



To All Interested Government Agencies and Public Groups:

JUL 22 2011

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

**TITLE:** Environmental Assessment (EA) for a Catch Reporting Rulemaking in the Atlantic Herring Fishery

**LOCATION:** Atlantic Exclusive Economic Zone

**SUMMARY:** This action revises the reporting requirements for vessels issued Atlantic herring (herring) permits, because more timely catch information is necessary to monitor herring catch against the stock-wide herring annual catch limit (ACL) and herring management area sub-ACLs, to help prevent sub-ACLs overages, and to reduce the chance of premature fishery closures. This action requires limited access herring vessels to report catch daily via vessel monitoring systems, open access herring vessels to report catch weekly via the interactive voice response system, and all herring-permitted vessels to submit vessel trip reports weekly.

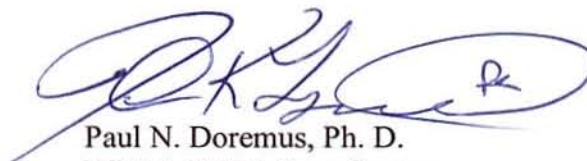
**RESPONSIBLE**

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The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact (FONSI), including the environmental assessment, is enclosed for your information.

Although NOAA is not soliciting comments on this completed EA/FONSI we will consider any comments submitted that would assist us in preparing future NEPA documents. Please submit any written comments to the Responsible Official named above.

Sincerely,



Paul N. Doremus, Ph. D.  
NOAA NEPA Coordinator



**REGULATORY AMENDMENT  
TO REVISE CATCH REPORTING REQUIREMENTS  
IN THE ATLANTIC HERRING FISHERY**

**Including the  
Environmental Assessment (EA),  
Regulatory Impact Review (RIR), and  
Initial Regulatory Flexibility Analysis (IRFA)**

**Prepared by the  
National Marine Fisheries Service  
July 20, 2011**

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## 1.0 INTRODUCTION AND BACKGROUND

The National Marine Fisheries Service (NMFS) is developing a regulatory amendment to the Atlantic Herring Fishery Management Plan (Herring FMP) under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Federal regulations at 50 CFR part 648.

This regulatory amendment and environmental assessment (EA) analyzes the impacts of proposed management measures designed to better monitor herring catch against the herring stock-wide annual catch limit (ACL) and management area sub-ACLs, as well helping prevent sub-ACL overages.

This document also contains information and supporting analyses required under other applicable laws, specifically the National Environmental Policy Act (NEPA), the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), the Paperwork Reduction Act (PRA), the Information Quality Act (IQA), and Executive Orders 13132 (Federalism), 12866 (Regulatory Planning), and 13563 (Regulatory Review). These other applicable laws and executive orders help ensure that in developing a regulatory amendment, NMFS considers the full range of alternatives and their expected impacts on the marine environment, living marine resources, and the affected human environment.

An FMP for herring was developed by the New England Fishery Management Council (Council), and implemented by NMFS, in 2000 (<http://www.nefmc.org/herring/index.html>). The FMP was most recently amended on March 2, 2011 (76 FR 11373) (<http://www.nefmc.org/herring/index.html>), with the establishment of ACLs and accountability measures (AMs) in Amendment 4 to the Herring FMP (Amendment 4). Initially, Amendment 4 also considered catch monitoring and reporting, interactions with river herring, access by midwater trawl vessels to groundfish closed areas, and interactions with the Atlantic mackerel fishery. In June 2009, the Council determined there was not sufficient time to develop and implement all the measures contemplated in Amendment 4 by 2011, so it decided to split Amendment 4 into two separate actions. The Council determined that Amendment 4 would continue to address ACL and AM requirements and specification issues, but that all other issues (e.g., catch monitoring and reporting, interactions with river herring and Atlantic mackerel, access to groundfish closed areas) would be considered in Amendment 5 to the Herring FMP (Amendment 5).

The harvest of herring is managed by a stock-wide ACL that is divided between four management areas. The herring stock complex is considered to be a single stock, but it is comprised of inshore (Gulf of Maine (GOM)) and offshore (Georges Bank (GB)) stock components. These stock components segregate during spawning and mix during feeding and migration. Herring management areas were developed in recognition of these different stock components; each management area has its own sub-ACL to allow greater control of the fishing mortality on each stock component. Area 1 is located in the GOM and is divided into an inshore section (Area 1A) and an offshore section (Area 1B). Area 2 is located in the coastal waters between Massachusetts and North Carolina, and Area 3 is on GB. The Area 1A sub-ACL is further allocated into seasonal periods (January-May and June-December).

In order to monitor catch against management area quota allocations (i.e., sub-ACLs), reporting requirements for the herring fishery were implemented as part of the Herring FMP in 2000. Regulations at 50 CFR 648.7 specify current vessel reporting requirements for the herring fishery. Herring catch, reported by vessels via the interactive voice response (IVR) system and supplemented by dealer-reported landings, is monitored against management area sub-ACLs. IVR reports include the following

information: Vessel identification, week in which herring was caught, pounds retained, pounds discarded, management areas fished, and pounds of herring caught in each management area. Owners/operators of vessels issued limited access permits (Categories A-C) report catch weekly via IVR and owners/operators of vessels issued open access permits (Category D) report catch via IVR only if they harvest 2,000 lb or more of herring on a given trip. All herring-permitted vessels also complete vessel trip reports (VTRs). VTRs include such information as: Vessel identification, date fished, location fished, gear used, number of crew, total number of hauls, average tow duration, weight of species caught, discard, and dealer information. VTRs are submitted on a monthly basis and are used to verify and/or supplement IVR and dealer data.

As described previously, the Council is in the process of developing Amendment 5, which considers revisions to catch reporting requirements for the herring fishery, but that amendment, if approved, is not anticipated to be implemented before 2013. Herring is not overfished and is not experiencing overfishing; however, the annual herring acceptable biological catch established for 2010-2012 was reduced from previous years (55 percent reduction from 2009) due to concerns with a retrospective pattern in the 2009 herring stock assessment that over-estimates biomass. While the herring optimum yield for 2010-2012 was not reduced below the amount of herring catch during 2008, the management area sub-ACLs were reduced from 2009 levels by 20 to 60 percent.

## **1.1 PURPOSE AND NEED FOR ACTION**

The purpose for this action is to consider implementing more timely catch reporting in the herring fishery. The harvesting capacity of the herring fleet is high, but catch is often variable, and current management area sub-ACLs lower than they have been in the recent past. Therefore, in 2010, it was difficult for NMFS to track catch and make catch projections using catch data that are only updated weekly. This action is needed to better monitor herring catch against the stock-wide herring ACL and management areas sub-ACLs, as well as to help prevent sub-ACL overages, and the subsequent sub-ACL reduction, or premature closures of management areas to directed herring fishing.

## **2.0 MANAGEMENT ALTERNATIVES**

### **2.1 LIMITED ACCESS ALTERNATIVES**

Amendment 1 to the Herring FMP (Amendment 1) established a limited access program for the herring fishery in June 2007 (72 FR 11252, March 31, 2007) to better match the capacity of the fleet to the size of the herring resource (<http://www.nefmc.org/herring/index.html>). Amendment 1 created three limited access permit categories. The All Areas Limited Access Permit (Category A) is issued to fishery participants with the greatest amount of historical fishery participation (i.e., caught at least 500 mt of herring in a year) and enables the permit holder to fish in all four of the herring management areas. The Areas 2/3 Limited Access Permit (Category B) is issued to fishery participants that had caught at least 250 mt of herring in a year and enables the permit holder to fish in herring management Areas 2 and 3. The Incidental Catch Limited Access Permit (Category C) is issued to fishery participants that had caught at least 15 mt of herring in a single year. The Category C herring permit enables the permit holder to fish in all four of the herring management areas and retain up to 25 mt of herring per calendar day.



In addition to weekly herring catch reporting via IVR, Amendment 1 required all limited access vessels to obtain and operate a vessel monitoring system (VMS). Vessels declare their intent to participate in the herring fishery by entering a herring code into the VMS prior to leaving port on a fishing trip. This requirement facilitates compliance with herring management area requirements. Category A and B vessels, fishing with midwater trawl or purse seine gear on a declared herring trip, are required to provide a VMS pre-landing notification to NMFS six hours prior to arriving in port at the conclusion of a fishing trip. This requirement allows NMFS personnel to meet vessels at the dock if issues such as bycatch, especially of haddock, or compliance with fishing restrictions warrant investigation.

In 2010, 101 vessels were issued limited access herring permits; 42 vessels were issued a Category A permit, 4 vessels were issued a Category B permit, and 55 vessels were issued a Category C permit. Limited access vessels harvest more than 99 % of the total annual herring catch and the limited access fleet is capable of catching up to 5,000 mt of herring in a week.

To help ensure that herring catch does not exceed management area sub-ACLs, current regulations require NMFS to establish a 2,000-lb possession limit in a management area when 95% of that management area's sub-ACL is projected to be caught. This measure essentially closes the directed herring fishery in that management area. As catch is approaching the sub-ACL's 95% closure threshold, NMFS coordinates the timing of implementing possession limit restrictions with the Atlantic States Marine Fisheries Commission (ASMFC) and the states of Maine, New Hampshire, and Massachusetts to ensure consistency with state requirements. Once the effective date of the 2,000-lb possession limit has been decided, NMFS publishes a notice in the *Federal Register* implementing the possession limit. However, given the high, but often variable, harvesting capacity of the fleet, in combination with relatively low management area sub-ACLs, it is sometimes difficult for NMFS to project when catch is at 95% of a sub-ACL using catch data that are only updated once a week.

If a pulse of fishing effort occurs in a management area, weekly catch reporting may not be timely enough to inform catch projections, and the subsequent decision to close the directed herring fishery, such that catch does not exceed management area sub-ACLs. In September 2010, catch in Area 1B exceeded its sub-ACL due to a pulse in fishing effort on a relatively small amount of unharvested herring. The 2010 sub-ACL for Area 1B was 4,362 mt. On August 28th, herring catch equaled 49% of the Area 1B sub-ACL. The next week (September 4<sup>th</sup>) catch equaled 82% of the Area 1B sub-ACL, and by the following week (September 11<sup>th</sup>) catch equaled 114% of the Area 1B sub-ACL. On September 14<sup>th</sup>, the directed fishery for herring was closed (i.e., 2,000-lb possession limit implemented) in Area 1B, but catch equaled 139% of the sub-ACL by September 18<sup>th</sup>.

Conversely, if data projections suggest that the catch rate in a management area is higher than the amount of fish actually being caught, NMFS may prematurely close the directed herring fishery in that management area, and risk that some herring may go unharvested. In October and early November of 2010, catch in Area 1A was highly variable, ranging from 142 mt to 4,943 mt per week. Catch projections in early November indicated that 95% of the sub-ACL had been harvested; therefore, a 2,000-lb possession limit was implemented in Area 1A on November 8<sup>th</sup>. Following a review of updated catch information, NMFS removed the 2,000-lb possession limit for the period between November 15<sup>th</sup> and November 17<sup>th</sup> and again for the period between November 29<sup>th</sup> and December 3<sup>rd</sup> to allow catch to approach the 95% of the Area 1A sub-ACL. While the fishery was eventually able to harvest the entire

Area 1A sub-ACL, the premature implementation of the reduced possession limit interrupted fishing and processing operations and likely resulted in increased operational costs to the industry.

