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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 219

[Docket No. 150413360-6558-04]

RIN 0648-BF02

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Northeast Fisheries Science Center Fisheries Research

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

ACTION: Final rule.

SUMMARY: NMFS' Office of Protected Resources (hereinafter "OPR" or "we" or "our"), upon request of NMFS' Northeast Fisheries Science Center (NEFSC), hereby issues a regulation to govern the unintentional taking of marine mammals incidental to fisheries research conducted in a specified geographical region, over the course of five years. This regulation, which allows for the issuance of a Letter of Authorization for the incidental take of marine mammals during the described activities and specified timeframes, prescribes the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking.

DATES: Effective from September 12, 2016 through September 9, 2021.

ADDRESSES: A copy of the NEFSC's application, application addendum, and supporting documents, as well as a list of the references cited in this document, are available on the Internet

at: *http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm*. In case of problems accessing these documents, please call the contact listed below this section (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Ben Laws, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Executive Summary

This regulation, under the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1361 *et seq*.), establishes a framework for authorizing the take of marine mammals incidental to the NEFSC's fisheries research activities in a specified geographical region (the Atlantic coast region which includes the Northeast U.S. Continental Shelf Large Marine Ecosystem (Northeast LME) and a portion of the Southeast U.S. Continental Shelf Large Marine Ecosystem (Southeast LME)).

The NEFSC collects a wide array of information necessary to evaluate the status of exploited fishery resources and the marine environment. Depending on the research, the NEFSC's conducts the following types of research: (1) fishery-independent research directed by NEFSC scientists and conducted onboard NOAA-owned and operated vessels or NOAA-chartered vessels; (2) fishery-independent research directed by cooperating scientists (other agencies, academic institutions, and independent researchers) conducted onboard non-NOAA vessels; and (3) fishery-dependent research conducted onboard commercial fishing vessels, with or without NOAA scientists onboard.

Purpose and Need for this Regulatory Action

OPR received an application from the NEFSC requesting five-year regulations and authorization to take multiple species of marine mammals. We anticipate take to occur in the Atlantic coast region by the following means: Level B harassment incidental to the use of active acoustic devices, visual disturbance of pinnipeds, and Level A harassment, serious injury, or mortality incidental to the use of fisheries research gear. This regulation is valid for five years from the date of issuance. Please see "Background" later in this document for definitions of harassment.

Section 101(a)(5)(A) of the MMPA (16 U.S.C. 1361 *et seq*.) directs the Secretary of Commerce 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, after notice and public comment, the agency makes certain findings and issues regulations. This regulation contains mitigation, monitoring, and reporting requirements.

Legal Authority for the Regulatory Action

Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing the five-year regulations and any subsequent Letters of Authorization.

Summary of Major Provisions within the Final Regulation

The following provides a summary of some of the major provisions within this regulation for the NEFSC's fisheries research activities in the Atlantic coast region. We have determined that the NEFSC's adherence to the mitigation, monitoring, and reporting measures listed later in this regulation would achieve the least practicable adverse impact on the affected marine mammals. They include:

- Required monitoring of the sampling areas to detect the presence of marine mammals before deployment of pelagic trawl nets, bottom-contact trawl gear, pelagic or demersal longline gear, gillnets, fyke nets, pots, traps, and other gears;
- Required implementation of standard tow durations of not more than 30 minutes to reduce the likelihood of incidental take of marine mammals;
- Required implementation of the mitigation strategy known as the "move-on rule," which incorporates best professional judgment, when necessary during trawl and longline operations;
- Required compliance with applicable vessel speed restrictions; and
- Required compliance with applicable and relevant take reduction plans for marine mammals.

Cost and Benefits

This final rule, specific only to the NEFSC's fishery research activities, is not significant under Executive Order 12866, Regulatory Planning and Review.

Availability of Supporting Information

We provided SUPPLEMENTARY INFORMATION in the NPRM for this activity in the **Federal Register** on July 9, 2015 (80 FR 39542), and two corrections to the proposed rulemaking in the **Federal Register** on August 6, 2015 (80 FR 46939), and August 17, 2015 (80 FR 49196). We did not reprint all of that information here in its entirety. Instead, we represent sections from the proposed rule in this document and provide either a summary of the material presented in the proposed rule or a note referencing the page(s) in the proposed rule where the public can find the information. We address any information that has changed since the proposed rule in this document. Additionally, this final rule contains a section that responds to the public

comments submitted during the 30-day public comment period and the two extensions of the public comment period.

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq*.) direct the Secretary of Commerce 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 OPR 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. OPR 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."

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].

Summary of Request

On December 17, 2014, OPR received an adequate and complete request from the NEFSC for authorization to take marine mammals incidental to fisheries research activities. We received an initial draft of the request on February 12, 2014, followed by revised drafts on September 19 and October 1, 2014. On December 29, 2014 (79 FR 78065), we published a notice of receipt of the NEFSC's application in the **Federal Register**, requesting comments and information related to the NEFSC request for thirty days. All comments received were considered in development of the proposed rulemaking and are available on the Internet at: *www.nmfs.noaa.gov/pr/permits/incidental/research.htm*.

The NEFSC proposes to conduct fisheries research using the following types of gear: pelagic trawl gear used at various levels in the water column, bottom-contact trawl gear, pelagic and demersal longlines with multiple hooks, gillnets, fyke nets, dredges, pots, traps, and other gear. If a marine mammal interacts with gear deployed by the NEFSC, the outcome could potentially be Level A harassment, serious injury (*i.e*., any injury that will likely result in mortality), or mortality. However, there is not sufficient information upon which to base a prediction of what the outcome could be for any particular interaction. Therefore, the NEFSC has pooled the estimated number of incidents of take expected to result from gear interactions, and we have assessed the potential impacts accordingly. The NEFSC also uses various active acoustic devices in the conduct of fisheries research, and use of these devices has the potential to result in Level B harassment of marine mammals. Level B harassment of pinnipeds hauled out on the shoreline may also occur, in some locations within the Atlantic coast region, as a result of visual disturbance from vessels conducting NEFSC research. This regulation is valid for five years from the date of issuance.

The NEFSC conducts fisheries research surveys in the Atlantic coast region which spans the United States-Canadian border to Florida. This specified geographic region includes the following subareas: the Gulf of Maine, Georges Bank, Southern New England waters, the Mid-Atlantic Bight, and the coastal waters of northeast Florida. The NEFSC requested authorization to take individuals of 10 species by Level A harassment, serious injury, or mortality (hereafter referred to as M/SI + Level A) and of 19 species by Level B harassment.

Description of the Specified Activity

Overview

The NEFSC collects a wide array of information necessary to evaluate the status of exploited fishery resources and the marine environment. NEFSC scientists conduct fishery-independent research onboard NOAA-owned and operated vessels or on chartered vessels. For other types of surveys, cooperating scientists may conduct fishery-independent research onboard non-NOAA vessels. Finally, the NEFSC sponsors some fishery-dependent research conducted onboard commercial fishing vessels, with or without NEFSC scientists onboard.

The NEFSC plans to administer and conduct approximately 48 survey programs over the five-year period. The gear types used fall into several categories: pelagic trawl gear used at various levels in the water column; bottom-contact trawl gear; pelagic and demersal longlines; gillnets; fyke nets; pots; traps; and other gear. The use of pelagic and bottom trawl nets, gillnets, fyke nets, and pelagic longline gears are likely to result in interactions with marine mammals. The majority of these surveys also use active acoustic devices.

The federal government has a responsibility to conserve and protect living marine resources in U.S. waters and has also entered into a number of international agreements and treaties related to the management of living marine resources in international waters outside the

United States. NOAA has the primary responsibility for managing marine fin and shellfish species and their habitats, with that responsibility delegated within NOAA to NMFS.

In order to direct and coordinate the collection of scientific information needed to make informed fishery management decisions, Congress created six Regional Fisheries Science Centers, each a distinct organizational entity and the scientific focal point within NMFS for region-based federal fisheries-related research. This research aims at monitoring fish stock recruitment, abundance, survival and biological rates, geographic distribution of species and stocks, ecosystem process changes, and marine ecological research. The NEFSC is the research arm of NMFS in the greater Atlantic Ocean region of the United States. The NEFSC conducts research and provides scientific advice to manage fisheries and conserve protected species in Northeast and Southeast LMEs and provides scientific information to support the New England Fishery Management Council, the Mid-Atlantic Fishery Management Council, the Atlantic States Marine Fisheries Commission, and numerous other domestic and international fisheries management organizations.

Dates and Duration

The specified activity may occur at any time during the five-year period of validity of the issued regulation. Dates and duration of individual surveys are inherently uncertain, based on congressional funding levels for the NEFSC, weather conditions, or ship contingencies. In addition, the NEFSC designs the cooperative research program to provide flexibility on a yearly basis in order to address issues as they arise. Some cooperative research projects last multiple years or may continue with modifications. Other projects only last one year and are not continued. Most cooperative research projects undergo an annual competitive selection process to determine funding for projects based on proposals developed by many independent

researchers and fishing industry participants. NEFSC survey activity occurs during most months of the year; however, most trawl surveys occur during the spring, summer, and fall. Longline surveys occur either biannually in the spring or annually in the summer and a small number of gillnet surveys occur annually in the summer.

Specified Geographical Region

The NEFSC operates within the Atlantic coast region, which was described in detail in the notice of proposed rulemaking for this activity in the **Federal Register** on July 9, 2015 (80 FR 39544-39546). We refer the public to that document for further information.

Detailed Description of Activities

We provided a detailed description of the NEFSC's planned research activities, gear types and active acoustic sound sources used in the notice of proposed rulemaking (80 FR 39546-39560; July 9, 2015) and do not repeat that information here. There are no changes to the specified activities, gear types, or active acoustic sound sources described in that document.

Comments and Responses

We published a notice of proposed rulemaking in the **Federal Register** on July 9, 2015 (80 FR 39542) and requested comments and information from the public. We also published two corrections and extensions of the public comment period for the proposed rulemaking in the **Federal Register** on August 6, 2015 (80 FR 46939), and August 17, 2015 (80 FR 49196). During the 70-day public comment period, we received letters from the Marine Mammal Commission (Commission), a joint letter from the Humane Society of the United States and Whale and Dolphin Conservation (HSUS/WDC), and comments from two private citizens which were not germane to the proposed action. We provide the comments and our responses here, and we have posted those comments on the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm* and on the federal e-Rulemaking

Portal at *www.regulations.gov* (enter 0648–BF02 in the ‘‘Search’’ box and scroll down to the Comments section). Please see the comment letters for the full rationale behind our response to the recommendations.

Comment 1: The Commission recommends that OPR develop criteria and guidance for determining when prospective applicants should request taking by Level B harassment incidental to the use of sub-bottom profilers, echosounders, and other sonars, stating that we should follow a consistent approach in assessing the potential for taking by Level B harassment from active acoustic systems.

Response: OPR agrees with the Commission's recommendation. Generally speaking, there has been a lack of information and scientific consensus regarding the potential effects of electromechanical sources (including scientific sonars) on marine mammals, which may differ depending on the acoustic system and species in question as well as the environment in which an applicant operates the system. We are currently working to ensure that our consideration on the use of these types of active acoustic sources is consistent and look forward to the Commission's advice as we develop guidance as recommended.

Comment 2: The Commission recommends that the OPR require the NEFSC to estimate the numbers of marine mammals taken by Level B harassment incidental to use of active acoustic sources (*e.g.*, echosounders) based on the 120-decibel (dB) rather than the 160-dB root mean square (rms) threshold. Please see the notice of proposed rulemaking (80 FR 39542; July 9, 2015) for a discussion related to acoustic terminology and thresholds. In addition, the Commission recommends that the OPR formulate a strategy for updating behavioral thresholds for all types of sound sources (*i.e.*, impulsive and non-impulsive) incorporating new data regarding behavioral thresholds and finalize the thresholds within the next year or two.

Response: Continuous sounds are those whose sound pressure level remains above that of the ambient sound, with negligibly small fluctuations in sound levels (NIOSH, 1998; ANSI, 2005), while intermittent sounds are defined as sounds with interrupted levels of low or no sound (NIOSH, 1998). Thus, echosounder signals are not continuous sounds but rather intermittent sounds. One can further define intermittent sounds as either impulsive or non-impulsive. Impulsive sounds have been defined as sounds which are typically transient, brief (less than one second), broadband, and consist of a high peak pressure with rapid rise time and rapid decay (ANSI, 1986; NIOSH, 1998). Echosounder signals also have durations that are typically very brief (less than one second), with temporal characteristics that more closely resemble those of impulsive sounds than non-impulsive sounds, which typically have more gradual rise times and longer decays (ANSI, 1995; NIOSH, 1998). With regard to behavioral thresholds, we consider the temporal and spectral characteristics of echosounder signals to more closely resemble those of an impulse sound than a continuous sound.

The Commission suggests that, for certain sources considered here, the interval between pulses would not be discernible to the animal, rendering them effectively continuous. However, echosounders emit pulses in a similar fashion as odontocete echolocation click trains. Research indicates that marine mammals, in general, have extremely fine auditory temporal resolution and can detect each signal separately (*e.g.*, Au *et al*., 1988; Dolphin *et al*., 1995; Supin and Popov, 1995; Mooney *et al*., 2009), especially for species with echolocation capabilities. Therefore, it is highly unlikely that marine mammals would perceive echosounder signals as being continuous. The Commission provides numerous references purporting to demonstrate behavioral responses by marine mammals to received levels of sound below 160 dB rms from sources with characteristics similar to those used by the NEFSC. However, the vast majority of these

references concern acoustic deterrent devices, which we do not believe are similar to the NEFSC's acoustic sources.

In conclusion, echosounder signals are intermittent rather than continuous signals, and the fine temporal resolution of the marine mammal auditory system allows them to perceive these sounds as such. Further, the physical characteristics of these signals indicate a greater similarity to the way that intermittent, impulsive sounds are received. Therefore, the 160-dB threshold (typically associated with impulsive sources) is more appropriate than the 120-dB threshold (typically associated with continuous sources) for estimating takes by behavioral harassment incidental to use of such sources. This response represents the consensus opinion of acoustics experts from NMFS' OPR and Office of Science and Technology.

Finally, we agree with the Commission's recommendation to revise existing acoustic criteria and thresholds as necessary to specify threshold levels that would be more appropriate for a wider range of sound sources and are currently in the process of producing such revisions (see 80 FR 45642, July 31, 2015). NOAA recognizes, as new science becomes available, that our current categorizations (*i.e.*, impulse versus continuous) may not fully encompass the complexity associated with behavioral responses (*e.g.*, context) and are working toward addressing these issues in future acoustic guidance. With respect to updating behavioral thresholds for different types of sound sources as soon as possible, OPR agrees with the Commission's recommendation. Due to the complexity and variability of marine mammal behavioral responses, NOAA will continue to work on developing guidance regarding the effects of anthropogenic sound on marine mammal behavior.

Comment 3: The Commission notes that we have delineated two categories of acoustic sources, largely based on frequency, with those sources operating at frequencies greater than the

known hearing ranges of any marine mammal (*i.e.*, greater than 180 kHz) lacking the potential to cause disruption of behavioral patterns. The Commission recommends that we review the recent scientific literature on acoustic sources with frequencies above 180 kHz (*i.e.*, Deng *et al*., 2014; Hastie *et al*., 2014) and incorporate those findings into our criteria and guidance for determining when prospective applicants should request authorization for taking by Level B harassment from the use of echosounders, sonars, and sub-bottom profilers.

Response: We are aware of the referenced literature and considered that information in our notice of proposed rulemaking (80 FR 39558, July 9, 2015). In general, the referenced work indicates that "sub-harmonics" could be "detectable" by certain species at distances up to several hundred meters. However, this detectability is in reference to ambient noise, not to OPR's established 160-dB threshold for assessing the potential for incidental take for these sources (see also our response to Comment 2). Source levels of the secondary peaks considered in these studies—those within the hearing range of some marine mammals—range from 135-166 dB, meaning that these sub-harmonics either would be below the threshold for behavioral harassment or would attenuate to such a level within a few meters. Beyond these important study details, these high-frequency (*i.e.*, Category 1) sources and any energy they may produce below the primary frequency that could be audible to marine mammals would be dominated by a few primary sources (*e.g.*, EK60) that are operated near-continuously—much like other Category 2 sources considered in our assessment of potential incidental take from the NEFSC's use of active acoustic sources—and the potential range above threshold would be so small as to essentially discount them.

Comment 4: HSUS/WDC provided comments on OPR's process for evaluating and adopting the NEFSC's Draft Programmatic Environmental Assessment (PEA) as described in the

notice of proposed rulemaking. The commenters state that "...[NMFS] has 'evaluated the Draft EA and [we] are proposing to adopt it,' which would seem to indicate that no or only insubstantial changes were made, despite substantial critique of the Draft PEA. Moreover, NMFS appears to have finalized the Draft PEA as it states that [HSUS/WDC's] comments were 'considered' in finalizing the PEA."

