010. The BiOp provides supporting analysis for this FONSI and concluded that CWA's long-term energy project (including the geophysical survey) is not likely to jeopardize the continued existence of any listed species. More specifically, NMFS Northeast Regional Office concluded that the CWA's long-term energy project (including the geophysical survey) may adversely affect, but is not likely to jeopardize, the continued existence of the loggerhead, Kemp's ridley, leatherback, or green sea turtle. Further, impacts would be limited to disturbance and are only anticipated to occur during the months of June-November when sea turtles are most likely to occur; CWA will likely have completed its survey prior to June. Additionally, NMFS Northeast Regional Office concluded that CWA's long-term energy project is not likely to adversely affect right, humpback, or fin whales, and, therefore, is not likely to jeopardize the continued existence of these whale species. The BiOp also concluded that designated critical habitat for these species does not occur in the action area and would not be affected by the survey. The NMFS Permits and Conservation Division will ensure that the mitigation and monitoring requirements established in the IHA include the Incidental Take Statement's terms and conditions applicable to marine mammals during survey activities.

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 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, no significant social or economic effects are expected to result from issuance of the IHA or the proposed survey.

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

Response: The effects of this action on the quality of the human environment, that is, NMFS' issuance of an IHA for the take of marine mammals incidental the geophysical survey, are not

highly controversial. Specifically, there is not a substantial dispute about the size, nature, or effect of potential impacts from NMFS's proposed action or CWA's proposed survey. Because this action (CWA's survey and NMFS' issuance of an IHA) is associated with the larger Cape Wind energy project, multiple organizations and some members of the public are opposed to issuance of the IHA.

For several years, NMFS has assessed and authorized incidental take for multiple geophysical surveys conducted within the same year and has developed relatively standard mitigation and monitoring measures which the public has vetted during each public comment period for a number of years. Moreover, the scope of this action is not unusually large or substantial. The mitigation measures are based on NMFS' past experiences and practices with similar projects and consideration of comments submitted on this action and other similar actions by the Marine Mammal Commission and members of the public. Therefore, NMFS believes there is no scientific controversy regarding the impacts of the proposed project.

NMFS received more than 80 comments from the general public, in addition to comments from the Marine Mammal Commission and several organizations. Numerous members of the public commented on their general opposition toward the long-term Cape Wind energy project. Specific responses to public comments will be provided in the *Federal Register* notice announcing the issuance of the IHA. Based on those comments, NMFS re-evaluated the mitigation and monitoring measures proposed, added another mitigation/monitoring component, and ultimately determined that the proposed measures are the most feasible and effective measures capable of implementation by the applicant.

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: NMFS' limited action of issuing an IHA would only authorize Level B harassment of marine mammals during a high resolution geophysical survey within Nantucket Sound, and would not result in substantial impacts to these types of unique areas. Although NMFS recognizes the importance of Nantucket Sound to the Wampanoag Tribe of Gay Head (Aquinnah) as a Traditional Cultural Property, NMFS's issuance of an IHA for the harassment of marine mammals is a type of undertaking that does not have the potential to cause effects to historic properties. Detailed information about the affected environment, marine mammals and other marine life, and all potential adverse direct, indirect and cumulative impacts related to the proposed action are provided in the EA and material incorporated by reference.

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

Response: NMFS does not expect either the survey or the issuance of an IHA to have effects on the human environment that would be highly uncertain or involve unique or unknown risks. While NMFS' judgments on impact thresholds are based on somewhat limited data, the best available data allow for NMFS to identify precautionary measures to minimize the potential for significant impacts on biological resources. The multiple mitigation and monitoring requirements are designed to ensure the least practicable impact on the affected species or stocks of marine mammals, and also to gather additional data on environmental impacts that may help inform future decision-making.

The exact mechanisms of how different sounds may affect certain marine organisms are not fully understood, but, as noted, NMFS believes the best available data supports the findings for this action. NMFS has authorized marine mammal take for similar types of surveys for a number of 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 surveys.

The best available science supports NMFS' determination that adverse impacts are unlikely and will be minimized through the implementation of the proposed mitigation and monitoring requirements. Therefore, the effects on the human environment are not likely to be highly uncertain and do not involve unique or unknown risks.