As described previously, Amendment 4 focused on revising the specification-setting process to bring the FMP into compliance with ACL and AM requirements by 2011 and changes to reporting requirements are being developed in Amendment 5. The Council adopted Amendment 4 on January 26, 2010 and it was submitted to NMFS on April 22, 2010. NMFS, on behalf of the Secretary of Commerce, approved the amendment in its entirety on November 9, 2010. The final rule implementing Amendment 4 became effective on April 1, 2011.

When approving and implementing Amendment 4, NMFS determined that weekly submission of IVR data and monthly submission of VTR data was sufficient to monitor herring catch against herring sub-ACLs. Between 2001 and 2009, herring catch exceeded management area closure thresholds (i.e., 95% of sub-ACL) on eight occasions (less than 25% of the time). In other words, the four herring management areas were monitored over nine years, for a total of 36 management area thresholds, and those thresholds were exceeded eight times. Because catch exceeded the management area closure threshold less than 25% of the time, NMFS concluded that existing catch reporting was sufficient to monitor herring catch against sub-ACLs. National Standard 1 guidelines specify that Councils are to reconsider their ACLs, if those ACLs are consistently exceeded. Amendment 4 provides the flexibility to re-evaluate and modify, if necessary, sub-ACLs and AMs during the specification process. Additionally, the amendment contains an AM that requires any ACL/sub-ACL overages to be deducted in the year following total catch accounting.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B a few weeks prior to approving Amendment 4 and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A just after approving Amendment 4. During the development and implementation of Amendment 4, NMFS concluded that existing reporting requirements were sufficient to monitor catch against sub-ACLs. However, experiences in late 2010 suggest that more timely catch reporting would allow NMFS to better monitor catch against sub-ACLs and help prevent sub-ACL overages.

### **2.1.1 Alternative 1: Weekly IVR and Monthly VTR Reporting (No Action)**

Under this alternative, no action would be taken to modify catch reporting requirements for owners/operators of vessels issued limited access herring permits. Catch by limited access vessels would be reported weekly via the IVR system and VTRs would be submitted monthly.

Catch data submitted via IVR would be due Tuesday midnight, eastern time, for the previous week (Sunday-Saturday), including negative reports (0 lb) when no fish were caught. IVR reports would include the following information: Vessel identification; week in which herring was caught; management areas fished; pounds of herring retained in each management area; and pounds of herring discarded in each management area.

VTRs would be submitted by the 15<sup>th</sup> of the month, midnight, eastern time, for the previous month. VTR reports would include: Vessel name; US Coast Guard documentation number (or state registration

number, if undocumented); permit number; date/time sailed; date/time landed; trip type; number of crew; gear fished; quantity and size of gear; mesh/ring size; chart area fished; average depth; latitude/longitude (or loran station and bearings); total hauls per area fished; average tow time duration; hail weight, in pounds (or count of individual fish, if a party or charter vessel), by species, of all species, or parts of species, such as monkfish livers, landed or discarded; and, in the case of skate discards, “small” (i.e., less than 23 inches, total length) or “large” (i.e., 23 inches or greater, total length) skates; dealer permit number; dealer name; date sold, port and state landed; and vessel operator's name, signature, and operator's permit number (if applicable).

### **2.1.2 Alternative 2: Daily VMS and Weekly VTR Reporting (Proposed Action)**

To ensure timely catch data are available to better inform management decisions, Alternative 2 would require owners/operators of vessels issued limited access herring permits (Categories A-C) to report herring catch, retained and discarded, daily via VMS. Daily catch reports would include the following information: Vessel name, VTR serial number, date, and the amount of herring retained and discarded from each management area. During a declared herring trip, catch reports would be required to be submitted via VMS by 9 a.m., eastern time, for herring caught the previous calendar day (0000-2400 hours). If no fish were caught on a particular day during the trip, a negative report (0 lb) would be submitted. This requirement would increase the frequency of information reporting and change the mechanism to report catch from status quo. This requirement is consistent with daily reporting requirements for owners/operators of vessels issued Northeast multispecies permits engaged in fishing in U.S./Canada management areas and special access programs.

As described previously, all limited access herring vessels are currently required to declare herring fishing trips via VMS. Additionally, Category A and B vessels fishing with midwater and purse seine gear are required to use their VMS to send NMFS pre-landing notifications.

VTRs submitted by limited access herring vessels are used by NMFS to verify vessel catch reports and resolve discrepancies between IVR and dealer data. VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLs. While the monthly submission of VTRs is useful, receiving VTRs on a weekly basis would speed NMFS’ ability to resolve issues with the herring data and, ultimately, help improve the monitoring of catch in the herring fishery. Therefore, Alternative 2 would require owners/operators of vessels issued limited access herring permits to submit VTRs on a weekly basis. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). This requirement would increase the frequency of information reporting from status quo, but the required content of the VTR would be unchanged from status quo. The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits.

### **2.1.3 Alternative 3: Trip-by-Trip IVR and Weekly VTR Reporting**

This alternative would require owners/operators of vessels issued limited access herring permits to submit catch data via IVR trip-by-trip and submit VTRs weekly. IVR reports would be due within 24 hours of an offload or prior to the start of the next fishing trip, whichever occurred first. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). These requirements would

increase the reporting frequency from status quo, but the required content of the IVR report and VTR would be unchanged from status quo.

## **2.2 OPEN ACCESS REPORTING**

In addition to limited access permit categories, Amendment 1 created an open access herring permit. The open access herring permit is available to all fishery participants wanting to harvest small amounts of herring or retain herring encountered incidentally while prosecuting other fisheries. Vessels issued an open access herring permit can retain up to 3 mt of herring per trip and are limited to landing herring once per calendar day. In 2010, 2,258 vessels were issued herring open access permits. Despite the relatively large number of vessels issued an open access herring permit, Category D vessels harvest less than 1% of the total annual herring catch.

Current regulations require Category D vessels to report herring catch via IVR only if harvest is 2,000 lb or more of herring on a trip. If catch is less than 2,000 lb, Category D vessels report catch monthly on VTRs. The IVR system allows catch to be reported by herring management area. The location of fishing (i.e., latitude, longitude) is reported on the VTR, which allows NMFS to attribute catch to the appropriate herring management area, but VTRs do not allow catch to be directly reported by herring management area.

If a pulse of fishing effort occurs or catch rates are highly variable, using VTR information that is updated monthly may not be timely enough to monitor catch against sub-ACLS or to resolve any discrepancies between IVR and dealer data. If Category D vessels reported all catch via IVR, catch projections could be easily updated with more recent information. VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLS. Receiving VTRs more frequently than once a month would speed NMFS' ability to resolve issues with the herring data and, ultimately, help improve the monitoring of catch in the herring fishery.

### **2.2.1 Alternative 4: Weekly IVR (Catch Greater Than or Equal to 2,000 LB on a Trip) and Monthly VTR Reporting (No Action)**

Under this alternative, no action would be taken to modify catch reporting requirements for owners/operators of vessels issued open access herring permits. Catch, greater than or equal to 2,000 lb on a trip, would be reported weekly via the IVR system and VTRs would be submitted monthly.

### **2.2.2 Alternative 5: Weekly IVR and Weekly VTR Reporting (Proposed Action)**

In an effort to simplify reporting requirements, improve the timeliness of herring catch data, and more efficiently apportion catch to management area, Alternative 5 would require that owners/operators of vessels issued open access herring permits report catch weekly via the IVR system. An IVR report would be required by Tuesday midnight, eastern time, for all herring caught the previous week (Sunday-Saturday). If no herring was caught during a week, no IVR report would be required.

Consistent with proposed VTR requirements for limited access vessels, Alternative 5 would require owners/operators of vessels issued open access herring permits to submit VTRs on a weekly basis. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). As described

previously, VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLs.

These requirements would increase the frequency of information reporting from status quo, but the required content of the IVR report and VTR would be unchanged from status quo.

### **2.2.3 Alternative 6: Trip-by-Trip IVR and Weekly VTR Reporting**

This alternative would require owners/operators of vessels issued open access herring permits to submit catch data via IVR trip-by-trip and submit VTRs weekly. IVR reports would be due within 24 hours of an offload or prior to the start of the next fishing trip, whichever occurred first. If no herring was caught, no IVR report would be required. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). These requirements would increase the reporting frequency from status quo, but the required content of the IVR report and VTR would be unchanged from status quo.

## **3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT**

### **3.1 INTRODUCTION**

Council on Environmental Quality (CEQ) regulations at part 1502.15 indicate that the contents of the affected environment section must succinctly describe the environment of the areas to be affected or created by the alternatives under consideration. Although the baseline and analysis in this document will consider the standard valued ecosystem components (VECs) typically assessed by actions taken under the Herring FMP, because this EA is of limited scope and many of the impacts will likely be indirect or administrative only, the extent of the information presented in this section has been curtailed accordingly.

The range of VECs described in this section is listed below:

1. Target species (herring)
2. Non-target and bycatch species (herring, spiny dogfish, and Atlantic mackerel)
3. Physical environment and Essential Fish Habitat (EFH) for the target species and non-target/bycatch species
4. Endangered and other protected species
5. Human communities (social and economic)

#### **3.1.1 TARGET SPECIES**

The target species for this action is herring. Herring occur from North Carolina to the Canadian Maritime provinces and from inshore to offshore waters to the edge of the continental shelf. They can also be found in every major estuary from the Chesapeake Bay to the Gulf of Maine. They are most abundant north of Cape Cod (Kelly and Moring 1986) with the largest and oldest fish found in the southern most portion of the range (Munro 2002).

Adult herring undertake extensive migrations to areas where they feed, spawn, and overwinter. Spawning occurs in the summer and fall, starting earlier along the eastern Maine coast and southwest Nova Scotia (August-September) than in the southwestern Gulf of Maine (early to mid-October in the Jeffreys Ledge

area) and as late as November-December on Georges Bank (Reid et al. 1999a). In U.S. waters, herring reach a maximum length of about 39 cm (15.6 inches) and an age of about 15-18 years (Anthony 1972).

The Council manages herring under the Atlantic Herring FMP. The stock complex is not overfished at this time, and overfishing is not occurring. A complete description of the herring resource can be found in section 7.1 of the final supplemental environmental impact statement (FSEIS) for Amendment 1 to the Herring FMP (<http://www.nefmc.org/herring/index.html>) and additional updates are available in section 4.1 of the EA prepared for the 2010-2012 Herring Specifications (<http://www.nefmc.org/herring/index.html>).