Response: OPR would like to clarify the process for evaluating the NEFSC's Draft PEA. First, we clearly state in our notice of proposed rulemaking (80 FR 39600, July 9, 2015) that the NEFSC, not NMFS' OPR, prepared the Draft PEA in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq*.) and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508). The NEFSC released the Draft PEA for public review and comment in the **Federal Register** on December 29, 2014 (79 FR 78061); considered public comments in the interim; and finalized their PEA in November 2015. The NEFSC addresses public comments on the Draft PEA—including those submitted by HSUS/WDC in Section 1.5 of the Final PEA which is available on the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm*.

Second, for the purposes of determining whether the issuance of regulations and a subsequent Letter of Authorization (LOA) would have a significant effect on the human environment, OPR stated that we would independently evaluate the NEFSC's Draft PEA, propose to adopt it (*i.e*., the final PEA that addresses public comments received on the NEFSC's Draft PEA and our notice of proposed rulemaking); or prepare a separate NEPA analysis and incorporate relevant portions of NEFSC's Draft PEA by reference (80 FR 39600, July 9, 2015). Thus, the commenters' statement that "…NMFS appears to have finalized the Draft PEA as it

states that our comments were "considered" in finalizing the PEA," is inaccurate, as the NEFSC had not finalized the Draft PEA at the time of publishing the proposed rulemaking in July 2015.

Comment 5: HSUS/WDC commented that "it would be important for commenters at this stage to understand whether the agency was simply adopting status quo mitigation measures discussed in the preferred alternative of the DPEA or including additional conservation measures for this permit. It would also be helpful to compare the data used in assessing status of, and impacts to, marine mammals discussed in the Draft PEA and which we critiqued in our comments. Yet there is no means of comparing what was proposed in the draft to what NMFS says it will adopt in a final form to allow understanding of whether changes were made in response to comments."

Response: See our Response to Comment 4. The NEFSC adhered to the procedural requirements of NEPA; the CEQ regulations for implementing NEPA, and NOAA Administrative Order 216-6 in developing the Final PEA. The connected federal action covered under the NEFSC's Final PEA is the issuance of regulations and subsequent Letter of Authorization (LOA) for the incidental taking of marine mammals under the MMPA. Under section 101(a)(5)(A) of the MMPA, OPR must consider a reasonable range of mitigation measures that may reduce the impact on marine mammals among other factors. However, some of the additional measures considered in the NEFSC's Alternative 3 could prevent them from maintaining the scientific integrity of its research programs. The NEFSC would normally exclude these measures from consideration in the Chapter 1 of the Final PEA as they would not meet the NEFSC's purpose and need under NEPA. Again, the NEFSC provides information on how they considered and addressed public comments in the Final PEA in Sections 1.5 of that document. Also, Sections 4.4 and 4.6 describe the NEFSC's consideration of Alternative 3 which

includes a suite of mitigation measures that the NEFSC did not propose to implement as a part of its Preferred Action under Alternative 2.

Comment 6: HSUS/WDC commented on a discrepancy between Table 3 and Table 20 in the notice of proposed rulemaking for the potential biological removal (PBR) level for short-beaked common dolphins.

Response: We thank the commenters for their review and have corrected the PBR value for short-beaked common dolphins to show 1,125 in Table 9 of this document instead of 170, which is the average annual human caused mortality estimate. The information provided in Table 3 in the notice of proposed rulemaking for short-beaked common dolphins is correct and has not changed.

Comment 7: HSUS/WDC commented that NMFS should re-examine impacts to bottlenose dolphin stocks since the NEFSC's research plans have not changed from what the NEFSC presented in the original application for an LOA and the Draft PEA. The commenters note that NMFS reduced the number of impacted bottlenose dolphin stocks to three: Western North Atlantic (WNA) Offshore, WNA Northern Migratory Coastal and WNA Southern Migratory Coastal rather than expand the list to consideration of all coastal bottlenose dolphin stocks as HSUS/WDC suggested in their 2014 comments on the original application for an LOA and the Draft PEA.

Response: The NEFSC considered HSUS/WDC's public comments on the likelihood of their research activities affecting certain stocks of bottlenose dolphins and reanalyzed the locations of their research activities relative to the ranges of estuarine and coastal bottlenose dolphin stocks in the Southeast LME within the Atlantic coast region. Based on that reanalysis and consideration of public comments, the NEFSC determined that the impact of their coastal

research activities, namely the Apex Predators Bottom Longline Coastal Shark and the Cooperative Atlantic States Shark Pupping and Nursery Ground (COASTSPAN) Surveys, within the Southeast LME was smaller than the information presented in the original 2014 application for an LOA and the Draft PEA

The NEFSC's revised analysis revealed that the Apex Predators Bottom Longline Coastal Shark Survey intersects with the estimated ranges of three stocks of bottlenose dolphins: the WNA Offshore; the WNA Northern Migratory Coastal; and the WNA Southern Migratory Coastal stocks. This survey generally samples in water depths greater than 20 m (66 ft) (*i.e.*, outside the typical range of estuarine dolphin stocks) and does not intersect with the remaining three coastal stocks in question: the WNA South Carolina-Georgia Coastal; the WNA Northern Florida Coastal; and the WNA Central Florida Coastal. The NEFSC determined that a take request was not warranted based on the following factors including: (1) the efficacy of the planned mitigation and monitoring measures in reducing the effects of the specified activity to the level of least practicable adverse impact; (2) the survey's location (offshore in water depths greater than 20 m [66 ft] depth) which has limited overlap with the primary habitat of the coastal morphotype of bottlenose dolphins; (3) the total survey effort (less than 50 days annually); (4) seasonality (spring); and (5) survey frequency (conducted every two to three years).

In assessing the impacts of the COASTSPAN survey, the NEFSC did not request take from the estuarine stocks of bottlenose dolphins in North Carolina, South Carolina, Georgia, and Florida, due to limited survey effort in estuarine waters. As discussed in the notice of proposed rulemaking (80 FR 39587, July 9, 2015), in the future, if there is a bottlenose dolphin take from one of the estuarine stocks (to be determined by genetic sampling), the NEFSC will consult with OPR and the Atlantic Bottlenose Dolphin Take Reduction Team under the Adaptive

Management provisions of the final rule to discuss appropriate modifications to COASTSPAN survey protocols.

NMFS provided a revised accounting of those coastal bottlenose dolphin stocks potentially impacted by the NEFSC's research activities within the 2015 Addendum to the NEFSC's 2014 LOA Application, available at: *http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm* which NMFS announced in the "Availability" section of the **Federal Register** notice of proposed rulemaking, 80 FR 39542, July 9, 2015. Table 20 in the notice of proposed rulemaking (80 FR 39595, July 9, 2015) shows the total estimated take by mortality, serious injury, and Level A harassment for the three stocks. The NEFSC take request for bottlenose dolphins includes two in trawl gear, five in gillnet gear, one in longline gear, and three for the potential take of one unidentified delphinid by trawl, gillnet, and/or longline for the WNA Offshore, the WNA Northern Migratory Coastal, and the WNA Southern Migratory Coastal stocks during the five-year authorization period.

The NEFSC notes in their final PEA that the Southeast Fisheries Science Center's (SEFSC) research activities could also potentially interact with the some of the same offshore and coastal stocks in the Atlantic coast region. The SEFSC is currently developing a Draft PEA and LOA application concerning fisheries research under its responsibility within the Atlantic coast region. The SEFSC's Draft PEA will also include consideration of coastal and estuarine bottlenose dolphin stocks within their future LOA application. This will include consideration of the NEFSC's research activities that occur in the Atlantic coast region. Thus, NMFS will be able to consider the combined impacts of incidental take related to NEFSC and SEFSC research activities on all bottlenose dolphin stocks within the Atlantic coast region.

Comment 8: HSUS/WDC commented that the NEFSC's LOA application did not consider the impact of an unusual mortality event (UME) in the northwest Atlantic Ocean on the overall abundance (and PBR for each stock) of the WNA Northern and Southern Migratory Coastal stocks and the resident populations of the South Carolina/Georgia Coastal, North Florida Coastal and Central Florida Coastal stocks. They suggested that NMFS should reconsider the impacts of additional research-related takes on those stocks.

Response: NMFS considered UMEs within the notice of proposed rulemaking for this activity in the **Federal Register** on July 9, 2015 (80 FR 39569). See our Response to Comment 7 with respect to the lack of anticipated impacts related to NEFSC research activities on the WNA South Carolina-Georgia Coastal, the WNA Northern Florida Coastal, and the WNA Central Florida Coastal stocks of bottlenose dolphins.

The dolphin stocks that may potentially occur within the vicinity of NEFSC coastal research activities include: the WNA Offshore, the WNA Northern Migratory Coastal, the Southern Migratory Coastal, and the WNA Southern Migratory Coastal stocks. However, specific information is lacking on which particular population or populations are affected by the UME (NMFS, 2015).

As discussed in the notice of proposed rulemaking and in the analyses in other referenced documents, NMFS has evaluated the potential effects of the NEFSC's research activities on a number of marine mammal species, including impacts to bottlenose dolphins stocks subject to the current UME and concludes that NEFSC's activities will have a negligible impact on those stocks.

Comment 9: HSUS/WDC expressed concern that we may not be appropriately accounting for behavioral impacts incidental to the NEFSC's use of active acoustic sources and noted that

such impacts could occur at greater distances than considered in our analysis. The commenters discuss the results from Risch *et al*. (2012) and suggest that it is likely that disturbance from some of the NEFSC's active acoustic sources would be more widespread than projected thus underestimating the occurrence of Level B harassment.

Response: See our Response to Comment 2. Beyond consideration of a different threshold for assessing potential behavioral impacts, it is not clear what additional or different approaches to impact assessment HSUS *et al*. might recommend. Absent a specific recommendation to consider, we believe that our approach to assessing the potential for behavioral harassment incidental to the NEFSC's use of active acoustics is appropriate. NMFS' assessment of acoustic impacts and the associated take estimates represent the consensus opinion of acoustics experts from NMFS' Office of Protected Resources and Office of Science and Technology.

The Risch *et al*. (2012) study documented reductions in humpback whale vocalizations in the Stellwagen Bank National Marine Sanctuary concurrent with transmissions of the Ocean Acoustic Waveguide Remote Sensing (OAWRS) low-frequency fish sensor system at distances of 200 km from the source. The recorded OAWRS produced a series of frequency modulated pulses (between 0.4 and 1 kHZ, much lower in frequency, longer in duration, with the potential to mask mysticete vocalizations at longer distances than the predominant frequencies produced by the NEFSC's active acoustic sources which attenuate at shorter distances from the source) and the signal received levels ranged from 88 to 110 dB re: 1 μPa (Risch *et al*., 2012). The authors hypothesized that individuals did not leave the area but instead ceased singing and noted that the duration and frequency range of the OAWRS signals (a novel sound to the whales) were similar to those of natural humpback whale song components used during mating (Risch *et al*., 2012).

However, Gong *et al*. (2014), disputes these findings, suggesting that (Risch *et al*., 2012) mistook natural variations in humpback whale song occurrence for changes caused by OAWRS activity approximately 200 km away. Risch *et al*. (2014) responded to Gong *et al*. (2014) and highlighted the context-dependent nature of behavioral responses to acoustic stressors.

Furthermore, the three predominant acoustic sources used by the NEFSC produce frequencies above the known functional hearing ranges for mysticetes. Mysticetes, including the humpback whale, are not likely to perceive most signals produced through the NEFSC's use of active acoustic sources and are therefore unlikely to behaviorally respond in a manner considered take. The NEFSC's initial estimates of Level B harassment due to acoustic sources did not consider functional hearing ranges and are therefore overestimates for mysticetes. For the final rule, NMFS has considered functional hearing and has revised the expected take for mysticetes accordingly.

Comment 10: HSUS/WDC commented on NMFS corrections to the proposed rule that increased the projected mortality estimates for gray and harbor seals and sought clarification on the proposed increase in take for both species.

Response: The NEFSC reported an interaction with one gray seal during a Spring Bottom Trawl Survey in April 2015, after releasing their LOA application and Draft PEA for public comment. In order to account for the potential for future gear interaction indicated by this event, NMFS included this information within the notice of proposed rulemaking (80 FR 39582, July 9, 2015; see Table 4, footnote 2). NMFS then used this information to adjust the estimated take by mortality for gray seals and harbor seals (a species with potential similar gear vulnerability as the

gray seal) accordingly in the **Federal Register** notice of correction (80 FR 46939, August 6, 2015).

Mitigation

In order to issue an incidental take authorization under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, "and other means of effecting the least practicable adverse 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 subsistence uses." NMFS provided a full description of the planned mitigation measures, including background discussion related to certain elements of the mitigation plan, in the notice of proposed rulemaking (80 FR 39595, July 9, 2015). Please see that document for more detail.

General Measures

Coordination and communication – We require that the NEFSC take all necessary measures to coordinate and communicate in advance of each specific survey with NOAA's Office of Marine and Aviation Operations (OMAO), or other relevant parties, to ensure that all mitigation measures and monitoring requirements described herein, as well as the specific manner of implementation and relevant event-contingent decision-making processes, are clearly understood and agreed-upon. This may involve describing all required measures when submitting cruise instructions to OMAO or when completing contracts with external entities. The NEFSC will coordinate and conduct briefings at the outset of each survey and as necessary between ship's crew (commanding officer/master or designee(s), as appropriate) and scientific party in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures. The chief scientist (CS) will be responsible for

coordination with the Officer on Deck (OOD; or equivalent on non-NOAA platforms) to ensure that requirements, procedures, and decision-making processes are understood and properly implemented.

For all NEFSC-affiliated research projects and vessels, the vessel coordinator and center director reviews cruise instructions and protocols for avoiding adverse interactions with protected species. If the research is conducted on a NOAA vessel, the Commanding Officer finalizes these instructions. If any inconsistencies or deficiencies are found, the written instructions will be made fully consistent with the Northeast Fisheries Observer Program (NEFOP) training materials and any guidance on decision-making that arises out of the training opportunities described earlier. In addition, the NEFSC will review informational placards and reporting procedures and update them as necessary for consistency and accuracy. Many research cruises already include pre-sail review of protected species protocols. The NEFSC will require pre-sail briefings before all research cruises, including those conducted by cooperating partners, as part of its continuing research program.

Protected species training - In an effort to help standardize and further emphasize the importance of protected species information, the NEFSC will implement a formalized protected species training program for all crew members as part of its continuing research program that will be required for all NEFSC-affiliated research projects, including cooperative research partners. The NEFSC will conduct training programs on a regular basis which will include topics such as monitoring and sighting protocols, species identification, decision-making factors for avoiding take, procedures for handling and documenting protected species caught in research gear, and reporting requirements. Required training will occur through participation in protected

species training programs developed by the regional commercial Fisheries Observer Program, which will typically be the NEFOP.

All NEFSC research crew members that may be assigned to monitor for the presence of marine mammals during future surveys will be required to attend an initial training course and refresher courses annually or as necessary. The implementation of this new training program will formalize and standardize the information provided to all crew that might experience protected species interactions during research activities.

Vessel speed – Vessel speed during active sampling rarely exceeds 5 kt, with typical speeds being 2 to 4 kt. Transit speeds vary from 6 to 14 kt but average 10 kt. These low vessel speeds minimize the potential for ship strike (see "Potential Effects of the Specified Activity on Marine Mammals and Their Habitat" for an in-depth discussion of ship strike). At any time during a survey or in transit, if a crew member standing watch or dedicated marine mammal observer sights marine mammals that may intersect with the vessel course, that individual will immediately communicate the presence of marine mammals to the bridge for appropriate course alteration or speed reduction, as possible, to avoid incidental collisions.

Other gears – The NEFSC deploys a wide variety of gear to sample the marine environment during all of their research cruises. Many of these types of gear (*e.g.*, plankton nets, video camera and ROV deployments) are not considered to pose any risk to marine mammals and are therefore not subject to specific mitigation measures. In addition, specific aspects of gear design, survey protocols (*e.g.*, number of hooks), and limited frequency of use indicate that certain types of gears that may otherwise be expected to have the potential to result in take of marine mammals do not pose significant risk to certain species of marine mammals (*e.g.*, large whales interactions with NEFSC longline gears) and are not subject to specific mitigation

measures due to the low level of survey effort and small survey footprint relative to that of commercial fisheries. However, at all times when the NEFSC is conducting survey operations at sea, the OOD and/or CS and crew will monitor for any unusual circumstances that may arise at a sampling site and use best professional judgment to avoid any potential risks to marine mammals during use of all research equipment.

Handling procedures – The NEFSC will implement a number of handling protocols to minimize potential harm to marine mammals that are incidentally taken during the course of fisheries research activities. In general, protocols have already been prepared for use on commercial fishing vessels. Because incidental take of marine mammals in fishing gear is similar for commercial fisheries and research surveys, NEFSC proposes to adopt these protocols, which are expected to increase post-release survival. In general, following a "common sense" approach to handling captured or entangled marine mammals will present the best chance of minimizing injury to the animal and of decreasing risks to scientists and vessel crew. Handling or disentangling marine mammals carries inherent safety risks, and using best professional judgment and ensuring human safety is paramount. The NEFSC protected species training programs will include procedures for handling and documenting protected species caught in research gear, and reporting requirements. The CS and appropriate members of the research crews will also be trained using the same monitoring, data collection, and reporting protocols for protected species as is required by the NEFOP.

Trawl Survey Visual Monitoring and Operational Protocols

The mitigation requirements described here are applicable to all beam, mid-water, and bottom trawl operations conducted by the NEFSC.

