



BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XF933

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Seabird and Shorebird Research and Monitoring in Massachusetts

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received a request from the Eastern Massachusetts (MA) National Wildlife Refuge (NWR) Complex, U.S. Fish and Wildlife Service (USFWS), for authorization to take marine mammals incidental to conducting seabird and shorebird monitoring and research in the Eastern MA NWR Complex (Complex). Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than [*INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER*].

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Fowler@noaa.gov*.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities> without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Amy Fowler, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at:

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities>. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity

(other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

NMFS has defined “negligible impact” in 50 CFR 216.103 as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

The MMPA states that the term “take” means to harass, hunt, capture, kill or attempt to harass, hunt, capture, or kill any marine mammal.

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed

action (*i.e.*, the issuance of an incidental harassment authorization) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in CE B4 of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On December 5, 2017, NMFS received a request from the USFWS for an IHA to take marine mammals incidental to seabird and shorebird monitoring and research activities within the Complex. NMFS determined the application adequate and complete on December 18, 2017. The USFWS's request is for take of gray seals and harbor seals by Level B harassment only. Neither the USFWS nor NMFS expect mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued an IHA to the USFWS for similar work (82 FR 12342, March 2, 2017). The USFWS complied with all the requirements (*e.g.*, mitigation, monitoring, and reporting) of the previous IHA and information regarding their monitoring results may be found in the Estimated Take section.

Description of Proposed Activity

Overview

The USFWS is proposing to conduct biological tasks for refuge purposes at Monomoy NWR, Nantucket NWR, and Nomans Land Island NWR in MA. These three refuges are managed through the Complex as part of the NWR System of the USFWS. Complex staff census and monitor the presence of breeding and migrating shorebirds using the beaches of Monomoy, Nantucket, and Nomans Land Island NWRs for nesting from April 1 to November 30, annually. Monitoring activities occur daily (on Monomoy and Nantucket) from April to August and is necessary to document the productivity (number of chicks fledged per pair) and population of protected shorebird and seabird species. Monomoy NWR also participates in several less frequent, but equally important, high priority conservation tasks to monitor for threatened and endangered species, including censusing northeastern beach tiger beetles (*Cicindela dorsalis*) and participating in a red knot (*Calidris canutus*) migration study during annual southward migration. Additionally, both Monomoy and Nantucket NWRs serve as vital staging grounds for migrating roseate terns (*Sterna dougallii*), where USFWS staff resight and stage counts.

Dates and Duration

The USFWS proposes to conduct the research activities at various times for each project from April 1 through November 30, 2018. Due to scheduling, time, tide constraints, and favorable weather/ocean conditions, the exact survey dates and durations are variable. The proposed IHA, if issued, would be effective from April 1, 2018 through March 31, 2019. More information on the scope of proposed activities can be found in the *Detailed Description of Activities* section.

Specific Geographic Region

The Complex is made up of eight refuges, including its three coastal refuges: Monomoy NWR, Nantucket NWR, and Nomans NWR. The three main activity sites are NWRs managed

by the USFWS and are islands located off the coast of Cape Cod, MA. Although Monomoy NWR consists of three managed barrier islands, pinnipeds are only disturbed while carrying out biological activities on the Atlantic side of South Monomoy Island where gray seals primarily haul out. Therefore, activities mentioned at Monomoy NWR will only refer to South Monomoy Island. While biological tasks performed at these three refuges differ in some regard, all activities are necessary to carry out high priority conservation work for threatened and endangered species. Each activity location is described below.

1. **Monomoy NWR** (N 41.590348, W -69.987432): This site refers to the Atlantic side of South Monomoy Island at Monomoy NWR. Seals use most of the ocean-facing beach of this island as a haulout site. See Figure 1 of the USFWS's application.

2. **Nantucket NWR** (N 41.391754, W -70.050568): This site refers to Nantucket NWR located on the northeast tip of Nantucket Island. The point itself is the primary haulout site for this location. See Figure 2 of the USFWS's application.

3. **Nomans NWR** (N 41.264267, W -70.812228): This site refers to Nomans Land Island located off the coast of Martha's Vineyard. Seals here haul out on the northeast peninsula, and sporadically along the northern shoreline. The rocks around the island are sometimes utilized as well. See Figure 3 of the USFWS's application.

4. **Cape Cod National Seashore nearby beaches** (see Figure 4 of the USFWS's application):

- A. **Coast Guard Beach** (N 41.842333, W -69.943834): This site refers to one of the beaches located at the Cape Cod National Seashore in Eastham, MA. The seals here haul out on the J-bars that form on the beach.

B. North Beach Island (N 41.669441, W -69.942765): This site refers to an island located at the Cape Cod National Seashore in Chatham, MA. The seals here haul out on the southwest end of the island.

C. High Head (N 42.066108, W -70.111318): This site refers to a beach located at the Cape Cod National Seashore in Truro, MA.

D. Jeremy Point (N 41.884300, W -70.069532): This site refers to Jeremy Point located on the Cape Cod bayside at the Cape Cod National Seashore in Wellfleet, MA. The seals here haul out on the sand flats in the waters around the point.

E. Provincetown Harbor (N 42.022342, W-70.178662): This site refers to the west end of the harbor in Provincetown. This is a new haulout as of fall 2015 and has only been observed a few times by the Provincetown Center for Coastal Studies (CCS) (L.Sette, CCS, personal communication 2016).

Detailed Description of Specific Activity

A description of each activity, based on location, is presented below. A summary of this information can also be found in Table 1.

1. Shorebird and Seabird Nest Monitoring and Research

Monomoy NWR

On January 10, 1986, the USFWS listed the Atlantic Coast population of piping plovers (*Charadrius melodus*) as threatened under the provisions of the U.S. Endangered Species Act (ESA) of 1973. Currently, Monomoy NWR serves as a nesting site for six percent of the breeding piping plover pairs in MA. Therefore, management and protection of the piping plover is one of the priority programs for the refuge. Many other avian species benefit from piping plover management, including the state listed species of concern least tern (*Sternula antillarum*)

and American oystercatcher (*Haematopus palliatus*). Monomoy NWR has a responsibility to follow the guidelines provided for management in the revised 1996 recovery plan for the species (USFWS 1996). The primary objective of the recovery program is to remove the Atlantic Coast piping plover population from the List of Endangered and Threatened Wildlife and Plants by: (1) achieving well-disturbed increases in numbers and productivity of breeding pairs, and (2) providing for long-term protection of breeding and wintering plovers and their habitat. Actions needed to achieve these objectives include: (1) manage breeding piping plovers and habitat to maximize survival and productivity, (2) monitor and manage wintering and migration areas to maximize survival and recruitment into the breeding population, (3) undertake scientific investigations that will facilitate recovery efforts, (4) develop and implement public information and education programs, and (5) review progress towards recovery annually and revise recovery efforts as appropriate (USFWS 1996).

The piping plover recovery efforts at the Complex correspond closely to management recommendations in the Piping Plover Recovery Plan. In order to monitor the productivity (number of chicks fledged per pair) of piping plovers at Monomoy NWR, it is necessary to identify suitable nesting habitat for the species. At Monomoy, piping plovers generally select areas that are sandy with some cobble on the beach face and occasionally nest in dense vegetation or behind primary dunes. The same can be said for least terns and American oystercatcher pairs which also nest on South Monomoy Island. These nesting areas are adjacent to known gray seal haulout sites.