### **3.1.2 NON-TARGET AND BYCATCH SPECIES**

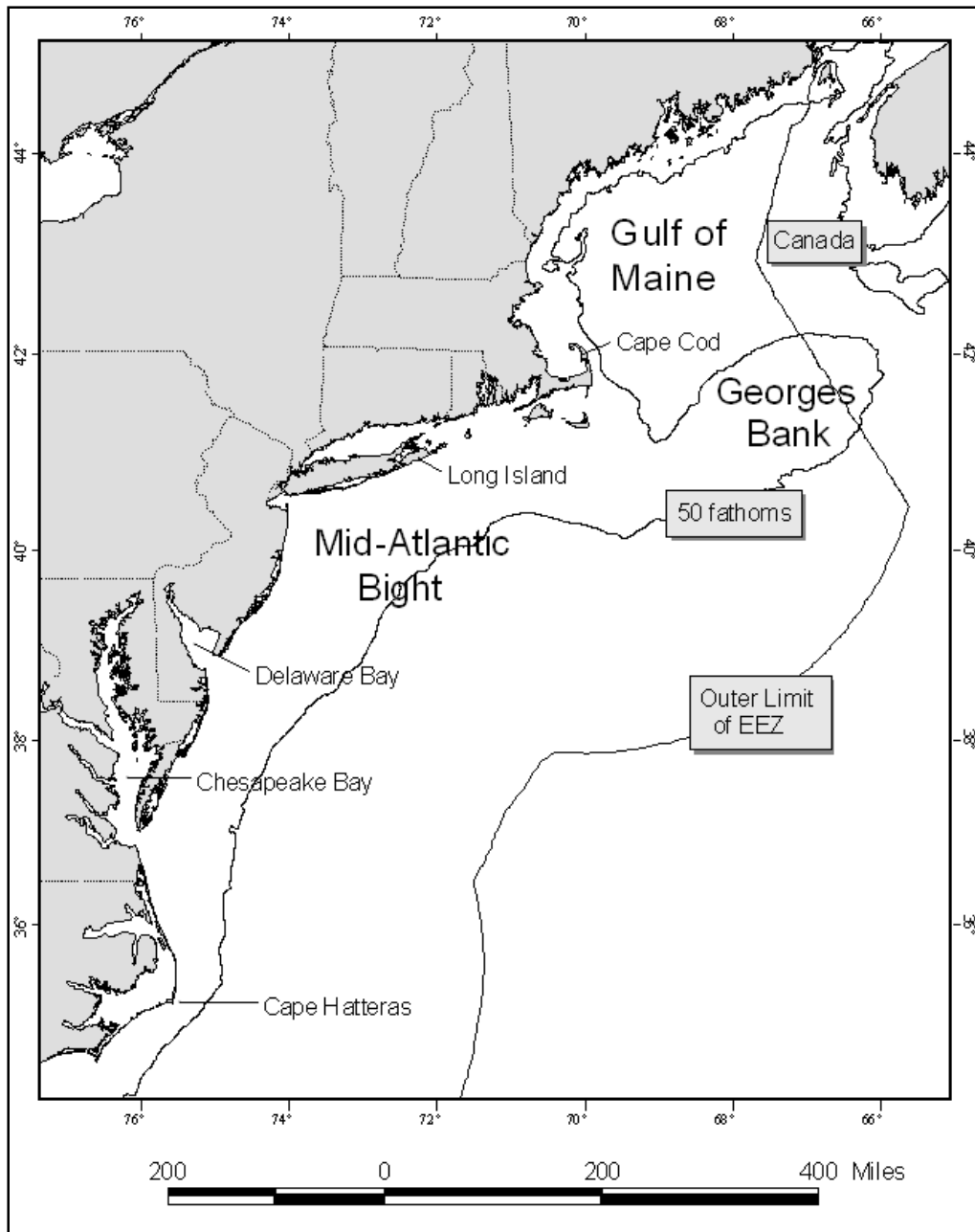
Non-target species refers to the other species which herring-permitted vessels land while fishing for herring. These other fish species may be caught by the same gear while fishing for herring, and sold assuming the vessel has proper authorization or permit(s). As defined in the MSA, bycatch refers to “fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards.” For the purposes of this EA, the discussion of non-target species and bycatch refers primarily to Atlantic mackerel (mackerel), spiny dogfish, and herring, based on the catch and discard data by weight on observed herring trips from 2007-2009 (see Tables 35-46 in the 2010-2012 Atlantic Herring Specifications EA). These species dominate bycatch (i.e., herring and spiny dogfish) or are the primary alternate species that are landed by herring vessels (i.e., mackerel). Mackerel, which is not overfished and overfishing is not occurring, is commonly landed when caught. Spiny dogfish, which is also not overfished, nor is overfishing occurring, tend to be relatively abundant in catches. They may be landed but are often the main component of the discarded bycatch. Spiny dogfish are often discarded because they are too large pass through the relatively narrow pump that pumps catch from the codend onto the vessel. Herring, as previously noted, are not overfished and overfishing is not occurring. Herring may be discarded due to mechanical issues associated with gear, poor species composition of a tow, test tows, or due to poor quality.

Because this action is expected to have little or no impact on non-target or bycatch species, more robust descriptions of mackerel and spiny dogfish were not included in this section. However, additional information regarding non-target species descriptions and status can be found under Section 4.1.2 of the 2010-2012 Herring Specifications EA.

### **3.1.3 PHYSICAL ENVIRONMENT AND ESSENTIAL FISH HABITAT**

#### **3.1.3.1 PHYSICAL ENVIRONMENT**

The Northeast U.S. Shelf Ecosystem includes the area from the Gulf of Maine south to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream to a depth of 2,000 meters (m) (Sherman et al. 1996). Four distinct sub-regions are identified: The Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. The physical and biological features of these regions are described under section 4.2 of the 2010-2012 Herring Specifications EA. Because this action is not expected to impact the physical environment, in-depth descriptions were not included as part of this section.



**Figure 1. Northeast U.S. Shelf Ecosystem.**

### 3.1.3.2 ATLANTIC HERRING ESSENTIAL FISH HABITAT

Text descriptions and map designations of essential fish habitat (EFH) for herring are described in Reid et al. (1999b) and at <http://www.nero.noaa.gov/hcd/herring.pdf>. Text descriptions identify the habitat requirements by life history stage, which include eggs, larvae, juveniles, adults, and spawning adults. These descriptions provide general geographic areas preferred by herring, preferred substrate (for eggs), and ideal ranges of water temperature, depth and salinity. When taken in consideration with the EFH maps, which provide geographic context, this information provides a full picture of EFH for herring.

Additional information regarding herring EFH or those species for which designated EFH overlaps with the herring fishery is not included here because, given the administrative nature of this action, it is not expected to impact the EFH of herring or other species.

### 3.1.4 ENDANGERED AND OTHER PROTECTED SPECIES

As noted, this action is of limited scope and administrative in nature. Consequently, impacts to endangered and protected species are not expected. NEPA indicates that the affected environment section should only contain data and analysis that are commensurate in detail with the importance of the impacts, and should avoid useless information and verbose descriptions (40 CFR 1502.15). However, in the case of endangered and protected species, this EA serves as the biological assessment (BA). As such, it is necessary to provide information beyond what may be essential to satisfy NEPA in order to meet the requirements for a BA found at 50 CFR 402.12.

#### 3.1.4.1 SPECIES PRESENT IN THE AREA

Many species occur in the operations area of the herring industry that are afforded protection under the Endangered Species of 1973 (ESA) (i.e., for those designated as threatened or endangered), and/or the Marine Mammal Protection Act of 1972 (MMPA), and are under NMFS' jurisdiction. Fifteen species are classified as endangered or threatened under the ESA, while the remainders are protected by the provisions of the MMPA.

The following list of species protected either by the ESA, the MMPA, or both, and may be found in the environment that would be used by the herring fishery. Two right whale critical habitat designations are also present in the Northeast.

#### **Cetaceans**

North Atlantic right whale ( <i>Eubalaena glacialis</i> )	Endangered
Humpback whale ( <i>Megaptera novaeangliae</i> )	Endangered
Fin whale ( <i>Balaenoptera physalus</i> )	Endangered
Sei whale ( <i>Balaenoptera borealis</i> )	Endangered
Blue whale ( <i>Balaenoptera musculus</i> )	Endangered
Sperm whale ( <i>Physeter macrocephalus</i> )	Endangered
Minke whale ( <i>Balaenoptera acutorostrata</i> )	Protected
Pilot whale ( <i>Globicephala spp.</i> )	Protected
Risso's dolphin ( <i>Grampus griseus</i> )	Protected
White-sided dolphin ( <i>Lagenorhynchus acutus</i> )	Protected
Common dolphin ( <i>Delphinus delphis</i> )	Protected
Spotted and striped dolphins ( <i>Stenella spp.</i> )	Protected
Bottlenose dolphin – Offshore Stock ( <i>Tursiops truncatus</i> )	Protected
White-beaked dolphin ( <i>Lagenorhynchus albirostris</i> )	Protected
Harbor Porpoise ( <i>Phocoena phocoena</i> )	Protected



### **Sea Turtles**

Leatherback sea turtle ( <i>Dermochelys coriacea</i> )	Endangered
Kemp's ridley sea turtle ( <i>Lepidochelys kempii</i> )	Endangered
Green sea turtle ( <i>Chelonia mydas</i> )	Endangered
Loggerhead sea turtle ( <i>Caretta caretta</i> )	Threatened

### **Fish**

Shortnose sturgeon ( <i>Acipenser brevirostrum</i> )	Endangered
Atlantic salmon ( <i>Salmo salar</i> )	Endangered
Cusk ( <i>Brosme brosme</i> )	Candidate
Atlantic sturgeon ( <i>Acipenser oxyrinchus</i> )	Proposed
Atlantic Bluefin Tuna ( <i>Thunnus thynnus</i> )	Candidate

### **Pinnipeds**

Harbor seal ( <i>Phoca vitulina</i> )	Protected
Gray seal ( <i>Halichoerus grypus</i> )	Protected
Harp seal ( <i>Pagophilus groenlandicus</i> )	Protected
Hooded seal ( <i>Cystophora cristata</i> )	Protected

### **Northern Right Whale Critical Habitat Designations**

Cape Cod Bay  
Great South Channel

Several Distinct Population Segments (DPSs) of loggerhead sea turtle are also proposed for uplisting to endangered status from threatened at this time.

### **Sea Turtle Section**

The loggerhead sea turtle is listed as threatened throughout its worldwide range. On July 12, 2007, NMFS and USFWS (Services) received a petition from Center for Biological Diversity and Turtle Island Restoration Network to list the “North Pacific populations of loggerhead sea turtle” as an endangered species under the ESA. In addition, on November 15, 2007, the Services received a petition from Center for Biological Diversity and Oceana to list the “Western North Atlantic populations of loggerhead sea turtle” as an endangered species under the ESA. NMFS published notices in the *Federal Register*, concluding that the petitions presented substantial scientific information indicating that the petitioned actions may be warranted (72 FR 64585, November 16, 2007; 73 FR 11849; March 5, 2008). In 2008, a Biological Review Team (BRT) was established to assess the global population structure to determine whether DPSs exist and, if so, the status of each DPS. The BRT identified nine loggerhead DPSs, distributed globally (Conant et al. 2009). On March 16, 2010, the Services announced 12-month findings on the petitions to list the North Pacific populations and the Northwest Atlantic populations of the loggerhead sea turtle as DPSs with endangered status and published a proposed rule to designate nine loggerhead DPSs worldwide, seven as endangered (North Pacific Ocean DPS, South Pacific Ocean DPS, Northwest Atlantic Ocean DPS, Northeast Atlantic Ocean DPS, Mediterranean Sea DPS, North Indian Ocean DPS, and Southeast Indo-Pacific Ocean DPS) and two as threatened (Southwest Indian Ocean DPS

and South Atlantic Ocean DPS). On March 22, 2011, the timeline for the final determination was extended for six months until September 16, 2011 (76 FR 15932).