Visual monitoring – The OOD, CS (or other designated member of the Scientific Party), and crew standing watch on the bridge visually scan for marine mammals (and other protected species) during all daytime operations. Marine mammal watches will be conducted by scanning the surrounding waters with bridge binoculars to survey the area upon arrival at the station, during visual and sonar reconnaissance of the trawl line to look for potential hazards (*e.g.*, commercial fishing gear, unsuitable bottom for trawling, *etc*.), and while the gear is deployed. During nighttime operations, visual observation will be conducted using the naked eye, to the extent allowed by available vessel lighting.

Operational procedures – The primary purpose of conducting visual monitoring period is to implement the "move-on rule." If marine mammals are sighted around the vessel before setting the gear, the OOD may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. During daytime trawl operations, research trawl gear is not deployed if marine mammals have been sighted near the ship unless those animals do not appear to be in danger of interactions with the trawl, as determined by the judgment of the OOD and CS. The efficacy of the move-on rule is limited during night time trawl operations or other periods of limited visibility. However, operational lighting from the vessel illuminates the water in the immediate vicinity of the vessel during gear setting and retrieval.

After moving on, if marine mammals are still visible from the vessel and appear to be at risk, the OOD may decide to move the vessel again or skip the sampling station. The OOD will consult with the CS or other designated scientist (identified prior to the voyage and noted on the cruise plan) and other experienced crew as necessary to determine the best strategy to avoid potential takes of these species. Strategies are based on the species encountered, their numbers

and behavior, their position and vector relative to the vessel, and other factors. For instance, a whale transiting through the area and heading away from the vessel may not require any move, or may require only a short move from the initial sampling site, while a pod of dolphins gathered around the vessel may require a longer move from the initial sampling site or possibly cancellation of the station if the dolphins follow the vessel. If trawling operations have been delayed because of the presence of marine mammals, then the vessel resumes trawl operations (when practical) only when the animals have not been sighted near the vessel or otherwise determined to no longer be at risk. This decision is at the discretion of the OOD and is situationally dependent.

In general, trawl operations will be conducted immediately upon arrival on station in order to minimize the time during which marine mammals may become attracted to the vessel. However, in some cases it will be necessary to conduct small net tows (*e.g.*, bongo net) prior to deploying trawl gear in order to avoid trawling through extremely high densities of gelatinous zooplankton that can damage trawl gear.

Once the trawl net is in the water, the OOD, CS, and/or crew standing watch will continue to visually monitor the surrounding waters and will maintain a lookout for marine mammal presence as far away as environmental conditions allow.

If marine mammals are sighted before the gear is fully retrieved, the most appropriate response to avoid marine mammal interaction will be determined by the professional judgment of the CS, watch leader, OOD and other experienced crew as necessary. This judgment will be based on past experience operating trawl gears around marine mammals (*i.e.*, best professional judgment) and on NEFSC training sessions that will facilitate dissemination of expertise operating in these situations (*e.g.*, factors that contribute to marine mammal gear interactions and

those that aid in successfully avoiding such events). Best professional judgment takes into consideration the species, numbers, and behavior of the animals, the status of the trawl net operation (*e.g*., net opening, depth, and distance from the stern), the time it would take to retrieve the net, and safety considerations for changing speed or course. We recognize that it is not possible to dictate in advance the exact course of action that the OOD or CS should take in any given event involving the presence of marine mammals in proximity to an ongoing trawl tow, given the sheer number of potential variables, combinations of variables that may determine the appropriate course of action, and the need to consider human safety in the operation of fishing gear at sea. Nevertheless, we require a full accounting of factors that shape both successful and unsuccessful decisions and these details will be fed back into NEFSC training efforts and ultimately help to refine the best professional judgment that determines the course of action taken in any given scenario (see further discussion in "Monitoring and Reporting").

Speed and course alterations, Tow duration and direction – The vessel's speed during active sampling with trawl nets will not exceed 5 kt. Typical towing speeds are 2-4 kt. Transit speed between active sampling stations will range from 10-12 kt, except in areas where vessel speeds are regulated to lower speeds. When operating in North Atlantic right whale Seasonal Management Areas, Dynamic Management Areas, or in the vicinity of right whales or surface active groups of large baleen whales the vessel's speed will not exceed 10 kt. Further, vessels will reduce speed and change course in the vicinity of resting groups of large whales.

As noted earlier, if marine mammals are sighted prior to deployment of the trawl net, the vessel may be moved away from the animals to a new station at the discretion of the OOD. Also, at any time during a survey or in transit, any crew member that sights marine mammals that may

intersect with the vessel course will immediately communicate their presence to the bridge for appropriate course alteration or speed reduction as possible to avoid incidental collisions.

Standard survey protocols that are expected to lessen the likelihood of marine mammal interactions include standardized tow durations and distances. Standard tow durations of not more than 30 minutes at the target depth will be implemented, excluding deployment and retrieval time (which may require an additional 30 minutes, depending on target depth), to reduce the likelihood of attracting and incidentally taking marine mammals. Short tow durations decrease the opportunity for marine mammals to find the vessel and investigate. The exceptions to the 30-minute tow duration are the Atlantic Herring Acoustic Pelagic Trawl Survey and the Deep-Water Biodiversity Survey where the total time in the water (deployment, fishing, and haul-back) are 40 to 60 minutes and 180 minutes, respectively.

Trawl tow distances will be less than 3 nm—typically 1-2 nm, depending on the specific survey and trawl speed—which NMFS expects to reduce the likelihood of attracting and incidentally taking marine mammals.

Gear maintenance – The crew will be careful when emptying the trawl to avoid damage to marine mammals that may be caught in the gear but are not visible upon retrieval. The gear will be emptied as quickly as possible after retrieval in order to determine whether or not marine mammals are present. The vessel's crew will clean trawl nets prior to deployment to remove prey items that might attract marine mammals. Catch volumes are typically small with every attempt made to collect all organisms caught in the trawl.

Dredge Survey Visual Monitoring and Operational Protocols

The mitigation requirements described here are applicable to all hydraulic, New Bedford-type, commercial, and Naturalist dredge operations conducted by the NEFSC.

Visual monitoring – Visual monitoring requirements for all dredge gears are the same as those described above for trawl surveys. Please see that section for full details of the visual monitoring and "move-on" protocols. However, care will be taken when emptying the dredge to avoid damage to protected species that may be caught in the gear but are not visible upon retrieval. The gear will be emptied as quickly as possible after retrieval in order to determine whether or not protected species are present.

Tow duration and direction – Standard dredge durations are 15 minutes or less, excluding deployment and retrieval time, to reduce the likelihood of attracting and incidentally taking protected species.

Longline Gear Visual Monitoring and Operational Protocols

Visual monitoring – Visual monitoring requirements for pelagic or demersal longline surveys are the same as those described above for trawl surveys. Please see that section for full details.

Operational procedures – Prior to setting the gear, the OOD, CS, and crew visually scan the waters surrounding the vessel for protected species at least 30 minutes before deploying the longline gear. This typically occurs during transit through the setting area and then returning back to the starting point. Longline sets may be delayed if marine mammals have been detected near the vessel in the 30 minutes prior to setting the gear.

For the Apex Predators Bottom Longline Coastal Shark Survey, which has a separate survey protocol from the COASTSPAN and NEFOP Observer Bottom Longline Training surveys conducted by NEFSC, the OOD, CS, and crew use a one nautical mile radius around the vessel to guide the decision on whether marine mammals are at risk of interactions before deploying the gear. The vessel may be moved to a new location if marine mammals are present

and the OOD uses professional judgment to minimize the risk to marine mammals from potential gear interactions.

The OOD, CS, and crew standing watch will continually monitor the gear to look for hooked or entangled marine mammals and other protected species and will release the animal following standard handling and release protocols for marine mammals.

The NEFSC has established standard soak times of three hours for bottom longline and two to five hours for pelagic longline surveys. The CS will ensure that soak times do not exceed five hours, except in cases where weather or mechanical difficulty delay gear retrieval.

NEFSC longline protocols specifically prohibit chumming (releasing additional bait to attract target species to the gear). Bait is removed from hooks during retrieval and retained on the vessel until all gear is removed from the area. The crew will not discard offal or spent bait while longline gear is in the water to reduce the risk of marine mammals detecting the vessel or being attracted to the area.

If marine mammals are detected while longline gear is in the water, the OOD exercises similar judgment and discretion to avoid incidental take of marine mammals as described for trawl gear. The species, number, and behavior of the marine mammals are considered along with the status of the ship and gear, weather and sea conditions, and crew safety factors.

If marine mammals are present during setting operations, immediate retrieval or halting the setting operations may be warranted. If setting operations have been halted due to the presence of marine mammals, resumption of setting will not begin until no marine mammals have been observed for at least 15 minutes. When visibility allows, the OOD, CS, and crew standing watch will conduct set checks every 15 minutes to look for hooked, or entangled marine mammals.

If marine mammals are present during retrieval operations, haul-back will be postponed until the OOD determines that it is safe to proceed. If haul-back operations have been halted due to the presence of marine mammals, resumption of haul-back would begin when no marine mammals have been observed for at least 15 minutes. When visibility allows, the OOD, CS, and crew standing watch will conduct set checks every 15 minutes to look for hooked, trapped, or entangled marine mammals.

Gillnet Visual Monitoring and Operational Protocols

Visual monitoring – The monitoring procedures for gillnets are similar to those described for trawl gear. The NEFSC does not propose to use pelagic gillnets in any survey.

Operational procedures – Gillnets are not deployed if marine mammals have been sighted on arrival at the sample site. The exception is for animals that, because of their behavior, travel vector or other factors, do not appear to be at risk of interaction with the gillnet gear. If no marine mammals are present, the gear is set and monitored during the soak. If a marine mammal is sighted during the soak and appears to be at risk of interaction with the gear, then the gear is pulled immediately.

For the COASTSPAN surveys, which are performed in areas where estuarine dolphins may occur, the NEFSC will actively monitor for potential bottlenose dolphin entanglements by hand checking the gillnet gear every 20 minutes by lifting the foot net. Also, in the unexpected case of a bottlenose dolphin entanglement, the NEFSC would request and arrange for expedited genetic sampling in order to determine the stock and would photograph the dorsal fin and submit to the Southeast Stranding Coordinator for identification/matching to bottlenose dolphins in the Mid-Atlantic Bottlenose Dolphin Photo-identification Catalog.

On the NEFOP Observer Gillnet Training cruises, which occur in areas covered by the HPTRP, acoustic pingers and weak links are used on all gillnets consistent with the Harbor Porpoise Take Reduction Plan regulations at (50 CFR 229.33) for commercial fisheries to reduce marine mammal bycatch. Under the HPTRP, gillnet gear used in specific areas during specific times are required to be equipped with pingers. We discuss the use of pingers and their acoustic characteristics later within the subsection titled "Cooperative Research Visual Monitoring and Operational Protocols."

All NEFOP protocols concerning monitoring and reporting protected species interactions are followed as per the current NEFOP Observer Manual (available on the internet at *http://www.nefsc.noaa.gov/fsb/manuals/2013/NEFSC_Observer_Program_Manual.pdf*). The soak duration time is 12 to 24 hours. Communication with the NEFOP Training Lead and the vessel captain occurs within 24 to 48 hours prior to setting of gear. During these communications, the NEFOP Training Lead and Captain decide when to set the gear, specifically taking into account any possible weather delays to avoid a long soak period. They do not deploy the gear if a significant weather delay is expected that would increase the preferred soak duration to greater than 24 hours. In those situations, the gear set times will be delayed.

Fyke Net Visual Monitoring and Operational Protocols

Visual monitoring – Fyke nets are normally set inshore by small boat crews, who will visually survey areas prior to deploying the nets. Monitoring is done prior to setting and during net retrieval which is conducted every 12 to 24-hours. If marine mammals are in close proximity (approximately 100 m) of the setting location, the field team will make a determination if the set location needs to be moved. If marine mammals are observed to interact with the gear during the setting, the crew will lift and remove the gear from the water.

Operational procedures – A 2-m fyke net will be deployed with a marine mammal excluder device that reduces the effective mouth opening to less than 15 cm. The 1-m fyke net does not require an excluder device as the opening is 12 cm. These small openings will prevent marine mammals from entering the nets.

Beach Seine Visual Monitoring and Operational Protocols

Visual monitoring – Prior to setting the seine nets, researchers will visually survey the area for marine mammals. They will also observe for marine mammals continuously during sampling.

Operational procedures – Seines are deployed with one end held on shore by a crew member and the net slowly deployed by boat in an arc and then retrieved by pulling both ends onto shore. Typical seine hauls are less than 15 minutes with the resulting catch sampled and released. Scientists will look as far as field of view permits from the beach in the general sampling area before the net is fished and will not deploy if marine mammals are present. If marine mammals are observed to be interacting with the gear, it will be lifted and removed from the water.

Rotary Screw Trap Visual Monitoring and Operational Protocols

Visual monitoring – Sites are visually surveyed for marine mammals prior to submerging the gear in the water channel. The traps remain in the water for an extended period of time and sampling crews tend the traps on a daily basis. The researchers will modify, delay, or conclude the sampling period depending on the numbers of marine mammals nearby and their potential for interacting with the gear as determined by the professional judgment of the researchers.

Operational procedures – Under most conditions the live car (*i.e.*, catch holding pen) is about 75 percent full of water, which would allow any trapped mammals to breath until release

from the trap. Rotary screw trap tending schedules are adjusted according to conditions of the river/estuary and threats to protected species (*i.e.*, presence of ESA-listed fish or marine mammals in the area). If capture occurs, the animal is temporarily retained in a live tank and released as soon as possible.

Cooperative Research Visual Monitoring and Operational Protocols

The mitigation requirements described earlier are applicable to commercial fishing vessels engaged in NEFSC cooperative research using trawls, dredges, longline, hook and line, lobster pots/traps, and gillnet gears.

These commercial fishing vessels are significantly smaller than the NOAA vessels, and depending on their size and configuration, marine mammal sighting may be difficult to make during all aspects of fishing operations. Further, scientific personnel are normally restricted from the deck during gear setting and haul-back operations. For all vessel size classes, it is unlikely that the individual(s) searching for marine mammals will have unrestricted 360 degree visibility around the vessel. However, observations during approach to a fishing station and during gear setting and haul-back may be feasible and practicable from the wheelhouse.

These projects will also comply with the TRP mitigation measures and gear requirements specified for their respective fisheries and areas (*e.g.*, pingers, sinking groundlines, and weak links on gillnet gear).

The NEFSC will review all NEFSC-affiliated research instructions and protocols for avoiding adverse interactions with protected species. If those instructions/protocols are not fully consistent with NEFOP training materials and guidance on decision-making that arises from NEFSC protected species training, the NEFSC will incorporate specific language into its contracts and agreements with NEFSC-affiliated research partners requiring adherence to all

required training requirements, operating procedures, and reporting requirements for protected species.

Operational procedures – For the Apex Predators Bottom Longline Coastal Shark and COASTSPAN longline and gillnet surveys, NEFSC partners would implement the Move-on-Rule. During the soak, the line is run and if any marine mammals are sighted the line is pulled immediately. On COASTSPAN gillnet surveys, gillnets are continuously monitored during the 3-hour soak time by under-running it, pulling it across the boat while leaving the net ends anchored. All animals, algae and other objects are removed with each pass as the net is reset into the water to minimize bycatch mortality.

Acoustic deterrent devices – NEFSC-affiliated cooperative research projects involving commercial vessels and gear, as well as the NEFOP Observer Training Gillnet Surveys currently deploy acoustic pingers on anchored sinking gillnets in areas where they are required by commercial fisheries to comply with requirements in the HPTRP (50 CFR 229.33). We considered the use of pingers in our notice of proposed rulemaking (80 FR 39558, July 9, 2015) and we do not discuss the potential taking of marine mammals resulting from NEFSC's use of pingers further in this document.

Pot/Trap Visual Monitoring and Operational Protocols

Several NEFSC and cooperative research surveys use fish or lobster pots to selectively capture species for research, tagging studies, and sample collection. Fish pots select for particular species by configuring the entrances, mesh, and escape tunnels (or "vents") to allow retention of the target species, while excluding larger animals, and allowing smaller animals to escape from the pot before retrieval.

Visual monitoring – The NEFSC and/or cooperating institutions shall initiate marine mammal watches (visual observation) no less than 30 minutes prior to both deployment and retrieval of the pot and trap gear. Marine mammal watches shall be conducted by scanning the surrounding waters with the naked eye and binoculars (or monocular). During nighttime operations, visual observation shall be conducted using the naked eye and available vessel lighting.

Operational Procedures – The NEFSC and/or cooperating institutions shall deploy pot gear as soon as is practicable upon arrival at the sampling station. The primary purpose of conducting a visual monitoring period is to implement the "move-on rule." The NEFSC and/or cooperating institutions shall implement the move-on rule. If marine mammals are sighted near the vessel before setting the gear, the NEFSC, as appropriate may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel, the NEFSC may decide to move again or to skip the station. The NEFSC may use best professional judgment in making this decision but may not elect to conduct the pot and trap activity when animals remain near the vessel.

