



MAY 3 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 Two Scientific Research Permits, No. 16109 and No. 15575, for Protected Sea Turtles and Marine Mammals

LOCATION: Atlantic Ocean from Massachusetts to North Carolina.

SUMMARY: The proposed action is issuance of two scientific research permits for takes of marine mammals and sea turtles during vessel surveys, photographic identification, remote video monitoring, and photography and videography. Permit No. 15575 would also include takes for aerial and ground vessel surveys and collection of scat. The purposes of the research are to conduct population assessments to determine seasonal abundance, distribution patterns, migration and behavior of 36 species of cetaceans, four species of pinnipeds, five species of sea turtles, including 11 species which are listed as threatened or endangered. Impacts from these activities would be short-term and minimal to individual animals and negligible to the species. A biological opinion concluded that the proposed action would not likely jeopardize the continued existence of the species and would not likely destroy or adversely modify designated critical habitat. The permits would be valid for five years from the date of issuance.

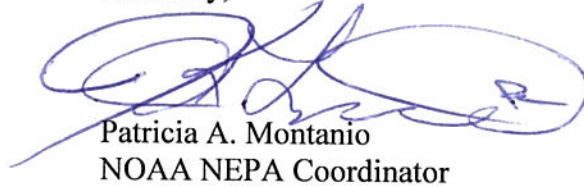
RESPONSIBLE OFFICIAL: Helen M. Golde
Acting Director, Office of Protected Resources
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
1315 East-West Highway, Room 13821
Silver Spring, MD 20910
(301) 427-8400



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



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

Environmental Assessment
on
Effects of Issuing Two Scientific Research Permits, No. 16109 and No. 15575, for Protected
Sea Turtles and Marine Mammals

April 2012

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 Resources

For Further Information Contact: Office of Protected Resources
National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910
(301) 427-8401

Location: Atlantic Ocean (Maine to North Carolina)

Abstract: The National Marine Fisheries Service (NMFS) proposes to issue Scientific Research Permits to GeoMarine, Inc (No. 16109) and Robert A. DiGiovanni Jr., Ph.D. (No. 15575) for takes of marine mammals and sea turtles in the wild, 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.). Both permits would be valid for five years from the date of issuance. Takes authorized under Permit No. 16109 would facilitate data collection that would help to provide a baseline of presence, distribution, abundance, movement patterns, and behavior of marine mammal and sea turtle species in nearshore waters (shoreline to the 30 m isobath) between southern New Jersey and the Virginia/North Carolina border. Takes authorized under Permit No. 15575 would facilitate data collection that would help to assess seasonal abundance and distribution of the North Atlantic right whale (*Eubalaena glacialis*) and other protected marine mammals and sea turtles in the Mid Atlantic waters. Activities would include aerial surveys and vessel surveys for behavioral observations, photo-identification, photography, and videography.



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1.0 PURPOSE OF AND NEED FOR ACTION

Proposed Action: In response to applications from GeoMarine, Inc. (Responsible Party: Jason Holt See), Gustavus, Texas 99826 (File No. 16109) and Robert A. DiGiovanni Jr., Ph.D., Riverhead Foundation for Marine Research and Preservation, Riverhead, New York 11901 (File No. 15575), NMFS proposes to issue scientific research permits authorizing “takes”¹ by Level B harassment² of marine mammals in the wild 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.*).

Purpose of and Need for Action: The MMPA and ESA 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 *bona fide*³ scientific research under Section 104 of the MMPA and for scientific purposes related to species recovery under Section 10(a)(1)(A) of the ESA.

The purpose of the permits is to provide the applicants with an exemption from the take prohibitions under the MMPA and ESA for harassment of marine mammals and sea turtles, including those listed as endangered, during conduct of research that is consistent with the MMPA and ESA issuance criteria.

The need for issuance of these permits is related to the purposes and policies of the MMPA and ESA. 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. Facilitating research about species’ basic biology and ecology or that identifies, evaluates, or resolves specific conservation problems informs NMFS management of protected species. The purposes of research activities conducted by each of the applicants are:

GeoMarine, Inc., File No. 16109: To provide baseline information on 35 species of cetaceans, five species of sea turtles, and four species of pinnipeds to better inform offshore renewable energy developers, regulators, and other stakeholders of the distribution, abundance, behavior, and migration of marine species in nearshore waters of southern New Jersey, Delaware, Maryland, Virginia, and North Carolina, which is a region of significant potential offshore wind farm development. Types of take would include harassment by survey approach during shipboard transect surveys.

¹ Under the MMPA, “take” is defined as to “harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect.” The ESA defines “take” as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

² “Harass” is defined under the MMPA 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 a disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but does not have the potential to injure a marine mammal or marine mammal stock in the wild (Level B harassment).”

³ The MMPA defines bona fide research as “scientific research on marine mammals, the results of which – (A) likely would be accepted for publication in a refereed scientific journal; (B) are likely to contribute to the basic knowledge of marine mammal biology or ecology; or (C) are likely to identify, evaluate, or resolve conservation problems.”

Robert A. DiGiovanni Jr., File No. 15575: To conduct aerial surveys to assess seasonal abundance and distribution of the North Atlantic right whale (*Eubalaena glacialis*) and 43 other protected marine mammal and sea turtle species in U.S. coastal waters from North Carolina to Massachusetts. This research would enhance the Northeast Fisheries Science Center's (NEFSC) Sighting Advisory System and Atlantic Marine Assessment Program for Protected Species surveys. Additional pinniped research would include small vessel surveys conducted to assess seasonal abundance and distribution of pinniped haul outs, along with land based collection of pinniped scat and maintenance of long term remote video systems at these locations.

Other EAs/EISs That Influence Scope of this Environmental Assessment (EA)

The NMFS Permits Division has prepared EAs with Findings of No Significant Impact (FONSI) for issuance of permits to conduct research on the listed and proposed for listing species of marine mammals and sea turtles. Those EAs were prepared to take a closer look at potential environmental impacts of permitted research on marine mammals and sea turtles listed as threatened or endangered, and not because the Permits Division determined that significant adverse environmental impacts were expected or that the a categorical exclusion was not applicable. As each EA demonstrates, and each FONSI has documented, research on marine mammals and sea turtles generally does not have a potential for significant adverse impacts on marine mammal or sea turtle populations or any other component of the environment.

GeoMarine, Inc. has been authorized to conduct similar research in the past under Permit No. 10014 held by the New Jersey Department of Environmental Protection (NJDEP). GeoMarine, Inc. currently holds an LOC (File No. 16232) to conduct visual surveys, close approach, photo-identification, and behavioral observations of non-ESA listed marine mammals along the coast from New Jersey to North Carolina and extending from 19 to 36 nautical miles (NM) offshore. The applicant's proposed activities on marine mammals and sea turtles have been analyzed in several NEPA documents (see below).

Mr. DiGiovanni has been authorized to conduct similar research in the past under Permit No. 1036-1744 and LOC No. 1036-1689. The applicant's proposed activities on marine mammals and sea turtles have been analyzed in several NEPA documents (see below).

The NEPA documents that contain analyses relevant to the proposed action include:

- *Environmental Assessment On Issuance Of Permits For Aerial And Vessel Surveys Of Marine Mammals In The Western North Atlantic* (NMFS 2005).

The EA was prepared for issuance of four research permits and describes the effects of research activities of collecting information on collection of information on the distribution and abundance in coastal and adjacent waters of the eastern U.S. of ESA-listed and non-listed marine mammals using close approaches during aerial and vessel surveys for photo-identification. A Finding of No Significant Impact (FONSI) was signed on April 20, 2005.

Robert A. DiGiovanni Jr.'s previous permit, No. 1036-1744, was one of the actions in this analysis.

- *Environmental Assessment Scientific Research Permit to New Jersey Department of Environmental Protection, Division of Science, Research and Technology, (Permit No. 10014) to Conduct Research on Protected Sea Turtles and Marine Mammals (NMFS 2007).*

The EA was prepared for issuance of one research permit and describes the effects of research activities of collecting information on the basic biology, ecology, and stock structure of ESA-listed large whale and sea turtle species, and several other non-listed cetacean and pinniped species using close approaches during aerial and vessel surveys for photo-identification. A FONSI was signed December 20, 2007.

NJDEP's (who contracted GeoMarine, Inc.) previous permit, No. 10014, was part of this analysis.

- *Supplemental Environmental Assessment on the Issuance of a Scientific Research Permit to the National Marine Fisheries Service Northeast Fisheries Science Center [Responsible Party: Dr. Nancy Thompson] to Conduct Research on Marine Mammals in the North Atlantic Ocean (NMFS 2008).*

The EA was prepared for issuance of one scientific research permit and describes the effects of collecting information on the basic biology, ecology, and stock structure of ESA-listed large whale species, and several other non-listed cetacean and pinniped species using a subset of the original research methodologies, target species, and action area. A FONSI was signed January 9, 2008.

- *Environmental Assessment for the Issuance of Scientific Research Permits for Research on Humpback Whales and Other Cetaceans (NMFS 2010)*

The EA was prepared for issuance of eight scientific research permits and describes the effects of collecting information on the biology, foraging ecology, behavior, and communication of a variety of marine mammal species in the Pacific Ocean, with a focus on humpback whales using aerial and vessel surveys for behavioral observations, photo-identification, underwater photography and videography, collection of sloughed skin and feces, sampling whale blows, passive acoustic recordings, export and re-import of parts, tags attached by suction cup or by implanting darts, barbs, or a portion of the tag into the skin and blubber, biopsy sample collection, and acoustic playbacks. A Finding of No Significant Impact (FONSI) was signed July 14, 2010.

Scope of Environmental Assessment: This EA focuses primarily on effects on North Atlantic right whale, humpback whale (*Megaptera novaeangliae*), sei whale (*Balaenoptera borealis*), fin whale (*B. physalus*), blue whale (*B. musculus*), sperm whale (*Physeter macrocephalus*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), Kemp's

ridley sea turtle (*Lepidochelys kempii*), green sea turtle (*Chelonia mydas*), and hawksbill sea turtle (*Eretmochelys imbricata*) listed as threatened or endangered under the ESA.

The National Oceanic and Atmospheric Administration (NOAA) has, in NOAA Administrative Order 216-6 (NAO 216-6; 1999), listed issuance of permits for research on marine mammals and threatened and endangered species as categories of actions that “do not individually or cumulatively have a significant effect on the human environment...” and which therefore do not require preparation of an EA or environmental impact statement (EIS). A possible exception to the use of these categorical exclusions is when the action may adversely affect species listed as threatened or endangered under the ESA (NAO 216-6 Section 5.05c).