### **Large Cetaceans**

It should also be noted that NMFS expects to propose changes to critical habitat designations of the North Atlantic right whale in 2011. At the time of writing, an announcement by the agency acknowledged that it is proceeding with the petition by working on a rule to propose revisions to the critical habitat designation for this species. "Critical habitat" is an area that contains physical or biological features that may require special management and that are essential to the conservation of the species. Three critical habitat areas currently exist, established in 1994, two of which are within the jurisdiction of the NEFMC; the feeding grounds in Cape Cod Bay and the Great South Channel.

### **Small Cetaceans**

With respect to harbor porpoise specifically, the most recent Stock Assessment Reports show that the number of harbor porpoise takes is increasing, moving closer to the Potential Biological Removal level calculated for this species (610 animals/year from 2001-2005) rather than declining toward the long-term Zero Mortality Rate Goal (ZMRG), which is 10 % of PBR (approximately 75 animals). Observer information collected from January 2005 to June 2006 has indicated an increase in porpoise bycatch throughout the geographic area covered by the Harbor Porpoise Take Reduction Plan (HPTRP) in both the Gulf of Maine and Mid-Atlantic regions and in monkfish gear specifically (NMFS, Discussion Paper on Planned Amendments to the Harbor Porpoise TRP 2007). The Harbor Porpoise Take Reduction Team developed options to reduce takes, and NMFS published a proposed rule on July 21, 2009 (74 Federal Register 36058) with four alternatives including no action. The comment period on this rule ended on August 20, 2009 and the final rule was published on February 19, 2010 (75 Federal Register 7383).

The following changes were implemented in the 2010 amendments to the HPTRP:

#### **New England**

- Expand the size of the Massachusetts Bay Management Area, as well as pinger use to include November;
- Establish the Stellwagen Bank Management Area and require pingers from November 1 through May 31;
- Establish the Southern New England Management Area where pingers are required from December 1 through May 31; and
- Establish the Cape Cod South Expansion Consequence Closure Area and Coastal Gulf of Maine Consequence Closure Area. These areas would be closed to gillnetting for two to three months if harbor porpoise bycatch levels are too high.

#### **Mid-Atlantic**

- Establish the Mudhole South Management Area, with a seasonal closure and gear modifications for large and small mesh gear;

- Modify the northern boundary of the waters off New Jersey Management Area to intersect with the southern shoreline of Long Island, NY at 72° 30' W longitude; and
- Modify tie-down spacing requirement for large mesh gillnets in all Mid-Atlantic management areas (waters off New Jersey, Mudhole North and South, and Southern Mid-Atlantic Management Areas).

The Atlantic Trawl Gear Take Reduction Team (ATGTRT) was organized in 2006 to implement a plan to address the incidental mortality and serious injury of long-finned pilot whales, short-finned pilot whales, common dolphins, and Atlantic white-sided dolphins in several trawl gear fisheries. In lieu of a TRP, the ATGTRT agreed to develop an Atlantic Trawl Gear Take Reduction Strategy (ATGTRS). The ATGTRS identifies informational and research tasks as well as education and outreach needs the ATGTRT believes are necessary to provide the basis for achieving the ultimate MMPA goal of achieving ZMRG. The ATGTRS also identifies several potential voluntary measures that can be adopted by certain trawl fishing sectors to potentially reduce the incidental capture of marine mammals. These voluntary measures are as follows:

- Reducing the numbers of turns made by the fishing vessel and tow times while fishing at night; and
- Increasing radio communications between vessels about the presence and/or incidental capture of a marine mammal to alert other fishermen of the potential for additional interactions in the area.

### **Atlantic Sturgeon**

Atlantic sturgeon has been proposed for listing under the ESA at this time, as well. A status review for Atlantic sturgeon was completed in 2007. NMFS has concluded that the U.S. Atlantic sturgeon spawning populations comprise five DPSs (ASSRT, 2007). The Gulf of Maine DPS of Atlantic sturgeon is proposed to be listed as threatened, and the New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon are proposed as endangered. On October 6, 2010 (75 FR 61872 and 75 FR 61904), NMFS proposed listing five populations of Atlantic sturgeon along the U.S. East Coast as either threatened or endangered species. A final listing rule is expected by October 6, 2011.

Atlantic sturgeon from any of the five DPSs could occur in areas where the herring fishery operates, and the species has been captured in gear targeting multispecies (Stein et al. 2004a, ASMFC 2007). The proposed action to modify the herring fishery is expected to be completed before the anticipated date of a final listing determination for Atlantic sturgeon. However, the conference provisions of the ESA may apply to actions proposed to be taken by Federal agencies once a species is proposed for listing (see ESA Section 7(a)(4) and 50 CFR 402.10).

Candidate species receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on candidate species from any proposed project. NMFS has initiated review of recent stock assessments, bycatch information, and other information for these candidate and proposed species. The results of those efforts are needed to accurately characterize recent interactions between fisheries and the candidate/proposed species in the context of stock sizes. Final determinations on the proposed listings are expected by October 6, 2011. Any conservation measures deemed appropriate for these species will follow the information reviews. Please note that once a species is proposed for listing the conference provisions of the ESA apply (see 50 CFR 402.10).

Atlantic sturgeon is an anadromous species that spawns in relatively low salinity, river environments, but spends most of its life in the marine and estuarine environments from Labrador, Canada to the Saint Johns River, Florida (Holland and Yelverton 1973, Dovel and Berggen 1983, Waldman et al. 1996, Kynard and Horgan 2002, Dadswell 2006, ASSRT 2007). Tracking and tagging studies have shown that subadult and adult Atlantic sturgeon that originate from different rivers mix within the marine environment, utilizing ocean and estuarine waters for life functions such as foraging and overwintering (Stein et al. 2004a, Dadswell 2006, ASSRT 2007, Laney et al. 2007, Dunton et al. 2010). Fishery-dependent data as well as fishery-independent data demonstrate that Atlantic sturgeon use relatively shallow inshore areas of the continental shelf; primarily waters less than 50 m (Stein et al. 2004b, ASMFC TC 2007, Dunton et al. 2010). The data also suggest regional differences in Atlantic sturgeon depth distribution with sturgeon observed in waters primarily less than 20 m in the Mid-Atlantic Bight and in deeper waters in the Gulf of Maine (Stein et al. 2004b, ASMFC TC 2007, Dunton et al. 2010). Information on population sizes for each Atlantic sturgeon DPS is very limited. Based on the best available information, NMFS has concluded that bycatch, vessel strikes, water quality and water availability, dams, lack of regulatory mechanisms for protecting the fish, and dredging are the most significant threats to Atlantic sturgeon.

#### **3.1.4.2 SPECIES POTENTIALLY AFFECTED**

It is expected that the sea turtle, cetacean, and pinniped species discussed below have the potential to be affected by the operation of the herring fishery. All other species listed above are not considered to have the potential to be affected by the operation of the herring fishery. While these species may occur within the general geographical areas fished by the herring fishery, they are unlikely to be encountered by the fleet because of their low abundance and varied distribution, and/or are not known to interact with the specific gear types that would be used by the herring fishery.

Background information on the range-wide status of sea turtle and marine mammal species that occur in the area and are known or suspected of interacting with fishing gear (demersal gear including trawls, gillnets, and longline types) can be found in a number of published documents. These include sea turtle status reviews and biological reports (NMFS and USFWS 1995; Turtle Expert Working Group (TEWG) 1998, 2000; NMFS and USFWS 2007a, 2007b; Leatherback TEWG 2007), recovery plans for ESA-listed cetaceans and sea turtles (NMFS 1991, 2005; NMFS and USFWS 1991a, 1991b; NMFS and USFWS 1992), the marine mammal stock assessment reports (e.g., Waring et al. 2006; 2007; 2009), and other publications (e.g., Clapham et al. 1999, Perry et al. 1999, Best et al. 2001, Perrin et al. 2002).

Additional ESA background information on the range-wide status of these species and a description of critical habitat can be found in a number of published documents including recent sea turtle (NMFS and USFWS 1995, USFWS 1997, TEWG 2000, NMFS SEFSC 2001, NMFS and USFWS 2007a) recovery team report (NMFS and USFWS 2008), status reviews and stock assessments, Recovery Plans for the humpback whale (NMFS 1991a), right whale (NMFS 1991b, 2005), right whale EIS (August 2007), fin and sei whale (NMFS 1998b), and the marine mammal stock assessment report (Waring et al. 2008) and other publications (e.g., Perry et al. 1999; Clapham et al. 1999; IWC 2001). A recovery plan for fin and sei whales is also available and may be found at the following web site [http://www.NOAAfisheries.noaa.gov/prot\\_res/PR3/recovery.html](http://www.NOAAfisheries.noaa.gov/prot_res/PR3/recovery.html) (NOAA Fisheries unpublished).

## Sea Turtles

Loggerhead, leatherback, Kemp's ridley, and green sea turtles occur seasonally in southern New England and Mid-Atlantic continental shelf waters north of Cape Hatteras, North Carolina. In general, turtles move up the coast from southern wintering areas as water temperatures warm in the spring (James et al. 2005, Morreale and Standora 2005, Braun-McNeill and Epperly 2004, Morreale and Standora 1998, Musick and Limpus 1997, Shoop and Kenney 1992, Keinath et al. 1987). The trend is reversed in the fall as water temperatures cool. By December, turtles have passed Cape Hatteras, returning to more southern waters for the winter (James et al. 2005, Morreale and Standora 2005, Braun-McNeill and Epperly 2004, Morreale and Standora 1998, Musick and Limpus 1997, Shoop and Kenney 1992, Keinath et al. 1987). Hard-shelled species are typically observed as far north as Cape Cod whereas the more cold-tolerant leatherbacks are observed in more northern Gulf of Maine waters in the summer and fall (Shoop and Kenney 1992, STSSN database <http://www.sefsc.noaa.gov/seaturtleSTSSN.jsp>).

In general, sea turtles are a long-lived species and reach sexual maturity relatively late (NMFS SEFSC 2001; NMFS and USFWS 2007a, 2007b, 2007c, 2007d). Sea turtles are injured and killed by numerous human activities (NRC 1990; NMFS and USFWS 2007a, 2007b, 2007c, 2007d). Nest count data are a valuable source of information for each turtle species since the number of nests laid reflects the reproductive output of the nesting group each year. A decline in the annual nest counts has been measured or suggested for four of five western Atlantic loggerhead nesting groups through 2004 (NMFS and USFWS 2007a), however, data collected since 2004 suggests nest counts have stabilized or increased (TEWG 2009). Nest counts for Kemp's ridley sea turtles as well as leatherback and green sea turtles in the Atlantic demonstrate increased nesting by these species (NMFS and USFWS 2007b, 2007c, 2007d).