If marine mammals are sighted near the vessel during the soak and are determined to be at risk of interacting with the gear, then the NEFSC and/or cooperating institutions shall carefully retrieve the gear as quickly as possible. The NEFSC and/or cooperating institutions may use best professional judgment in making this decision.

The NEFSC and/or cooperating institutions shall ensure that surveys deploy gear fulfilling all pot/trap universal commercial gear configurations such as weak link requirements

and marking requirements as specified by applicable take reduction plans as required for commercial pot/trap fisheries.

The NEFSC shall ensure that cooperating institutions conducting pot and trap surveys adhere to monitoring and mitigation requirements and shall include required protocols in all survey instructions, contracts, and agreements.

Acoustic Telemetry Gear Visual Monitoring and Operational Protocols

The NEFSC deploys passive acoustic telemetry receivers in many of Maine's rivers, estuaries, bays and into the Gulf of Maine. These receivers monitor tagged Atlantic salmon, as well as other tagged animals of collaborators along the east coast.

Visual monitoring –The receivers are set by small boat crews that visually survey the area for marine mammals prior to setting. Interactions with the gear or boats are not expected.

Operational Procedures – Receivers are anchored using a 24-pound mushroom anchor or a 79-pound cement mooring and attached to a surface float by an 11/16 inch sinking pot warp with a weight rating of 1,200 pounds. Units in the estuary and bay are equipped with whale-safe weak links with a weight rating of 600 pounds. Other receivers are deployed on coastal commercial lobstermen's fishing gears which comply with fishing regulations for nearshore operations. The receivers are recovered twice annually, but the traps are tended according to required fishing schedules of the fishery.

We have carefully evaluated the NEFSC's planned mitigation measures and considered a range of other measures in the context of ensuring that we prescribed the means of effecting the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, the successful

implementation of the measure is expected to minimize adverse impacts to marine mammals, (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation.

Any mitigation measure(s) we prescribe should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed here:

(1) Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).

(2) A reduction in the number (total number or number at biologically important time or location) of individual marine mammals exposed to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).

(3) A reduction in the number (total number or number at biologically important time or location) of times any individual marine mammal would be exposed to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).

(4) A reduction in the intensity of exposure to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing the severity of behavioral harassment only).

(5) Avoidance or minimization of adverse effects to marine mammal habitat, paying particular attention to the prey base, blockage or limitation of passage to or from biologically important areas, permanent destruction of habitat, or temporary disturbance of habitat during a biologically important time.

(6) For monitoring directly related to mitigation, an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the NEFSC's planned measures, as well as other measures considered, NMFS has determined that these mitigation measures provide the means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Description of Marine Mammals in the Area of the Specified Activity

NMFS previously reviewed the NEFSC species descriptions—which summarize available information regarding status and trends, distribution and habitat preferences, behavior and life history, and auditory capabilities of the potentially affected species—for accuracy and completeness and refer the reader to Sections 3 and 4 of the NEFSC's application, as well as to NMFS' Stock Assessment Reports (SARs; *www.nmfs.noaa.gov/pr/sars/*). We also provided information related to all species with expected potential for occurrence in the specified geographical region where the NEFSC plans to conduct the specified activities, summarizing information related to the population or stock, including PBR. Please see Table 3 in the notice of proposed rulemaking (80 FR 39595, July 9, 2015) for that information. We do not repeat that information here.

Potential Effects of the Specified Activity on Marine Mammals and Their Habitat

NMFS provided a summary and discussion of the ways that components of the specified activity (*e.g.*, gear deployment, use of active acoustic sources, and visual disturbance) may impact marine mammals and their habitat in the notice of proposed rulemaking (80 FR 39595, July 9, 2015). Specifically, we considered potential effects to marine mammals from ship strike, physical interaction with various gear types, use of active acoustic sources, and visual

disturbance of pinnipeds, as well as effects to prey species and to acoustic habitat. We do not repeat that information here.

Estimated Take by Incidental Harassment, Serious Injury, or Mortality

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]." Serious injury means any injury that will likely result in mortality (50 CFR 216.3).

Take of marine mammals incidental to the NEFSC's research activities could occur as a result of: (1) injury or mortality due to gear interaction; (2) behavioral disturbance resulting from the use of active acoustic sources (Level B harassment only); or (3) behavioral disturbance of pinnipeds hauled out on the shoreline resulting from close proximity of research vessels (Level B harassment only).

Estimated Take Due to Gear Interaction

Historical Interactions – In order to estimate the number of potential incidents of take that could occur by M/SI + Level A through gear interaction, we first considered the NEFSC's past record of such incidents, and then also considered other species that may have similar vulnerabilities to the NEFSC's trawl, gillnet, and fyke net gear for which we have historical interaction records. We describe historical interactions with NEFSC research gear in Tables 1, 2, and 3 in this rule. Available records are for the years 2004 through the present. Please see the NEFSC's Final PEA for specific locations of these incidents.

Table 1. Historical Interactions with Trawl Gear

Gear	Survey	Date	Species	# killed	# released alive	Total
Gourock high speed midwater rope trawl	Atlantic Herring Survey	10/8/2004	Short-beaked common dolphin (Western NA stock)	2	0	2
Bottom trawl (4-seam, 3 bridle)	NEFSC Standard Bottom Trawl Survey	11/11/2007	Short-beaked common dolphin (Western NA stock)	1	0	1
Gourock high speed midwater rope trawl	Atlantic Herring Survey	10/11/2009	Minke whale	0	1[1]	1
Bottom trawl (4-seam, 3 bridle)	Spring Bottom Trawl Survey	4/4/2015	Gray seal	1[2]	0	1
Total individuals captured (total number of interactions given in parentheses)			Short-beaked common dolphin (3)	3	0	3
			Minke whale (1)	0	1	1
			Gray seal (1)	1	0	1

[1] According to the incident report, "The net's cod end and whale were brought aboard just enough to undo the cod end and free the whale. It was on deck for about five minutes. While on deck, it was vocalizing and moving its tail up and down. The whale swam away upon release and appeared to be fine. Estimated length was 19 feet." The NEFSC later classified this incidental take as a serious injury using NMFS criteria for such determinations published in January 2012 (Cole and Henry, 2013).
[2] The NEFSC filed an incident report for this incidental take on April 4, 2015.

Table 2. Historical Interactions with Gillnet Gear.

Gear	Survey	Date	Species	# killed	# released alive	Total
Gillnet	COASTSPAN	11/29/2008	Common Bottlenose dolphin (Northern South Carolina Estuarine System stock)[1]	1	0	1
Gillnet	NEFOP Observer Gillnet Training Trips	5/4/2009	Gray seal	1	0	1
Gillnet	NEFOP Observer Gillnet Training Trips	5/4/2009	Harbor porpoise	1	0	1
Total individuals captured (total number of interactions given in parentheses)			Bottlenose dolphin (1)	1	0	1
			Gray seal (1)	1	0	1
			Harbor porpoise (1)	1	0	1

[1] In 2008, the COASTSPAN gillnet survey caught and killed one common bottlenose dolphin while a cooperating institution was conducting the survey in South Carolina. This was the only occurrence of incidental take in these surveys. Although no genetic information is available from this dolphin, based on the location of the event, NMFS retrospectively assigned this mortality to the Northern South Carolina Estuarine System stock in 2015 from the previous classification as the western North Atlantic stock (Waring *et al*., 2014).

Table 3. Historical Interactions with Fyke Net Gear.

Gear	Survey	Date	Species	# killed	# released alive	Total
Fyke Net	Maine Estuaries Diadromous Survey	10/25/2010	Harbor seal	1	0	1
Total				1	0	1

The NEFSC has no recorded interactions with any gear other than midwater and bottom trawl, gillnet, and fyke net gears. As noted in the notice of proposed rulemaking (80 FR 39595, July 9, 2015), we anticipate future interactions with the same gear types.

In order to use these historical interaction records in a precautionary manner as the basis for the take estimation process, and because we have no specific information to indicate whether any given future interaction might result in M/SI versus Level A harassment, we conservatively assume that all interactions equate to mortality.

During trawl surveys, the NEFSC has recorded interactions with short-beaked common dolphins (Western North Atlantic stock; two total interactions with three individual animals); minke whale (one total interaction with one animal); and gray seal (one total interaction with one animal). Common dolphins are the species most likely to interact with NEFSC trawl gear with an average of 1.5 dolphins captured per interaction.

During gillnet surveys, the NEFSC has recorded interactions with short-beaked common dolphins (Northern South Carolina Estuarine System stock; one total interaction with one animal); gray seal (one total interaction with one animal); and harbor porpoise (one total interaction with one animal).

During one fyke net survey in 2010, the NEFSC recorded one interaction with one harbor seal. Since this recorded interaction, the NEFSC now requires the use of marine mammal excluder devices as a mitigation measure for this gear type.

In order to produce the most precautionary take estimates possible, we use here the entirety of the data available to us (*i.e*., 2004-15).

In order to estimate the potential number of incidents of M/SI + Level A that could occur incidental to the NEFSC's use of midwater and bottom trawl, gillnet, fyke net, and longline gear in the Atlantic coast region over the five-year period from 2015-20, we first look at the six species described that have been taken historically and then evaluate the potential vulnerability of additional species to these gears.

Table 4 in this document shows the 11-year annual average captures of these six species and the projected five-year totals for this final rule, for trawl, gillnet, and fyke net gear. In order to produce precautionary estimates, we calculate the annual average for the 11-year period (2004-2015) and round up the annual to the nearest whole number. Because the NEFSC requests take for a five-year period, we multiply the annual average by five and assume that this number may be taken within the effective five-year period of the proposed authorization.

To date, infrequent interactions of trawl nets, gillnets, and fyke net gears with marine mammals have occurred in the Atlantic coast region during NEFSC research activities. The NEFSC interaction rates have exhibited some inter-annual variation in numbers, possibly due to changing marine mammal densities and distributions and dynamic oceanographic conditions. This approach is precautionary. Estimating takes of species captured historically will produce an estimate higher than the historic average take for each species taken incidentally during past NEFSC research. We use this methodology to ensure accounting for the maximum amount of potential take in the future, as well as accounting for the fluctuations in inter-annual variability observed during the 11-year time period. Moreover, these estimates are based on the assumption that annual effort over the proposed five-year authorization period will not exceed the annual effort during the period 2004-2015.

Table 4. Annual Average Captures (2004-15) and Projected Five-Year Total for Historically-Captured Species.

Gear	Species	2004	05	06	07	08	09	10	11	12	13	14	15	Avg. per year	Projected 5-year total[1]
Trawl	Short-beaked common dolphin	2	0	0	1	0	0	0	0	0	0	0	0	0.27	5
	Minke whale	0	0	0	0	0	1	0	0	0	0	0	0	0.09	5
	Gray seal	0	0	0	0	0	0	0	0	0	0	0	1	0.09	5
Gillnet	Common bottlenose dolphin	0	0	0	0	1	0	0	0	0	0	0	0	0.09	5[2]
	Harbor porpoise	0	0	0	0	0	1	0	0	0	0	0	0	0.09	5
	Gray seal	0	0	0	0	0	1	0	0	0	0	0	0	0.09	5
Fyke net	Harbor seal	0	0	0	0	0	0	1	0	0	0	0	0	0.09	5

[1] The estimated total is the product of the 2004-2015 annual average rounded up to the nearest whole number and multiplied by the five-year timespan of the proposed rule.
[2] The projected 5-year total includes an estimate of 5 each for the Western North Atlantic offshore, the Western North Atlantic Northern Migratory Coastal, and the Western North Atlantic Southern Migratory Coastal stocks of common bottlenose dolphins. The NEFSC is not requesting take for the estuarine stocks of bottlenose dolphins for the COASTPAN surveys.

As background to the process of determining which species not historically taken may have sufficient vulnerability to capture in NEFSC gear to justify inclusion in the take authorization request, we note that the NEFSC is NMFS' research arm in the Greater Atlantic region which we consider as a leading source of expert knowledge regarding marine mammals (*e.g.*, behavior, abundance, density) in the areas where the NEFSC operates. The NEFSC formulated the take requests for species selected by NEFSC subject matter experts who based their selections on the best available information. We have concurred with these decisions.

In order to evaluate the potential vulnerability of additional species to trawl gears, gillnets, and fyke nets, we first consulted NMFS' List of Fisheries (LOF), which classifies U.S. commercial fisheries into one of three categories according to the level of incidental marine mammal M/SI that is known to occur on an annual basis over the most recent five-year period (generally) for which data has been analyzed. Despite no historical records of take in the NEFSC's pelagic and bottom longline surveys, there is a substantial record of marine mammal take in commercial fisheries using similar gears. Therefore, we consider potential takes through use of longline gear through analogy to commercial fisheries. NMFS provided this information, as presented in the 2015 LOF (79 FR 77919; January 28, 2015), in Tables 8, 9, and 10 in the notice of proposed rulemaking (80 FR 39595, July 9, 2015) and do not reproduce it here.

Information related to incidental M/SI in relevant commercial fisheries is not, however, the sole determinant of whether it may be appropriate to authorize M/SI + Level A incidental to NEFSC survey operations. A number of factors (*e.g.*, species-specific knowledge regarding animal behavior, overall abundance in the geographic region, density relative to NEFSC survey

effort, feeding ecology, propensity to travel in groups commonly associated with other species historically taken) were taken into account by the NEFSC to determine whether a species may have a similar vulnerability to certain types of gear as historically taken species. In some cases, we have determined that species without documented M/SI may nevertheless be vulnerable to capture in NEFSC research gear. We have also determined that some species groups with documented M/SI are not likely to be vulnerable to capture in NEFSC gear. In these instances, we provide further explanation later in this document. Those species with no records of historical interaction with NEFSC research gear and no documented M/SI in relevant commercial fisheries, and for which the NEFSC has not requested the authorization of incidental take, are not considered further in this section. The NEFSC believes generally that any sex or age class of those species for which take authorization is requested could be captured.

Non-historical interactions – In addition to those species the NEFSC has directly interacted with research fishing gear over the 11-year period (2004-2015), the NEFSC believes it is appropriate to include estimates for future incidental takes of a number of species that have not been taken historically but inhabit the same areas and show similar types of behaviors and vulnerabilities to such gear as the "reference" species taken in the past. The NEFSC believes the potential for take of these other "analogous" species would be low and would occur rarely, if at all, based on lack of takes over the past 11 years.

We note that prior takes in the cooperative research fishery are assigned to the respective fishery; therefore the NEFSC did not consider those types of take in formulating the requested authorization. The NEFSC only estimated takes for NEFSC gear that: 1) had a prior take in the historical record or 2) had analogous takes with commercial fishing gear.

Vulnerability of analogous species to different gear types is informed by the record of interactions by the analogous and reference species with commercial fisheries using gear types similar to those used in research. Furthermore, when determining the amount of take requested, we make a distinction between analogous species thought to have the same vulnerability for incidental take as the reference species and those analogous species that may have a similar vulnerability. In those cases thought to have the same vulnerability, the request is for the same number per year as the reference species. In those cases thought to have similar vulnerability, the request is less than the reference species. For example, the NEFSC believes the vulnerability of harbor seals to be taken in trawl gear and gillnets is the same as for gray seals (one per year) and thus requests one harbor seal per year (total of five over the authorization period) for trawl gear and gillnets.

Alternatively, the potential for take of Atlantic white-sided dolphins in gillnets is expected to be similar but less than that associated with harbor porpoises (one per year) and the reduced request relative to this reference species is one Atlantic white sided dolphin over the entire five-year authorization period.

The approach outlined here reflects: (1) concern that some species with which we have not had historical interactions may interact with these gears, (2) acknowledgment of variation between sets, and (3) understanding that many marine mammals are not solitary so if a set results in take, the take could be greater than one animal. In these particular instances, the NEFSC estimates the take of these species to be equal to the maximum interactions per any given set of a reference species historically taken during 2004-2015.

Trawls – To estimate the requested taking of analogous species, the NEFSC identified several species in the western North Atlantic Ocean which may have similar vulnerability to

research-based trawls as the short-beaked common dolphin. The maximum take of short-beaked common dolphin was two individuals in one trawl set in 2004. Therefore, on the basis of similar vulnerability, the NEFSC estimates two potential takes over the five year authorization period for each of the following species in trawls: Risso's dolphin; common bottlenose dolphin (offshore and both northern and southern coastal migratory stocks); Atlantic-white-sided dolphin; white-beaked dolphin; Atlantic spotted dolphin; and harbor porpoise. For these species, we propose to authorize a total taking by M/SI + Level A of two individuals over the five-year timespan (see Table 5).

Other dolphin species may have similar vulnerabilities as those listed above but because of the timing and location of NEFSC research activities, the NEFSC concluded that the likelihood for take of these species was low (see Tables 8, 9, and 10 in the notice of proposed rulemaking [80 FR 39595, July 9, 2015]). Those species include: pantropical spotted dolphin; striped dolphin; Fraser's dolphin; rough-toothed dolphin; Clymene dolphin; and spinner dolphin.

Two pinniped species may be taken in commercial fisheries analogous to NEFSC research trawl activities. Therefore, NEFSC requests one potential take each of gray and harbor seals annually in trawls over the LOA authorization period. For these pinniped species, we propose to authorize a total taking by M/SI + Level A of five individuals over the five-year timespan (see Table 5).