There is no evidence from prior analyses⁴ of the effects of permit issuance, or from monitoring reports submitted by permit holders⁵, that issuance of research permits for take of marine mammals and sea turtles listed under the ESA results in adverse impacts on stocks or species. Nevertheless, NMFS has prepared this EA, with a more detailed analysis of the potential for adverse impacts on threatened or endangered species resulting from takes of a specified number of individuals to assist in making the decision about permit issuance under the MMPA and ESA.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

Alternative 1 - No Action: Under the No Action alternative, no permits would be issued and the applicants would not receive an exemption from the MMPA and ESA prohibitions against take. This action would not set a precedent for decisions on future actions. Other permit requests would continue to be considered and all other existing permits would remain in effect.

Alternative 2 - Proposed Action: Under the Proposed Action alternative, the proposed permits would be issued to exempt the applicants from MMPA and ESA take prohibitions during conduct of research that is consistent with the purposes and policies of the MMPA and ESA and applicable permit issuance criteria.

Methods: The research protocols are described in detail in each of the applications⁶ on file for the action and are briefly summarized here. The experimental protocols consist of aerial and vessel surveys, photo-identification, observation and close approach.

The following is a summary of the applicants’ requests to take marine mammals and sea turtles.

⁴ Since 2005, NMFS has prepared over 100 EAs for issuance of permits under the MMPA and ESA. In every case, the EA supported a finding of no significant impact regardless of the nature of the permitted take or the status of the species that were the subject of the permit. These EAs were accompanied by Biological Opinions prepared pursuant to interagency consultation under section 7 of the ESA and further document that such permits are not likely to adversely affect listed species.

⁵ All NMFS permits for research on marine mammals and sea turtles require submission of annual reports, which include information on responses of animals to the permitted takes.

⁶ Scientific research permit applications will become available for review on the Applications and Permits for Protected Species (APPS) home page, <https://apps.nmfs.noaa.gov> and upon written request or by appointment in the respective NMFS Regional offices during the public comment period.

GeoMarine, Inc. File No. 16109:

The objectives of the applicant's research are to elucidate the distribution and abundance of 35 species of cetaceans, four species of pinnipeds and five species of sea turtles. Types of take would include harassment by approach during shipboard transect surveys (see Appendix 1 for take numbers). The permit would contain terms and conditions standard to such permits as issued by NMFS.

Close vessel approach for photo-identification and behavioral observations

Surveys would be conducted at ~10 knots along random tracklines in a saw-tooth pattern from the University of Delaware's R/V Sharp (146 ft) to collect data for estimating abundance of cetaceans. The University of Delaware designed and constructed an observation deck on the R/V Sharp specifically for marine mammal surveys for the New Jersey Department of Environmental Protection Environmental Baseline Study (NJDEP EBS).

Visual observations would be recorded from the flying bridge (10 m [32.81 ft] above water) during daylight hours. The vessel would remain in passing mode if species identification and group estimates can be obtained while remaining on the trackline. If necessary, the vessel would veer off the trackline to approach the individual or group (closing mode) to obtain this information. A minimum approach distance of 50 yards would be maintained for all protected species, except endangered whales which would have a minimum approach distance of 100 yards unless not practicable. The duration of observations would be limited to 30 minutes. Approaches would be limited to once per day for an individual if they are able to confirm the identity of the individual. Approaches would be made at less than 10 knots and would parallel the course and speed of the animals. Some animals or species listed in the take table may be incidentally harassed when approaching other species for behavioral observations.

During close vessel approaches for all activities (Level B harassment), disturbance to animals would be minimized by:

- Approaching at minimal speeds from behind or beside the group.
- Remaining parallel to the animals.
- Matching speed with the group.
- Minimizing changes in speed.
- Terminating activities if active avoidance is occurring.
- Not conducting activities if other vessels are in the immediate vicinity of whales.
- Consulting with other researchers in the area to: avoid harassing the same animals, explore collaborations, contribute to the cumulative research in the area, and share photo-identification images.

Action area: Research would occur along the 30 m isobath since this is the depth limit for the wind turbines which are planned for development along the east coast. The width of the action area ranges from 19 to 36 NM offshore from New Jersey to North Carolina.

Duration: Surveys would be conducted once per season to maximize survey time during known migration periods: July (summer survey), November (fall survey), February (winter survey), April (spring survey). Each survey is anticipated to take approximately eight days to complete depending on the hours of available daylight.

DiGiovanni, File No. 15575:

The research protocols are described in detail in the application on file for this action and are briefly summarized here. Proposed research would take place throughout the year, with the majority of effort likely to be in the New York Bight and surrounding waters. Additional effort would occur along the east coast from Massachusetts to North Carolina. Research would target 32 species of cetaceans, four species of pinnipeds, four species of sea turtles, as well as unidentified marine mammal and sea turtle species (see Appendix 2 for details on take numbers and activities for each species).

Aerial Surveys

Level B harassment of marine mammals and sea turtles would occur primarily from aerial surveys. Aerial surveys would occur at 600-1000 ft at 100 knots in fixed wing aircraft lasting up to seven hours per flight. Surveys would follow standardized aerial survey protocols established by the Northeast Fisheries Science Center and would not be flown with a sea state greater than Beaufort 6 or visibility less than two miles. The aircraft may circle up to six times over sighted animals (except for haul outs) for identification and photo-id.

Disturbance to animals would be minimized during aerial surveys by:

- Limiting circling to the minimum time necessary to achieve objectives.
- Terminating activities if avoidance behavior is observed.
- Avoiding over flights of pinniped haul outs.
- Avoiding known pinniped rookeries.

Close vessel approach for photo-identification

Additional Level B harassment would occur from vessel surveys of pinniped haul outs. Opportunistic sighting and photo-id data of all requested species would be collected during transits to and from the haul out locations. Surveys would be conducted on vessels up to 24 ft in length at a survey speed of 10 knots, lasting up to 12 hours. In transit, target species (e.g. right whales) may be approached to a minimum of 20 yards if sighted, for species confirmation and photo-identification. Surveys of inhabited pinniped haul outs would last no longer than 30 minutes at a minimum distance of 20 yards.

During close vessel approach for all activities (Level B harassment), disturbance to animals would be minimized by:

- Approaching at minimal speeds from behind or beside the group.
- Terminating activities if active avoidance is occurring.

Land based research for scat collection and placement of remote video systems

Land based research on pinniped haul out sites would also occur. Haul out sites vacated prior to arrival or due to non-research activity (recreational and commercial boaters, kayakers, etc.), would be entered on foot for the purposes of collecting pinniped scat for health studies. In addition, remote video camera systems installed during the off season when no pinnipeds are present, which are used for long term monitoring of behavior and abundance of pinnipeds, would

be maintained. These activities would not result in Level A or B harassment since no pinnipeds would be present. The takes authorized for land based activities would be for the collection of marine mammal parts.

Action Area: Research would occur along the mid-Atlantic inshore waters out to the continental shelf break as well as bays and estuaries from Massachusetts to North Carolina. Bays and estuaries would include Long Island Sound, Great South Bay Estuary Reserve, Peconic Bay Estuary in New York and the Chesapeake Bay, Virginia. The area would not extend greater than 110 miles offshore in northern waters and 70 miles in the southern regions.

Duration: Aerial surveys would occur up to six times per month per 350 square mile survey area which is the average limit of available survey area during a single flight. Vessel and land-based surveys will occur approximately once per month.

3.0 AFFECTED ENVIRONMENT

The research involves approaching groups of animals, including some ESA-listed or MMPA-depleted species, and these species are considered part of the affected biological environment. Specific species that would be taken during the proposed action and types of takes requested for each permit are listed in Appendix 1 and 2. A brief description of the species targeted for research under the proposed action is below (Table 1), summarized from NMFS Stock Assessment Reports (SAR); additional information on the status of these species can be found in the SAR's and/or in the NMFS Recovery Plans for these species. All marine mammal stocks/species listed under the ESA are also considered depleted under the MMPA.

The permits would authorize takes of all marine mammals and sea turtles potentially disturbed by the proposed activities. This is consistent with the MMPA definition of level B harassment in which actions with a potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns including migration, breathing, nursing, breeding, feeding, or sheltering are considered a take. The inclusion of "potential to" in this definition means that the take occurs regardless of whether there is a disruption in the behavioral patterns of the marine mammals or sea turtles exposed to the action.

Research activities are: abundance and density estimation, photo-identification, and behavioral observations through vessel and aerial surveys; and shore based activities near pinniped haul outs (See Appendix 1 and 2 for information on specific takes requested by permit.)

Table 1. ESA-listed species targeted for study in the proposed action, by permit, and proposed activity that could lead to harassment. Permit No. 16109 = GeoMarine, Inc. and 15575 = Mr. Robert DiGiovanni.

Species	MMPA Stock/ ESA Listing Unit/	Permit No.	Vessel Survey	Aerial Survey
Humpback whale	Gulf of Maine Stock (NMFS Endangered)	16109	X	
		15575	X	X
Blue whale	Western North Atlantic Stock (NMFS Endangered)	16109	X	
		15575	X	X
Fin whale	Western North Atlantic Stock (NMFS Endangered)	16109	X	
		15575	X	X
Sei whale	Nova Scotia Stock (NMFS Endangered)	16109	X	
		15575	X	X
Sperm whale	North Atlantic Stock (NMFS Endangered)	16109	X	
		15575	X	X
North Atlantic right whale	Western North Atlantic Stock (NMFS Endangered)	16109	X	
		15575	X	X
Leatherback sea turtle	Range-wide (NMFS Endangered)	16109	X	
		15575	X	X
Loggerhead sea turtle	Range-wide (NMFS Threatened)	16109	X	
		15575	X	X
Kemp's ridley sea turtle	Range-wide (NMFS Endangered)	16109	X	
		15575	X	X
Green sea turtle	Range-wide (NMFS Threatened)	16109	X	
		15575	X	X
Hawksbill sea turtle	Range-wide (NMFS Endangered)	16109	X	
		15575	X	X

Status of Target Species

Humpback whales: Humpback whales, throughout their range, are listed as depleted under the MMPA and endangered under the Endangered Species Act (ESA). NMFS is conducting a status

review of humpback whales under the ESA to ensure that the listing classification of the species is accurate. The status review will be based on the best available scientific and commercial data.