Piping plovers begin returning to their Atlantic Coast nesting beaches in mid-March. The first nest is generally laid in mid-April and eggs will continue to be present on the beach until late July. During this time, nests are located by USFWS staff by looking for a number of signs:

continuous presence of adult birds, courtship and territorial behavior in a certain area, large concentrations of tracks, and scrapes (nests or nest attempts). Methods for finding nests include waiting for a disturbed bird to return to its nest or covering probable nesting areas by searching the ground for signs of scrapes and zig-zagging the whole area to make sure the entire habitat is covered. Methods for finding nests can sometimes lead to seal disturbance. Nests are visited 4-5 times a week and confirmation of adult presence and incubation is confirmed at a distance when possible to prevent disturbance. Nests hatch after 28 days of incubation and chicks will remain with one or both parents until they fledge at 25-35 days of age. Depending on the date of hatching, flightless chicks may be present on refuge beaches from mid-May until late August. Chicks are monitored until they fledge and may move hundreds of yards from the nest site to feed. Feeding areas include intertidal areas along the ocean and sound sides of South Monomoy Island as well as washover areas.

Similar activities are performed when searching and monitoring American oystercatcher nests and broods. No American oystercatcher pairs nested near seal haulout sites in 2015, but have nested on the ocean side of South Monomoy Island in previous years. In 2001, the American oystercatcher warranted special attention from the U.S. Shorebird Conservation Plan after the population severely declined to under 11,000 individuals. Monomoy NWR has the largest concentration of nesting American oystercatchers on Cape Cod and nesting success at this site is important to the survival of the species. The nesting season occurs from the end of April until mid-August. Monomoy NWR also serves as an important staging site for resting migrants, and bands are often read and reported to the American Oystercatcher Working Group. Staging American oystercatcher will sometimes roost near seal haulout sites.

Least terns nest in small groups around South Monomoy Island. Productivity is not measured throughout the season, but nesting pairs are censused during a 2-3 day period in mid-June. Least terns are censused using the line-sweep method throughout the extent of the nesting colonies and checked by staff weekly to gauge productivity.

USFWS staff install symbolic fencing (sign posts with “area closed” and “beach closed” informational signs) around nest sites of piping plovers, American oystercatchers, and least terns to inform the public about the bird’s presence and protect critical habitat from human disturbance. These areas are adjacent to known seal haulout sites and are regularly monitored throughout the season.

Nantucket NWR

Similar biological activities are carried out on Nantucket NWR as Monomoy NWR. Piping plover, least tern, and American oystercatcher are known species to use Nantucket NWR and nearby lands for nesting from the end of April until mid-August. Beach nesting birds are monitored following similar methods and protocols as Monomoy NWR and areas of nesting are posted with closed signs. Signs are placed at least 150 feet from known seal haulout areas on Nantucket NWR, which predominately occur at the north tip of the Refuge. These posts help protect those areas from public disturbance. Nesting beach birds generally do not nest within the closed area for seals, but instead nest adjacent to the haulouts. If need be, staff will briefly enter the closed area to check nests, but otherwise stay outside of the closed area, greater than 150 feet from seal haulouts. Seabirds and shorebirds do not nest on the Complex every year; in 2015, no beach birds nested on Nantucket NWR.

Nomans Land Island NWR

Nomans NWR is closed to the public and is only visited 1-3 times a year by USFWS staff. During these visits, the presence of shorebirds and seabirds are noted for record. Shorebirds and seabirds are inventoried by scoping suitable nesting and feeding habitat on the island. The greatest potential for marine mammal disturbance occurs in safe boat landing zones, because these areas often overlap with hauled out seals. Every precautionary measure is taken to reduce disturbance to seals on Nomans Land Island NWR, but staff will land a boat or walk within 50 yards (yd) of seal haulouts if safety reasons prevail. A 25-foot Parker is used to travel to and from Nomans NWR.

2. Roseate Tern Staging Counts and Resighting

Monomoy NWR

On November 2, 1987, the Service listed the northeastern breeding population of the roseate terns as Federally endangered. Monomoy NWR serves as an important nesting and staging site for the species. Monomoy NWR has a responsibility to follow the guidelines provided for management in the Roseate Tern Recovery Plan for the Northeast population (USFWS 1998). The primary objective of the roseate tern recovery program is to promote an increase in breeding population size, distribution, and productivity so as to warrant reclassification to threatened status and eventual delisting. Actions needed to attain this objective include: (1) oversee breeding roseate terns and their habitat to help increase survival and productivity including the physical maintenance, expansion, and enhancement of nesting habitat; (2) develop a management plan for monitoring wintering and migration areas; (3) secure unprotected sites through acquisition and easements; (4) develop outreach materials and implement education programs; (5) conduct scientific investigations that will facilitate recovery efforts; (6) review progress of recovery annually and revise recovery efforts as needed (USFWS

1998). While breeding roseate terns prefer nesting habitat far from seal haulout sites, migrating terns use areas adjacent to the beach edge. Cape Cod and the surrounding islands as a whole serves as an important staging ground for common terns (*Sterna hirundo*) and roseate terns. In fact, the entire northeast population of roseate terns stage in this area prior to migrating to Central and South America. The USFWS conduct staging tern counts to document the importance of Monomoy NWR relative to other sites and to record changes in use over time by gathering baseline data on the numbers of roseate terns staging on the Complex and adjacent beaches as well as the causes and duration of disturbances to staging terns. This is in compliance with the recovery plan to conduct scientific investigations that will facilitate recovery efforts (USFWS 1998).

In August, USFWS staff traverse areas of suitable staging habitat, including sand flats and open sand beaches, and make quick estimates of the number of staging terns. The terns are counted using binoculars and spotting scopes from a distance that does not disturb the birds. Color bands, field readable bands, and any tagged or banded birds are identified for reporting purposes. Observations on behavior and disturbance are also documented. Depending on the size of the flock, these surveys can last anywhere between one to three hours.

Nantucket NWR

Staging tern counts are carried out on Nantucket NWR following similar methods and protocols mentioned for Monomoy NWR.

Nomans Land Island NWR

Staging tern counts are not performed on Nomans NWR.

3. Red knot Stopover Study

Monomoy NWR and Nearby Beaches in Chatham, Orleans, and Eastham

On December 11, 2014, the USFWS listed the rufa subspecies of the red knot as Federally threatened under the ESA. As noted in the State of the Birds 2014 report, the knot's status is representative of the steep declines represented in shorebirds that migrate long distances (NABCI 2014). Threats to shorebirds have become more diverse and widespread in recent decades, requiring coordinated conservation efforts across their vast ranges. Protection of breeding, migration, and wintering habitat is critical to this species' recovery (Niles *et al.*, 2008).

Southeastern MA, Monomoy NWR and surrounding beaches in Chatham, Orleans, and Eastham in particular, likely provide one of the most important areas for adult and juvenile red knots during their southward migration (Koch and Paton 2009; Harrington *et al.*, 2010a; Harrington *et al.*, 2010b). Research has shown that this region supports red knots bound for different winter destinations, including red knots wintering as far south as Patagonia (Harrington *et al.*, 2010b). Currently, there is little information on migration routes, and no information on wintering sites of juvenile red knots.

The red knot stopover study is not conducted on Nantucket NWR or Nomans NWR.

4. Northeastern Beach Tiger Beetle Census

In August of 1990, the USFWS listed the northeastern beach tiger beetle as threatened under the ESA. Currently northeastern beach tiger beetle can be found at only two sites in MA: one on the south shore of Martha's Vineyard and one on South Monomoy Island and Nauset/South Beach in Chatham, MA (USFWS 1994, USFWS 2015). Searches on Monomoy in the 1980s failed to locate the northeastern beach tiger beetle, but the structure of the habitat seemed favorable, making Monomoy the leading candidate as an introduction site. The first beetle larvae transplant occurred in May 2000. Since 2004, tiger beetle larvae have not been transferred to Monomoy (USFWS 2015). However, through continued adult tiger beetle

monitoring, the annual presence of tiger beetles has been documented on the refuge. Annual monitoring confirms successful survival and production of tiger beetles through all stages of life, and gives a firm indication of a new self-sustaining population at Monomoy NWR.