Gillnets – To estimate the requested take of analogous species for gillnets, the NEFSC identified several species in the western North Atlantic Ocean which may have similar vulnerability to research-based gillnet surveys as the bottlenose dolphin due to similar behaviors and distributions in the survey areas.

Gillnet surveys typically occur nearshore in bays and estuaries. The NEFSC caught one gray seal and one harbor porpoise during Northeast Fisheries Observer Program training gillnet surveys. The NEFSC believes that harbor seals have the same vulnerability to be taken in gillnets as gray seals and therefore estimates five takes of harbor seals in gillnets over the five-year authorization period. For this species, we propose to authorize a total taking by M/SI + Level A of five individuals over the five-year timespan (see Table 5).

Likewise, the NEFSC believes that Atlantic white-sided dolphins and short-beaked common dolphins have a similar vulnerability to be taken in gillnets as harbor porpoise and bottlenose dolphins and estimates one take each of Atlantic white-sided dolphin and short-beaked common dolphin in gillnet gear over the five-year authorization period. For this species, we propose to authorize a total taking by M/SI + Level A of one individual over the five-year timespan (see Table 5).

In 2008, the COASTSPAN gillnet survey caught and killed one common bottlenose dolphin while a cooperating institution was conducting the survey in South Carolina. This was the only occurrence of incidental take in these surveys. The NEFSC is not requesting any bottlenose dolphin takes from the Northern South Carolina Estuarine System stock, because of limited survey effort in estuarine waters. The NEFSC considers there to be a remote chance of incidentally taking a bottlenose dolphin from the estuarine stocks. Thus, the NEFSC is not requesting take for the estuarine stocks of bottlenose dolphins for the COASTPAN longline and gillnet surveys. However, in the future, if there is a bottlenose dolphin take from the estuarine stocks as confirmed by genetic sampling, the NEFSC will reconsider its take request in consultation and coordination with the NMFS Office of Protected Resources and the Atlantic Bottlenose Dolphin Take Reduction Team.

Fyke nets – For fyke nets, the NEFSC believes that gray seals have a similar vulnerability for incidental take as harbor seals which interacted once in a single fyke net set during the past 11 years. For the period of this authorization, the NEFSC estimates one take annually by fyke net for gray and harbor seals over the five-year authorization period. Thus, for gray and harbor seals, we propose to authorize a total taking by M/SI + Level A of five individuals of harbor and gray seals over the five-year timespan (see Table 5).

Longlines - While the NEFSC has not historically interacted with large whales or other cetaceans in its longline gear, it is well documented that some of these species are taken in commercial longline fisheries. The 2015 LOF classifies commercial fisheries based on prior interactions with marine mammals. Although the NEFSC used this information to help make an informed decision on the probability of specific cetacean and large whale interactions with longline gear, many other factors were also taken into account (*e.g*., relative survey effort, survey location, similarity in gear type, animal behavior, prior history of NEFSC interactions with longline gear, *etc*.). Therefore, there are several species that have been shown to interact with commercial longline fisheries but for which the NEFSC is not requesting take. For example, the NEFSC is not requesting take of large whales, long-finned pilot whales, and short-finned pilot whales in longline gear. Although these species could become entangled in longline gear, the probability of interaction with NEFSC longline gear is extremely low considering a low level of survey effort relative to that of commercial fisheries, the short length of the mainline, and low numbers of hooks used. Based on the amount of fish caught by commercial fisheries versus NEFSC fisheries research, the "footprint" of research effort compared to commercial fisheries is very small. The NEFSC considered previously caught species (as outlined in the 2015 List of Fisheries, see Tables 8, 9, and 10 in the notice of proposed rulemaking (80 FR 39595, July 9,

2015) in analogous commercial fisheries to have a higher probability of take; however, all were not included for potential take by the NEFSC. Historically, marine mammals have never been caught or entangled in NEFSC longline gear. However, such gear could be considered analogous to potential commercial longline surveys that may be conducted elsewhere (*e.g.*, Garrison, 2007; Roche *et al*., 2007; Straley *et al*., 2014). Given the potential for interactions, NEFSC estimates one take over the five-year authorization period of the following cetaceans in longline gear: Risso's dolphin; common bottlenose dolphin (offshore and both northern and southern coastal migratory stocks); and short-beaked common dolphins. For these species, we propose to authorize a total taking by M/SI + Level A of one individual over the five-year timespan (see Table 5).

It is also possible that researchers may not be able to identify a captured animal to the species level with certainty. Certain pinnipeds and small cetaceans are difficult to differentiate at sea, especially in low-light situations or when a quick release is necessary. For example, a captured delphinid that is struggling in the net may escape or be freed before positive identification is made. Therefore, the NEFSC has requested the authorization of incidental M/SI + Level A for an unidentified delphinid by trawl (1 individual), gillnet (1 individual), and longline (1 individual) gears over the course of the five-year period of the proposed authorization. Similarly, the NEFSC has requested the authorization of incidental M/SI + Level A for an unidentified pinniped by trawl (1 individual), fyke net (1 individual), gillnet (1 individual), and longline (1 individual) gears.

Table 5 summarizes total estimated take due to gear interactions in the Atlantic coast region; these estimates reflects revisions from those provided in the notice of proposed

rulemaking (80 FR 39595, July 9, 2015) and the correction to the proposed rulemaking in the **Federal Register** on August 6, 2015 (80 FR 46939).

Table 5 - Total Estimated M/SI + Level A Due to Gear Interaction in the Atlantic Coast Region, 2015-2020.

Species	Est. 5-year total, trawl[1]	Est. 5-year total, gillnet[1]	Est. 5-year total, longline[1]	Est. 5-year total, fyke net[1]	Total, all gears
Minke whale	5	0	0	0	5
Risso's dolphin	2	0	1	0	3
Atlantic white-sided dolphin	2	1	0	0	3
White-beaked dolphin	2	0	0	0	2
Short-beaked common dolphin	5	1	1	0	7
Atlantic spotted dolphin	2	0	0	0	2
Common bottlenose dolphin (WNA offshore stock)[2]	2	5	1	0	8
Common bottlenose dolphin (WNA N. Migratory stock)[2]	2	5	1	0	8
Common bottlenose dolphin (WNA S. Migratory stock)[2]	2	5	1	0	8
Harbor porpoise	2	5	0	0	7
Unidentified delphinid	1	1	1	0	3
Harbor seal	5	5	0	5	15
Gray seal	5	5	0	5	15
Unidentified pinniped	1	1	1	1	4

[1]Please see preceding text for derivation of take estimates.
[2] The NEFSC is not requesting takes for the estuarine stocks of bottlenose dolphins for the COASTPAN surveys.

Estimated Take Due to Acoustic Harassment

As described in the notice of proposed rulemaking (80 FR 39595, July 9, 2015), we believe that NEFSC's use of active acoustic sources has, at most, the potential to cause Level B harassment of marine mammals. In order to attempt to quantify the potential for Level B harassment to occur, NMFS (including the NEFSC and acoustics experts from other parts of NMFS) developed an analytical framework considering characteristics of the active acoustic systems described in the notice of proposed rulemaking (80 FR 39595, July 9, 2015) under *Description of Active Acoustic Sound Sources*, their expected patterns of use in the Atlantic coast region, and characteristics of the marine mammal species that may interact with them. We believe that this quantitative assessment benefits from its simplicity and consistency with current NMFS acoustic guidance regarding Level B harassment but caution that, based on a number of

deliberately precautionary assumptions, the resulting take estimates should be seen as a likely overestimate of the potential for behavioral harassment to occur as a result of the operation of these systems.

The assessment paradigm for active acoustic sources used in NEFSC fisheries research is relatively straightforward and has a number of key simplifying assumptions. NMFS' current acoustic guidance requires in most cases that we assume Level B harassment occurs when a marine mammal receives an acoustic signal at or above a simple step-function threshold. For use of these active acoustic systems, the current threshold is 160 dB re 1 μPa (rms) for Level B harassment. Estimating the number of exposures at the 160-dB received level requires several determinations, each of which is described sequentially here:

(1) A detailed characterization of the acoustic characteristics of the effective sound source or sources in operation;

(2) The operational areas exposed to levels at or above those associated with Level B harassment when these sources are in operation;

(3) A method for quantifying the resulting sound fields around these sources; and

(4) An estimate of the average density for marine mammal species in each area of operation.

Quantifying the spatial and temporal dimension of the sound exposure footprint (or "swath width") of the active acoustic devices in operation on moving vessels and their relationship to the average density of marine mammals enables a quantitative estimate of the number of individuals for which sound levels exceed the relevant threshold for each area. The number of potential incidents of Level B harassment is ultimately estimated as the product of the volume of water ensonified at 160 dB rms or higher and the volumetric density of animals

determined from simple assumptions about their vertical stratification in the water column. Specifically, reasonable assumptions based on what is known about diving behavior across different marine mammal species were made to segregate those that predominately remain in the upper 200 m of the water column versus those that regularly dive deeper during foraging and transit. We described the approach used (including methods for estimating each of the calculations described above) and the assumptions made that result in conservative estimates in significant detail in our notice of proposed rulemaking (80 FR 39595, July 9, 2015), and do not repeat the discussion here.

As a result of discussion with NMFS subject matter experts in drafting the final rule, we have determined it appropriate to account for marine mammal functional hearing, although our consideration of functional hearing is fairly simplistic. We now consider functional hearing cut-offs (*i.e.*, ranges of the functional hearing groups described in the notice of proposed rulemaking [80 FR 39595, July 9, 2015] and in Southall *et al*. [2007]) in a straightforward manner in these calculations (*i.e.*, sources are considered unlikely to lead to any Level B harassment if they are above or below functional hearing cut-offs). The result of this consideration is recognition that mysticetes are unlikely to perceive these signals; therefore, receipt of the signal would be highly unlikely to result in any reaction considered to be harassment.

However, the known differences in hearing sensitivities between different marine mammal species, and within a functional hearing range (*e.g.*, as reflected in auditory weighting functions), are not considered in estimates of Level B harassment by acoustic sources. All species are assumed to be equally sensitive to acoustic systems operating within their functional hearing range; therefore, the quantitative results presented here remain conservative with respect to functional hearing. We provide a summary of the results in Table 6.

Table 6 - Densities and Estimated Source-, Stratum-, and Species-Specific Annual Estimates of Level B Harassment in the Atlantic Coast Region and Adjacent Offshore Waters.

Species	Volumetric density (#/km^3)	Estimated Level B harassment (#s of animals) in 0-200m depth stratum			Estimated Level B harassment in >200m depth stratum	Total
		EK60	ME70	DSM300	EK60	
Atlantic Coast Region Cetaceans						
North Atlantic right whale	n/a	0	0	0	NA	0[1]
Humpback whale	n/a	0	0	0	NA	0[1]
Fin whale	n/a	0	0	0	NA	0[1]
Sei whale	n/a	0	0	0	NA	0[1]
Minke whale	n/a	0	0	0	NA	0[1]
Blue whale	n/a	0	0	0	NA	0[1]
Sperm whale	0.00005	0	0	0	NA	0[2]
Dwarf sperm whale	0.0001	0	0	0	NA	0[2]
Pygmy sperm whale	0.0001	0	0	0	NA	0[2]
Killer Whale	0.00	0	0	0	NA	0[2]
Pygmy killer whale	0.00	0	0	0	NA	0[2]
Northern bottlenose whale	0.00	0	0	0	NA	0[2]
Cuvier's beaked whale	0.0105	3	8	2	NA	13
Mesoplodon beaked whales	0.0105	3	8	2	NA	13
Melon-headed whale	0.00	0	0	0	NA	0[2]
Risso's dolphin	0.011	3	8	2	NA	13
Long-finned pilot whale	0.1725	41	127	35	NA	203
Short-finned pilot whale	0.1725	41	127	35	NA	203
Atlantic white-sided dolphin	0.122	29	90	25	NA	144
White-beaked dolphin	0.0405	10	30	8	NA	48
Short-beaked common dolphin	1.0575	254	780	213	NA	1,247
Atlantic spotted dolphin	0.00	0	0	0	NA	0[2]
Pantropical spotted dolphin	0.00	0	0	0	NA	0[2]
Striped dolphin	0.00	0	0	0	NA	0[2]
Fraser's dolphin	0.00	0	0	0	NA	0[2]
Rough toothed dolphin	0.00	0	0	0	NA	0[2]
Clymene dolphin	0.00	0	0	0	NA	0[2]
Spinner dolphin	0.00	0	0	0	NA	0[2]
Common bottlenose dolphin (offshore)	0.0300	7	22	6	NA	35
Common bottlenose dolphin (coastal)	0.5165	124	381	104	NA	609
Harbor Porpoise	0.0965	23	71	19	NA	113
Atlantic Coast Region Pinnipeds						
Harbor Seal	1.422	342	1,049	287	NA	1,678
Gray Seal	0.00	0	0	0	NA	0[2]
Harp Seal	0.00	0	0	0	NA	0[2]
Hooded Seal	0.00	0	0	0	NA	0[2]
Offshore Area Cetaceans						
North Atlantic right whale	n/a	0	0	0	0	0[2]
Humpback whale	n/a	0	0	0	0	0[2]
Fin whale	n/a	0	0	0	0	0[2]
Sei whale	n/a	0	0	0	0	0[2]
Minke whale	n/a	0	0	0	0	0[2]
Blue whale	n/a	1	1	0	0	0[1]
Sperm whale	0.0304	12	3	0	15	15
Dwarf sperm whale	0.004	0	0	0	2	2
Pygmy sperm whale	0.004	0	0	0	2	2
Killer Whale	0.00	0	0	0	0	0[2]
Pygmy killer whale	0.00	0	0	0	0	0[2]

Northern bottlenose whale	0.0034	0	0	0	2	2
Cuvier's beaked whale	0.0312	2	3		15	20
Mesoplodon beaked whales	0.0312	2	3	0	15	20
Melon-headed whale	0.00	0	0	0	0	0[2]
Risso's dolphin	0.422	22	44	0	0	66
Long-finned pilot whale	0.0512	3	5	0	24	32
Short-finned pilot whale	0.0512	3	5	0	24	32
Atlantic white-sided dolphin	0.00	0	0	0	0	0[2]
White-beaked dolphin	0.00	0	0	0	0	0[2]
Short-beaked common dolphin	0.9375	49	97	0	0	146
Atlantic spotted dolphin	0.104	5	11	0	0	16
Pantropical spotted dolphin	0.00	0	0	0	0	0[2]
Striped dolphin	1.514	79	157	0	0	236
Fraser's dolphin	0.00	0	0	0	0	0[2]
Rough toothed dolphin	0.008	0	1	0	0	1
Clymene dolphin	0.00	0	0	0	0	0[2]
Spinner dolphin	0.00	0	0	0	0	0[2]
Common bottlenose dolphin (offshore)	0.2630	14	27	0	0	41

n/a: not applicable

[1] For mysticetes unlikely to be impacted by the predominant active acoustic sources used by the NEFSC, NMFS adjusted the take estimates from ten to zero based on functional hearing group sensitivity for mysticetes.

[2] For species with unknown or very low volumetric densities, NMFS adjusted the take estimates from ten to zero because of the low probability of sighting or interaction with these species during most research cruises with the active acoustic instruments used in NEFSC research.

Estimated Take Due to Physical Disturbance

Estimated take due to physical disturbance could potentially occur in the Penobscot River Estuary as a result of the unintentional approach of NEFSC vessels to pinnipeds hauled out on ledges.

The NEFSC uses four gear types (fyke nets, beach seine, rotary screw traps, and Mamou shrimp trawl) to monitor fish communities in the Penobscot River Estuary. The NEFSC conducts the annual surveys over specific sampling periods which could use any gear type: Mamou trawling is conducted year-round; fyke net and beach seine surveys are conducted April-November; and rotary screw trap surveys from April-June.

We anticipate that trawl, fyke net, and beach seine surveys may disturb harbor seals and gray seals hauled out on tidal ledges through physical presence of researchers. The NEFSC conducts these surveys in upper Penobscot Bay above Fort Point Ledge where there is only one minor seal ledge (Odum Ledge) used by approximately 50 harbor seals (*i.e.*, based on a June

2001 survey). Although one cannot assume that the number of seals using this region is stable over the April-November survey period; it is likely lower in spring and autumn.

There were no observations of gray seals in the 2001 survey, but recent anecdotal information suggests that a few gray seals may share the haulout site. These fisheries research activities do not entail intentional approaches to seals on ledges (*i.e.*, boats avoid close approach to tidal ledges and no gear is deployed near the tidal ledges); only behavioral disturbance incidental to small boat activities is anticipated. It is likely that some pinnipeds on the ledges would move or flush from the haul-out into the water in response to the presence or sound of NEFSC survey vessels. Behavioral responses may be considered according to the scale shown in Table 7. We consider responses corresponding to Levels 2-3 to constitute Level B harassment.

Table 7 – Seal Response to Disturbance.

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.

The NEFSC estimated potential incidents of Level B harassment due to physical disturbance (Table 8) using the following assumptions: (1) all hauled out seals may be disturbed by passing research skiffs, although researchers have estimated that only about 10 percent (5 animals in a group of 50) have been visibly disturbed in the past; and (2) approximately 50 harbor seals and 20 gray seals may be disturbed by the passage of researchers for each survey effort (100 fyke net sets, 100 beach seine sets, and 200 Mamou shrimp trawls per year).