The Gulf of Maine stock (formerly known as Western North Atlantic stock) of humpback whales includes relatively discrete sub-populations which feed during summer in the waters of the Gulf of Maine, the Gulf of St. Lawrence, Newfoundland/Labrador, and western Greenland (Katona and Beard 1990). Other North Atlantic feeding grounds occur off Iceland and northern Norway (Christensen et al. 1992). In the winter, whales from all six feeding areas (including the Gulf of Maine) mate and calve primarily in the West Indies, where spatial and genetic mixing among sub-populations occurs (Clapham et al. 1993; Katona and Beard 1990; Stevick et al. 1998). Humpback whales also use the Mid-Atlantic as a migratory pathway and apparently as a feeding area, at least for juveniles. Since 1989, observations of juvenile humpbacks in that area have been increasing during the winter months, peaking January through March, particularly in the vicinity of the Chesapeake and Delaware Bays (Swingle et al. 1993). Humpbacks can be found in waters off of Florida. Biologists theorize that non-reproductive animals may be establishing a winter feeding range in the Mid-Atlantic because they are not participating in reproductive behavior in the Caribbean.

The best population estimate for the stock is 847 whales with a PBR of 1.1 whales annually (Waring et al. 2009). Although the most recent abundance estimates indicate continued population growth, the size of the Gulf of Maine humpback whale stock may be below the optimum sustainable population in the U.S. Atlantic EEZ. Barlow and Clapham (1997) estimated a rate of population increase of at 6.5 percent for this stock.

The total level of human-caused mortality and serious injury is unknown, but may be slowing recovery of the population. The main sources of human-caused serious injury and mortality are entanglement in fishing gear and vessel collisions. On average 2.4 animals are seriously injured or killed as a result of fishery interactions and another 1.6 whales due to vessel collisions annually (Glass et al. 2009). The total level of U.S. fishery-caused mortality and serious injury is unknown, but reported levels are more than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant or approaching zero mortality and serious injury rate.

Blue Whale: Blue whales, throughout their range, are listed as depleted under the MMPA and endangered under the Endangered Species Act (ESA).

Compared to the other species of large whales, relatively little is known about the blue whale. Blue whales are found mainly in deep waters east of the U.S. Atlantic EEZ. In the North Atlantic, the blue whales range from the subtropics to Baffin Bay and the Greenland Sea (Yochem and Leatherwood 1985). Their southern migration limit is unknown; although there have been sightings in the Gulf of Mexico and off of Florida. Blue whales are highly mobile, spending little time in any one area. The bulk of their diet is composed of large euphausiid crustaceans (*Thysanoessa inermis* and *Meganyctiphanes norvegica*). Fish and copepods may also be consumed but are not likely to be significant components of the diet (NMFS 1998).

There are insufficient data to determine the status and trends of the blue whale population in the western North Atlantic stock (Waring et al. 2002). The Recovery Plan for the blue whale

(NMFS 1998) summarizes what is known about blue whale abundance in the western North Atlantic and concludes that the population probably numbers in the low hundreds. More than 440 individuals were photo-identified in the Gulf of St. Lawrence between 1979-2009 (R. Sears, pers. comm., as quoted by NMFS 2010). Blue whales are listed as endangered under the ESA and depleted under the MMPA.

Fin Whale: Fin whales, throughout their range, are listed as depleted under the MMPA and endangered under the Endangered Species Act (ESA). A Recovery Plan was published in 2010 for this species.

The fin whale is ubiquitous in the North Atlantic and occurs from the Gulf of Mexico and Mediterranean Sea northward to the edges of the arctic ice pack (NMFS 1998a). The overall pattern of fin whale movement is complex, consisting of a less obvious north-south pattern of migration than that of North Atlantic right and humpback whales. Based on acoustic recordings from hydrophone arrays, however, Clark (1995) reported a general southward flow pattern of fin whales in the fall from the Labrador/Newfoundland region, south past Bermuda, and into the West Indies. Generally, fin whales are found from Cape Hatteras, North Carolina northward. The overall distribution may be based on prey availability, and fin whales are found throughout the action area. Based on stranding data, fin whales are believed to calve in the Mid-Atlantic (Hain et al. 1992). Fin whales are larger and faster than humpback and right whales and are less concentrated in nearshore environments. Insufficient data are available to determine status and trends of the western North Atlantic stock of the fin whale population (Waring et al. 2006). The current population estimate of 3,985 animals was derived from an aerial survey conducted in August 2006 and from the July-August 2007 northern Labrador to Scotian Shelf survey (Waring et al. 2010).

For the period 2003 through 2007, the minimum annual rate of human-caused mortality and serious injury to fin whales was 2.8 per year (U.S. waters, 2.0; Canadian waters, 0.8) (Glass et al. 2009). The total U.S. fishery-related mortality and serious injury for this stock derived from the available records is not less than 10% of the calculated PBR, and therefore cannot be considered insignificant and approaching the Zero Mortality Rate Goal (ZMRG).

Sei Whale: Sei whales, throughout their range, are listed as depleted under the MMPA and endangered under the Endangered Species Act (ESA).

The southern portion of this stock's range is the Gulf of Maine and Georges Bank. Sei whales are not common in the U.S. Atlantic waters south of this location. The southernmost confirmed records are strandings along the northern Gulf of Mexico and in the Greater Antilles. Sei whales are generally found in deeper waters, characteristic of the continental shelf edge region (Hain et al. 1985). The sei whale population in the western North Atlantic is assumed to consist of two stocks, a Nova Scotian Shelf stock and a Labrador Sea stock. Within the action area, the sei whale is commonly distributed on Georges Bank and into the Gulf of Maine/Bay of Fundy region during spring and summer, primarily in deeper waters. Individuals may range as far south as North Carolina. There are occasional influxes of this species further into Gulf of Maine waters, presumably in conjunction with years of high copepod abundance inshore. Sei whales are occasionally seen feeding in association with northern right whales in the southern Gulf of

Maine and in the Bay of Fundy. There are insufficient data to determine trends of the sei whale population in the North Atlantic. Because there are no abundance estimates within the last ten years, a minimum population estimate cannot be determined for NMFS management purposes (Waring et al. 2006). Abundance surveys are problematic as this species is difficult to distinguish from the fin whale.

The best population estimate of 386 animals was derived from vessel and aerial surveys conducted between June and August 2004 (Palka 2006). For the period 2003 through 2007, the minimum annual rate of human-caused mortality and serious injury to sei whales was 0.8. This value includes incidental fishery interaction records, 0.2, and records of vessel collisions, 0.6 (Glass et al. 2009).

Sperm Whale: Sperm whales, throughout their range, are listed as depleted under the MMPA and endangered under the Endangered Species Act (ESA). A status review was concluded in 2009 and a Recovery Plan was published in 2010 for this species.

Sperm whales are the largest of the toothed whales. There are five stocks of sperm whales. The sperm whale occurs throughout the U.S. EEZ on the continental shelf edge, over the continental slope, and into the mid-ocean regions. In winter, sperm whales of the North Atlantic stock are concentrated east and northeast of Cape Hatteras, North Carolina. In spring, the center of distribution is east of Delaware and Virginia. Summer distribution extends east and north of Georges Bank and into the Northeast Channel region, as well as the continental shelf south of New England. The occurrence of sperm whales south of New England on the continental shelf is highest in the fall. They prey on large mesopelagic (living at depths from 200 to 1,000 m) squid, other cephalopods (e.g., octopus), demersal (living near the bottom) fish, and occasionally benthic (bottom dwelling) fish. Sperm whales are capable of diving to depths of more than 1,000 m for durations of more than 60 minutes. The best estimate of abundance of the Western North Atlantic stock is 4,804 (Waring et al. 2007).

North Atlantic Right Whale: North Atlantic Right whales, throughout their range, are listed as depleted under the MMPA and endangered under the ESA.

The western stock of North Atlantic right whales range from their winter calving grounds in coastal waters of the southeastern United States to their spring feeding and nursery grounds in New England waters extending northward to the Bay of Fundy and the Scotian shelf in summer. However, the location of a large segment of the population is unknown during winter, and data from a limited number of satellite-tagged whales suggests an extended range, at least for some individuals. There are at least five major habitats or congregation areas for this stock of right whales: the coastal waters of the southeastern United States, the Great South Channel, Cape Cod and Massachusetts Bays, the Bay of Fundy, and the Scotian Shelf. Critical habitat has been designated for right whales in the Atlantic Ocean in Cape Cod Bay, Great South Channel, and coastal waters off the southeastern United States.

The western North Atlantic population size was estimated to be at least 361 individuals in 2005 based on a census of individual whales identified using photo-identification techniques. Recent mortalities, including those in the first half of 2005, suggest an increase in the annual mortality

rate (Kraus et al. 2005). Research using the North Atlantic Right Whale Catalogue has indicated that, annually, between 14% and 51% of right whales are involved in entanglements (Knowlton et al. 2005). Ship strikes are also a major cause of mortality and injury to right whales (Kraus 1990; Knowlton and Kraus 2001). In records from 2003 through 2007, mortality and serious injury to right whales due to ship strikes were 2.8 whales per year (U.S. waters, 2.2; Canadian waters, 0.6).

Given the small population size and low reproductive rate, human-related mortalities may be the principal factors inhibiting growth and recovery of the population. In order to reduce the threat of ship collisions with North Atlantic right whales, NMFS issued a final rule to implement speed restrictions in 2008.

Green sea turtle: Green sea turtles are distributed around the world, mainly in waters between the northern and southern 20° C isotherms (Hirth 1971). The complete nesting range of the green sea turtle within the southeastern United States includes sandy beaches of mainland shores, barrier islands, coral islands, and volcanic islands between Texas and North Carolina and at the U.S. Virgin Islands (USVI) and Puerto Rico (NMFS and USFWS 1991). Principal U.S. nesting areas for green turtles are in eastern Florida, predominantly Brevard through Broward counties. Regular green sea turtle nesting also occurs on the U.S. Virgin Islands and Puerto Rico.

Green sea turtle mating occurs in the waters off the nesting beaches. Each female deposits 1-7 clutches (usually 2-3) during the breeding season at 12 to 14 day intervals. Mean clutch size is highly variable among populations, but averages 110-115 eggs. After hatching, green sea turtles go through a post-hatchling pelagic stage where they are associated with drift lines of algae and other debris.

The green sea turtle was listed as threatened in 1978, except for the Florida and Pacific coast of Mexico breeding populations that were listed as endangered. Critical habitat for the green sea turtle has been designated for the waters surrounding Isla Culebra, Puerto Rico and its associated keys from the mean high water line seaward to three nautical miles (5.6 km). Key physical or biological features essential for the conservation of the green sea turtle found in this designated critical habitat include important food resources and developmental habitat, water quality, and shelter.