Northeastern beach tiger beetle live their entire life on the beach, and prefer medium to medium-course sand. Adults occur on the beach from June through September and often congregate around the water's edge on warm days (USFWS 2011). On Monomoy NWR, the population occurs in habitat on the Atlantic side of South Monomoy Island on the water's edge and in the wrack line. Several index counts of the tiger beetle population are completed by USFWS staff during July and August each year. Counts are conducted by slowly walking the water's edge at a width of 2-3 people across and tallying adults seen on the surface of the beach until the extent of suitable habitat is covered.

Northeastern beach tiger beetle surveys are not conducted on Nantucket NWR or Nomans Land Island NWR.

5. Coastal Shoreline Change Survey

Since 2011, Monomoy has participated in a long-term coastal shoreline monitoring project in collaboration with Rutgers University and the National Park Service (NPS) protocol. The annual shoreline surveys are conducted twice a year to gain a finer understanding of the rate of shoreline change and to provide baseline information for sea level rise. Two 1-day surveys are conducted at most sites, one in the spring and one in the fall. Surveys are only conducted in the fall at Monomoy NWR, typically between September and November, consequent to the large number of seals using the area in the spring. To document accurate data on shoreline change, a handheld Trimble device is used to GPS the neap high tide swash line around the ocean-facing

extent of South Monomoy Island by walking the beach at a normal pace. The survey takes approximately one day to complete.

Shoreline surveys are not conducted on Nantucket NWR or Nomans NWR.

Table 1. Site Location and Duration of the Five Projects in the Eastern Massachusetts National Wildlife Refuge

Activity	Time of Year	Site Location and Duration		
		Monomoy NWR	Nantucket NWR	Nomans NWR
Shorebird and Seabird Monitoring and Research	April-August	17 weeks 2 days/week 6-8 hours/day	17 weeks* 2 days/month <1 hour/day	1-3 days/year ~1 hours/day
Roseate Tern Staging Counts and Resighting	Mid July-September	3 weeks 1-2 days/week 1-3 hours/day	6-8 weeks 2 days/month 1—3 hours/day	N/A
Red Knot Stopover Study	August-October	Two trapping windows 5-10 days in combination with Cape Cod beaches 6-12 hours/day	N/A	N/A
Northeastern Beach Tiger Beetle Census	July-September	1-3 days/year 6-8 hours/day	N/A	N/A
Coastal Shoreline Change Survey	September-October	Once/year 8 hours day	N/A	N/A

*Shorebird and Seabird Monitoring and Research on Nantucket is contingent on the presence of nesting beach birds. In 2015, no shorebirds or seabirds nested on Nantucket NWR.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see “Proposed Mitigation” and “Proposed Monitoring and Reporting”).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS’s Stock Assessment Reports (SAR; <https://www.fisheries.noaa.gov/topic/population-assessments/marine-mammals>) and more general information about these species (e.g., physical and behavioral descriptions) may be found on NMFS’s website (<https://www.fisheries.noaa.gov/find-species>).

Table 2 lists all species with expected potential for occurrence in the Complex and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2016). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS's stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. Until 2017, NMFS SARs relied on Canadian Department of Fisheries and Oceans (DFO) population models to determine the abundance of gray seals in Canada. The portion of gray seals in U.S. waters was not determined until the 2017 draft SARs (NMFS 2017). All values presented in Table 2 are the most recent available at the time of publication and are available in the 2017 draft SARs (NMFS 2017). The 2017 draft SARs were published in the *Federal Register* on December 19, 2017. The 2017 draft SARs are still up for public comment at the time of this publication (<https://www.fisheries.noaa.gov/national/marine-mammal-protection/draft-marine-mammal-stock-assessment-reports>).

Table 2. General Information on Marine Mammals in the Vicinity of Eastern Massachusetts National Wildlife Refuge, Massachusetts.

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N) ¹	Stock abundance (CV, N _{min} , most recent abundance survey) ²	PBR	Annual M/SI ³
Order Carnivora – Superfamily Pinnipedia						
Family Phocidae (earless seals)						
Gray seal	<i>Halichoerus grypus atlantica</i>	Western North Atlantic	- , N	27,131 (N/A, 27,131, 2016)	1,554	5,207
Harbor seal	<i>Phoca vitulina concolor</i>	Western North Atlantic	- , N	75,834 (0.15, 66,884, 2012)	2,006	368

1 - Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

2 - NMFS marine mammal stock assessment reports online at: www.nmfs.noaa.gov/pr/sars/. CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable [explain if this is the case]

3 - These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (e.g., commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

All species that could potentially occur in the proposed survey areas are included in Table

2. As described below, both species (with two managed stocks) temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur, and we have proposed authorizing it.

Gray Seal

There are three major populations of gray seals found in the world; eastern Canada (western North Atlantic stock), northwestern Europe, and the Baltic Sea. The gray seals that occur in the project area belong to the western North Atlantic stock, which ranges from New Jersey to Labrador. Based on genetic analysis from the Canadian and U.S. populations, all individuals were placed into one population providing further evidence that this stock is one interbreeding population (Wood *et al.*, 2011). U.S. population abundance was estimated using minimum U.S. pup production (6,308 pups) fit to population models, yielding a U.S. stock

abundance of 27,131 seals. U.S. pup production accounts for approximately six percent of the total pup production over the entire range of the stock (NMFS 2017). Current population trends show that gray seal abundance is likely increasing in the U.S. Atlantic Exclusive Economic Zone (Waring *et al.*, 2016). Although the rate of increase is unknown, surveys conducted since their arrival in the 1980s indicate a steady increase in abundance in both Maine and Massachusetts (Waring *et al.*, 2016). It is believed that recolonization by Canadian gray seals is the source of the U.S. population (Waring *et al.*, 2016). Gray seals are not listed under the ESA and the stock is not considered strategic or depleted under the MMPA.

Monomoy NWR is the largest haulout site for gray seals on the U.S. Atlantic seaboard, and one of only two consistent sites in Massachusetts (the other being Muskeget Island, west of Nantucket) where gray seals pup (USFWS 2015). Gray seals are known to use Monomoy NWR and Nantucket NWR land and water year round, with higher numbers accumulating during the winter and spring when pupping and molting occur. While gray seal pupping grounds are historically further north on Sable Island in Nova Scotia and in the Gulf of St. Lawrence in Canada, there has been a year-round breeding population on Cape Cod and the islands since the late 1990s (NOAA 2015a, USFWS 2015).

Gray seals start to group up in fall and pupping generally occurs from mid-December to early February (USFWS 2015). Gray seal pupping on Monomoy NWR was limited in the past but has been increasing rapidly in recent years. By early spring, upwards of 19,000 gray seals can be found hauled out on Monomoy NWR (B. Josephson, NOAA, personal communication). While many of these seals use Monomoy NWR for breeding, others make their way to the refuge to molt. By late spring, gray seal abundance continues to taper until the fall.

Gray seal pupping information for Nantucket NWR and Nomans Land Island NWR is limited, but evidence suggests that a small number of pups are born on the latter. Aerial images and evidence do not show that pups are born on Nantucket NWR, although speculations persist (S. Wood, NOAA, personal communication). Similar trends in distribution at Monomoy NWR occur at Nomans and Nantucket NWRs, but in significantly less numbers. Gray seals are most abundant at the activity sites from late fall until spring, and less frequent during the summer months when most activity is occurring. Raw counts of gray seal counts from 2015 are summarized in Table 3.