The loggerhead sea turtle is listed as threatened throughout its worldwide range. On July 12, 2007, NMFS and USFWS (Services) received a petition from Center for Biological Diversity and Turtle Island Restoration Network to list the "North Pacific populations of loggerhead sea turtle" as an endangered species under the ESA. In addition, on November 15, 2007, the Services received a petition from Center for Biological Diversity and Oceana to list the "Western North Atlantic populations of loggerhead sea turtle" as an endangered species under the ESA. NMFS published notices in the Federal Register, concluding that the petitions presented substantial scientific information indicating that the petitioned actions may be warranted (72 FR 64585, November 16, 2007; 73 FR 11849; March 5, 2008). In 2008, a Biological Review Team (BRT) was established to assess the global population structure to determine whether DPSs exist and, if so, the status of each DPS. The BRT identified nine loggerhead DPSs, distributed globally (Conant et al. 2009). On March 16, 2010, the Services announced 12-month findings on the petitions to list the North Pacific populations and the Northwest Atlantic populations of the loggerhead sea turtle as DPSs with endangered status and published a proposed rule to designate nine loggerhead DPSs worldwide, seven as endangered (North Pacific Ocean DPS, South Pacific Ocean DPS, Northwest Atlantic Ocean DPS, Northeast Atlantic Ocean DPS, Mediterranean Sea DPS, North Indian Ocean DPS, and Southeast Indo-Pacific Ocean DPS) and two as threatened (Southwest Indian Ocean DPS and South Atlantic Ocean DPS). On March 22, 2011, the timeline for the final determination was extended for six months until September 16, 2011 (76 FR 15932).

## Large Cetaceans

The most recent Marine Mammal Stock Assessment Report (SAR) (Waring et al. 2009) reviewed the current population trend for each of these cetacean species within the U.S. Exclusive Economic Zone (EEZ) waters, as well as providing information on the estimated annual human-caused mortality and serious injury, and a description of the commercial fisheries that interact with each stock in the U.S. Atlantic. Information from the SAR is summarized below.

The western North Atlantic baleen whale species (i.e., North Atlantic right, humpback, fin, sei, and minke) follow a general annual pattern of migration from high latitude summer foraging grounds, including the Gulf of Maine, and Georges Bank, to low latitude winter calving grounds (Perry et al. 1999, Kenney 2002). However, this is an oversimplification of species movements, and the complete winter distribution of most species is unclear (Perry et al. 1999, Waring et al. 2009). Studies of some of the large baleen whales (right, humpback, and fin) have demonstrated the presence of each species in higher latitude waters even in the winter (Swingle et al. 1993, Wiley et al. 1995, Perry et al. 1999, Brown et al. 2002, Patrician et al. 2009). Blue whales are most often sighted on the east coast of Canada, particularly in the Gulf of St. Lawrence, and occur only infrequently within the U.S. EEZ (Waring et al. 2002).

In comparison to the baleen whales, sperm whale distribution occurs more on the continental shelf edge, over the continental slope, and into mid-ocean regions (Waring et al. 2006). However, sperm whale distribution in U.S. EEZ waters also occurs in a distinct seasonal cycle (Waring et al. 2006). Typically, sperm whale distribution is concentrated east-northeast of Cape Hatteras in winter and shifts northward in spring when whales are found throughout the Mid-Atlantic Bight (Waring et al. 2006). Distribution extends further northward to areas north of Georges Bank and the Northeast Channel region in summer and then south of New England in fall, back to the Mid-Atlantic Bight (Waring et al. 1999).

For North Atlantic right whales, the available information suggests that the population is increasing at a rate of 1.8% per year during 1990-2005, and the total number of North Atlantic right whales is estimated to be at least 345 animals in 2005 (Waring et al. 2009). The minimum rate of annual human-caused mortality and serious injury to right whales averaged 3.0 per year during 2003 to 2007 (Waring et al. 2009). Of these, 0.8 per year resulted from fishery interactions.

The North Atlantic population of humpback whales is estimated to be 11,570, although the estimate is considered to be negatively biased (Waring et al. 2009). The best estimate for the Gulf of Maine stock of humpback whales is 847 whales (Waring et al. 2009). The population trend was considered positive for the Gulf of Maine population, but there are insufficient data to estimate the trend for the larger North Atlantic population. Based on data available for selected areas and time periods, the minimum population estimates for other western north Atlantic whale stocks are 1,678 fin whales, 207 sei whales, 3,539 sperm whales, and 1,899 minke whales (Waring et al. 2009). No recent estimates are available for blue whale abundance. Insufficient data exist to determine trends for any other large whale species.

The ALWTRP was revised with publication of a final rule (72 FR 57104, October 5, 2007) that is intended to continue to address entanglement of large whales (right, humpback, fin, and minke) in fixed

commercial fishing gear (i.e., pot, trap, and gillnet) and to reduce the risk of death and serious injury from entanglements that do occur.

### **Small Cetaceans**

Numerous small cetacean species (dolphins, pygmy and dwarf sperm whales, pilot and beaked whales, harbor porpoise) occur within the area from Cape Hatteras through the Gulf of Maine. Seasonal abundance and distribution of each species in the Mid-Atlantic, Georges Bank, and/or Gulf of Maine waters varies with respect to life history characteristics. Some species primarily occupy continental shelf waters (e.g., white sided dolphins, harbor porpoise), while others are found primarily in continental shelf edge and slope waters (e.g., Risso's dolphin), and still others occupy all three habitats (e.g., common dolphin, spotted dolphins, striped dolphins). Information on the western North Atlantic stocks of each species is summarized in Waring et al. (2009).

### **Pinnipeds**

Of the four species of seals expected to occur in the area, harbor seals have the most extensive distribution with sightings occurring as far south as 30° N (Katona et al. 1993, Waring et al. 2009). Gray seals are the second most common seal species in U.S. EEZ waters, occurring primarily in New England (Katona et al. 1993, Waring et al. 2009). Pupping for both species occurs in both U.S. and Canadian waters of the western North Atlantic with the majority of harbor seal pupping likely occurring in U.S. waters and the majority of gray seal pupping in Canadian waters, although there are at least three gray seal pupping colonies in U.S. waters as well. Harp and hooded seals are less commonly observed in U.S. EEZ waters. Both species form aggregations for pupping and breeding off eastern Canada in the late winter/early spring, and then travel to more northern latitudes for molting and summer feeding (Waring et al. 2006). Both species have a seasonal presence in U.S. waters from Maine to New Jersey, based on sightings, stranding, and fishery bycatch (Waring et al. 2009).

## **3.1.5 HUMAN COMMUNITIES**

A complete description of the Atlantic herring fishery – vessels, processors, and communities – is provided in Amendment 1 to the Herring FMP. The following subsections update general fishery information through the 2010 fishing year and are consistent with information provided in previous Stock Assessment and Fishery Evaluation Reports. The Amendment 1 FSEIS should be referenced for additional information.

### **3.1.5.1 ATLANTIC HERRING VESSELS AND PERMIT CATEGORIES**

One of the major features of Amendment 1 was the establishment of a limited access program in the herring fishery. There are four permit categories: 1) limited access permit for all management areas (Category A); 2) limited access permit for access to Areas 2 and 3 only (Category B); 3) limited access incidental catch permit for 25 mt per trip (Category C); and 4) an open access incidental catch permit for 3 mt per trip (Category D).

Table 1 summarizes the number of federally permitted herring vessels by permit category and length.

**Table 1. Number of Vessels by Atlantic Herring Permit Category and Length.**

<b>2008</b>				
<b>Category</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Under 60	4	2	21	1,762
60-80	9	3	29	422
>80	32		8	225
<b>Grand Total</b>	<b>45</b>	<b>5</b>	<b>58</b>	<b>2,409</b>
<b>2009</b>				
<b>Category</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Under 60	5	2	22	1,761
60-80	9	2	26	411
>80	31		7	222
<b>Grand Total</b>	<b>45</b>	<b>4</b>	<b>55</b>	<b>2,394</b>
<b>2010</b>				
<b>Category</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Under 60	5	2	23	1,656
60-80	8	2	25	377
>80	29		7	225
<b>Grand Total</b>	<b>42</b>	<b>4</b>	<b>55</b>	<b>2,258</b>

Table 2 lists the number of limited access herring vessels during the 2010 fishing year by herring permit category and principal port (i.e., primary port of landings as indicated on the permit). The majority of limited access directed fishery permit holders (Categories A and B) primarily land catch in Maine and Massachusetts. Category B vessels (limited access directed fishery in Areas 2 and 3 only) and Category C vessels (limited access incidental catch) tend to primarily land catch throughout the southern New England and Mid-Atlantic regions.



**Table 2. Number of Limited Access Herring Vessels by Permit Category and Principal Port, 2010.**

<b>PRINCIPAL PORT</b>	<b>A</b>	<b>B*</b>	<b>C**</b>
<b>MAINE</b>			
NEW HARBOR			2
PORTLAND	4		2
PROSPECT HARBOR	1		
ROCKLAND	3		
SOUTH BRISTOL			3
SOUTHWEST HARBOR	1		
STONINGTON	1		
VINALHAVEN	1		
<b>TOTAL ME</b>	<b>11</b>	<b>0</b>	<b>7</b>
<b>NEW HAMPSHIRE</b>			
PORTSMOUTH			2
RYE			2
<b>TOTAL NH</b>	<b>0</b>	<b>0</b>	<b>4</b>
<b>MASSACHUSETTS</b>			
DAVISVILLE	2		
FAIRHAVEN			1
GLOUCESTER	5		2
NEW BEDFORD	8		2
<b>TOTAL MA</b>	<b>15</b>	<b>0</b>	<b>5</b>
<b>CONNECTICUT</b>			
NEWINGTON	2		
<b>TOTAL CT</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>RHODE ISLAND</b>			
POINT JUDITH	2	3	12
<b>TOTAL RI</b>	<b>2</b>	<b>3</b>	<b>12</b>
<b>NEW YORK</b>			
HAMPTON	1		1
MONTAUK			4
<b>TOTAL NY</b>	<b>1</b>		<b>5</b>
<b>NEW JERSEY</b>			
CAPE MAY	5		8
<b>TOTAL NJ</b>	<b>5</b>	<b>0</b>	<b>8</b>
<b>OTHER PORTS</b>	6	1	14
<b>GRAND TOTAL</b>	<b>42</b>	<b>4</b>	<b>55</b>

Source: NMFS permit and VTR databases, March 2011

\*BC permits are vessels that had both B and C permits during the same year

\*\*C permits are vessels that only had a C permit during a year

Table 3 lists the number of open access herring vessels (Category D) in 2010 by principal port state (as reported on the permit). Massachusetts had the most landings by Category D herring permits (865) in 2010. The principle ports with the most Category D herring permits included New Bedford, MA (223), Gloucester, MA (223), Montauk, NY (104), Cape May, NJ (101), and Point Judith, RI (77).