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

Response: The proposed action of CWA conducting the survey in Nantucket Sound and NMFS' proposed action of issuing an IHA to CWA that authorizes the incidental take (Level B behavioral harassment) of a small number of marine mammals are interrelated. The survey conducted under the requirements of an IHA authorizing Level B harassment of marine mammals is not expected to result in cumulatively significant impacts when considered in relation to other separate actions with individually insignificant effects.

NMFS has issued incidental take authorizations for other research surveys that may have resulted in the harassment of marine mammals, but these surveys are dispersed both geographically (throughout the world) and temporally, are short-term in nature, and use mitigation and monitoring measures to minimize impacts to marine mammals and to minimize other potential adverse environmental impacts in the activity area. There are no other surveys currently scheduled for Nantucket Sound and therefore, NMFS is unaware of any synergistic impacts to marine resources associated with reasonably foreseeable future actions that may be planned or occur within the same region of influence. The Cumulative Effects section of the EA and the material incorporated by reference go into more detail regarding other past, present, and reasonably foreseeable future actions, but concludes that the impacts of CWA's proposed survey in Nantucket Sound are expected to be no more than minor and short-term with no potential to contribute to cumulatively significant impacts.

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

Response: The survey and the issuance of an IHA are not expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources. The Keeper of the National Register of Historic Places determined that Nantucket Sound is eligible for inclusion in the National Register as a traditional cultural property (TCP). Although NMFS recognizes the importance of Nantucket Sound to the Wampanoag Tribe of Gay Head (Aquinnah), NMFS' issuance of an IHA for the harassment of marine mammals is a type of undertaking that does not have the potential to cause effects to historic properties.

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

Response: The proposed survey and the issuance of an IHA are not expected to lead to the introduction of any non-indigenous species into the environment because CWA's vessels would travel to and from ports in Massachusetts, adjacent to Nantucket Sound.

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: The survey and the issuance of an IHA are not expected to set a precedent for future actions with significant effects nor represent a decision in principle regarding future considerations.

To ensure compliance with statutory and regulatory standards, NMFS' actions under section 101(a)(5)(D) of the MMPA must be considered individually and be based on the best available information, which is continuously evolving. Subsequent requests for incidental take authorizations would be evaluated upon their own merits relative to the criteria established in the MMPA, ESA, and NMFS implementing regulations on a case-by-case basis.

As mentioned above, NMFS has issued many authorizations for similar surveys. A finding of no significant impact for this action, and for 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: The seismic survey and the issuance of an IHA would not violate any federal, state, or local laws for environmental protection. Both CWA and NMFS have fulfilled their section 7 responsibilities under the ESA (see response to Question 4), EFH consultation requirements (see response to Question 1), and the MMPA (by submitting an application for an IHA) 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 survey and the issuance of an IHA are not expected to result in any significant cumulative adverse effects on target or non-target species incidentally taken by harassment due to survey activities.

NMFS has issued incidental take authorizations for other similar surveys 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.

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 As evaluated in the EA and materials incorporated by reference, human activities in the region of the proposed survey in Nantucket Sound include vessel traffic, fishing, development, and mining. Those

activities, as described in the EA, when conducted separately or in combination with other activities, could adversely affect marine mammals and sea turtles in the survey area. Because of the relatively small area of ensonification and conservative mitigation measures, the action will not result in synergistic or cumulative adverse effects that could have a substantial effect on any species.

The proposed survey does not target any marine mammal or sea turtle 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 mammals and sea turtles might result in short-term behavioral effects for these marine species within the ensonified zones, but no long-term displacement of marine mammals, endangered species, or their prey is expected as a result of the survey conducted under the requirements of the IHA. Therefore, NMFS does not expect any cumulative adverse effects on any species as a result of the seismic survey.

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 Cape Wind Associates to Take Marine Mammals by Harassment Incidental to a High Resolution Geophysical Survey in Nantucket Sound, Massachusetts,*" and documents that it references, NMFS has determined that issuance of an IHA to CWA for the take, by Level B harassment only, of small numbers of marine mammals incidental to conducting a high resolution geophysical survey in Nantucket Sound in accordance with Alternative 2 in NMFS' 2011 EA will not significantly impact the quality of the human environment, as described in this FONSI, in the EA, and in BOEMRE's EIS.

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

DEC 16 2011

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Date