Table 3. Raw Count of the Maximum Number of Individual Gray Seals Using Monomoy NWR Lands and Surrounding Waters in 2015 Based on NOAA Unpublished Data (B. Josephson, NOAA, personal communication).

Gray Seals	
Month	Raw Count
January	4,435
February	6,047
March	16,764
April	18,098
May	19,166
June	8,764
July	978
August	1,206
September	658
October	1,113
November	2,379
December	Not calculated

Harbor Seal

Harbor seals found on the project area are included in the western North Atlantic stock, which ranges from Canadian Arctic to southern New England and New York, and occasionally to the Carolinas (Waring *et al.*, 2016). Based on available counts along the Maine coast in 2012, the minimum population estimate is 75,834 (Waring *et al.*, 2016). Harbor seals are not listed under the ESA and the stock is not considered strategic or depleted under the MMPA.

Harbor seals occur seasonally in the Complex, and generally arrive in early September and remain through May (Waring *et al.*, 2016). Numbers of these seals increase slowly through this time period and then quickly drop off in March as they make their northward movement from southern New England to Maine and eastern Canada, where they breed in mid-May (USFWS 2015). Gray seals seem to be displacing harbor seals to some extent, but the two species will haul out together, with gray seals occupying the upper beach and harbor seals staying closer to the water (D. Waring, personal communication). Pupping generally occurs between mid-May through June off the coast of Maine; however recent evidence suggests that some pupping may occur as far south as Manomet, MA, but does not occur in the project area.

The best current abundance estimate of harbor seals is 75,834 (CV=0.15) which is from a 2012 survey (Waring *et al.*, 2015). The minimum population estimate is 66,884 based on corrected available counts along the Maine coast in 2012. It is unclear how many harbor seals use the Complex. Harbor seals are seen infrequently and only occur seasonally. USFWS staff estimate that of all the seals they observe in the Complex, approximately five percent are harbor seals.

Sound Sources and Sound Characteristics

NMFS does not expect acoustic stimuli to result from human presence, and will therefore not have the potential to harass marine mammals, incidental to the conduct of the proposed activities. One activity (cannon nets) may have an acoustic component, but we believe take from this activity can be avoided.

This section includes a brief explanation of the sound measurements frequently used in the discussions of acoustic effects in this notice. Sound pressure is the sound force per unit area, and is usually measured in micropascals (μPa), where 1 pascal (Pa) is the pressure resulting from

a force of one newton exerted over an area of one square meter. Sound pressure level (SPL) is the ratio of a measured sound pressure and a reference level. The commonly used reference pressure is 1 μPa for underwater, and the units for SPLs are dB re: 1 μPa . The commonly used reference pressure is 20 μPa for in air, and the units for SPLs are dB re: 20 μPa .

$\text{SPL (in decibels (dB))} = 20 \log (\text{pressure}/\text{reference pressure}).$

SPL is an instantaneous measurement expressed as the peak, the peak-peak, or the root mean square (rms). Root mean square is the square root of the arithmetic average of the squared instantaneous pressure values. All references to SPL in this document refer to the root mean square unless otherwise noted. SPL does not take into account the duration of a sound.

Research Activities Sound Characteristics

Activities that may have an acoustic component (*e.g.*, cannon nets) are not expected to reach the thresholds for Level B harassment. Cannon nets could be an airborne source of noise, and have a measured SL of 128 dB at one meter (m) (estimated based on a measurement of 98.4 dB at 30 m; L. Niles, pers. comm., December 2016); however, the SPL is expected to be less than the thresholds for airborne pinniped disturbance (*e.g.*, 90 dB for harbor seals, and 100 dB for all other pinnipeds) at 80 meters from the source. The USFWS proposes to stay at least 100 meters from all pinnipeds if cannon nets are to be used for research purposes.

Potential Effects of Specified Activities on Marine Mammals and their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The “Estimated Take by Incidental Harassment” section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The “Negligible Impact Analysis and Determination” section considers the content of this section, the “Estimated Take

by Incidental Harassment” section, and the “Proposed Mitigation” section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Acoustic and visual stimuli generated by: (1) vessel landings; (2) research activities (*e.g.*, cannon nets, sign installation); and (3) human presence may have the potential to cause behavioral disturbance of pinnipeds.

Vessel Presence and Noise

Researchers have demonstrated temporary threshold shifts (TTS) in certain captive odontocetes and pinnipeds exposed to strong sounds (reviewed in Southall *et al.*, 2007). In 2004, researchers measured auditory fatigue to airborne sound in harbor seals, California sea lions, and northern elephant seals after exposure to non-pulse noise for 25 minutes (Kastak *et al.*, 2004). In the study, the harbor seal experienced approximately six dB of TTS at 99 dB re: 20 μ Pa. The authors identified onset of TTS in the California sea lion at 122 dB re: 20 μ Pa. The northern elephant seal experienced TTS-onset at 121 dB re: 20 μ Pa (Kastak *et al.*, 2004).

Pinnipeds have the potential to be disturbed by underwater noise generated by the engine of the vessel (Born *et al.*, 1999; Richardson *et al.*, 1995). Data on underwater TTS-onset in pinnipeds exposed to pulses are limited to a single study which exposed two California sea lions to single underwater pulses from an arc-gap transducer and found no measurable TTS following exposures up to 183 dB re: 1 μ Pa (peak-to-peak) (Finneran *et al.*, 2003).

As a general statement from the available information, pinnipeds exposed to intense (approximately 110 to 120 dB re: 20 μ Pa) non-pulse sounds often leave haulout areas and seek refuge temporarily (minutes to a few hours) in the water (Southall *et al.*, 2007).

It is likely that the initial vessel approach would cause a subset, or all of the marine mammals hauled out to flush into the water. The physical presence of the vessel could also lead to non-auditory effects on marine mammals involving visual or other cues. Noise from the vessel would not be expected to cause direct physical effects but have the potential to affect behavior. The primary factor that may influence abrupt movements of animals is engine noise, specifically changes in engine noise. Responses by mammals could include hasty dives or turns, change in course, or flushing from a haul out site.

If pinnipeds are present on Nomans NWR when the vessel approaches, it is likely that the vessel would cause some number of the pinnipeds to flush; however, the USFWS staff would approach in a slow and controlled manner, as far away as possible from haulouts to prevent or minimize flushing. Staff would also avoid or proceed cautiously when operating boats in the direct path of swimming seals that may be present in the area as far from hauled out seals as possible.

Human Presence

The appearance of USFWS personnel may have the potential to cause Level B harassment of marine mammals hauled out on the beaches in the proposed action area. Disturbance includes a variety of effects, including subtle to conspicuous changes in behavior, movement, and displacement. Disturbance may result in reactions ranging from an animal simply becoming alert to the presence of the USFWS staff (*e.g.*, turning the head, assuming a more upright posture) to flushing from the haulout site into the water. NMFS does not consider the lesser reactions to constitute Level B (behavioral) harassment. However, if pinnipeds move greater than two body lengths or make longer retreats over the beach or if already moving, make a change of direction of greater than 90 degrees or flush into the water in response to the

presence of surveyors, these are indicative of disruptions of behavioral patterns and thus are Level B harassment. NMFS uses a three-point scale (Table 4) to determine which disturbance reactions constitute take under the MMPA. Levels two and three (movement and flush) are considered take, whereas Level one (alert) is not.

Table 4. Disturbance Scale of Pinniped Responses to In-Air Sources to Determine Take.

Level	Type of Response	Definition
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.
2*	Movement	Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.
3*	Flush	All retreats (flushes) to the water.