The estimated total number of instances of harassment is approximately 20,000 for harbor seals and 8,000 for gray seals annually.

Table 8– Estimated Annual Level B harassment Take of Pinnipeds Associated with Surveys in the Lower Estuary of the Penobscot River.

Species	Estimated seals on ledge haulout	Survey gear	Number of sets	Survey Season	Estimated Instances of harassment
Harbor seal	50	Fyke net	100	April-November	5,000
Gray seal	20				2,000
Harbor seal	50	Beach seine	100	April-November	5,000
Gray seal	20				2,000
Harbor seal	50	Mamou shrimp trawl	200	Year-round	10,000
Gray seal	20				4,000

Summary of Estimated Incidental Take

Here we provide summary tables detailing the total proposed incidental take authorization on an annual basis for the NEFSC in the Atlantic coast region, as well as other information relevant to the negligible impact analyses.

Table 9 – Summary Information Related to Proposed Annual Take Authorization in the Atlantic Coast Region, 2016-2021.

Species[1]	Proposed total annual Level B harassment authorization	Percent of estimated population	Proposed total M/SI + Level A authorization, 2015-2020	Estimated maximum annual M/SI + Level A[2]	PBR[3]	% PBR[4]	Stock trend[5]
North Atlantic Right whale	0	0	0	0	n/a	-	↑
Humpback whale	0	0	0	0	n/a	-	↑
Minke whale	0	0	5	1	162	0.62	?
Sei whale	0	0	0	0	n/a	-	?
Fin whale	0	0	0	0	n/a	-	?
Blue whale	0	0	0	0	n/a	-	?
Sperm whale	15	0.65	0	0	n/a	-	?
Kogia spp.	4	0.10	0	0	n/a	-	?
Cuvier's beaked whale	33	0.51	0	0	n/a	-	?
Northern bottlenose whale	2	undet.	0	0	n/a	-	?
Mesoplodont beaked whales	33	0.47	0	0	n/a	-	
Bottlenose dolphin (WNA Offshore)[6]	76	0.10	11[6]	2.2	561	0.39	?
Bottlenose dolphin (WNA, Northern Migratory Coastal)[6]	609	5.27	11[6]	2.2	86	2.56	?
Bottlenose dolphin (WNA, Southern Migratory Coastal)[6]	609	6.64	11[6]	2.2	63	3.49	?
Pantropical spotted dolphin	0	0	0	0	n/a	-	?
Atlantic spotted dolphin	16	0.06	3	0.6	316	0.19	?

Spinner dolphin	0	undet.	0	0	n/a	-	?
Striped dolphin	236	0.45	0	0	n/a	-	?
Short-beaked common dolphin	1,393	0.80	10	2	1,152	1.18	?
White-beaked dolphin	48	2.90	3	0.6	10	6.00	?
Atlantic white-sided-dolphin	144	0.32	5	1	304	0.33	?
Risso's dolphin	79	0.43	5	1	126	0.79	?
Fraser's dolphin	0	undet.	0	0	n/a	-	?
Rough-toothed dolphin	1	0.37	0	0	n/a	-	?
Clymene dolphin	0	0	0	0	n/a	-	?
Melon-headed whale	0	undet.	0	0	n/a	-	?
Pygmy killer whale	0	undet.	0	0	n/a	-	?
Northern bottlenose whale	12	undet.	0	0	n/a	-	?
Long-finned pilot whale	235	0.89	0	0	n/a	-	?
Short-finned pilot whale	235	1.09	0	0	n/a	-	?
Harbor porpoise	113	0.14	7	1.4	706	0.20	?
Gray seal	0; 8,000[7]	2.42	15	3.6	1,469	0.25	↑
Harp seal	0	0	0	0	n/a	-	→↑
Harbor seal	1,678; 20,000[7]	2.48	15	3.6	1,662	0.22	?
Unidentified delphinid				n/a	n/a	-	n/a
Unidentified pinniped				n/a	n/a	-	n/a

Please see preceding text for details.

[1]For species with multiple stocks in the Atlantic coast regions or for species groups (*Kogia spp*. and Mesoplodont beaked whales), indicated level of take could occur to individuals from any stock or species (not including coastal and estuarine stocks of bottlenose dolphins).

[2]This column represents the total number of incidents of M/SI + Level A that could potentially accrue to the specified species or stock and is the number carried forward for evaluation in the negligible impact analysis (later in this document). To reach this total, we add one to the total for each pinniped or delphinid that may be captured in longline or gillnet gear, one to the total for each delphinid that may be captured in trawl gear, and one pinniped that may be captured in fyke net gear. This represents the potential that the take of an unidentified pinniped or delphinid could accrue to any given stock captured in that gear. The proposed take authorization is formulated as a five-year total; the annual average is used only for purposes of negligible impact analysis. We recognize that portions of an animal may not be taken in a given year.

[3]See Table 3 in the proposed notice of rulemaking and following discussion for more detail regarding PBR.

[4]Estimated maximum annual M/SI + Level A expressed as a percentage of PBR.

[5]See relevant SARs for more information regarding stock status and trends. Interannual increases may not be interpreted as evidence of a trend.

[6] For these stocks of bottlenose dolphins, the estimated annual maximum numbers of M/SI + Level A reflect the stock-specific trawl estimate (2), plus five for gillnet take, plus one for longline take, plus three for the potential take of one unidentified delphinid by trawl, gillnet, and longline.

[7] The first number represents estimated annual Level B take by acoustic sources. The second number represents estimated annual Level B take by the physical disturbance during surveys in Penobscot Bay.

Analyses and Determinations

Here we provide negligible impact analyses and small numbers analyses for the Atlantic coast region. Unless otherwise specified, the discussion below is intended to apply to all of the species for which take is authorized, *i.e.*, those discussed previously and indicated in Table 9

given that the anticipated effects of these activities are expected to be similar in nature, and there is no information about the size, status, or structure of any species or stock that would lead to a different analysis. In some cases we add species-specific factors.

Negligible Impact Analyses

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." 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" by mortality, serious injury, and Level A or Level B harassment, we consider other factors, such as the likely nature of any behavioral responses (e.g., intensity, duration), the context of any such responses (e.g., critical reproductive time or location, migration), as well as effects on habitat. We also evaluate the number, intensity, and context of estimated takes by evaluating this information relative to population status. The impacts from other past and ongoing anthropogenic activities are incorporated into these analyses via their impacts on the environmental baseline (*e.g.*, as reflected in the density/distribution and status of the species, population size and growth rate).

In 1988, Congress amended the MMPA, with provisions for the incidental take of marine mammals in commercial fishing operations. Congress directed NMFS to develop and recommend a new long-term regime to govern such incidental taking (see MMC, 1994). The need to set allowable take levels incidental to commercial fishing operations led NMFS to suggest a new and simpler conceptual means for assuring that incidental take does not cause any

marine mammal species or stock to be reduced or to be maintained below the lower limit of its Optimum Sustainable Population (OSP) level. That concept (PBR) was incorporated in the 1994 amendments to the MMPA, wherein Congress enacted MMPA sections 117 and 118, establishing a new regime governing the incidental taking of marine mammals in commercial fishing operations and stock assessments.

PBR, which is defined by the MMPA (16 U.S.C. 1362(20)) 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," is one tool that can be used to help evaluate the effects of M/SI on a marine mammal stock. OSP is defined by the MMPA (16 U.S.C. 1362(9)) as "the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element." A primary goal of the MMPA is to ensure that each stock of marine mammal either does not have a level of human-caused M/SI that is likely to cause the stock to be reduced below its OSP level or, if the stock is depleted (*i.e.*, below its OSP level), does not have a level of human-caused mortality and serious injury that is likely to delay restoration of the stock to OSP level by more than ten percent in comparison with recovery time in the absence of human-caused M/SI.

PBR appears within the MMPA only in section 117 (relating to periodic stock assessments) and in portions of section 118 describing requirements for take reduction plans for reducing marine mammal bycatch in commercial fisheries. PBR was not designed as an absolute threshold limiting human activities, but as a means to evaluate the relative impacts of those activities on marine mammal stocks. Specifically, assessing M/SI relative to a stock's PBR may signal to NMFS the need to establish take reduction teams in commercial fisheries and may

assist NMFS and existing take reduction teams in the identification of measures to reduce and/or minimize the taking of marine mammals by commercial fisheries to a level below a stock's PBR. That is, where the total annual human-caused M/SI exceeds PBR, NMFS is not required to halt fishing activities contributing to total M/SI but rather may prioritize working with a take reduction team to further mitigate the effects of fishery activities via additional bycatch reduction measures.

Since the introduction of PBR, NMFS has used the concept almost entirely within the context of implementing sections 117 and 118 and other commercial fisheries management-related provisions of the MMPA, including those within section 101(a)(5)(E) related to the taking of ESA-listed marine mammals incidental to commercial fisheries (64 FR 28800; May 27, 1999). The MMPA requires that PBR be estimated in stock assessment reports and that it be used in applications related to the management of take incidental to commercial fisheries (i.e., the take reduction planning process described in section 118 of the MMPA. Although NMFS has not historically applied PBR outside the context of sections 117 and 118, NMFS recognizes that as a quantitative tool, PBR may be useful in certain instances for evaluating the impacts of other human-caused activities on marine mammal stocks. In this analysis, we consider incidental M/SI relative to PBR for each affected stock, in addition to considering the interaction of those removals with incidental taking of that stock by harassment, within our evaluation of the likely impacts of the proposed activities on marine mammal stocks and in determining whether those impacts are likely to be negligible. Our use of PBR in this case does not make up the entirety of our impact assessment, but rather is utilized as a known, quantitative metric for evaluating whether the proposed activities are likely to have a population-level effect on the affected marine mammal stocks. For the purposes of analyzing this specified activity, NMFS acknowledges that

some of the fisheries research activities use similar gear and may have similar effects, but on a smaller scale, as marine mammal take by commercial fisheries.

Species/Group Specific Analysis - To avoid repetition, the majority of our determinations apply to all the species listed in Table 9, given that the anticipated effects of the NEFSC research activities are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, we describe them within the section or within a separate sub-section. See the *Brief Background on Sound* section earlier in the notice of proposed rulemaking (80 FR 39542, July 9, 2015) for a description of marine mammal functional hearing groups as originally designated by Southall *et al*. (2007).

Acoustic Effects – Please refer to Table 9 for information relating to this analysis. As described in greater depth previously (see *Acoustic Effects*, in the notice of proposed rulemaking (80 FR 39542, July 9, 2015)), we do not believe that the NEFSC's use of active acoustic sources has the likely potential to cause any effect exceeding Level B harassment of marine mammals. In addition, for the majority of species, the proposed annual take by Level B harassment is very low in relation to the population abundance estimate (less than 7.5 percent) for each stock.

We have produced what we believe to be conservative estimates of potential incidents of Level B harassment. The procedure for producing these estimates, described in detail in the notice of proposed rulemaking (80 FR 39542, July 9, 2015) and summarized earlier in the *Estimated Take Due to Acoustic Harassment* section, represents NMFS' best effort towards balancing the need to quantify the potential for occurrence of Level B harassment due to production of underwater sound with a general lack of information related to the specific way

that these acoustic signals, which are generally highly directional and transient, interact with the physical environment and to a meaningful understanding of marine mammal perception of these signals and occurrence in the areas where the NEFSC operates. The sources considered here have moderate to high output frequencies (10 to 200 kHz), generally short ping durations, and are typically focused (highly directional) to serve their intended purpose of mapping specific objects, depths, or environmental features. In addition, some of these sources can be operated in different output modes (*e.g.*, energy can be distributed among multiple output beams) that may lessen the likelihood of perception by and potential impacts on marine mammals in comparison with the quantitative estimates that guide our take authorization.

In particular, low-frequency hearing specialists (*i.e.*, mysticetes) are less likely to perceive or, given perception, to react to these signals. These groups have reduced functional hearing at the higher frequencies produced by active acoustic sources considered here (*e.g.*, primary operating frequencies of 38-200 kHz) and, based purely on their auditory capabilities, the potential impacts are likely much less (or non-existent). However, for purposes of this analysis, we assume that the take levels proposed for authorization would not occur for mysticetes. As described previously, there is some minimal potential for temporary effects to hearing for certain marine mammals (*i.e.*, odontocete cetaceans), but most effects would likely be limited to temporary behavioral disturbance. Effects on individuals that are taken by Level B harassment will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring), reactions that are considered to be of low severity (*e.g.*, Southall *et al.*, 2007). There is the potential for behavioral reactions of greater severity, including displacement, but because of the directional nature of the sources considered here and because the source is itself moving, these outcomes are unlikely and

would be of short duration if they did occur. Although there is no information on which to base any distinction between incidents of harassment and individuals harassed, the same factors, in conjunction with the fact that NEFSC survey effort is widely dispersed in space and time, indicate that repeated exposures of the same individuals would be very unlikely.

Take by M/SI + Level A – We now consider the level of taking by M/SI + Level A proposed for authorization. First, it is likely that required injury determinations will show some undetermined number of gear interactions to result in Level A harassment rather than serious injury; therefore, our authorized take numbers are overestimates with regard solely to M/SI. In addition, we note that these take levels are likely precautionary overall when considering that: (1) estimates for historically taken species were developed assuming that the annual average number of takes from 2004-2015, would occur in each year from 2015-20; and that (2) the majority of species for which take authorization is proposed have never been taken in NEFSC surveys.

However, assuming that all of the takes proposed for authorization actually occur, we assess these quantitatively by comparing to the calculated PBR for each stock. Estimated M/SI + Level A for all stocks is significantly less than PBR (less than six percent for each stock).

Large whales (North Atlantic right, blue, fin, sei, humpback, and sperm whales) – Due to their very low numbers within the NEFSC research area and a tendency to occur primarily in waters outside of the NEFSC research area, blue, sperm, and sei whales rarely coincide with NEFSC fisheries research vessels. Thus, we anticipate that any potential gear interactions are unlikely. There have been no entanglements or takes of blue, sperm, or sei whales or any ESA-listed marine mammals in NEFSC fisheries research. Thus, there are no requested take by M/SI + Level A of these species during the next five years. Given the mitigation measures in place and

the lack of historical takes, the NEFSC does not expect to have any adverse gear interactions with ESA-listed cetaceans in research surveys.

Long- and short-finned pilot whales – Due to the low levels of survey effort in hotspot areas for pilot whales, adherence to gear requirements for longline surveys, low numbers of hooks and sets used in longline surveys, and short soak times with continuous monitoring during gillnet surveys, we anticipate that any potential gear interactions are unlikely. There have been no entanglements or takes of long- or short-finned pilot whales in NEFSC fisheries research. Thus, there are no requested take by M/SI + Level A of these species during the next five years.

Take by Physical Disturbance – We note that the NEFSC conducts one set of research activities where the physical presence of researchers may result in Level B incidental harassment of pinnipeds on haulouts. This level of periodic incidental harassment would have temporary effects and would not be expected to alter the continued use of the tidal ledges by seals. Anecdotal reports from previous monitoring show that the pinnipeds returned to the various sites and did not permanently abandon haul-out sites after the NEFSC conducted their research activities. Based on the following factors, the NEFSC's research activities are not likely to cause permanent abandonment of the haulout areas, injury, serious injury, or mortality because: (1) the effects of the research activities would be limited to short-term startle responses and localized behavioral changes due to the short and sporadic duration of the research activities; (2) minor and brief responses, such as short-duration startle or alert reactions, are not likely to constitute disruption of behavioral patterns, such as migration, nursing, breeding, feeding, or sheltering; and (3) the availability of alternate areas for pinnipeds to avoid the resultant visual disturbances from the research operations.

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 planned mitigation measures, we find that the total marine mammal take from NEFSC fisheries research activities will have a negligible impact on the affected marine mammal species or stocks in the Atlantic coast region. In summary, this finding of negligible impact is founded on the following factors: (1) the possibility of injury, serious injury, or mortality from the use of active acoustic devices may reasonably be considered discountable; (2) the anticipated incidents of Level B harassment from the use of active acoustic devices consist of, at worst, temporary and relatively minor modifications in behavior; (3) the predicted number of incidents of combined Level A harassment, serious injury, and mortality are at insignificant levels relative to all affected stocks; and (4) the presumed efficacy of the planned mitigation measures in reducing the effects of the specified activity to the level of least practicable adverse impact. In addition, no M/SI is proposed for authorization for any species or stock that is listed under the ESA. In combination, we believe that these factors demonstrate that the specified activity will have only short-term effects on individuals (resulting from Level B harassment) and that the total level of taking will not impact rates of recruitment or survival sufficiently to result in population-level impacts.

Small Numbers Analyses

Please see Table 9 for information relating to this small numbers analysis. The total amount of taking proposed for authorization is less than 6.0 percent for all stocks.

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 mitigation measures, we find that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks in the Atlantic coast region.

Monitoring and Reporting

In order to issue an incidental take authorization for an activity, section 101(a)(5)(A) 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 incidental take 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.

Any monitoring requirement we prescribe should improve our understanding of one or more of the following:

- Occurrence of marine mammal species in action area (*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 responses to acute stressors, or impacts of chronic exposures (behavioral or physiological).
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of an individual; or (2) population, species, or stock.