Hawksbill sea turtle: The hawksbill sea turtle occurs in tropical and subtropical seas of the Atlantic, Pacific, and Indian Oceans. The species is widely distributed in the Caribbean Sea and western Atlantic Ocean, with representatives of at least some life history stages regularly occurring in southern Florida and the northern Gulf of Mexico (especially Texas); in the Greater and Lesser Antilles; and along the Central American mainland south to Brazil.

Within the United States, hawksbills are most common in Puerto Rico and its associated islands, and in the USVI. In the continental United States, hawksbill sea turtles have been recorded from all the Gulf States and from along the eastern seaboard as far north as Massachusetts, with the exception of Connecticut, however sightings north of Florida are rare (Meylan and Donnelly 1999). They are closely associated with coral reefs and other hard-bottom habitats, but they are also found in other habitats including inlets, bays, and coastal lagoons. At least some life history

stages regularly occur in southern Florida and the northern Gulf of Mexico (especially Texas); in the Greater and Lesser Antilles; and along the Central American mainland south to Brazil.

In Florida, hawksbills are observed with some regularity on the reefs off Palm Beach County, where the warm Gulf Stream current passes close to shore, and in the Florida Keys. Texas is the only other state where hawksbills are sighted with any regularity. Most sightings involve post-hatchlings and juveniles.

The life history of hawksbills consists of a pelagic stage that lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 cm in straight carapace length (Meylan 1988), followed by residency in developmental habitats (foraging areas where immature turtles reside and grow) in coastal waters. Adult foraging habitat, which may or may not overlap with developmental habitat, is typically coral reefs, although other hard-bottom communities and occasionally mangrove-fringed bays may be occupied. Hawksbills show fidelity to their foraging areas over periods of time as great as several years (van Dam and Diez 1998).

In the Western Atlantic, the largest hawksbill nesting population occurs in the Yucatán Peninsula of Mexico, where several thousand nests are recorded annually in the states of Campeche, Yucatán, and Quintana Roo (Garduño-Andrade et al. 1999). Important but significantly smaller nesting aggregations are documented elsewhere in the region in Puerto Rico, the USVI, Antigua, Barbados, Costa Rica, Cuba, and Jamaica (Meylan 1999b). Estimates of the annual number of nests for each of these areas are of the order of hundreds to a few thousand. Nesting within the southeastern United States and U.S. Caribbean is restricted to Puerto Rico (>650 nests/yr), the USVI (~400 nests/yr), and, rarely, Florida (0-4 nests/yr) (Meylan 1999, Florida Statewide Nesting Beach Survey database). At the two principal nesting beaches in the U.S. Caribbean where long-term monitoring has been carried out, populations appear to be increasing (Mona Island, Puerto Rico) or stable (Buck Island Reef National Monument, St. Croix, USVI) (Meylan 1999b).

The hawksbill sea turtle was listed as endangered under the ESA in 1970, and is considered Critically Endangered by the International Union for the Conservation of Nature (IUCN) based on global population declines of over 80 percent during the last three generations (105 years) (Meylan and Donnelly 1999). Critical habitat for the hawksbill sea turtle is designated under 50 CFR 226.209. It includes the waters surrounding the islands of Mona and Monito, Puerto Rico from the mean high water line seaward to three nautical miles (5.6 km).

Kemp's ridley sea turtle: Of the seven extant species of sea turtles of the world, the Kemp's ridley has declined to the lowest population level. This species has a very restricted range relative to other sea turtle species. Kemp's ridleys nest in daytime aggregations known as arribadas, primarily at Rancho Nuevo, a stretch of beach in Mexico. Most of the population of adult females nests in this single locality (Pritchard 1969). When nesting aggregations at Rancho Nuevo were discovered in 1947, adult female populations were estimated to be in excess of 40,000 individuals (Hildebrand 1963). By the early 1970s, the world population estimate of mature female Kemp's ridleys had been reduced to 2,500-5,000 individuals. The population declined further through the mid-1980s. Recent observations of increased nesting suggest that the decline in the ridley population has stopped and there is cautious optimism that the

population is now increasing (Turtle Expert Working Group (TEWG) 1998). The number of nests has grown from a low of approximately 702 nests in 1985, to approximately 12,000 nests in 2006 suggesting that the adult nesting female population is about 7,400 individuals.

It appears that adult Kemp's ridley sea turtles are restricted somewhat to the Gulf of Mexico in shallow near shore waters, although adult-sized individuals sometimes are found on the eastern seaboard of the United States. Juvenile/subadult Kemp's ridleys have been found along the eastern seaboard of the United States and in the Gulf of Mexico. Atlantic juveniles/subadults travel northward with vernal warming to feed in the productive, coastal waters of Georgia through New England, returning southward with the onset of winter to escape the cold (Lutcavage and Musick 1985; Henwood and Ogren 1987; Ogren 1989). In the Gulf, juvenile/subadult ridleys occupy shallow, coastal regions. The near shore waters of the Gulf of Mexico are believed to provide important developmental habitat for juvenile Kemp's ridley sea turtles. Ogren (1988) suggests that the Gulf coast, from Port Aransas, Texas, through Cedar Key, Florida, represents the primary habitat for subadult ridleys in the northern Gulf of Mexico. Ogren (1989) suggested that in the northern Gulf this species moves offshore to deeper, warmer water during winter. Studies suggest that subadult Kemp's ridleys stay in shallow, warm, nearshore waters in the northern Gulf of Mexico until cooling waters force them offshore or south along the Florida coast (Renaud 1995). Little is known of the movements of the post-hatching, planktonic stage within the Gulf. Studies have shown the post-hatchling pelagic stage varies from 1-4 or more years, and the benthic immature stage lasts 7-9 years (Schmid and Witzell 1997).

The Kemp's ridley was listed as endangered on December 2, 1970. There is no designated critical habitat for the Kemp's ridley sea turtle.

Leatherback sea turtle: Leatherback turtles are the largest living sea turtle and utilize both coastal and pelagic waters. In the western Atlantic, adults routinely migrate between boreal, temperate and tropical waters, presumably to optimize both foraging and nesting opportunities (Bleakney 1965; Lazell 1980). Leatherbacks are deep divers, with recorded dives to depths in excess of 1000 m (Eckert et al. 1989), but they may come into shallow waters if there is an abundance of jellyfish near shore. Tag data recorded by Eckert et al. (1989) indicate that leatherbacks are night feeders.

The leatherback ranges farther than any other sea turtle species, exhibiting broad thermal tolerances (NMFS and USFWS 1995). Leatherbacks are widely distributed throughout the oceans of the world, and are found throughout waters of the Atlantic, Pacific, Caribbean, and the Gulf of Mexico (Ernst and Barbour 1972). Adult leatherbacks forage in temperate and subpolar regions from 71° N to 47° S latitude in all oceans and undergo extensive migrations between 90° N and 20° S, to and from the tropical nesting beaches. In the Atlantic Ocean, leatherbacks have been recorded as far north as Newfoundland, Canada, and Norway, and as far south as Uruguay, Argentina, and South Africa (NMFS SEFSC 2001). Female leatherbacks nest from the southeastern United States to southern Brazil in the western Atlantic and from Mauritania to Angola in the eastern Atlantic. The most significant nesting beaches in the Atlantic, and perhaps in the world, are in French Guiana and Suriname (NMFS SEFSC 2001). Leatherbacks are predominantly pelagic, however they can be found in near shore waters.

The Turtle Expert Working Group (TEWG) (2007) estimated the adult leatherback sea turtle population of the North Atlantic to be approximately 34,000-94,000 animals. The range of the estimate is large, reflecting the Working Group's uncertainty in nest numbers and their extrapolation to adults. The Working Group believes that as estimates improve the range would likely decrease. However, this is the most current estimate available. It is important to note that while the analysis provides an estimate of adult abundance for all populations in the greater North Atlantic, it does not provide estimates for the number or origin of leatherbacks in specific foraging areas, nor does it provide an estimate of subadult abundance. Trends in the adult population size estimate were not possible since trends in sex ratio and remigration rates were not available (TEWG 2007).

The leatherback was listed as endangered on June 2, 1970. Critical habitat for the leatherback includes the waters adjacent to Sandy Point, St. Croix, USVI, up to and inclusive of the waters from the hundred fathom curve shoreward to the level of the mean high tide with boundaries at 17° 42' 12" North and 65° 50' 00" West. Key physical or biological features essential for the conservation of the leatherback sea turtle found in this designated critical habitat include elements important for reproduction.

Loggerhead sea turtle: Loggerheads occur throughout the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans and inhabit continental shelves and estuarine environments. Developmental habitat for small juveniles includes the pelagic waters of the North Atlantic Ocean and the Mediterranean Sea.

Non-nesting, adult female loggerheads are reported throughout the United States and Caribbean Sea; however, little is known about the distribution of adult males who are seasonally abundant near nesting beaches during the nesting season. Aerial surveys suggest that loggerheads (benthic immatures and adults) in U.S. waters are distributed in the following proportions: 54 percent in the southeast U.S. Atlantic, 29 percent in the northeast U.S. Atlantic, 12 percent in the eastern Gulf of Mexico, and 5 percent in the western Gulf of Mexico (TEWG 1998).

The recent loggerhead status review (Conant et al. 2009) concluded that there are nine loggerhead distinct population segments (DPSs). These include the North Pacific Ocean DPS; the South Pacific DPS; the North Indian Ocean DPS; the Southeast Indo-Pacific Ocean DPS; the Southwest Indian Ocean DPS; the Northwest Atlantic Ocean DPS; the Northeast Atlantic Ocean DPS; the Mediterranean Sea DPS; and the South Atlantic Ocean DPS. While NMFS has not yet officially recognized these DPSs, the information provided in the status review represents the most recent and available information relative to the status of this species. On March 16, 2010 NMFS published a Notice of a Proposed Rule (75 FR 12598) to formally designate the loggerhead with these nine DPS' worldwide. The notice also stated that NMFS plans to reclassify both DPS' within the United States as endangered (N. Pacific DPS and Northwest Atlantic Ocean DPS).

The loggerhead was listed as a threatened species in 1978. Critical habitat has not been designated for the loggerhead.

Status of Other Marine Mammals

The permit applications summarize the status of the other marine mammals in the project area that may be affected by the action and for which takes are requested. The only non-ESA affected species listed as depleted under the MMPA is the Western North Atlantic coastal stock of bottlenose dolphin (*Tursiops truncatus*). The other affected marine mammal species are from robust populations that are either stable or increasing in size. More information about each stock may be found in the respective SARs (Waring et al. 2011), which are provided below and available online at <http://www.nmfs.noaa.gov/pr/sars/species.htm>.