*Only Levels 2 and 3 are considered take, whereas Level 1 is not.

Reactions to human presence, if any, depends on species, state of maturity, experience, current activity, reproductive state, time of day, and many other factors (Richardson *et al.*, 1995; Southall *et al.*, 2007; Weilgart 2007). These behavioral reactions from marine mammals are often shown as: changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior, avoidance of areas; and/or flight responses (*e.g.*, pinnipeds flushing into the water from haulouts or rookeries). If a marine mammal does react briefly to human presence by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if visual stimuli from human presence displaces marine mammals from an important feeding or breeding area for a prolonged period,

impacts on individuals and populations could be significant (*e.g.*, Lusseau and Bejder 2007; Weilgart 2007).

Disturbances resulting from human activity can impact short- and long-term pinniped haulout behavior (Renouf *et al.*, 1981; Schneider and Payne 1983; Terhune and Almon 1983; Allen *et al.*, 1984; Stewart 1984; Suryan and Harvey 1999; and Kucey and Trites 2006).

Numerous studies have shown that human activity can flush harbor seals off haulout sites (Allen *et al.*, 1984; Calambokidis *et al.*, 1991; and Suryan and Harvey 1999) or lead Hawaiian monk seals (*Neomonachus schauinslandi*) to avoid beaches (Kenyon 1972). In one case, human disturbance appeared to cause Steller sea lions to desert a breeding area at Northeast Point on St. Paul Island, Alaska (Kenyon 1962).

In cases where vessels actively approached marine mammals (*e.g.*, whale watching or dolphin watching boats), scientists have documented that animals exhibit altered behavior such as increased swimming speed, erratic movement, and active avoidance behavior (Acevedo 1991; Trites and Bain 2000; Williams *et al.*, 2002; Constantine *et al.*, 2003), reduced blow interval (Richter *et al.*, 2003), disruption of normal social behaviors (Lusseau 2003; 2006), and the shift of behavioral activities which may increase energetic costs (Constantine *et al.*, 2003; 2004).

In 1997, Henry and Hammil (2001) conducted a study to measure the impacts of small boats (*i.e.*, kayaks, canoes, motorboats, and sailboats) on harbor seal haulout behavior in Metis Bay, Quebec, Canada. During that study, the authors noted that the most frequent disturbances (n=73) were caused by lower speed, lingering kayaks, and canoes (33.3 percent) as opposed to motorboats (27.8 percent) conducting high-speed passes. The seal's flight reactions could be linked to a surprise factor by kayaks and canoes, which approach slowly, quietly, and low on the water making them look like predators. However, the authors note that once the animals were

disturbed, there did not appear to be any significant lingering effect on the recovery of numbers to their pre-disturbance levels. In conclusion, the study showed that boat traffic at current levels has only a temporary effect on the haulout behavior of harbor seals in the Metis Bay area.

In 2004, Acevedo-Gutierrez and Johnson (2007) evaluated the efficacy of buffer zones for watercraft around harbor seal haulout sites on Yellow Island, Washington. The authors estimated the minimum distance between the vessels and the haulout sites; categorized the vessel types; and evaluated seal responses to the disturbances. During the course of the seven-weekend study, the authors recorded 14 human-related disturbances which were associated with stopped powerboats and kayaks. During these events, hauled out seals became noticeably active and moved into the water. The flushing occurred when stopped kayaks and powerboats were at distances as far as 453 and 1,217 ft (138 and 371 m) respectively. The authors note that the seals were unaffected by passing powerboats, even those approaching as close as 128 ft (39m), possibly indicating that the animals had become tolerant of the brief presence of the vessels and ignored them. The authors reported that on average, the seals quickly recovered from the disturbances and returned to the haulout site in less than or equal to 60 minutes. Seal numbers did not return to pre-disturbance levels within 180 minutes of the disturbance less than one quarter of the time observed. The study concluded that the return of seal numbers to pre-disturbance levels and the relatively regular seasonal cycle in abundance throughout the area counter the idea that disturbances from powerboats may result in site abandonment (Acevedo-Gutierrez and Johnson 2007). As a general statement from the available information, pinnipeds exposed to intense (approximately 110 to 120 decibels re: 20 μ Pa) non-pulsed sounds often leave haulout areas and seek refuge temporarily (minutes to a few hours) in the water (Southall *et al.*, 2007).

Stampede

There are other ways in which disturbance, as described previously, could result in more than Level B harassment of marine mammals. They are most likely to be consequences of stampeding, a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus. These situations are: (1) falling when entering the water at high-relief locations; (2) extended separation of mothers and pups; and (3) crushing of pups by large males during a stampede. However, NMFS does not expect any of these scenarios to occur from the USFWS's research activities. There is the risk of injury if animals stampede towards shorelines with precipitous relief (*e.g.*, cliffs). However, there are no cliffs on any of the haulout locations in the Complex. If disturbed, the small number of hauled out adult animals may move toward the water without risk of encountering barriers or hazards that would otherwise prevent them from leaving the area. Moreover, seals may flush into the water, but would not have the potential to crush other seals like sea lions do during a stampede. They may bump into each other, but this is not expected to have lethal consequences. Thus, in this case, NMFS considers the risk of injury, serious injury, or death to hauled-out animals as very low.

Anticipated Effects on Marine Mammal Habitat

The only habitat modification associated with the proposed activity is installation of signs on beaches where haulouts are located. Thus, NMFS does not expect that the proposed activity would have any effects on marine mammal habitat and NMFS expects that there will be no long- or short-term physical impacts to pinniped habitat in the Complex.

The proposed activities are not expected to result in any permanent impact on habitats used by marine mammals, including prey species and foraging habitat. The main impact associated with the proposed activity will be direct effects on marine mammals from human

presence at haulouts (*i.e.*, the potential for temporary abandonment of the site), previously discussed in this notice.

NMFS does not anticipate that the proposed research and monitoring activities would result in any permanent effects on the habitats used by the marine mammals in the proposed area, including the food sources they use (*i.e.*, fish and invertebrates). Based on the preceding discussion, NMFS does not anticipate that the proposed activity would have any habitat-related effects that could cause significant or long-term consequences for individual marine mammals or their populations.

Estimated Take

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS' consideration of whether the number of takes is "small" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to USFWS research and monitoring surveys. NMFS expects that the presence of the USFWS personnel could disturb animals hauled out on beaches near research activities and that the animals may alter their

behavior or attempt to move away from the USFWS personnel. Based on the nature of the activity, Level A harassment is neither anticipated nor proposed to be authorized.

As described previously, no mortality is anticipated or proposed to be authorized for this activity. Below we describe how the take is estimated.

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

Gray Seal—Little information is known about gray seal age and sex distribution at the Complex. Gray seals may use Complex sites for pupping but research and monitoring activities are not performed during the breeding season, so no newborn pups will be disturbed. Group composition of individuals present at activity sites are likely to be of mixed age and sex classes.

The greatest disturbance to gray seals is expected to occur during the beach nesting bird breeding season from April to August. During April and May, when seals are hauled out in very large numbers on the refuge, they may be present at beaches of varying widths, between 30 m and 300 m. In narrower areas, all of the seals may be disturbed; in mid-width areas, some of the younger and smaller seals may flush, but large males may remain on the beach; and in the widest area, USFWS activities may have no impact on the hauled out seals. USFWS staff conduct research and monitoring work outside of the season of highest gray seal numbers.