- Effects on marine mammal habitat and resultant impacts to marine mammals.
- Mitigation and monitoring effectiveness.

The NEFSC plans to make more systematic its training, operations, data collection, animal handling and sampling protocols, etc. in order to improve its ability to understand how mitigation measures influence interaction rates and ensure its research operations are conducted in an informed manner and consistent with lessons learned from those with experience operating these gears in close proximity to marine mammals. It is in this spirit that NMFS and the NEFSC crafted the monitoring requirements described here.

Visual Monitoring

Marine mammal watches are a standard part of conducting fisheries research activities, and are implemented as described previously in *Mitigation.* Marine mammal watches and monitoring occur prior to deployment of gear, and they continue until gear is brought back on board. Office of Marine Aviation and Operations personnel operating NOAA vessels are required to monitor interactions with protected species (and report interactions to the NEFSC Director). Similarly, there is a condition of grant and contract awards for monitoring of protected species takes.

In the Penobscot Bay only, the NEFSC will monitor any potential disturbance of pinnipeds on ledges, paying particular attention to the distance at which different species of pinniped are disturbed. Disturbance will be recorded according to the three-point scale, representing increasing seal response to disturbance, shown in Table 7.

Training

The NEFSC anticipates that additional information on practices to avoid marine mammal interactions can be gleaned from training sessions and more systematic data collection standards.

The NEFSC will conduct annual trainings for all chief scientists and other personnel who may be responsible for conducting dedicated marine mammal visual observations to explain mitigation measures and monitoring and reporting requirements, mitigation and monitoring protocols, marine mammal identification, recording of count and disturbance observations (relevant to Penobscot Bay surveys), completion of datasheets, and use of equipment. Some of these topics may be familiar to NEFSC staff, who may be professional biologists; the NEFSC shall determine the agenda for these trainings and ensure that all relevant staff have necessary familiarity with these topics.

The NEFSC will also dedicate a portion of training to discussion of best professional judgment (which is recognized as an integral component of mitigation implementation; see "Mitigation"), including use in any incidents of marine mammal interaction and instructive examples where use of best professional judgment was determined to be successful or unsuccessful. We recognize that many factors come into play regarding decision-making at sea and that it is not practicable to simplify what are inherently variable and complex situational decisions into rules that may be defined on paper. However, it is our intent that use of best professional judgment be an iterative process from year to year, in which any at-sea decision-maker (*i.e.*, responsible for decisions regarding the avoidance of marine mammal interactions with survey gear through the application of best professional judgment) learns from the prior experience of all relevant NEFSC personnel (rather than from solely their own experience). The outcome should be increased transparency in decision-making processes where best professional judgment is appropriate and, to the extent possible, some degree of standardization across common situations, with an ultimate goal of reducing marine mammal interactions. It is the responsibility of the NEFSC to facilitate such exchange.

Handling Procedures and Data Collection

Improved standardization of handling procedures were discussed previously in *Mitigation*. In addition to the benefits implementing these protocols are believed to have on the animals through increased post-release survival, NEFSC believes adopting these protocols for data collection will also increase the information on which "serious injury" determinations (NMFS, 2012a, b) are based and improve scientific knowledge about marine mammals that interact with fisheries research gears and the factors that contribute to these interactions. NEFSC personnel will be provided standard guidance and training regarding handling of marine mammals, including how to identify different species, bring an individual aboard a vessel, assess the level of consciousness, remove fishing gear, return an individual to water and log activities pertaining to the interaction.

NEFSC will record interaction information on either existing data forms created by other NMFS programs or will develop their own standardized forms. To aid in serious injury determinations and comply with the current NMFS Serious Injury Guidelines (NMFS, 2012a, b), researchers will also answer a series of supplemental questions on the details of marine mammal interactions.

Reporting

As is normally the case, NEFSC will coordinate with the relevant stranding coordinators for any unusual marine mammal behavior and any stranding, beached live/dead, or floating marine mammals that are encountered during field research activities. The NEFSC will follow a phased approach with regard to the cessation of its activities and/or reporting of such events, as described in the proposed regulatory texts following this preamble. In addition, Chief Scientists (or cruise leader, CS) will provide reports to NEFSC leadership and to the Office of Protected

Resources (OPR) by event, survey leg, and cruise. As a result, when marine mammals interact with survey gear, whether killed or released alive, a report provided by the CS will fully describe any observations of the animals, the context (vessel and conditions), decisions made and rationale for decisions made in vessel and gear handling. The circumstances of these events are critical in enabling the NEFSC and OPR to better evaluate the conditions under which takes are most likely occur. We believe in the long term this will allow the avoidance of these types of events in the future.

The NEFSC will submit annual summary reports to OPR including: (1) annual line-kilometers surveyed during which the EK60, ME70, DSM900 (or equivalent sources) were predominant; (2) summary information regarding use of all NEFSC-specific gears, including: longline (including bottom and vertical lines), gillnet, fyke net, and trawl (including bottom trawl) gear, including number of sets, hook hours, tows, etc., specific to each gear; (3) accounts of all incidents of marine mammal interactions, including circumstances of the event and descriptions of any mitigation procedures implemented or not implemented and why; (4) summary information related to any disturbance of pinnipeds during the Penobscot Bay surveys, including event-specific total counts of animals present, counts of reactions according to the three-point scale shown in Table 7, and distance of closest approach; and (5) a written evaluation of the effectiveness of NEFSC mitigation strategies in reducing the number of marine mammal interactions with survey gear, including best professional judgment and suggestions for changes to the mitigation strategies, if any. The period of reporting will be a one year period beginning at the date of issuance of the LOA. The NEFSC must submit the report not less than ninety days following the end of the reporting period. Submission of this information is in service of an adaptive management framework allowing NMFS to make appropriate modifications to

mitigation and/or monitoring strategies, as necessary, during the five-year period of validity for these regulations.

NMFS has established a formal incidental take reporting system, the Protected Species Incidental Take (PSIT) database, requiring that incidental takes of protected species be reported within 48 hours of the occurrence. The PSIT generates automated messages to NMFS staff, alerting them to the event and to the fact that updated information describing the circumstances of the event has been entered into the database. The PSIT and CS reports represent not only valuable real-time reporting and information dissemination tools but also serve as an archive of information that may be mined in the future to study why takes occur by species, gear, region, etc.

The NEFSC will also collect and report all necessary data, to the extent practicable given the primacy of human safety and the well-being of captured or entangled marine mammals, to facilitate serious injury (SI) determinations for marine mammals that are released alive. NEFSC will require that the CS complete data forms (already developed and used by commercial fisheries observer programs) and address supplemental questions, both of which have been developed to aid in SI determinations. NEFSC understands the critical need to provide as much relevant information as possible about marine mammal interactions to inform decisions regarding SI determinations. In addition, the NEFSC will perform all necessary reporting to ensure that any incidental M/SI is incorporated as appropriate into relevant SARs.

Adaptive Management

The final regulation governing the take of marine mammals incidental to NEFSC fisheries research survey operations in the specified geographical region contains an adaptive management component. The inclusion of an adaptive management component is both valuable

and necessary within the context of five-year regulation for activities that have been associated with marine mammal mortality.

The reporting requirements associated with this final rule are designed to provide OPR with monitoring data from the previous year to allow consideration of whether any changes are appropriate. NMFS OPR and the NEFSC will meet annually to discuss the monitoring reports and current science and whether mitigation or monitoring modifications are appropriate. The use of adaptive management allows NMFS OPR to consider new information from different sources to determine (with input from the NEFSC regarding practicability) on an annual or biennial basis if mitigation or monitoring measures should be modified (including additions or deletions). Mitigation measures could be modified if new data suggests that such modifications would have a reasonable likelihood of reducing adverse effects to marine mammals and if the measures are practicable.

The following are some of the possible sources of applicable data to be considered through the adaptive management process: (1) results from monitoring reports, as required by MMPA authorizations; (2) results from general marine mammal and sound research; and (3) any information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by this regulation or subsequent LOA.

Changes to the Proposed Regulations

As a result of clarifying discussions with NEFSC, we made certain changes to the proposed regulations as described here. These changes are considered minor and do not affect any of our preliminary determinations.

Mitigation Measures for Pot/Trap Gear

As described in the notice of proposed rulemaking (80 FR 39546-39560; July 9, 2015), NEFSC engages in cooperative research activities and observer training that may use different gear types and vary from year to year, while remaining within the overall scope of activity described and analyzed for NEFSC. Within the scope of the proposed rule, NEFSC plans to conduct or fund observer training using pot/trap gear within the period of validity for these regulations; therefore, it is appropriate to specify mitigation measures specific to this gear type. Inclusion of mitigation measures specific to pot/trap gear does not affect any of our determinations, and does not reflect an increase in the total amount or type of activity anticipated or change in the extent or type of taking anticipated.

Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by these actions, in the specified geographical region for which we are issuing this regulation. Therefore, we have 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)

There are multiple marine mammal species listed under the ESA with confirmed or possible occurrence in the specified geographical region. In the Northeast Region, research surveys occur in two areas that have been designated as critical habitat for the North Atlantic right whale (NOAA, 1994). These are the Cape Cod Bay (CCB) Critical Habitat Area and the Great South Channel (GSC) Critical Habitat Area. NMFS OPR initiated consultation with NMFS' Greater Atlantic Regional Office (GARFO) under section 7 of the ESA on the promulgation of a five-year regulation and the subsequent issuance of an LOA to the NEFSC under section 7 of the ESA. In June 2016, the GARFO issued a biological opinion to OPR and

the NEFSC (concerning conduct of the specified activities) which concluded that the issuance of the authorization is not likely to jeopardize the continued existence of any listed marine mammal species is not likely to adversely affect any listed marine mammal species. The opinion also concluded that the issuance of the authorization would not affect any designated critical habitat.

National Environmental Policy Act (NEPA)

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq*.), as implemented by the regulations published by the CEQ (40 CFR parts 1500-1508), the NEFSC prepared a PEA to consider the direct, indirect and cumulative effects to the human environment resulting from the described research activities. OPR made NEFSC's draft PEA available to the public for review and comment, in relation to its suitability for adoption by OPR in order to assess the impacts to the human environment of issuance of a regulation and subsequent Letter of Authorization to the NEFSC. Also in compliance with NEPA and the CEQ regulations, as well as NOAA Administrative Order 216-6, OPR has reviewed NEFSC's PEA, determined it to be sufficient, and adopted that PEA and signed a Finding of No Significant Impact (FONSI) on August 2, 2016. The NEFSC's EA and OPR's FONSI for this action may be found on the Internet at *www.nmfs.noaa.gov/pr/permits/incidental/research.htm*.

Classification

Per the procedures established to implement Executive Order 12866, the Office of Management and Budget has determined that this rule is not significant.

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this rule will not have a significant economic impact on a substantial number of small entities. The factual basis for this certification was published with

the proposed rule and is not repeated here. No comments were received regarding the economic impact of this final rule. As a result, a final regulatory flexibility analysis is not required and one was not prepared.

This rule does not contain a collection-of-information requirement subject to the provisions of the Paperwork Reduction Act (PRA) because the applicant is a federal agency. Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number.

List of Subjects in 50 CFR Part 219

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and recordkeeping requirements, Seafood, Transportation.

Dated: August 2, 2016.

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Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

For reasons set forth in the preamble, the NMFS amends 50 CFR part 219 as follows:

PART 219 – REGULATIONS GOVERNING THE TAKING AND IMPORTING OF MARINE MAMMALS

1. The authority citation for part 219 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq*.

2. Add subpart D to part 219 to read as follows:

Subpart D – Taking Marine Mammals Incidental to Northeast Fisheries Science Center Fisheries Research in the Atlantic Coast Region

Sec.

Authority: 16 U.S.C. 1361 *et seq*.

Subpart D – Taking Marine Mammals Incidental to Northeast Fisheries Science Center Fisheries Research in the Atlantic Coast Region

§ 219.31 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the National Marine Fisheries Service's

(NMFS) Northeast Fisheries Science Center (NEFSC) and those persons it authorizes or funds to conduct activities on its behalf for the taking of marine mammals that occurs in the area outlined in paragraph (b) of this section and that occurs incidental to research survey program operations.

(b) The taking of marine mammals by NEFSC may be authorized in a Letter of Authorization (LOA) only if it occurs within the Atlantic coast region.

§ 219.32 Effective dates.

Regulations in this subpart are effective September 12, 2016 through September 9, 2021.

§ 219.33 Permissible methods of taking.

(a) Under LOAs issued pursuant to § 216.106 of this chapter and § 219.7, the Holder of the LOA (hereinafter "NEFSC") may incidentally, but not intentionally, take marine mammals within the area described in § 219.31(b) by Level B harassment associated with use of active acoustic systems and physical or visual disturbance of hauled-out pinnipeds and by Level A harassment, serious injury, or mortality associated with use of trawl, dredge, bottom and pelagic longline, gillnet, pot and trap, fyke net, beach seine, and rotary screw trap gears, provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOA, provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOA.

§ 219.34 Prohibitions.

Notwithstanding takings contemplated in § 219.31 and authorized by a LOA issued under § 216.106 of this chapter and § 219.7, no person may, in connection with the activities described in § 219.31:

(a) Take any marine mammal not specified in § 219.33(b);

(b) Take any marine mammal specified in § 219.33(b) in any manner other than as

specified;

(c) Take a marine mammal specified in § 219.33(b) if NMFS determines such taking results in more than a negligible impact on the species or stocks of such marine mammal;

(d) Take a marine mammal specified in § 219.33(b) if NMFS determines such taking results in an unmitigable adverse impact on the species or stock of such marine mammal for taking for subsistence uses; or

(e) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or a LOA issued under § 216.106 of this chapter and § 219.37.

§ 219.35 Mitigation requirements.

When conducting the activities identified in § 219.31(a), the mitigation measures contained in any LOA issued under § 216.106 of this chapter and § 219.37 must be implemented. These mitigation measures shall include but are not limited to:

(a) General conditions:

(1) NEFSC shall take all necessary measures to coordinate and communicate in advance of each specific survey with the National Oceanic and Atmospheric Administration's (NOAA) Office of Marine and Aviation Operations (OMAO) or other relevant parties on non-NOAA platforms to ensure that all mitigation measures and monitoring requirements described herein, as well as the specific manner of implementation and relevant event-contingent decision-making processes, are clearly understood and agreed upon.

(2) NEFSC shall coordinate and conduct briefings at the outset of each survey and as necessary between the ship's crew (Commanding Officer/master or designee(s), contracted vessel owners, as appropriate) and scientific party or in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

(3) NEFSC shall coordinate as necessary on a daily basis during survey cruises with OMAO personnel or other relevant personnel on non-NOAA platforms to ensure that requirements, procedures, and decision-making processes are understood and properly implemented.

(4) When deploying any type of sampling gear at sea, NEFSC shall at all times monitor for any unusual circumstances that may arise at a sampling site and use best professional judgment to avoid any potential risks to marine mammals during use of all research equipment.

(5) All vessels must comply with applicable and relevant take reduction plans, including any required use of acoustic deterrent devices.

(6) All vessels must comply with applicable speed restrictions.

(7) NEFSC shall implement handling and/or disentanglement protocols as specified in the guidance provided to NEFSC survey personnel.

(b) Trawl survey protocols:

(1) NEFSC shall conduct trawl operations as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall initiate marine mammal watches (visual observation) prior to sampling. Marine mammal watches shall be conducted by scanning the surrounding waters with the naked eye and binoculars (or monocular). During nighttime operations, visual observation shall be conducted using the naked eye and available vessel lighting.

(3) NEFSC shall implement the "move-on rule." If a marine mammal is sighted around the vessel before setting the gear, NEFSC may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel,

NEFSC may decide to move again or to skip the station. NEFSC may use best professional judgment in making this decision.

(4) NEFSC shall maintain visual monitoring effort during the entire period of time that trawl gear is in the water (*i.e.*, throughout gear deployment, fishing, and retrieval). If marine mammals are sighted before the gear is fully removed from the water, NEFSC shall take the most appropriate action to avoid marine mammal interaction. NEFSC may use best professional judgment in making this decision.

(5) If trawling operations have been suspended because of the presence of marine mammals, NEFSC may resume trawl operations when practicable only when the animals are believed to have departed the area. NEFSC may use best professional judgment in making this determination.

(6) NEFSC shall implement standard survey protocols to minimize potential for marine mammal interaction, including maximum tow durations at target depth and maximum tow distance, and shall carefully empty the trawl as quickly as possible upon retrieval. Trawl nets must be cleaned prior to deployment.

(c) Dredge survey protocols:

(1) NEFSC shall deploy dredge gear as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall initiate marine mammal watches (visual observation) prior to sampling. Marine mammal watches shall be conducted by scanning the surrounding waters with the naked eye and binoculars (or monocular). During nighttime operations, visual observation shall be conducted using the naked eye and available vessel lighting.

(3) NEFSC shall implement the "move-on rule." If marine mammals are sighted around

the vessel before setting the gear, the NEFSC may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel, NEFSC may decide to move again or to skip the station. NEFSC may use best professional judgment in making this decision but may not elect to conduct dredge survey activity when animals remain near the vessel.