Table 2. Non-ESA listed species targeted for study in the proposed action, by permit, and proposed activity that could lead to harassment. Permit No., 16109 = GeoMarine, Inc. and 15575 = Robert DiGiovanni

Species	Stock	Permit No.	Vessel Survey	Aerial Survey
Dolphin, Atlantic spotted	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, Atlantic white-sided	Western North Atlantic Stock	16109	X	
Dolphin, bottlenose	Western North Atlantic Coastal Stock	16109	X	
	Western North Atlantic Offshore Stock	16109	X	
	Range-wide	15575	X	X
Dolphin, clymene	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, common, short-beaked	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, Fraser's	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, pantropical spotted	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, Risso's	Western North Atlantic Stock	16109	X	
		15575	X	X
	Western North	16109	X	

Species	Stock	Permit No.	Vessel Survey	Aerial Survey
Dolphin, spinner	Atlantic Stock	15575	X	X
Dolphin, striped	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, rough-toothed	Western North Atlantic Stock	16109	X	
		15575	X	X
Dolphin, white-beaked	Western North Atlantic Stock	16109	X	
		15575	X	X
Porpoise, harbor	Gulf of Maine/Bay of Fundy Stock	16109	X	
		15575	X	X
Whale, Bryde's	Range-wide	16109	X	
		15575	X	X
Whale, Cuvier's beaked	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, melon-headed	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, Mesoplodon beaked	Western North Atlantic Stock	16109	X	
Whale, minke	Canadian East Coastal Stock	16109	X	
	Range-wide	15575	X	X
Whale, northern bottlenose	Western North Atlantic Stock	16109	X	
		15575		X
Whale, pilot, long-finned	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, pilot, short-finned	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, false killer	Range-wide	15575	X	X
Whale, pygmy	Western North	16109	X	

Species	Stock	Permit No.	Vessel Survey	Aerial Survey
killer	Atlantic Stock	15575	X	X
Whale, killer	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, pygmy sperm	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, Gervais' beaked	Range-wide	16109	X	
		15575	X	X
Whale, Sowerby's beaked	Range-wide	16109	X	
		15575		X
Whale, True's beaked	Range-wide	16109	X	
		15575	X	X
Whale, dwarf sperm	Western North Atlantic Stock	16109	X	
		15575	X	X
Whale, beluga	Range-wide	15575	X	X
Seal, harbor	Western North Atlantic Stock	16109	X	
		15575	X	X
Seal, harp	Northwest North Atlantic Stock	16109	X	
		15575	X	X
Seal, hooded	Western North Atlantic Stock	16109	X	
		15575	X	X
Seal, gray	Western North Atlantic Stock	16109	X	
		15575	X	X

Non-Target Marine Animals

In addition to the marine mammal stocks and species that are the subject of the permit, an assortment of sea birds, sea turtles, fish and invertebrates may be found in the action area. The permit would only authorize takes of marine mammals. The takes of marine mammals by harassment would not affect any non-target marine animals and they are not considered further.

Biodiversity and Ecosystem Function

The proposed action is directed at marine mammals and sea turtles and does not interfere with benthic productivity, predator-prey interactions or other biodiversity or ecosystem functions. Marine mammals and sea turtles would not be removed from the ecosystem or displaced from habitat, nor would the permitted research affect their diet or foraging patterns. Further, the proposed action does not involve activities known to or likely to result in the introduction or spread of non-indigenous 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 is directed at marine mammals and sea turtles and would not affect habitat. Activities that have been shown to affect habitat include disturbance or destruction of habitat from stationary fishing gear, dredging and filling, agricultural and urban runoff, direct discharge, and the introduction of exotic species. None of the activities in the Proposed Action are directed at or likely to have any impact on habitat. The Proposed Action 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.

Essential Fish Habitat

EFH has been designated for many of the fish species within the action area. Activities that have been shown to affect EFH include disturbance or destruction of habitat from stationary fishing gear, dredging and filling, agricultural and urban runoff, direct discharge, and the introduction of exotic species.

For the New England and Mid-Atlantic regions, EFH has been identified for a total of 59 species covered by 14 fishery management plans (FMPs), under the auspices of either the New England Fishery Management Council, Mid-Atlantic Fishery Management Council, South Atlantic Fishery Management Council or NMFS.

Within the area encompassed by the NMFS Southeast Region, EFH has been identified for hundreds of marine species covered by 20 FMPs, under the auspices of the Gulf of Mexico, South Atlantic, or Caribbean FMC or the NMFS.

Critical Habitat for North Atlantic Right Whales

In 1994, NMFS designated critical habitat for the northern right whale in the North Atlantic Ocean (59 FR 28805). This critical habitat designation includes portions of Cape Cod Bay and Stellwagen Bank, the Great South Channel (each off the coast of Massachusetts), and waters adjacent to the coasts of Georgia and the east coast of Florida. These areas were determined to provide critical feeding, nursery, and calving habitat for the North Atlantic population of northern right whales. NMFS published a Proposed Rule in 2010 (75 FR 61690) to revise the existing critical habitat designation by expanding the areas designated as critical feeding and calving habitat areas for the North Atlantic right whale.

National Marine Sanctuaries:

All holders of NMFS' scientific research permits conducting work within a National Marine Sanctuary are urged to obtain appropriate authorizations from and coordinate the timing and location of their research with NOAA's National Marine Sanctuaries Program (NMSP). In addition, each permit request was sent to the NMSP for review for research that would occur in sanctuary waters. Research could occur in the following Sanctuaries:

Stellwagen Bank National Marine Sanctuary

The Gerry E. Studds Stellwagen Bank NMS, at the mouth of Massachusetts Bay between Cape Cod and Cape Ann, is important to North Atlantic right whales as a feeding ground and migratory path along the eastern coast of North America. This 842 square mile sanctuary is also important to the local economy, particularly regarding its use by the shipping, fishing, and whale-watching industries. In addition to its importance to right whales, Stellwagen Bank is important habitat for a variety of marine species including leatherback and loggerhead sea turtles, humpback whales, and fin whales, as well as harbor porpoises, Atlantic white-sided dolphins, harbor seals and gray seals, numerous fish species (e.g., basking sharks, Atlantic bluefin tuna, Atlantic cod, winter flounder), 40 species of sea birds (Wilson's storm petrel, shearwaters, northern fulmar, and northern gannets, terns, gulls and, in the winter, alcids and large numbers of black-legged kittiwakes), and a variety of invertebrates (e.g., sea scallops, northern lobster, sponges, soft corals, anemones, sea stars, sand dollars and sea urchins, marine worms, and squid). Water depths range from 65 ft on the southwest corner to depths of about 600 ft in deep passages to the northeast. Massachusetts Basin on the western side of the sanctuary levels off at about 300 ft in depth, while the top of the bank averages about 100 to 120 ft.

Monitor National Marine Sanctuary

Monitor National Marine Sanctuary protects the wreck of the famed Civil War ironclad *USS Monitor*. In 1974 the wreck was listed on the National Register of Historic Places. Since its designation as our nation's first marine sanctuary in 1975, the *Monitor* has been the subject of intense investigation. Located 16 miles off the North Carolina coast in 73 m of water, biologists are studying how the *Monitor* acts as a living artificial reef for marine life.

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 sea turtles and would not preclude their availability for other scientific, cultural, or historic uses. Thus, effects on such resources will not be considered further.

Social and Economic Resources

The proposed action would not affect distribution of environmental burdens, access to natural or depletable resources or other social or economic concerns. It would 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

4.1 Effects of the No Action Alternative

There are no direct or indirect effects on the environment of not issuing the permit. The takes of marine mammals and sea turtles, including those listed as threatened or endangered, resulting from the applicants' research would not be exempted. It is unlikely the applicants would conduct the research in the absence of a permit, because to do so would risk sanctions and enforcement actions. This alternative would not result in the harassment of the target animals.

4.2 Effects of the Proposed Action Alternative

Effects would occur at the time when the applicants research results in takes of marine mammals and sea turtles, including those listed as threatened or endangered.

Level B harassment, as defined by the MMPA, would occur during aerial and vessel surveys, behavioral observations, photo-identification activities. These activities were analyzed in past EAs for research conducted by the applicants, and it was determined that they could lead to short-term disturbance of marine mammals and sea turtles, but that there would be no significant impact from issuance of the permits (NMFS 2005 and 2007). The proposed research activities are all activities that would result in no more than Level B harassment and are not new or novel scientific techniques; therefore, NMFS feels that the effects of close approach to marine mammals and sea turtles would be minimal and short-term.

Vessel and aerial approach for photo-identification and behavioral observations

For the proposed Level B harassment activities, the presence of vessels and aircraft can lead to disturbance of marine mammals and sea turtles although animals' reactions, are generally short-term and of a low impact. Baker et al. (1983) described two responses of whales to vessels, including: (1) "horizontal avoidance" of vessels 2,000 to 4,000 meters away characterized by faster swimming and fewer long dives; and (2) "vertical avoidance" of vessels from 0 to 2,000 meters away during which whales swam more slowly, but spent more time submerged. Watkins et al. (1981) found that both fin and humpback whales appeared to react to vessel approach by increasing swim speed, exhibiting a startled reaction, and moving away from the vessel with strong fluke motions. However, one of the applicants noted in prior annual reports for permit No. 10014 that most cetaceans showed no reaction to the research vessel. For example, in the 2009 permit report they observed that one North Atlantic right whale was disturbed during their surveys. Reactions from this encounter included the whale changing directions while their survey vessel was in close proximity. Approaches to marine mammals by aircraft below certain altitudes could harass marine mammals and, as a result, NMFS has recommended guidelines for approaching and viewing marine mammals, and, in the case of North Atlantic right whales, has promulgated regulations for minimum approach distances. Behavioral alterations are possible as a result of shadow of the aircraft flashing across the animal or the audible presence of the aircraft; however, those changes are usually minor and temporary.

NMFS is not aware of any studies that have examined stress levels (e.g., blood chemistry changes) in sea turtles after exposure to vessel or aerial surveys. These types of studies would be extremely difficult to conduct. While reactions to the vessel or aircraft could result in a change in behavior, it would be similar to other natural behaviors such as predator avoidance. The

reaction is likely to result in some level of stress for the sea turtles, but the avoidance reaction is not expected to result in harm and is within the normal spectrum of behaviors the animal might experience naturally. NMFS has authorized numerous research activities involving approach by boat and hand capture (e.g., rodeo) that would elicit the same avoidance behavior and stress, and more (struggle to escape); these animals experience more stress than what would result from the proposed vessel and aerial surveys and have been released unharmed, some even tracked with telemetry for months after release (indicating they resumed migrations, feeding, etc.). This suggests that the effects during surveys should be minimal and very transitory. A sea turtle's reaction to a vessel or aircraft approaching or passing overhead may include diving or a rapid swim. Due to slow vessel speed and constant surveillance for animals in the vicinity, the risk of ship strike is expected to be very low and discountable. Sea turtles would be exposed very briefly to the survey activity and are expected to maintain or resume normal behavior after the boat or aircraft leaves the area.