Harbor Seal—Peak pupping for harbor seals is in June and occurs elsewhere, mainly on the coasts of Maine and maritime Canada. Prior to a 2001 study, it was thought that the majority of migrating harbor seals moving into New England waters were sub-adults and juveniles. The study revealed that adult seals also migrate to waters around Cape Cod (NOAA 2015b). However, data on harbor seal sex and age distribution is still insufficient to report. Harbor seals

are only noted in gray seal haulouts if they are spotted by USFWS staff or researchers. USFWS staff estimate that gray seal haulouts are comprised of five percent or less harbor seals based on field observations, as harbor seals are not always seen mixed in with every gray seal haulout. Harbor seal numbers taper during the summer time when the highest level of seal disturbance occurs.

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

As discussed earlier, NMFS assumes that pinnipeds that move greater than two body lengths or make longer retreats over the beach, or if already moving, make a change of direction of greater than 90 degrees or flush into the water in response to the presence of surveyors, are behaviorally harassed, and thus subject to Level B taking. Take estimation is based on the number of seals observed in past research years that have been flushed during research activities.

Table 5. Estimated Number of Gray Seal Takes Per Activity at Monomoy, Nantucket, and Nomans Land Island NWRs.

Gray Seal			
Age: all		Sex: male and female	
	# takes/event	# events/activity	Total takes
Shorebird and Seabird Monitoring and Research	1000 (Monomoy)	34 (Monomoy)	34,430
	50 (Nantucket)	8 (Nantucket)	
	10 (Nomans)	3 (Nomans)	
Roseate Tern Staging Counts and Resighting	10 (Monomoy)	6 (Monomoy)	100
	10 (Nantucket)	4 (Nantucket)	
Red Knot Stopover Study	250 (Monomoy)	5 (Monomoy)	2,000
	150 (Cape Cod)	5 (Cape Cod)	
Northeastern Beach Tiger Beetle Census	750 (Monomoy)	3 (Monomoy)	2,250
Coastal Shoreline Change Survey	500 (Monomoy)	1 (Monomoy)	500
Total			39,280

Take estimates were based on NOAA unpublished data (Table 3) and USFWS field observations. While the average number of gray seals present (in regards to Monomoy) from April until August is greater than what is reflected in Table 5, not every hauled out seal on the beach is impacted from each activity, and not all seals are impacted from every activity event. This is especially true for Monomoy NWR because the seal haulout stretches across 4+ miles of beach, whereas the haulouts on Nomans NWR and Nantucket NWR are more compact at a central location.

For shorebird and seabird monitoring and research on Monomoy, an average 1,000 gray seals was estimated based on Table 3 unpublished data and field observations of staff working on the island. Seals on South Monomoy Island will haul out in groups along the Atlantic shoreline. Although gray seals will haul out daily on South Monomoy, they will not always be present in the same location every day, and will haul out during different times of the day in accordance with the tide. USFWS staff face the greatest difficulty avoiding seals along the narrow shoreline sections of the island at the south end of South Monomoy Island. Seal haulouts can be readily avoided given the width of the beach and availability of preferred nesting beach bird habitat located closer to the dunes. While the average number of gray seals hauled out on South Monomoy between April and August is 9,000, an average of 1,000 individuals (at any given time) better describes the number of seals staff come into contact with (Table 5). USFWS staff monitor beach birds along the 4+ mile Atlantic shoreline of South Monomoy 5-6 days a week (Table 1). It is important to note that the entire extent of the shoreline is not monitored every day. Staff monitor as many areas as time allows, although there are some days when the north or south end of the island are not visited. Disturbance does not always occur when seal haulout areas are visited. During the 17 week nesting season, USFWS estimates that seals are disturbed

during shorebird and seabird monitoring twice a week. This equates to 34 events of disturbance. The same ideology and number of events was applied to Nantucket for this activity (Table 5). Nomans Land NWR is only visited twice a year during the spring and summer, and the number of takes per event is based on observations of staff visiting the island.

The number of gray seal takes per roseate tern staging count and resighting event was estimated based on staff observations from previous surveys. Seals are rarely disturbed during this activity, as roseate terns generally prefer to roost on flats or open sand, while seals prefer to haul out on the shoreline of South Monomoy and Nantucket. However, disturbance is possible if roseate terns roost adjacent to the northern end of the haulout area on South Monomoy Island or the haulout on Nantucket. The number of resighting events is based on previous year's survey efforts.

The number of gray seal takes provided for the red knot study were derived from previous year's efforts and staff observation. Trapping does not always occur on South Monomoy Island, and in fact did not occur there in 2017. Trapping locations are chosen based on reconnaissance efforts conducted to locate red knot roosts. When trapping is conducted on South Monomoy Island, the cannon nets are set in one location along the Atlantic shoreline and are not moved for the remainder of the trapping effort. Therefore, only the haulouts closest to the trapping site may be affected, which the USFWS estimates to be around 250 seals (Table 5). Gray seal numbers for Cape Cod were provided from seal surveys conducted by the Provincetown Center for Coastal Studies. The number of events per red knot trapping activity reflects previous year's efforts. Trapping does not occur if a seal haulout is located within 100 m of a red knot roost.

The number of gray seal takes estimated for Northeastern beach tiger beetle census is based on USFWS staff observation. This activity usually takes two to three days to conduct and results in some seal disturbance. The number of takes provided for the coastal shoreline change survey is based on unpublished data from NOAA for the month of October (Table 3). Monomoy no longer conducts shoreline surveys in the spring when seal haulouts are at their highest numbers; only one survey is conducted in the fall.

It is unclear exactly how many harbor seals occur at the Complex, therefore it is difficult to determine how many takes occur since harbor seals are mainly present during the off season when research and monitoring is limited. Harbor seals are not present at all gray seal haulouts but at haulouts where both species are present, USFWS staff estimate that gray seal haulouts during the summer are comprised of 5 percent or less harbor seals. Due to the lack of available data on presence, harbor seal takes are not broken down by activity or site. Rather, the number of harbor seal Level B takes requested was calculated by taking 5 percent of the total gray seal take estimate. USFWS is requesting 1,964 Level B takes of harbor seals incidental to research and monitoring activities.

These incidental harassment take numbers represent less than three percent of the affected stocks of harbor seals. Under the 2017 draft SARs, the take number of gray seals exceeds the stock abundance estimate in U.S. waters (Table 6). However, actual take may be slightly less if animals decide to haul out at a different location for the day or if animals are foraging at the time of the survey activities. The number of individual seals taken is also assumed to be less than the take estimate since these species show high philopatry (Waring *et al.*, 2016; Wood *et al.*, 2011). We expect the take numbers to represent the number of exposures, but assume that the same seals may be behaviorally harassed over multiple days, and the likely

number of individual seals that may be harassed would be less. In addition, this project occurs in a small portion of the overall range of the Northwest Atlantic population of gray seals. While there is evidence of haulout site philopatry, resights of tagged and branded animals and satellite tracks of tagged animals show movement of individuals between the U.S. and Canada (Puryear *et al.*, 2016). The percentage of time that individuals are resident in U.S. waters is unknown (NMFS 2017). Genetic evidence provides a high degree of certainty that the Western North Atlantic stock of gray seals is a single stock (Boskovic *et al.*, 1996; Wood *et al.*, 2011). Thus, although the U.S. stock estimate is only 27,131, the overall stock abundance is 451,131. The gray seal take estimate for this project represents less than nine percent of the overall Western North Atlantic stock abundance in U.S. and Canadian waters (Table 6).

Table 6. Percentage of Stock Affected by the Number of Takes per Species.

Species	Level B	Stock Abundance¹	% Population
Gray seal	39,280	27,131 (451,131) ²	144.8 (8.71)
Harbor seal	1,964	75,834	2.59

¹NMFS 2017

²Overall Western North Atlantic stock abundance

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, “and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking” for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and

manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned) the likelihood of effective implementation (probability implemented as planned); and

2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Mitigation for Marine Mammals and their Habitat

Time and Frequency—The USFWS would conduct research activities throughout the course of the year between April 1 and November 30, 2018, outside of the seasons of highest seal abundance and pupping at the Complex.