(4) NEFSC shall maintain visual monitoring effort during the entire period of time that dredge gear is in the water (*i.e.*, throughout gear deployment, fishing, and retrieval). If marine mammals are sighted before the gear is fully removed from the water, NEFSC shall take the most appropriate action to avoid marine mammal interaction. NEFSC may use best professional judgment in making this decision.

(5) If dredging operations have been suspended because of the presence of marine mammals, NEFSC may resume operations when practicable only when the animals are believed to have departed the area. NEFSC may use best professional judgment in making this determination.

(6) NEFSC shall carefully empty the dredge gear as quickly as possible upon retrieval to determine if marine mammals are present in the gear.

(d) Bottom and pelagic longline survey protocols:

(1) NEFSC shall deploy longline gear as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall initiate marine mammal watches (visual observation) no less than thirty minutes prior to both deployment and retrieval of the longline gear. Marine mammal watches shall be conducted by scanning the surrounding waters with the naked eye and binoculars (or

monocular). During nighttime operations, visual observation shall be conducted using the naked eye and available vessel lighting.

(3) NEFSC shall implement the "move-on rule." If marine mammals are sighted near the vessel 30 minutes before setting the gear, the NEFSC may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel, NEFSC may decide to move again or to skip the station. NEFSC may use best professional judgment in making this decision but may not elect to conduct longline survey activity when animals remain near the vessel.

(4) For the Apex Predators Bottom Longline Coastal Shark Survey, if one or more marine mammals are observed within 1 nautical mile (nmi) of the planned location in the 30 minutes before gear deployment, NEFSC shall transit to a different section of the sampling area to maintain a minimum set distance of 1 nmi from the observed marine mammals. If, after moving on, marine mammals remain within 1 nmi, NEFSC may decide to move again or to skip the station. NEFSC may use best professional judgment in making this decision but may not elect to conduct pelagic longline survey activity when animals remain within the 1-nmi zone.

(5) NEFSC shall maintain visual monitoring effort during the entire period of gear deployment or retrieval. If marine mammals are sighted before the gear is fully deployed or retrieved, NEFSC shall take the most appropriate action to avoid marine mammal interaction. NEFSC may use best professional judgment in making this decision.

(6) If deployment or retrieval operations have been suspended because of the presence of marine mammals, NEFSC may resume such operations after there are no sightings of marine mammals for at least 15 minutes within the area or within the 1-nmi area for the Apex Predators

Bottom Longline Coastal Shark Survey. NEFSC may use best professional judgment in making this decision.

(7) NEFSC shall implement standard survey protocols, including maximum soak durations and a prohibition on chumming.

(e) Gillnet survey protocols:

(1) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall deploy gillnet gear as soon as is practicable upon arrival at the sampling station.

(2) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall initiate marine mammal watches (visual observation) prior to both deployment and retrieval of the gillnet gear. When the vessel is on station during the soak, marine mammal watches shall be conducted during the soak by scanning the surrounding waters with the naked eye and binoculars (or monocular).

(3) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall implement the "move-on rule." If marine mammals are sighted near the vessel before setting the gear, the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains, may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel, the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains may decide to move again or to skip the station. The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains may use best professional judgment in making this decision but may not elect to conduct the gillnet survey activity when animals remain near the

vessel.

(4) If marine mammals are sighted near the vessel during the soak and are determined to be at risk of interacting with the gear, then the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall carefully retrieve the gear as quickly as possible. The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains may use best professional judgment in making this decision.

(5) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall implement standard survey protocols, including continuously monitoring the gillnet gear during soak time and removing debris with each pass as the net is reset into the water to minimize bycatch.

(6) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall ensure that surveys deploy acoustic pingers on gillnets in areas where required for commercial fisheries. NEFSC must ensure that the devices are operating properly before deploying the net.

(7) NEFSC shall ensure that cooperating institutions, contracted vessels, or commercially-hired captains conducting gillnet surveys adhere to monitoring and mitigation requirements and shall include required protocols in all survey instructions, contracts, and agreements.

(8) For the COASTSPAN gillnet surveys, the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains will actively monitor for potential bottlenose dolphin entanglements by hand-checking the gillnet every 20 minutes. In the unexpected case of a bottlenose dolphin entanglement, the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall request and arrange for expedited genetic sampling

for stock determination. The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall also photograph the dorsal fin and submit the image to the NMFS Southeast Stranding Coordinator for identification/matching to bottlenose dolphins in the Mid-Atlantic Bottlenose Dolphin Photo-identification Catalog.

(f) Pot and trap survey protocols:

(1) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall deploy pot gear as soon as is practicable upon arrival at the sampling station.

(2) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall initiate marine mammal watches (visual observation) no less than 30 minutes prior to both deployment and retrieval of the pot and trap gear. Marine mammal watches shall be conducted by scanning the surrounding waters with the naked eye and binoculars (or monocular). During nighttime operations, visual observation shall be conducted using the naked eye and available vessel lighting.

(3) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall implement the move-on rule. If marine mammals are sighted near the vessel before setting the gear, the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains, as appropriate, may decide to move the vessel away from the marine mammal to a different section of the sampling area if the animal appears to be at risk of interaction with the gear. If, after moving on, marine mammals are still visible from the vessel, the NEFSC, and/or its cooperating institutions, contracted vessels, or commercially-hired captains may decide to move again or to skip the station. The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains may use best professional judgment in making this decision but may not elect to conduct the pot and trap activity when

animals remain near the vessel.

(4) If marine mammals are sighted near the vessel during the soak and are determined to be at risk of interacting with the gear, then the NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall carefully retrieve the gear as quickly as possible. The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains may use best professional judgment in making this decision.

(5) The NEFSC and/or its cooperating institutions, contracted vessels, or commercially-hired captains shall ensure that surveys deploy gear fulfilling all Pot/Trap universal commercial gear configurations such as weak link requirements and marking requirements as specified by applicable take reduction plans as required for commercial pot/trap fisheries.

(6) The NEFSC shall ensure that its cooperating institutions, contracted vessels, or commercially-hired captains conducting pot and trap surveys adhere to monitoring and mitigation requirements and shall include required protocols in all survey instructions, contracts, and agreements.

(g) Fyke net gear protocols:

(1) NEFSC shall conduct fyke net gear deployment as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall visually survey the area prior to both deployment and retrieval of the fyke net gear. NEFSC shall conduct monitoring and retrieval of the gear every 12- to 24-hour soak period.

(3) If marine mammals are in close proximity (approximately 328 feet [100 meters]) of the setting location, NEFSC shall determine if the set location should be moved. NEFSC may use best professional judgment in making this decision.

(4) If marine mammals are observed to interact with the gear during the setting, NEFSC shall lift and remove the gear from the water.

(5) NEFSC must install and use a marine mammal excluder device at all times when the 2-meter fyke net is used.

(h) Beach seine gear protocols:

(1) NEFSC shall conduct beach seine deployment as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall visually survey the area prior to both deployment and retrieval of the seine net gear.

(3) If marine mammals are in close proximity of the seining location, NEFSC shall lift the net and remove it from the water. NEFSC may use best professional judgment in making this decision.

(i) Rotary screw trap gear protocols:

(1) NEFSC shall conduct rotary screw trap deployment as soon as is practicable upon arrival at the sampling station.

(2) NEFSC shall visually survey the area prior to both setting and retrieval of the rotary screw trap gear. If marine mammals are observed in the sampling area, NEFSC shall suspend or delay the sampling. NEFSC may use best professional judgment in making this decision.

(3) NEFSC shall tend to the trap on a daily basis to monitor for marine mammal interactions with the gear.

(4) If the rotary screw trap captures a marine mammal, NEFSC shall carefully release the animal as soon as possible.

§ 219.36 Requirements for monitoring and reporting.

(a) Visual monitoring program:

(1) Marine mammal visual monitoring shall occur: prior to deployment of beam, mid-water, and bottom trawl, bottom and pelagic longline, gillnet, fyke net, beach seine, pot, trap, and rotary screw trap gear; throughout deployment of gear and active fishing of all research gears; and throughout retrieval of all research gear.

(2) Marine mammal watches shall be conducted by watch-standers (those navigating the vessel and/or other crew) at all times when the vessel is being operated.

(3) NEFSC shall monitor any potential disturbance of pinnipeds on ledges, paying particular attention to the distance at which different species of pinniped are disturbed. Disturbance shall be recorded according to a three-point scale of response (*i.e.*, 1 = alert; 2 = movement; 3 = flight) to disturbance.

(b) The NEFSC shall continue to conduct a local census of pinniped haulout areas prior to conducting any fisheries research in the Penobscot River estuary to better understand the local abundance of animals. The NEFSC's census reports will now include an accounting of disturbance based on the three-point scale of response severity metrics.

(c) Training:

(1) NEFSC must conduct annual training for all chief scientists and other personnel (including its cooperating institutions, contracted vessels, or commercially-hired captains) who may be responsible for conducting dedicated marine mammal visual observations to explain mitigation measures and monitoring and reporting requirements, mitigation and monitoring protocols, marine mammal identification, completion of datasheets, and use of equipment. NEFSC may determine the agenda for these trainings.

(2) NEFSC shall also dedicate a portion of training to discussion of best professional

judgment, including use in any incidents of marine mammal interaction and instructive examples where use of best professional judgment was determined to be successful or unsuccessful.

(3) NEFSC shall coordinate with NMFS' Southeast Fisheries Science Center (SEFSC) regarding surveys conducted in the southern portion of the Atlantic coast region, such that training and guidance related to handling procedures and data collection is consistent.

(d) Handling procedures and data collection:

(1) NEFSC must develop and implement standardized marine mammal handling, disentanglement, and data collection procedures. These standard procedures will be subject to approval by NMFS Office of Protected Resources (OPR).

(2) When practicable, for any marine mammal interaction involving the release of a live animal, NEFSC shall collect necessary data to facilitate a serious injury determination.

(3) NEFSC shall provide its relevant personnel with standard guidance and training regarding handling of marine mammals, including how to identify different species, bring/ or not bring an individual aboard a vessel, assess the level of consciousness, remove fishing gear, return an individual to water, and log activities pertaining to the interaction.

(4) NEFSC shall record such data on standardized forms, which will be subject to approval by OPR. The data shall be collected at a sufficient level of detail (e.g., circumstances leading to the interaction, extent of injury, condition upon release) to facilitate serious injury determinations under the MMPA.

(e) Reporting:

(1) NEFSC shall report all incidents of marine mammal interaction to NMFS' Protected Species Incidental Take database within 48 hours of occurrence.

(2) NEFSC shall provide written reports to OPR upon request following any marine

mammal interaction (animal captured or entangled in research gear). In the event of a marine mammal interaction, these reports shall include details of survey effort, full descriptions of any observations of the animals, the context (vessel and conditions), decisions made and rationale for decisions made in vessel and gear handling.

(3) Annual reporting:

(i) The period of reporting will be one year beginning at the date of issuance of the LOA. NEFSC shall submit an annual summary report to OPR not later than ninety days following the end of the reporting period.

(ii) These reports shall contain, at minimum, the following:

(A) Annual line-kilometers surveyed during which the EK60, ME70, DSM300 (or equivalent sources) were predominant and associated pro-rated estimates of actual take;

(B) Summary information regarding use of the following: all trawl gear, all longline gear, all gillnet gear, all dredge gear, fyke net gear, beach seine net gear, and rotary screw trap gear (including number of sets, hook hours, tows, and tending frequency specific to each gear type);

(C) Accounts of all incidents of marine mammal interactions, including circumstances of the event and descriptions of any mitigation procedures implemented or not implemented and why;

(D) Summary information from the pinniped haulout censuses in the and summary information related to any disturbance of pinnipeds, including event-specific total counts of animals present, counts of reactions according to a three-point scale of response severity (1 = alert; 2 = movement; 3 = flight), and distance of closest approach;

(E) A written evaluation of the effectiveness of NEFSC mitigation strategies in reducing the number of marine mammal interactions with survey gear, including best professional

judgment and suggestions for changes to the mitigation strategies, if any;

(F) Final outcome of serious injury determinations for all incidents of marine mammal interactions where the animal(s) were released alive; and

(G) A summary of all relevant training provided by the NEFSC and any coordination with the Southeast Fishery Science Center, the Greater Atlantic Regional Office, and the Southeast Regional Office, NMFS.

(f) Reporting of injured or dead marine mammals:

(1) In the unanticipated event that the specified activity clearly causes the take of a large whale (i.e., entanglement or ship strike) or if the NEFSC and/or its cooperating institutions observe a carcass entangled in gear or struck by any vessel, the NEFSC and/or its cooperating institutions must immediately report the incident to 866-755-6622 in the Northeast region (VA-ME) and 877-WHALE-HELP in the Southeast region (FL-NC). If personnel are unable to call these numbers, personnel must contact the United States Coast Guard (USCG). For active entanglements, NEFSC personnel and/or its cooperating institutions are not allowed to remove any gear until they receive a temporary authorization from NMFS.

(2) In the unanticipated event that the activity defined in § 219.31(a) clearly causes the take of a marine mammal in a prohibited manner, NEFSC and/or its cooperating institution personnel engaged in the research activity shall immediately cease such activity until such time as an appropriate decision regarding activity continuation can be made by the NEFSC Director (or designee). For large whales, the NEFSC and/or its cooperating institutions must first contact the hotline numbers or the USCG as outlined in paragraph (f)(1) of this section. The NEFSC must also report the incident immediately to OPR, the Greater Atlantic Regional Stranding Coordinator, and the Southeast Regional Stranding Coordinator, NMFS. OPR will review the

circumstances of the prohibited take and work with NEFSC to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The report must include the following information:

(i) Time, date, and location (latitude/longitude) of the incident;

(ii) Description of the incident;

(iii) Environmental conditions (including wind speed and direction, Beaufort sea state, cloud cover, and visibility);

(iv) Description of all marine mammal observations in the 24 hours preceding the incident;

(v) Species identification or description of the animal(s) involved;

(vi) Status of all sound source use in the 24 hours preceding the incident;

(vii) Water depth;

(viii) Fate of the animal(s); and

(ix) Photographs or video footage of the animal(s).

(3) In the event that NEFSC and/or its cooperating institutions discover an injured or dead marine mammal and 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), NEFSC shall immediately report the incident to OPR, the Greater Atlantic Regional Stranding Coordinator, and the Southeast Regional Stranding Coordinator, NMFS. For large whales, the NEFSC and/or its cooperating institutions must first contact the hotline numbers or the USCG as outlined in paragraph (f)(1) of this section. The report must include the same information identified in paragraph (f)(2) of this section. Activities may continue while OPR reviews the circumstances of the incident. OPR will work with NEFSC to determine whether additional mitigation measures

or modifications to the activities are appropriate.

(4) In the event that NEFSC and/or its cooperating institutions discover an injured or dead marine mammal and determines that the injury or death is not associated with or related to the activities defined in § 219.31(a) (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, scavenger damage), NEFSC shall report the incident to OPR, the Greater Atlantic Regional Stranding Coordinator, and the Southeast Regional Stranding Coordinator, NMFS within 24 hours of the discovery. For large whales, the NEFSC and/or its cooperating institutions must first contact the hotline numbers or the USCG as outlined in paragraph (f)(1) of this section. NEFSC shall provide photographs or video footage or other documentation of the stranded animal sighting to OPR, the Greater Atlantic Regional Stranding Coordinator, and the Southeast Regional Stranding Coordinator, NMFS.

§ 219.37 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, NEFSC must apply for and obtain an LOA.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed the expiration date of these regulations.

(c) If an LOA expires prior to the expiration date of these regulations, NEFSC may apply for and obtain a renewal of the LOA.

(d) In the event of projected changes to the activity or to mitigation and monitoring measures required by an LOA, NEFSC must apply for and obtain a modification of the LOA as described in § 219.38.

(e) The LOA shall set forth:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact (*i.e.*, mitigation) on the species, its habitat, and on the availability of the species for subsistence uses; and

(3) Requirements for monitoring and reporting.

(f) Issuance of the LOA shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under these regulations.

(g) Notice of issuance or denial of an LOA shall be published in the **Federal Register** within thirty days of a determination.

§ 219.38 Renewals and modifications of Letters of Authorization.

(a) An LOA issued under § 216.106 of this chapter and § 219.37 for the activity identified in § 219.31(a) shall be renewed or modified upon request by the applicant, provided that:

(1) The proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for these regulations (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section), and

(2) OPR determines that the mitigation, monitoring, and reporting measures required by the previous LOA under these regulations were implemented.

(b) For an LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision in in paragraph (c)(1) of this section) that do not change the findings made for the regulations or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), OPR may publish a notice of proposed LOA in the **Federal Register**, including the associated analysis of the change, and solicit public

comment before issuing the LOA.

(c) An LOA issued under § 216.106 of this chapter and § 219.37 for the activity identified in § 219.31(a) may be modified by OPR under the following circumstances:

(1) Adaptive Management – OPR may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with NEFSC regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in the preamble for these regulations.

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA:

(A) Results from NEFSC's monitoring from the previous year(s).

(B) Results from other marine mammal and/or sound research or studies.

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent LOAs.

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, OPR will publish a notice of proposed LOA in the **Federal Register** and solicit public comment.

(2) Emergencies – If OPR determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 219.32(b), an LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the **Federal Register** within thirty days of the action.

§§ 219.39 – 219.40 [Reserved]

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