Scat Collection and Remote Video System placement and maintenance

The collection of scat and the placement and maintenance of the remote video system would occur on haul out sites when no pinnipeds are present; therefore, no harassment of live animals is expected. The remote video system is stationary and positioned at a distance to maintain a full view of the haul out site. No behavioral response to the presence of the camera system is anticipated.

Summary of Effects of Level B Harassment

Behavioral responses would be expected to vary from no response to diving or changing direction or tail slapping in marine mammals. Any potential effect of vessel and aerial approaches should be short-lived and minimal. These short-term behavioral responses would not likely lead to mortality, serious injury, or disruption of essential behaviors such as feeding, mating, or nursing, to a degree that the individual's likelihood of successful reproduction or survival would be substantially reduced. Annual reports submitted by the applicants under current and past permits support demonstrate this.

In accordance with Section 7 of the ESA, a Biological Opinion was prepared and after reviewing the current status of listed resources, the environmental baseline for the action area, the anticipated effects of the proposed activities, and the cumulative effects, it is the NMFS' opinion that the activities authorized by the proposed issuance of scientific research permits 15575 and 16109, as proposed, is not likely to jeopardize the continued existence of listed species, and we do not anticipate the destruction or adverse modification of the designated critical habitat within the action area.

4.3 Mitigation Measures

In addition to the mitigation measures identified by the applicants and described in this EA, all NMFS marine mammal and sea turtle research permits contain conditions intended to minimize the potential adverse effects of the research activities on the animals. These conditions are based on the type of research authorized, the species involved, information in the literature and from the researchers about the effects of particular research techniques and the responses of animals to these activities. 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 associated with takes. The permits, if issued, would contain conditions requiring the applicants to retreat from animals if behaviors indicate the approach may be interfering with reproduction, pair bonding, feeding, or other vital functions.

In summary, the permit conditions limit the level of take as described in the take table and require notification, coordination, monitoring, and reporting. Although injury and mortality are not expected, if they occur due to the authorized actions, the permits would contain measures requiring researchers to cease activities until protocols have been reviewed and revised with NMFS.

4.5 Cumulative Impacts

Effects of Scientific Research Permits and Authorizations: In general, takes of marine mammals and sea turtles during permitted research have not been shown to result in long-term or permanent adverse effects on individuals regardless of the number of times the harassment occurs. The frequency and duration of the disturbance under the proposed permits would allow adequate time for animals to recover from adverse effects such that additive or cumulative effects of the action on its own are not expected.

No measurable effects on population demographics are anticipated because any sub-lethal (disturbance) effects are expected 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 animals. There exists the possibility that adverse effects on a species could accrue from the cumulative effects of a large number of permitted takes relative to the size of the population. However, there is no evidence that current or past levels of permitted takes have resulted in such species level effects.

There are 34 other permits and general authorizations authorizing research along the Atlantic (see Appendix 3 for details). Due to the size of the study areas, the differing objectives, and the rarity of surveys in each area by each researcher throughout the year, it is unlikely that the proposed research would overlap in time and space with other ongoing research. Over time, NMFS has issued dozens of permits for takes of marine mammals and sea turtles in the proposed action area for a variety of activities, examples of which include vessel surveys, photo-identification, capture, handling, biopsy sampling, lavage, laparoscopy, attachment of scientific instruments, and release. The number of permits and associated takes indicate that a portion of the populations of marine mammal and sea turtle species in the proposed action area have been subject to varying levels of stress due to research activities. However, the number of takes proposed by the applicants is not expected to result in a significant adverse impact on the target species, especially considering many of the takes are authorized by current permits. In addition, all permits issued by NMFS for research on protected species, including the proposed permits, contain conditions requiring the Permit Holders to coordinate their activities with the NMFS regional offices and other Permit Holders conducting research on the same species in the same areas, and, to the extent possible, share data to avoid unnecessary duplication of research and disturbance of animals.

NMFS acknowledges that repeated disturbance of some individual cetaceans, sea turtles or pinnipeds could occur. However, NMFS expects that the temporary harassment of individuals would dissipate within minutes, and therefore animals would recover before being targeted for research by another Permit Holder. Further, NMFS has taken steps to limit repeated harassment and avoid unnecessary duplication of effort through permit conditions requiring coordination among Permit Holders. NMFS would continue to monitor the effectiveness of these conditions in avoiding unnecessary repeated disturbances.

It is also important to note that many of the target animals are migratory and may transit in and out of U.S. waters and the high seas. NMFS does not have jurisdiction over the activities of individuals conducting field studies in other nations' waters, and cumulative effects from all scientific research on these species across the Proposed Action area cannot be fully assessed. However, where possible, NMFS attempts to collaborate with foreign governments to address management and conservation of these trans-boundary ESA-listed species.

Incidental Harassment Authorizations: In addition to scientific research permits, NMFS issues Letters of Authorization (LOAs) and IHAs under the MMPA for the incidental take of marine mammals. NMFS has issued five LOA and three IHA (Appendix 3) for the take of marine mammals near the action area. Five MMPA Rulemakings have also been issued.

Effects of Ship Strikes and Commercial Whale Watching Operations: The stocks and populations of marine mammals and sea turtles that are the subject of the permits are exposed to a variety of human activities including entanglement in fishing gear, anthropogenic noise from vessel traffic, coastal development and ship strike.

Many marine mammal and sea turtle populations may be experiencing increased exposure to vessels and associated sounds. Commercial shipping, whale watching, ferry operations, and recreational boating traffic have expanded in many regions in recent decades, including the northeastern Atlantic. Commercial fishing boats are also a prominent part of the vessel traffic in many areas. Vessels have the potential to affect marine mammals through the physical presence and activity of the vessel, the increased underwater sound levels generated by boat engines or a combination of these factors. Vessel strikes are rare, but do occur and can result in injury.

Commercial and private vessels engaged in marine mammal watching or other recreational activities have the potential to impact cetaceans in the proposed action area. A study of whale watch activities worldwide found that the business of viewing whales and dolphins in their natural habitat has grown rapidly, at an average rate of 3.7% per year, over the past decade into a two billion dollar (U.S. dollars) industry involving over 119 countries and territories and over 13 million participants (O'Connor et al. 2009). Although marine mammal watching is considered by many to be a non-consumptive use of marine mammals with economic, recreational, educational, and scientific benefits, it is not without potential negative impacts. One concern is that animals may become more vulnerable to vessel strikes once they habituate to vessel traffic (Swingle et al. 1993; Wiley et al. 1995). In 2001, NMFS instated a final rule prohibiting approach, by any means, within 500 yard (460 m) of any right whale (50 CFR 224.103) in U.S. waters.

In November 2006, NMFS established a set of recommended vessel routes in four locations to reduce the likelihood of collisions in key right whale habitats. More recently, in October 2008, NMFS issued new regulations to reduce the likelihood of vessel collisions with North Atlantic right whales. The regulations implement speed restrictions of 10 knots or less for vessels 65 ft (19.8 m) and greater in certain areas and at certain times of the year along the U.S. Atlantic seaboard that correspond to right whale occurrence. Exempted from the rule are State enforcement vessels and U.S. government vessels that will be expected to adhere to guidance provided under ESA Section 7 consultations. The rule also contains a provision exempting vessels from speed restrictions in poor sea and weather conditions, thereby ensuring safe vessel maneuverability under those special conditions. The rule also provides for establishment of temporary, voluntary dynamic management areas (DMAs) in times and/or areas where the seasonal management measures are not in effect, and where whales occur. In these locations, mariners would have the option to cross through the DMA at a speed no greater than 10 knots or route around the area.

Effects of Commercial Whaling: Large whale populations were the subject of commercial whaling to varying degrees for hundreds of years. The development of steam-powered boats in the late 19th century, coupled with the use of the forward-mounted gun-fired harpoon, made it possible to more efficiently kill and tow ashore the larger baleen whale species such as blue, fin, and minke whales. Earliest efforts to end commercial whaling included a ban by the League of Nations in the mid-1930s and the formation of the International Convention for the Regulation of Whaling in 1946. Prior to current prohibitions on whaling, such as the IWC's moratorium, most large whale species had been depleted to the extent that it was necessary to list them as endangered under the ESA. The industry caused significant declines in several of the target species' populations.

Effects of Entanglement with Fishing Gear: Because the occurrence of some marine mammals and sea turtles can overlap with frequented fishing areas, gear entanglements are common and can cause death by drowning or serious injuries such as lacerations, which in turn can lead to severe infections. Injuries and entanglements that are not initially lethal may result in a gradual weakening of entangled individuals, making them more vulnerable to some other direct cause of mortality (Kenney and Kraus 1993). For example, entanglement may reduce a whale's ability to maneuver, making it more susceptible to ship strikes. Entanglement-related stress may decrease an individual's reproductive success or reduce its life span, which may in turn depress population growth.

Effect of Climate Change: The extent to which climate and/or ecosystem changes impact the target cetacean species is largely unknown. However, NMFS recognizes that such impacts may occur based on the biology, diet, and foraging behavior of dolphins and whales. Inter-annual, decadal, and longer time-scale variability in climate can alter the distribution and biomass of prey available to large whales. The effects of climate-induced shifts in productivity, biomass, and species composition of zooplankton on the foraging success of planktivorous whales have received little attention. Such shifts in community structure and productivity may alter the distribution and occurrence of foraging whales in coastal habitats and affect their reproductive potential as well. Similar shifts in prey resources could likewise impact large whales if climate change alters the density, distribution, or range of prey.

Effects of MC252 Oil Spill on Sea Turtles: The 2010 Deepwater Horizon oil well blowout has impacted green, leatherback, Kemp's ridley, loggerhead, and hawksbill sea turtles in the Gulf of Mexico. The event has resulted in the live or dead stranding of more than 1,100 sea turtles. However, this is likely an underestimate of the number of sea turtles impacted by the spill because 1) it is unlikely that all oiled animals were documented and 2) additional sea turtles were observed within oiled waters but were unable to be captured during the response. The overall degree and extent to which the populations and species have been impacted is not known; however, researchers and managers are currently working to assess and quantify impacts.