**Table 3. Number of Open Access (Category D) Herring Permits by State in 2010.**

<b>PRINCIPAL PORT STATE</b>	<b>Number of Category D Permits</b>
MAINE	297
NEW HAMPSHIRE	116
MASSACHUSETTS	865
CONNECTICUT	39
RHODE ISLAND	138
NEW YORK	234
NEW JERSEY	331
OTHER STATES	238
<b>GRAND TOTAL</b>	<b>2258</b>

*Source: NMFS permit and VTR databases, March 2011*

### 3.1.5.2 ATLANTIC HERRING FISHERY SPECIFICATIONS AND LANDINGS

The herring fishery specifications process was revised in Amendment 4 to meet the new requirements in the 2007 reauthorization of the MSA, including the specification of an overfishing level and standards for setting catch limits that consider both scientific and management uncertainty. The 2010-2012 specifications included substantial reductions in the available yield and management area sub-ACLs across the herring fishery. The revised specifications process still requires that the directed herring fishery be closed in any management area when 95% of the sub-ACL is projected to be reached.

**Table 4. 2010-2012 Atlantic Herring Fishery Specifications (Metric Tons).**

<b>SPECIFICATION</b>	<b>2010-2012 ALLOCATION (MT)</b>	<b>Previous (2009) Allocation</b>
<b>OFL</b>	<b>145,000 (2010)</b> <b>134,000 (2011)</b> <b>127,000 (2012)</b>	N/A
<b>ABC</b>	<b>106,000</b>	194,000
<b>Stock-wide ACL/U.S. OY</b>	<b>91,200</b>	145,000
<b>Sub-ACL Area 1A</b>	<b>26,546</b>	45,000
<b>Sub-ACL Area 1B</b>	<b>4,362</b>	10,000
<b>Sub-ACL Area 2</b>	<b>22,146</b>	30,000
<b>Sub-ACL Area 3</b>	<b>38,146</b>	60,000

Table 5 expresses 2010 herring landings by permit category as a percentage of total herring landings reported in the VTRs. The vast majority of herring is landed by the 42 Category A permit holders (i.e., the limited access directed fishery permit holders with access to all management areas). The limited access permit holders – Categories A, B, and C – reported 99.7% of Atlantic herring landings during 2010; these 101 vessels best represent the vessels that are participating in the Atlantic herring fishery.

**Table 5. Atlantic Herring Landings (000's of pounds) for Herring-Permitted Vessels by Permit Category, 2008 – 2010.**

Year	Permit Category				Total
	A	BC*	C**	D	
2008	181,431.4	1,304.8	151.6	1,000.5	183,888.2
2009	222,402.0	3,143.8	1,111.5	215.0	226,872.3
2010	140,577.4	1,624.3	1,899.3	669.8	144,770.8
<b>Total</b>	<b>544,410.8</b>	<b>6,072.9</b>	<b>3,162.4</b>	<b>1,885.3</b>	<b>555,531.3</b>

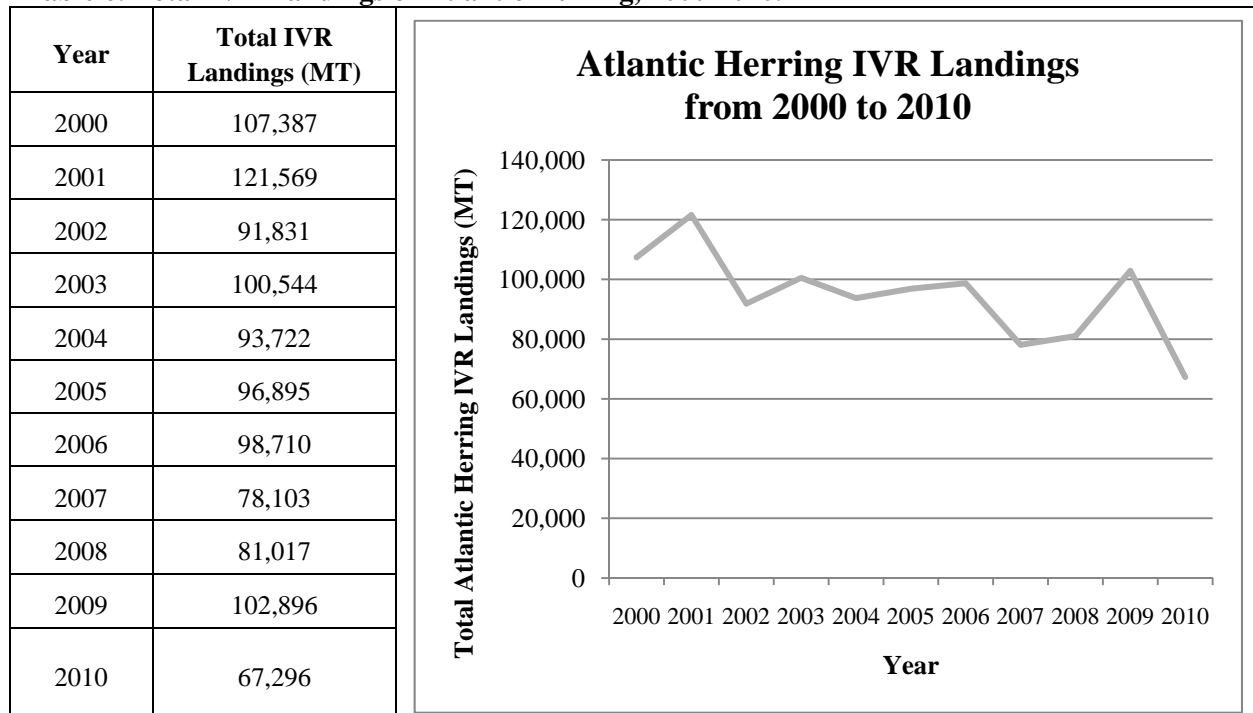
Source: NMFS permit and VTR databases, March 2011

\*BC permits are vessels that had both B and C permits during the same year

\*\*C permits are vessels that only had a C permit during a year

The 2010 fishing year saw a great reduction in the amount of Atlantic herring caught in the U.S. fishery, as IVR catches totaled 67,296 mt, down 35% from the 2009 catch. Herring catch has been trending downward since the implementation of the Herring FMP and throughout the time series of IVR reporting. The most recent five-year average herring catch (85,604 mt, 2006-2010) is 15% lower than the previous five-year average catch (100,912 mt, 2001-2005) (Table 6).

**Table 6. Total IVR Landings of Atlantic Herring, 2000-2010.**



### 3.1.5.3 ATLANTIC HERRING FISHERY REVENUES

Based on dealer data, herring revenues by permit category during the 2008 through 2010 fishing years are summarized in Table 7. Category A permits accounted for approximately 98 percent of the landings value from 2008 to 2010. As compared to 2008, the total value of landings was much lower in 2010 for Category D vessels. Category D's value of landings was \$72,229 in 2008 and \$26,399 in 2010. Conversely, Category C landings in 2010 rose to \$308,148 from \$24,606 in 2008. It should be noted that all vessels are considered small businesses according to the Small Business Administration's definition of having less than \$4 million in gross revenues.

**Table 7. Herring Ex-Vessel Value<sup>1</sup> by Year and Permit Category, 2008-2010.**

Permit Category	2008	2009	2010	Total
A	19,937,106	22,403,140	17,302,366	59,642,612
B <sup>2</sup>	131,395	280,463	154,803	566,661
C	24,606	184,491	308,148	517,245
D	72,229	27,194	26,399	125,822
Total	20,165,336	22,895,288	17,791,716	60,852,340

Source: NMFS permit and dealer databases, March 2011

<sup>1</sup>Values are in USD\$ for dealer-reported landings purchased from herring-permitted vessels during a herring fishing year (i.e., fishing year = 2008 and permit application year = 2008)

<sup>2</sup>All B vessels also had C permits during the same year, and values were excluded from C permit totals

### 3.5.1.4 ATLANTIC HERRING FISHERY COMMUNITIES

Amendment 1 identified several communities of interest with respect to the Atlantic herring fishery, based on the following criteria:

1. **Atlantic herring landings of at least 10,000,000 pounds (4,536 mt) in each of five years from 1994-2002, or anticipated landings above this level based on interviews and documented fishery-related developments.**
2. **Infrastructure dependent in part or whole on Atlantic herring.**  
Infrastructure for the Atlantic herring fishery includes:
  - Shoreside processing facilities for food production (sardine canneries, whole frozen);
  - Shoreside processing facilities for bait production (salting, etc.);
  - Shoreside processing facilities for value-added production (pearl essence);
  - At-sea processing facilities (freezer vessels); and
  - Trucking and other essential services for distributing fish.
3. **Dependence on herring as lobster and/or tuna bait.**
4. **Geographic isolation in combination with some level of dependence on the Atlantic herring fishery.**
5. **Utilization of Atlantic herring for value-added production.**

Based on the five criteria described above, the following *communities of interest* were identified:

1. Portland, Maine
2. Rockland, Maine
3. Stonington/Deer Isle, Maine
4. Vinalhaven, Maine
5. Lubec/Eastport, Maine
6. Prospect Harbor, Maine
7. Bath, Maine
8. Sebasco Estates, Maine
9. NH Seacoast – Newington, Portsmouth, Hampton/Seabrook
10. Gloucester, Massachusetts
11. New Bedford, Massachusetts
12. Southern Rhode Island – Point Judith, Newport, North Kingstown
13. Cape May, New Jersey

Because this action is administrative in nature, as it would revise reporting requirements for herring vessel owners, vessel owners would be most impacted. Communities dependent on herring for bait or human consumption would likely to have negligible to minimal impacts. Therefore, based a review of herring vessel principle port information for 2010 and landings data for 2008-2010, the following communities of interest were identified for this action (Table 8).

**Table 8. Communities of Interest Identified for This Herring Action.**

<b>Principle Port</b>	<b>Cat. A permits (2010)</b>	<b>Cat. B permits (2010)</b>	<b>Cat. C permits (2010)</b>	<b>Cat. D permits (2010)</b>	<b>2008 landings (lbs kept)</b>	<b>2009 landings (lbs kept)</b>	<b>2010 landings (lbs kept)</b>
Portland, Maine	4	0	2	54	20,085,520	27,533,976	29,566,213
Rockland, Maine	3	0	0	2	29,202,000	19,936,423	20,869,650
NH Seacoast (Newington, Portsmouth, Hampton/Seabrook)	2	0	6	116	979,110	3,306,475	929,923
Gloucester, Massachusetts	5	0	2	223	59,551,513	71,288,203	40,116,279
New Bedford, Massachusetts	8	0	2	223	40,646,915	52,969,585	27,208,216
Southern Rhode Island (Point Judith, Newport, North Kingstown)	3	4	13	92	4,494,565	10,331,310	8,853,862
Cape May, New Jersey	5	0	8	101	6,242,116	13,235,000	3,685,000
Montauk, New York	0	0	4	104	9,696	9,674	7,118

A summary of the profiles of these communities, including important demographic and social information, is included in previous documents, with the exception of Montauk, New York which is presented below. Appendix XI to the Amendment 1 FSEIS and the Herring 2010-2012 Specifications EA should be referenced for further information on these communities. It is also noted that changes have occurred in the herring fishery since the implementation of Amendment 1, and that socioeconomic and fishing community information is currently being re-evaluated in conjunction with development of Amendment 5.