Vessel Approach and Timing Techniques—The USFWS would ensure that its vessel approaches to beaches with pinniped haulouts would be conducted so as to not disturb marine mammals as most practicable. To the extent possible, the vessel would approach the beaches in a slow and controlled approach, as far away as possibly from haulouts to prevent or minimize

flushing. Staff would also avoid or proceed cautiously when operating boats in the direct path of swimming seals that may be present in the area.

Avoidance of Acoustic Impacts from Cannon Nets—Cannon nets have a measured SL of 128 dB at one meter (m) (estimated based on a measurement of 98.4 dB at 30 m; L. Niles, pers. comm., December 2016); however, the SPL is expected to be less than the thresholds for airborne pinniped disturbance (*e.g.*, 90 dB for harbor seals, and 100 dB for all other pinnipeds) at 80 yards from the source. The USFWS proposes to stay at least 100 meters from all pinnipeds if cannon nets are to be used for research purposes.

Avoidance of Visual and Acoustic Contact with People—The USFWS would instruct its members and research staff to avoid making unnecessary noise and not expose themselves visually to pinnipeds whenever practicable. USFWS staff would stay at least 50 yards from hauled out pinnipeds, unless it is absolutely necessary to approach seals closer, or potentially flush a seal, in order to continue conducting endangered species conservation work. When disturbance is unavoidable, staff will work quickly and efficiently to minimize the length of disturbance. Researchers and staff will do so by proceeding in a slow and controlled manner, which allows for the seals to slowly flush into the water. Staff will also maintain a quiet working atmosphere, avoiding loud noises, and using hushed voices in the presence of hauled out pinnipeds. Pathways of approach to the desired study or nesting site will be chosen to minimize seal disturbance if an activity event may result in the disturbance of seals. USFWS staff will scan the surrounding waters near the haulouts, and if predators (*i.e.*, sharks) are seen, seals will not be flushed by USFWS staff.

Researchers, USFWS staff, and volunteers will be properly informed about the MMPA take prohibitions, and will educate the public on the importance of not disturbing marine

mammals, when applicable. Staff at Nantucket NWR will remain present on the beaches utilized by pinnipeds to prevent anthropogenic disturbance during times of high public use (late spring to early fall). Staff at Monomoy NWR will also be present on beaches utilized by seals during the same time of year, and will inform the public to keep a distance from haulouts if an issue is noticed. Similar to the USFWS, the NPS also takes precautionary mitigation to help prevent seal take by the public. In August and on the weekends in September, staff and volunteers are present on the National Seashore beaches to share with the public the importance of preventing disturbance to seals by keeping people at a proper viewing distance of at least 50 yards.

The presence/proximity of seal haulouts and the loud sound created by the firing of cannon nets are taken into consideration when selecting trapping sites for the Red Knot Stopover Study. Trapping sites are decided based on the presence of red knots, the number of juveniles located within roosts, and the observation of birds with attached geolocators and flags. Sites are not trapped on if there is a strong possibility of disturbing seals (*i.e.*, closer than 100 meters). The Red Knot Stopover Study occurs during the time of year (July to September) when the least number of seals are present at the activity sites.

The proposed mitigation measures are designed to minimize the potential for behavioral harassment of pinnipeds hauled out near the survey sites. The proposed surveys occur outside of the period of highest seal abundance at the Complex. While the survey timing overlaps with harbor seal pupping season, pupping is not known to occur at the Complex. Gray seal pupping has been documented at the Complex but generally occurs between December and February, when USFWS staff will not be conducting surveys. We believe the proposed mitigation measures are practicable for the applicant to implement.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

Monitoring

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth, "requirements pertaining to the monitoring and reporting of such taking." The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas).

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and
- Mitigation and monitoring effectiveness.

As part of its IHA application, the USFWS proposes to conduct marine mammal monitoring, in order to implement the mitigation measures that require real-time monitoring, and satisfy the monitoring requirements of the proposed IHA. These include:

Monitoring seals as project activities are being conducted. Proposed monitoring requirements in relation to the USFWS's proposed activities would include species counts, numbers of observed disturbances, and descriptions of the disturbance behaviors during the research activities, including location, date, and time of the event. In addition, the USFWS would record observations regarding the number and species of any marine mammals either observed in the water or hauled out. Behavior of seals will be recorded on a three point scale: 1= alert reaction, not considered harassment; 2= moving at least two body lengths, or change in direction greater than 90 degrees; 3= flushing (Table 4). USFWS staff would also record and report all observations of sick, injured, or entangled marine mammals on Monomoy NWR to the International Fund for Animal Welfare (IFAW) marine mammal rescue team, and will report to NOAA if injured seals are found at Nantucket NWR and Nomans NWR. Tagged or marked marine mammals will also be recorded and reported to the appropriate research organization or

Federal agency, as well as any rare or unusual species of marine mammal. Photographs will be taken when possible. This information will be incorporated into a report for NMFS at the end of the season. The USFWS will also coordinate with any university, state, or Federal researchers to attain additional data or observations that may be useful for monitoring marine mammal usage at the activity sites.

If at any time injury, serious injury, or mortality of the species for which take is authorized should occur, or if take of any kind of other marine mammal occurs, and such action may be a result of the USFWS's activities, the USFWS would suspend research activities and contact NMFS immediately to determine how best to proceed to ensure that another injury or death does not occur and to ensure that the applicant remains in compliance with the MMPA.

Reporting

The USFWS would submit a draft report to NMFS Office of Protected Resources no later than 90 days after the conclusion of research and monitoring activities in the 2018 season. The report will include a summary of the information gathered pursuant to the monitoring requirements set forth in the proposed IHA. The USFWS will submit a final report to NMFS within 30 days after receiving comments from NMFS on the draft report. If the USFWS receives no comments from NMFS on the draft report, NMFS will consider the draft report to be the final report.

The report will describe the operations conducted and sightings of marine mammals near the proposed project. The report will provide full documentation of methods, results, and interpretation pertaining to all monitoring. The report will provide:

1. A summary and table of the dates, times, and weather during all research activities;

2. Species, number, location, and behavior of any marine mammals observed throughout all monitoring activities;
3. An estimate of the number (by species) of marine mammals exposed to human presence associated with the USFWS's activities; and
4. A description of the implementation and effectiveness of the monitoring and mitigation measures of the IHA and full documentation of methods, results, and interpretation pertaining to all monitoring.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the authorization, such as an injury (Level A harassment), serious injury, or mortality (*e.g.*, stampede), USFWS personnel shall immediately cease the specified activities and immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northeast Regional Stranding Coordinator. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Description and location of the incident (including water depth, if applicable);
- Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

The USFWS shall not resume its activities until NMFS is able to review the circumstances of the prohibited take. We will work with the USFWS to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The USFWS may not resume their activities until notified by us via letter, email, or telephone.

In the event that the USFWS discovers an injured or dead marine mammal, and the marine mammal observer determines that the cause of injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as we describe in the next paragraph), the USFWS will immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northeast Regional Stranding Coordinator. The report must include the same information identified in the paragraph above this section. Activities may continue while NMFS reviews the circumstances of the incident. NMFS would work with the USFWS to determine whether modifications in the activities are appropriate.