The target species also benefit from human activities operated by Federal, state, and or local agencies and organizations including management, conservation, and recovery efforts, nest monitoring, education and outreach, and stranding response programs.

Summary: There may already be significant adverse impacts on marine mammals and sea turtles from the existing levels of human activities. However, the relative incremental effect of the proposed action would not be cumulatively significant. The proposed takes of specified numbers of marine mammals and sea turtles are not likely to contribute to collectively significant adverse impacts on marine mammal stocks or species and sea turtle species, including those listed as threatened or endangered. The effects of the takes would be transitory and recoverable, associated with only minor and short-term changes in the behavior of a limited number of individual marine mammals and sea turtles.

5.0 LIST OF PREPARERS AND AGENCIES CONSULTED

This document was prepared by the Permits and Conservation Division of NMFS' Office of Protected Resources in Silver Spring, Maryland.

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APPENDIX 1. –Proposed Annual Takes⁷ for Marine Mammals and Sea Turtles Year-Round During Vessel Surveys in the Atlantic Ocean from New Jersey to North Carolina.

SPECIES	MMPA STOCK/ ESA LISTING UNIT	LIFESTAGE/ SEX	NUMBER OF ANIMALS PER YEAR	TAKES PER ANIMAL	PROCEDURES
Dolphin, Atlantic spotted	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, Atlantic white-sided	Western North Atlantic Stock	All	50	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, bottlenose	Western North Atlantic Coastal Stock	All	3200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, bottlenose	Western North Atlantic Offshore Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, clymene	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, common, short-beaked	Western North Atlantic Stock	All	2500	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, Fraser's	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, pantropical spotted	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, Risso's	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video

⁷ Takes = the maximum number of animals that may be targeted for research annually in each row of the table.

SPECIES	MMPA STOCK/ ESA LISTING UNIT	LIFESTAGE/ SEX	NUMBER OF ANIMALS PER YEAR	TAKES PER ANIMAL	PROCEDURES
Dolphin, spinner	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, striped	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, white-beaked	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Porpoise, harbor	Gulf of Maine/Bay of Fundy Stock	All	150	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Seal, gray	Western North Atlantic Stock	All	25	1	Count/survey; Incidental disturbance; Observations, behavioral; Photo-id
Seal, harbor	Western North Atlantic Stock	All	50	1	Count/survey; Incidental disturbance; Observations, behavioral; Photo-id
Seal, harp	Northwest North Atlantic Stock	All	50	1	Count/survey; Incidental disturbance; Observations, behavioral; Photo-id
Seal, hooded	Western North Atlantic Stock	All	50	1	Count/survey; Incidental disturbance; Observations, behavioral; Photo-id
Whale, blue	Western North Atlantic Stock (NMFS Endangered)	All	10	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, Cuvier's beaked	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, melon-headed	Western North Atlantic	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video

SPECIES	MMPA STOCK/ ESA LISTING UNIT	LIFESTAGE/ SEX	NUMBER OF ANIMALS PER YEAR	TAKES PER ANIMAL	PROCEDURES
Whale, Mesoplodon beaked	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, minke	Canadian East Coastal Stock	All	50	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, northern bottlenose	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, pilot, long-finned	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, pilot, short-finned	Western North Atlantic Stock	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, pygmy killer	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, pygmy sperm	Western North Atlantic Stock	All	10	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, right, North Atlantic	Western Atlantic Stock (NMFS Endangered)	All	50	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, sei	Nova Scotia Stock (NMFS Endangered)	All	10	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, Sowerby's beaked	Range-wide	All	5	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video

SPECIES	MMPA STOCK/ ESA LISTING UNIT	LIFESTAGE/ SEX	NUMBER OF ANIMALS PER YEAR	TAKES PER ANIMAL	PROCEDURES
Whale, sperm	North Atlantic Stock (NMFS Endangered)	All	10	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, True's beaked	Range-wide	All	5	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Turtle, leatherback sea	Range-wide (NMFS Endangered)	All	100	1	Count/survey; Photograph/Video
Turtle, unidentified (hardshell) sea	Range-wide (NMFS Threatened)	All	300	1	Count/survey; Photograph/Video
Whale, dwarf sperm	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, fin	Western North Atlantic Stock (NMFS Endangered)	All	125	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, Gervais' beaked	Range-wide	All	5	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, humpback	Western North Atlantic Stock (NMFS Endangered)	All	100	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, killer	Western North Atlantic Stock	All	20	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Dolphin, rough-toothed	Range-wide	All	200	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video
Whale, Bryde's	Range-wide	All	10	1	Count/survey; Incidental harassment; Observations, behavioral; Photo-id; Photograph/Video

Appendix 2: Proposed Annual Takes from Massachusetts to North Carolina for File No. 15575. All lifestages and both male and females could be harassed.

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Whale, right, North Atlantic	Western Atlantic Stock (NMFS Endangered)	All	350	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, minke	Range-wide	All	250	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, sei	Nova Scotia Stock (NMFS Endangered)	All	240	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, Bryde's	Range-wide	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, blue	Western North Atlantic Stock (NMFS Endangered)	All	100	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, fin	Western North Atlantic Stock (NMFS Endangered)	All	400	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, humpback	Western North Atlantic Stock (NMFS Endangered)	All	370	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, common, short-beaked	Western North Atlantic Stock	All	3660	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, pilot, short-finned	Western North Atlantic Stock	All	320	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Whale, pilot, long-finned	Western North Atlantic Stock	All	2070	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, Risso's	Western North Atlantic Stock	All	580	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, Fraser's	Western North Atlantic Stock	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, Atlantic spotted	Western North Atlantic Stock	All	80	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, white-beaked	Western North Atlantic Stock	All	200	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, killer	Western North Atlantic Stock	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, Atlantic white-sided	Western North Atlantic Stock	All	700	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, pantropical spotted	Western North Atlantic Stock	All	300	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, clymene	Western North Atlantic Stock	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, striped	Western North Atlantic Stock	All	600	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, spinner	Western North Atlantic Stock	All	500	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Dolphin, bottlenose	Range-wide	All	10000	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, beluga	Range-wide	All	5	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Porpoise, harbor	Gulf of Maine/Bay of Fundy Stock	All	700	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, pygmy sperm	Western North Atlantic Stock	All	60	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, dwarf sperm	Western North Atlantic Stock	All	40	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, sperm	North Atlantic Stock (NMFS Endangered)	All	200	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, Gervais' beaked	Range-wide	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, Sowerby's beaked	Range-wide	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Seal, hooded	Western North Atlantic Stock	All	40	24	Harass	Survey, aerial	Observations, behavioral; Photo-id	Repeat surveys of haulouts 2x/month
Seal, harbor	Western North Atlantic Stock	All	15000	24	Harass	Survey, aerial	Observations, behavioral; Photo-id	Repeat surveys of haulouts 2x/month
Seal, gray	Western North Atlantic Stock	All	15000	24	Harass	Survey, aerial	Observations, behavioral; Photo-id	Repeat surveys of haulouts 2x/month
Seal, harp	Northwest North Atlantic Stock	All	20	24	Harass	Survey, aerial	Observations, behavioral; Photo-id	Repeat surveys of haulouts 2x/month

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Seal, hooded	Western North Atlantic Stock	All	300	24	Harass	Survey, vessel	Collect, scat; Observations, behavioral; Photo-id; Remote video monitoring	Repeat surveys of haulouts 2x/month
Seal, harbor	Western North Atlantic Stock	All	15000	24	Harass	Survey, vessel	Collect, scat; Observations, behavioral; Photo-id; Remote video monitoring	Repeat surveys of haulouts 2x/month
Seal, gray	Western North Atlantic Stock	All	3500	24	Harass	Survey, vessel	Collect, scat; Observations, behavioral; Photo-id; Remote video monitoring	Repeat surveys of haulouts 2x/month
Whale, northern bottlenose	Western North Atlantic Stock	All	20	1	Harass	Survey, aerial	Incidental harassment; Observations, behavioral; Photo-id	
Seal, harp	Northwest North Atlantic Stock	All	70	1	Harass	Survey, vessel	Collect, scat; Observation, monitoring; Observations, behavioral; Photo-id; Remote video monitoring	
Whale, pygmy killer	Western North Atlantic Stock	All	20	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
dolphin, unidentified	NA	All	3000	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, unidentified rorqual	NA	All	100	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, unidentified fin/sei		All	300	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Seal, gray	Western North Atlantic Stock	All	1400	1	Harass/Sampling	Survey, ground	Collect, scat; Count/survey; Photo-id; Remote video monitoring	
Seal, harbor	Western North Atlantic Stock	All	3000	1	Harass/Sampling	Survey, ground	Collect, scat; Count/survey; Photo-id; Remote video monitoring	

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Turtle, green sea	Range-wide (NMFS Threatened)	Adult/ Subadult/ Juvenile	475	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Turtle, Kemp's ridley sea	Range-wide (NMFS Endangered)	Adult/ Subadult/ Juvenile	125	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Turtle, leatherback sea	Range-wide (NMFS Endangered)	Adult/ Subadult/ Juvenile	80	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Turtle, loggerhead sea	Range-wide (NMFS Threatened)	Adult/ Subadult/ Juvenile	1400	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Turtle, unidentified sea	NA (NMFS Endangered)	Adult/ Subadult/ Juvenile	1115	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Whale, unidentified baleen	NA	All	100	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Pinniped, unidentified	NA	All	500	1	Harass	Survey, aerial	Count/survey	
Whale, True's beaked	Range-wide	All	100	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Dolphin, rough-toothed	Range-wide	All	100	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Turtle, hawksbill sea	Range-wide (NMFS Endangered)	Adult/ Subadult/ Juvenile	2	1	Harass	Other	Count/survey	aerial and vessel surveys for counts
Whale, Cuvier's beaked	Western North Atlantic Stock	All	2	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	

SPECIES	LISTING UNIT/STOCK	LIFESTAGE/ SEX	NUMBER OF ANIMALS	TAKES PER INDIVIDUAL	TAKE ACTION	OBSERVE/ COLLECT METHOD	PROCEDURES	DETAILS
Whale, melon-headed	Western North Atlantic	All	2	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, false killer	Range-wide	All	10	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	
Whale, unidentified beaked	Range-wide	All	30	1	Harass	Survey, aerial/vessel	Count/survey; Incidental harassment; Observations, behavioral; Photo-id	

APPENDIX 3: Active Scientific Research Permits and Letters of Confirmation Authorizing Research as well as Letters of Authorization and Incidental Harassment Authorizations in the Action Area.