### **Montauk, NY**

Montauk is located on the eastern tip of the South Fork of Long Island in New York and according to Census 2000 data, is home to 3,851 residents. The majority of the employers in Montauk are seasonal and dependent on the tourist industry, including restaurants and hotels. Montauk has a very diverse fishery, using a number of different gear types and catching a variety of species. While landings of herring in Montauk were relatively low between 2008 and 2010, 4 Category C vessels and 104 Category D vessels identified Montauk as their principle port during 2010.

#### **3.5.1.5 DEPENDENCE ON HERRING FOR BAIT**

Herring is important for the lobster and tuna fisheries, as well as other primarily recreational fisheries (e.g., striped bass). Maine relies heavily on herring to supply bait to the significant lobster fishery in the region. The supply of bait could result in multiplier effects throughout the numerous coastal communities that depend largely on herring bait (mostly in Maine).

### **4.0 ENVIRONMENTAL CONSEQUENCES OF THE ALTERNATIVES**

The MSA (402(a)(2)), in conjunction with regulations at 50 CFR Part 648.7, provides NMFS with the authority to revise fishery reporting requirements as necessary to monitor an FMP. Recognizing the importance of timely catch information to better monitor herring catch against the stock-wide herring ACL and management areas sub-ACLs, as well as helping prevent sub-ACL overages, this action considers increasing the frequency of catch reporting requirements for vessels issued herring permits.

Potential impacts were evaluated using the criteria outlined in Table 9. All impacts are judged relative to the No Action Alternative.

<b>Table 9. Impact Definitions Used in Impact Analyses.</b>			
<b>VEC</b>	<b>Definitions</b>		
	<b>Positive</b>	<b>Negative</b>	<b>Negligible</b>
<b>Target species, non-target and bycatch species, endangered and protected species</b>	Actions that increase stock/population size	Actions that decrease stock/population size	Actions that have little or no positive or negative impacts to stocks/populations
<b>Habitat</b>	Actions that improve the quality or reduce disturbance of habitat	Actions that degrade the quality or increase disturbance of habitat	Actions that have no positive or negative impact on habitat quality
<b>Human Communities</b>	Actions that increase revenue and social well being of fishermen and/or associated businesses	Actions that decrease revenue and social well being of fishermen and/or associated businesses	Actions that have no positive or negative impact on revenue and social well being of fishermen and/or associated businesses
<b>Impact Qualifiers</b>			
	<b>Low</b>	<b>High</b>	<b>Likely</b>
	To a lesser degree	To a substantial degree	Some degree of uncertainty associated with impact

#### 4.1 IMPACTS TO TARGET SPECIES

The target species in this analysis is herring, as described in Section 3.1.1. The herring fishery is administered in accordance with the Herring FMP. The Herring FMP was developed by the Council and implemented by NMFS, in 2000. The specification-setting process is the primary management tool to administer the herring fishery. The current specifications (75 FR 48874, August 12, 2010) established herring harvest levels and Amendment 4 (76 FR 11373, March 2, 2011) established the provision that any overages would be deducted from future harvest levels. Because herring catch rates can be highly variable, alternatives in this action consider increasing the frequency of catch reporting in the herring fishery to help NMFS better monitor herring catch against sub-ACLs. All of the alternatives in this action are administrative and will not affect the amount of herring available for harvest, fishing effort, or fishing behavior. Therefore, there would be negligible impacts to the target species associated with implementing any of the alternatives, including the No Action Alternative.

#### **4.2 IMPACTS TO NON-TARGET SPECIES AND BYCATCH SPECIES, THE PHYSICAL ENVIRONMENT AND EFH, AND THE ENDANGERED AND OTHER PROTECTED SPECIES**

The non-target and bycatch species are described in Section 3.1.2, the physical environment and EFH are described in Section 3.1.3, and the endangered and other protected species are described in Section 3.1.4. All of the alternatives in this action are administrative and will not affect the amount of herring available for harvest, fishing effort, or fishing behavior. Therefore, there would be negligible impacts to non-target and bycatch species, physical environment and EFH, and endangered and other protected species associated with implementing any of the alternatives, including the No Action Alternative.

An assessment of the potential effects of the directed herring commercial fishery on EFH for herring and other federally managed species in the Northeast region of the U.S. was conducted as part of an EIS that evaluated impacts of the herring fishery on EFH (NMFS 2005). This analysis was included in Appendix VI, Volume II of the FSEIS for Amendment 1. It found that midwater trawls and purse seines do occasionally contact the seafloor and may adversely impact benthic habitats utilized by a number of federally managed species, including EFH for herring eggs. However, after reviewing all the available information, the conclusion was reached that if the quality of EFH is reduced as a result of this contact, the impacts are minimal and/or temporary and, pursuant to MSA, do not need to be minimized (i.e., that there was no need to take specific action at that time to minimize the adverse effects of the herring fishery on benthic EFH). This conclusion also applied to pelagic EFH for herring larvae, juveniles, and adults, and to pelagic EFH for any other federally managed species in the region. Because the fishery as a whole has minimal and temporary impacts on EFH (the conclusion of the 2005 EIS), evaluations of the impacts to EFH in the 2010-2012 specifications packages stated that changes in the amount of herring caught and the distribution of the catch by area would have a negligible impact on EFH.

In summary, it can be concluded that the herring fishery continues to have no more than minimal and temporary impacts on EFH as a result of the Proposed Action. This is based on: (1) the previous finding that the fishery, as it existed in 2005, was not having more than a minimal or temporary impacts on EFH, and, (2) the fact that the Proposed Action is administrative in nature and is therefore not expected to change fishery operations in a way that would alter the extent of these temporary and minimal impacts to EFH in comparison with the No Action Alternatives. Therefore, neither additional action to minimize adverse impacts to EFH, nor an EFH assessment, is required.

#### **4.3 IMPACTS TO HUMAN COMMUNITIES**

Human communities are described in Section 3.1.5. The herring fishery is administered in accordance with the Herring FMP. The Herring FMP was developed by the Council and implemented by NMFS, in 2000. The specification-setting process is the primary management tool to administer fishing levels in the herring fishery. The current specifications (75 FR 48874, August 12, 2010) established herring harvest levels and Amendment 4 (76 FR 11373, March 2, 2011) established the provision that any overages would be deducted from future harvest levels. Because herring catch rates can be highly variable, the alternatives in this action consider increasing the frequency of catch reporting in the herring fishery to help NMFS better monitor herring catch against sub-ACLs.



The alternatives would directly affect the reporting burden for owners/operators of vessels issued herring permits, and perhaps indirectly affect the duration of the fishing season and availability of herring. The impacts on human communities associated with these alternatives are not expected to be significant and are not expected to be significantly different than those previously analyzed with 2010-2012 Specifications and Amendment 4.

#### **4.3.1 LIMITED ACCESS ALTERNATIVES**

##### **4.3.1.1 Alternative 1: Weekly IVR and Monthly VTR Reporting (No Action)**

Under this alternative, no action would be taken to modify catch reporting requirements for owners/operators of vessels issued limited access herring permits. Catch by limited access vessels would be reported weekly via the IVR system and VTRs would be submitted monthly.

Catch data submitted via IVR would be due Tuesday midnight, eastern time, for the previous week (Sunday-Saturday), including negative reports (0 lb) when no fish were caught. IVR reports would include the following information: Vessel identification, week in which herring was caught, pounds retained, pounds discarded, management areas fished, and pounds of herring caught in each management area. VTRs would be submitted by the 15<sup>th</sup> of the month, midnight, eastern time, for the previous month.

The IVR phone number is a toll-free number; therefore, the annual cost of reporting via IVR is free. The annual IVR reporting burden (i.e., time) per vessel would be the submission of 52 reports per year. Each IVR report is estimated to take 7 minutes to complete. The annual cost of submitting VTRs monthly is \$5.28 per vessel (12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$5.28). Each VTR report is estimated to take 5 minutes to complete. The annual IVR and VTR reporting burden would be 64 reports per vessel.

Because there would be no changes to reporting beyond what is currently required, Alternative 1 would have negligible direct economic impacts on human communities.

As was described in Section 2.1, 2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A.

If a pulse of fishing effort occurs in a management area, weekly catch reporting may not be timely enough to inform catch projections, and the subsequent decision to close the directed herring fishery, such that catch does not exceed management area sub-ACLs.

Amendment 4 established an overage deduction accountability measure, such that any ACL/sub-ACL overage would be deducted from that ACL/sub-ACL following total catch accounting. If weekly catch reports are not timely enough to inform catch projections and an overage occurs, there may be an indirect negative economic impact to human communities associated with Alternative 1 when the amount of the overage is deducted from subsequent ACLs/sub-ACLs. For example, if there is a sub-ACL overage in 2011, then that overage will be deducted from that area's sub-ACL in 2013. This overage deduction may result in lost fishing opportunity and revenue in 2013.

Conversely, if data projections suggest that the catch rate in a management area is higher than the amount of fish actually being caught, NMFS may prematurely close the directed herring fishery in that management area. If the directed fishery in a management area is prematurely closed, as occurred in Area 1A in 2010, there is the potential for lost fishing opportunity and revenue and increased operational costs. For example, if the fleet stops fishing in response to a closure and resumes fishing one to two weeks later, there is the potential for increased operating costs (e.g., re-outfitting vessel, gathering crew). Additionally, if herring have moved out of a management area and are no longer available to the fishery by the time the premature possession limit is lifted, a percentage of the sub-ACL may go unharvested resulting in lost revenue.

Under Alternative 1, there is the possibility that catch data may not be timely enough to inform catch projections, resulting in another premature implementation of a reduced possession limit. If this occurs, there may be an indirect negative economic impact to fishery participants resulting from increased operational costs associated with resuming harvesting and processing activities when the possession limit is lifted.

The phone system that supports IVR reporting sometimes malfunctions and does not allow callers to report their catch. Because of issues with phone reception, most callers phone the IVR system from land and do not have the option of reporting catch via the IVR system while at sea. These issues with the IVR system may have an indirect negative impact on fishery participants.

Overall, Alternative 1 would have low negative impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) are lowest under Alternative 1, compared to Alternatives 2 and 3. Under Alternative 1, the potential for indirect costs (e.g., sub-ACL overages, increased operational costs due to premature implementation of a possession limit, percentage of sub-ACL that goes unharvested, IVR reports typically made from land and not sea) is greatest when compared to Alternatives 2 and 3.

#### **4.3.1.2 Alternative 2: Daily VMS and Weekly VTR Reporting (Proposed Action)**

To ensure timely catch data are available to better inform management decisions, Alternative 2 would require owners/operators of vessels issued limited access herring permits (Categories A-C) to report herring catch, retained and discarded, daily via VMS. Daily catch reports would include the following information: Vessel name, VTR serial number, date, and the amount of herring retained and discarded from each management area. During a declared herring trip, catch reports would be required to be submitted via VMS by 9 a.m., eastern time, for herring caught the previous calendar day (0000-2400 hours). If no fish were caught on a particular day during the trip, a negative report (0 lb) would be submitted. This requirement would increase the frequency of information reporting and change the mechanism to report catch from status quo. This requirement is consistent with daily reporting requirements for owners/operators of vessels issued Northeast multispecies permits engaged in fishing in U.S./Canada management areas and special access programs.