In the event that the USFWS discovers an injured or dead marine mammal, and the lead visual observer determines that the injury or death is not associated with or related to the authorized activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the USFWS will report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Northeast Regional Stranding Coordinator within 24 hours of the discovery. The USFWS personnel will provide photographs or video footage (if available) or other documentation of the stranded animal sighting to us. The USFWS can continue their survey activities while NMFS reviews the circumstances of the incident.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival” (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS’s implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

Although the USFWS’s survey activities may disturb a small number of marine mammals hauled out on beaches in the Complex, NMFS expects those impacts to occur to a localized group of animals. Marine mammals would likely become alert or, at most, flush into the water in reaction to the presence of the USFWS personnel during the proposed activities. Much of the disturbance will be limited to a short duration, allowing marine mammals to reoccupy haulouts within a short amount of time. Thus, the proposed action is unlikely to result in long-term

impacts such as permanent abandonment of the area because of the availability of alternate areas for pinnipeds to avoid the resultant acoustic and visual disturbances from the research activities.

The USFWS's activities would occur during the least sensitive time (*e.g.*, April through November, outside of the pupping season) for hauled out pinnipeds in the Complex. Thus, pups or breeding adults would not be present during the proposed activity days.

Moreover, the USFWS's mitigation measures regarding vessel approaches and procedures that attempt to minimize the potential to harass the seals would minimize the potential for flushing and large-scale movements. Thus, the potential for large-scale movements and flushing leading to injury, serious injury, or mortality is low.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No injury (Level A harassment) or serious injury is anticipated or authorized;
- No mortality is anticipated or authorized;
- Impacts will occur to a localized group of animals;
- Disturbance will be limited to a short duration, allowing marine mammals to reoccupy haulouts within a short amount of time;
- Activities will occur during the least sensitive time (*e.g.*, April through November, outside of pupping season) for pinnipeds hauled out in the Complex, therefore no pups or breeding adults would be present during the proposed activity days; and
- The USFWS's mitigation measures regarding visual and acoustic disturbance to hauled out pinnipeds would minimize the potential for flushing and large-scale movements,

therefore the potential for large-scale movements and flushing leading to injury, serious injury, or mortality is low;

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted above, only small numbers of incidental take may be authorized under section 101(a)(5)(D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

NMFS estimates that the USFWS's proposed activities could potentially take, by Level B harassment only, two species of marine mammal under our jurisdiction. For each species, these estimates are small numbers (less than three percent of the affected stock of harbor seals and less than eight percent of the stock of gray seals) relative to the population size (Table 6). As stated before, the number of individual seals taken is also assumed to be less than the take estimate (number of exposures) since we assume that the same seals may be behaviorally harassed over multiple days.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has preliminarily determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the USFWS for conducting research activities at the Eastern MA NWR locations, from April 1, 2018 through November 30, 2018, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

Proposed Authorization Language

The United States Fish and Wildlife Service, Eastern Massachusetts National Wildlife Refuge Complex (USFWS) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to harass marine mammals incidental to

conducting research activities in the Eastern Massachusetts National Wildlife Refuge Complex (Complex), when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from April 1, 2018 through March 31, 2019.
2. This IHA is valid only for activities associated with the research activities and human presence in the Complex.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of the USFWS, its designees, and work crew personnel operating under the authority of this IHA.
 - (b) The species authorized for taking are the gray seal (*Halichoerus grypus atlantica*) and the harbor seal (*Phoca vitulina concolor*).
 - (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). The authorized take numbers are shown below:
 - (i) 2,147 harbor seals
 - (ii) 39,680 gray seals
 - (d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (e) The USFWS shall conduct briefings between survey crews, marine mammal monitoring team, and Complex staff prior to the start of all research and monitoring activities, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

(f) The USFWS may not conduct activities between the dates of December 1, 2018 and March 31, 2019.

4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

(a) Research activities shall be conducted only between April 1, 2018 and November 30, 2018.

(b) Ensure that vessel approaches to Nomans NWR shall be such that the techniques are least disturbing to marine mammals. The vessel must conduct a slow and controlled approach to the island as far away as possible from haulouts. USFWS staff shall avoid operating boats in the direct path of swimming seals that may be present in the area unless seals are in the only safe path to the beach.

(c) Provide instructions to USFWS staff and team members on appropriate conduct in the vicinity of hauled out marine mammals. The USFWS research teams shall maintain a quiet working atmosphere by avoiding making unnecessary noise and by using hushed voices while near hauled out seals; shall remain at least 50 yards (yd) from seals unless absolutely necessary to conduct endangered species conservation work; and shall choose pathways to study sites that will minimize disturbance to seals.

(d) Ensure cannon nets will not be used closer than 100 m from seals.

(e) Ensure that the waters surrounding the haulouts are free of predators (*e.g.*, sharks) before USFWS staff flush seals from the haulouts.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during seabird and shorebird research. Monitoring and reporting shall be conducted in accordance with the Monitoring Plan. The holder of this IHA is required to:

- (a) Monitor seals when research activities are conducted in the presence of marine mammals.
- (b) Record the date, time, and location (or closest point of ingress) of each of the research activities in the presence of marine mammals.
- (c) Collect the following information for each visit:
 - (i) Information on the numbers (by species) of marine mammals observed during the activities, by age and sex, if possible;
 - (ii) The estimated number of marine mammals (by species) that may have been harassed during the activities based on the 3-point disturbance scale;
 - (iii) Any behavioral responses or modifications of behaviors that may be attributed to the specific activities (*e.g.*, flushing into water, becoming alert and moving, rafting);
 - (iv) The date, location, and start and end times of the event;
 - (v) Information on the weather, including the tidal state and horizontal visibility; and
 - (vi) Observations of sick, injured, or entangled marine mammals, and any tagged or marked marine mammals. Photographs will be taken when possible.

6. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft report on all monitoring conducted under the IHA within 90 calendar days of the completion of seabird and shorebird research and monitoring activities. A final report shall be prepared and submitted within thirty days following resolution of comments

on the draft report from NMFS. This report must contain the informational elements described in the Monitoring Plan, at minimum (see attached), and shall also include:

- (i) A summary of the dates, times, and weather during all research activities;
- (ii) Species, number, location, and behavior of any marine mammals, observed throughout all monitoring activities;
- (iii) An estimate of the number (by species) of marine mammals that are known to have been exposed to visual and acoustic stimuli associated with the research activities; and
- (iv) A description of the implementation and effectiveness of the monitoring and mitigation measures of the IHA and full documentation of methods, results, and interpretation pertaining to all monitoring.

(b) Reporting injured or dead marine mammals:

(i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as an injury (Level A harassment), serious injury, or mortality, the USFWS shall immediately cease the specified activities and report the incident to the Office of Protected Resources (301-427-8461), NMFS, and the Greater Atlantic Regional Stranding Coordinator (978-282-8478), NMFS. The report must include the following information:

1. Time and date of the incident;
2. Description of the incident;
3. Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
4. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;

5. Species identification or description of the animal(s) involved;
6. Fate of the animal(s); and
7. Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with the USFWS to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The USFWS may not resume their activities until notified by NMFS.

(ii) In the event that the USFWS discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), the USFWS shall immediately report the incident to the Office of Protected Resources, NMFS, and the Greater Atlantic Regional Stranding Coordinator, NMFS.

The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with the USFWS to determine whether additional mitigation measures or modifications to the activities are appropriate.

(iii) In the event that the USFWS discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the USFWS shall report the incident to the Office of Protected Resources, NMFS, and the Greater Atlantic Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. The USFWS shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this Notice of Proposed IHA for the proposed research and monitoring project. We also request comment on the potential for renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to expiration of the current IHA.;

- The request for renewal must include the following:

- (1) An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements;

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized; and

- Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures remain the same and appropriate, and the original findings remain valid.

Dated: February 28, 2018.

Donna Wieting,

Director, Office of Protected Resources,

National Marine Fisheries Service.

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