*** = permits that authorize takes of marine mammals and sea turtles.**

Permit No.	Permit Holder	Expiration date	Ocean Basin or Area	Harassment
605-1904	The Whale Center of New England	2/15/2013	Cape Cod and VA to FL	Level A & B
633-1778	Center For Coastal Studies	6/30/2012	North Atlantic Ocean and Canadian Gulf of Maine	Level A & B
*775-1875	NEFSC	1/15/2013	ME to FL	Level A & B
809-1902	Virginia Aquarium & Marine Science Center Foundation	11/30/2012	VA	Level B
948-1692	Pabst	5/31/2012	DE to FL	Level B
1058-1733	Baumgartner	5/31/2012	North Atlantic Ocean	Level A & B
*1551	SEFSC	7/01/2013	North Atlantic, Gulf of Mexico, and Caribbean Sea	Level A & B
1557	Lutcavage	6/30/2012	MA, GA to FL	ESA 10(a)1(A)
*10014	NJDEP	12/31/2012	NJ	Level B
10070	U.S. Navy	1/21/2014	North Atlantic Ocean	MMPA Rulemaking
10082	Neptune LNG LLC	7/10/2016	MA	MMPA Rulemaking
13331	U.S. Navy	06/04/2014	VA	MMPA Rulemaking
13332	U.S. Navy	1/21/2015	FL	MMPA Rulemaking
13416	Weiss	06/01/2013	NC	Level B
*13543	SCDNR	4/30/2014	NC to FL	Level A & B

Permit No.	Permit Holder	Expiration date	Ocean Basin or Area	Harassment
13562	U.S. Navy	06/04/2014	NC	MMPA Rulemaking
13927	Hain	10/31/2016	GA to FL	Level B
14157	Mazzoil	3/1/2014	GA to FL	Level B
14219	Cox	3/1/2014	SC to GA	Level B
14233	Kraus	9/30/2015	ME to FL	Level A & B
14241	Tyack	7/31/2014	NC	Level A & B
14245	NMML	5/01/2016	Gulf of Maine, mid-Atlantic and southeastern US	Level A & B
*14249	Smolowitz	10/31/2014	NY to NC	Level A & B
14348	NOS- CCEHBR	6/30/2014	SC to GA	Level B
14451	Mobley	7/31/2015	Pacific and Atlantic Ocean	Level B
14475	The Dolphin Project	7/31/2014	SC to GA	Level B
14586	Wyneken	11/30/2015	FL	Level B
14603	Center for Coastal Studies	9/30/2015	ME to MA	Level B
14646	Sayigh	7/1/2015	MA	Level B
14791	Nowacek	7/30/2015	Northwest Atlantic Ocean	Level A & B
14903	Sette	3/1/2015	MA	Level B
*15112	NEFSC	1/01/2016	Northwest Atlantic Ocean	Level A & B
15135	Price	12/31/2012	NC	ESA 10(a)1(A)
15141	Bertilsson-Friedman	3/1/2015	NY	Level B

Permit No.	Permit Holder	Expiration date	Ocean Basin or Area	Harassment
15415	Kraus	3/31/2014	ME to NY	Level B
15488	Georgia Department of Natural Resources	6/30/2016	SC to FL	Level A & B
16103	Montie	12/31/2015	SC	Level B
16104	Young	12/31/2015	NC and SC	Level B
16185	Read	4/01/2016	Atlantic Ocean	Level B
16232	GeoMarine, Inc.	3/31/2016	NJ to NC	Level B
16280	U.S. Navy	6/4/2012	VA	LOA
16281	U.S. Navy	6/4/2012	FL	LOA
16283	U.S. Navy	6/4/2012	NC	LOA
16449	Northeast Gateway Energy Bridge, L.L.C.	10/5/2012	MA	IHA
16454	Cape Wind Associates	12/31/2012	MA	IHA
16557	Neptune LNG LLC	7/10/2016	MA	LOA
16679	U.S. Marine Corps	12/31/2012	NC	IHA
16987	U.S. Navy	1/21/2013	North Atlantic Ocean	LOA



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 Nos. 16109 and 15575**

Background

On November 30, 2010, the National Marine Fisheries Service (NMFS) received an application for a permit (File No. 16109) from GeoMarine, Inc and an application on (January 4, 2011) for a permit (File No. 15575) from Robert A. DiGiovanni, Jr. to conduct research on 36 species of cetaceans, five species of sea turtles, and four species of pinnipeds from Massachusetts to North Carolina. 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 Two Scientific Research Permits, No. 16109 and No. 15575, for Protected Sea Turtles and Marine Mammals; April 2012. In addition, a Biological Opinion was issued under the Endangered Species Act (April 2012) summarizing the results of an intra-agency consultation. The analyses in the EA, as informed by the Biological Opinion, support the findings and determination below.

Analysis

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ’s context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in Fishery Management Plans?

Response: Issuance of these permits is not expected to affect ocean and coastal habitats or any designated Essential Fish Habitat (EFH). Although EFH may be present in the action area, the proposed action would only affect marine mammals and sea turtles authorized for research by the permits. The majority of research would only involve routine vessel movements at the water surface and aerial surveys above land and water, and all activities would be directed at target marine mammal and sea turtle species. None of the activities in the Proposed Action are directed at or likely to have any impact on habitat. The Proposed Action does not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat. Therefore, no EFH consultation was required.



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: The effects of the action on target species, including ESA-listed species and their habitat, EFH, marine sanctuaries, and non-target species were all considered in the EA. The Proposed Action would target marine mammals and sea turtles for photo-identification and observation, which is expected to result in short-term minimal disturbance to individual whales. This work is not expected to interfere with benthic productivity, an animal's susceptibility to predation, alter dietary preferences or foraging behavior, or change distribution or abundance of predators or prey. Therefore, the Proposed Action is not expected to have a substantial impact on biodiversity or ecosystem function.

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

Response: The Proposed Action involves aerial and vessel surveys and close approach of vessels for behavioral observation, and photo-identification of marine mammals and sea turtles. There would not be a 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. Research would be conducted by or under the close supervision of experienced personnel, as required by the permits. Therefore, no negative impacts on human health or safety are anticipated during research.

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: As determined in the 2012 biological opinion, the Proposed Action would affect ESA-listed species in the action area during research. Researchers may harass individual animals during vessel based activities. However, the biological opinion concluded that the effects of the Proposed Action would be short-term in nature to individual animals. The Proposed Action would not likely jeopardize the continued existence of any ESA-listed species and would not likely destroy or adversely modify designated critical habitat. There is designated critical habitat for North Atlantic right whales in the action area, however none of the research activities would affect the constituent elements of the habitat. The research activities would not affect the North Atlantic right whales prey species or the quality of the water. No injuries to listed species are expected. No other non-target species would be affected by the proposed research. Further, the permit would contain mitigation measures to minimize the effects of the research and to avoid unnecessary stress to any protected species by requiring use of specific research protocols.

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

Response: Effects of the research would be limited to the short-term harassment of target animals. Issuance of these permits and conduct of the authorized research would not substantially impact short- or long-term use of the environment or result in use of natural or depletable resources, such as might be expected from construction or resource extraction activities. Issuance of these permits and conduct of the research would not result in inequitable distributions of environmental burdens or access to environmental goods. Permitting the proposed research could result in a low level of economic benefit to local economies in the action area. However, such impacts would be negligible on a national or regional level and therefore are not considered significant.

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

Response: NMFS does not consider the Proposed Action controversial nor has it been considered controversial in the past. The proposed research activities are standard research activities that have been conducted on these species by the scientific community, and by the applicants, for decades. A *Federal Register* notice (76 FR 51001) was published to allow other agencies and the public the opportunity to review and comment on the action. All comments were addressed and responses were included in the decision memos for the permits. None of the comments were considered controversial and none addressed the proposal's potential effects on the quality of the human environment. No other portion of the marine environment beyond the target species would be impacted by the proposed action.

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: There is designated critical habitat for North Atlantic right whales in the action area; however, as determined by the 2012 biological opinion, the proposed action would not likely destroy or adversely modify designated critical habitat. The proposed research does not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat and would not be expected to result in substantial impacts to any such area. Research activities would occur in the U.S.S. Monitor National Marine Sanctuary and the Stellwagen Bank National Marine Sanctuary but would be coordinated with Sanctuary staff and would not result in substantial impacts to the Sanctuary. 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.

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

Response: The potential risks of permit issuance and conduct of the permitted research are not unique or unknown, nor is there significant uncertainty about impacts. The proposed activities have been previously authorized as research activities for cetaceans and sea turtles for decades. There have been no reported serious injuries or mortalities of target species or risks to any other portion of the human environment as a result of these research activities. Therefore, the risks to the human environment are not unique or unknown.

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

Response: The proposed action is not related to other actions with individually insignificant, but cumulatively significant impacts. The incremental impact of the action when added to other past, present, and reasonably foreseeable future actions discussed above and in the EA would be minimal and not significant.

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 action would not take place in any district, site, highway, structure, or object listed in or eligible for listing in the National Register of Historic Places, thus none would be impacted. The proposed action would also not occur in an area of significant scientific, cultural or historical resources and thus would not cause their loss or destruction.

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

Response: Issuance of these permits is not expected to result in introduction or spread of non-indigenous species. The action would not be removing or introducing any species. The research is not associated with any known mechanisms of transporting and introducing non-indigenous species. For example, researchers would not be moving between bodies of water.

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

Response: Issuance of these permits would not set a precedent for future actions or represent a decision in principle. NMFS has issued numerous scientific research permits pursuant to section 104 of the MMPA and section 10 of the Endangered Species Act. Nothing about NMFS' decision making process

pursuant to the statutory and regulatory criteria is unique to these permits, nor are these the first permits NMFS has issued for this type of research activity. Issuance of these permits does not involve any irreversible or irretrievable commitments of resources.

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


Response: Issuance of these permits is not expected to violate any Federal, State, or local laws or requirements related to environmental protection. NMFS has sole jurisdiction for issuance of such permits for marine mammals and sea turtles while in the water and has determined the proposed research to be consistent with all applicable provisions of the MMPA and ESA. The permits currently contain language stating that these permits do not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.

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?

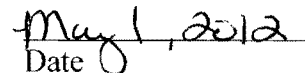
Response: The proposed action is not expected to result in cumulative adverse effects on the target species or non-target species. Effects on the target species are expected to be restricted to a specified number of individuals, and not expected to rise to a level that would impact a stock or species. While non-target species may be encountered incidentally, they would not be intentionally approached, and are not expected to be affected by the proposed action.

DETERMINATION

In view of the information presented in this document, and the analyses contained in the EA and Biological Opinion prepared for issuance of Permit Nos. 16109 and 15575, 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



Date