As described previously, all limited access herring vessels are currently required to declare herring fishing trips via VMS. Additionally, Category A and B vessels fishing with midwater and purse seine gear are required to use their VMS to send NMFS pre-landing notifications.

VTRs submitted by limited access herring vessels are used by NMFS to verify vessel catch reports and resolve discrepancies between IVR and dealer data. VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLs. While the monthly submission of VTRs is useful, receiving VTRs on a weekly basis would speed NMFS' ability to resolve issues with the herring data and, ultimately, help improve the monitoring of catch in the herring fishery. Therefore, NMFS proposes that owners/operators of vessels issued limited access herring permits be required to submit VTRs on a weekly basis. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). This requirement would increase the frequency of information reporting from status quo, but the required content of the VTR would be unchanged from status quo.

Under Alternative 2, the direct economic impact to human communities would be the increased cost associated with daily VMS reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued limited access herring permits. In 2010, there were 101 vessels issued limited access herring permits. The top five principle ports for these vessels in 2010, ranked by number of permits, were: Point Judith, RI (17), Cape May, NJ (13), New Bedford, MA (10), Gloucester, MA (7), and Portland, ME (6).

The cost of transmitting a catch report via VMS is \$0.60 per transmission. In 2010, the average number of fishing days for a limited access herring vessel was 93. Therefore, the annual cost of daily VMS reporting is estimated to be \$55.80 per vessel. The estimated annual VMS reporting burden (i.e., time) would be the submission of 93 reports per vessel. Each VMS report is estimated to take 5 minutes to complete. Limited access vessels are currently required to submit VTRs monthly. The additional annual cost of submitting VTRs weekly would be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60.) The annual VTR reporting burden would be the submission of 52 reports per vessel. Each VTR report is estimated to take 5 minutes to complete. The annual cost of daily VMS reporting plus the additional cost of weekly VTR reporting is estimated to be \$73.40 per vessel. The annual VMS and VTR reporting burden is estimated to be 145 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 101 vessels issued limited access herring permits, only 8 of the Category A vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of vessels issued limited access herring permits are already submitting weekly VTRs.

The ex-vessel value for the herring fishery varies by permit category. During 2008-2010, limited access vessels accounted for more than 99% of the annual landings value. The increased cost of reporting associated with Alternative 2 varies by permit category. Specifically, the increased cost of reporting, based on the average ex-vessel value for the fishery during 2008-2010, would be 0.012% (\$2,485) of the fishery value for the Category A vessels, 0.118% (\$223) of the fishery value for Category B vessels, and 1.780% (\$3,069) of the fishery value for Category C vessels.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A. Under Alternative 2, catch data would be updated more frequently and would likely better inform catch projections. If catch

projections contained less uncertainty, ACL/sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants and herring dealers associated with Alternative 2.

The VMS system that would be used for catch reporting is already used by owners/operators of vessels issued limited access herring permits for trip declarations and pre-landing notifications. The system is reliable and malfunctions are rare. Because VMS messages can be sent while a vessel is at sea, VMS reporting may be a convenient method for owners/operators to report catch. For these reasons, there may be an indirect positive impact for fishery participants associated with Alternative 2.

Overall, Alternative 2 would have low positive impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) are highest under Alternative 2, compared to Alternatives 1 and 3. However, the increased reporting cost under Alternative 2 is still relatively low compared to ex-vessel value (less than 1.8%). Under Alternative 2, the potential for indirect benefits (e.g., fewer sub-ACL overages, less operational costs due to premature implementation of a possession limit, less likely that a percentage of sub-ACL goes unharvested, VMS reports can be made from land or sea) is greatest when compared to Alternatives 1 and 3.

#### **4.3.1.3 Alternative 3: Trip-by-Trip IVR and Weekly VTR Reporting**

This alternative would require owners/operators of vessels issued limited access herring permits to submit catch data via IVR trip-by-trip and submit VTRs weekly. IVR reports would be due within 24 hours of an offload or prior to the start of the next fishing trip, whichever occurred first. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). These requirements would increase the reporting frequency from status quo, but the required content of the IVR report and VTR would be unchanged from status quo.

Under Alternative 3, the direct economic impact to human communities would be the increased cost associated with trip-by-trip IVR reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued limited access herring permits.

Because the IVR phone number is a toll-free number, the cost of reporting via IVR is free. Because limited access vessels typically take trips that are multiple days in length, the estimated annual IVR reporting burden (i.e., time) would be the submission of 52 reports per vessel. Each IVR report is estimated to take 7 minutes to complete. Limited access vessels are currently required to submit VTRs monthly. The additional annual cost of submitting VTRs weekly would be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60. Each VTR report is estimated to take 5 minutes to complete. The annual IVR and VTR reporting burden is estimated to be 104 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 101 vessels issued limited access herring permits, only 8 of the Category A vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of vessels issued limited access herring permits are already submitting weekly VTRs.

The ex-value value for the herring fishery varies by permit category. During 2008-2010, limited access vessels accounted for more than 99% of the annual landings value. The increased cost of reporting associated with Alternative 3 varies by permit category. Specifically, the increased cost of reporting, based on the average ex-vessel value for the fishery during 2008-2010, would be 0.0007% (\$141) of the fishery value for the Category A vessels, 0.000% (\$0) of the fishery value for Category B vessels, and 0.000% (\$0) of the fishery value for Category C vessels.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A. Under Alternative 3, catch data would be updated more frequently and would likely better inform catch projections. If catch projections contained less uncertainty, ACL/sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants and herring dealers associated with Alternative 3.

The phone system that supports IVR reporting sometimes malfunctions and does not allow callers to report their catch. Because of issues with phone reception, most callers phone the IVR system from land and do not have the option of reporting catch via the IVR system while at sea. These issues with the IVR system may have an indirect negative impact on fishery participants.

Overall, Alternative 3 would have low positive impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) associated with Alternative 3 are higher than those under Alternative 1, but lower than those under Alternative 2. The increased reporting cost under Alternative 3 is minimal compared to ex-vessel value (0.0007%). Under Alternative 3, the potential for indirect benefits (e.g., fewer sub-ACL overages, less operational costs due to premature implementation of a possession limit, less likely that a percentage of sub-ACL goes harvested) is greater than under Alternative 1, but less than under Alternative 2. The potential for indirect costs (e.g., IVR reports typically made from land and not sea) under Alternative 3 is less than under Alternative 1 and greater than under Alternative 2.

#### **4.3.2 OPEN ACCESS ALTERNATIVES**

In addition to limited access permit categories, Amendment 1 created an open access herring permit. The open access herring permit is available to all fishery participants wanting to harvest small amounts of herring or retain herring encountered incidentally while prosecuting other fisheries. Vessels issued an open access herring permit can retain up to 3 mt of herring per trip and are limited to landing herring once per calendar day. In 2010, 2,258 vessels were issued herring open access permits. Despite the relatively large number of vessels issued an open access herring permit, Category D vessels harvest less than 1% of the total annual herring catch.

Current regulations require Category D vessels to report herring catch via IVR only if harvest equals 2,000 lb or more of herring on a trip. If catch is less than or equal to 2,000 lb, Category D vessels report catch monthly on VTRs. The IVR system allows catch to be reported by herring management area. The

location of fishing (i.e., latitude, longitude) is reported on the VTR, which allows NMFS to apportion catch to the appropriate herring management area, but VTRs do not allow catch to be reported by herring management area.

If a pulse of fishing effort occurs or catch rates are highly variable, using VTR information that is updated monthly may not be timely enough to resolve any discrepancies between IVR and dealer data. VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLs. Receiving VTRs more frequently than monthly would speed NMFS' ability to resolve issues with the herring data and, ultimately, help improve the monitoring of catch in the herring fishery.

#### **4.3.2.1 Alternative 4: Weekly IVR (Catch Greater Than or Equal to 2,000 LB on a Trip) and Monthly VTR Reporting (No Action)**

Under this alternative, no action would be taken to modify catch reporting requirements for owners/operators of vessels issued open access herring permits. Catch, greater than or equal to 2,000 lb on a trip, would be reported weekly via the IVR system and VTRs would be submitted monthly.

The IVR phone number is a toll-free number; therefore, the cost of reporting via IVR is free. Because open access vessels infrequently have trips in excess of 2,000 lb, the estimated annual IVR reporting burden (i.e., time) would be the submission of 7 reports per vessel. Each IVR report is estimated to take 7 minutes to complete. Open access vessels are currently required to submit VTRs monthly. The cost of submitting VTRs monthly is \$5.28 (12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$5.28). Each VTR report is estimated to take 5 minutes to complete. The annual IVR and VTR reporting burden is estimated to be 19 reports per vessel.

Because there would be no changes to reporting beyond what is currently required, there would be no direct economic impact to human communities associated with Alternative 4.

Under Alternative 4, there is the possibility that catch data may not be timely enough to inform catch projections increasing the likelihood of either a ACL/sub-ACL overage or a premature implementation of a reduced possession limit, similar to what happened during 2010. If this occurs, there may be an indirect negative economic impact to fishery participants and herring dealers resulting from increased operational costs and the potential risk that a percentage of a management area sub-ACL may be unharvested.

The phone system that supports IVR reporting sometimes malfunctions and does not allow callers to report their catch. Because of issues with phone reception, most callers phone the IVR system from land and do not have the option of reporting catch via the IVR system while at sea. These issues with the IVR system may have an indirect negative impact on fishery participants.

Overall, Alternative 4 would have low negative impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) are lowest under Alternative 4, compared to Alternatives 5 and 6. Under Alternative 4, the potential for indirect costs (e.g., sub-ACL overages, increased operational costs due to premature implementation of a possession limit, percentage of sub-ACL that goes unharvested) is greatest when compared to Alternatives 5 and 6.

#### **4.3.2.2 Alternative 5: Weekly IVR and Weekly VTR Reporting (Proposed Action)**

In an effort to simplify reporting requirements, improve the timeliness of herring catch data, and more efficiently apportion catch to management area, Alternative 5 would require owners/operators of vessels issued open access herring permits to report catch weekly via the IVR system. An IVR report would be required by Tuesday midnight, eastern time, for herring caught the previous week (Sunday-Saturday). If no herring was caught during a week, no IVR report would be required.

Consistent with proposed VTR requirements for limited access vessels, Alternative 5 would require owners/operators of vessels issued open access herring permits to submit VTRs on a weekly basis. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday). As described previously, VTRs are valuable tools for correcting reporting errors and improving the quality of data used to monitor management area sub-ACLs.

These requirements would increase the frequency of information reporting from status quo, but the required content of the IVR report and VTR would be unchanged from status quo. Category D vessels can make trips that are a day or two in length, so a weekly IVR report would likely cover several trips.

Under Alternative 5, the direct economic impact to human communities would be the increased cost associated with weekly IVR reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued open access herring permits. In 2010, there were 2,258 vessels issued open access herring permits. The top five principle port states for these vessels in 2010, ranked by number of permits, were: Massachusetts (865), New Jersey (331), Maine (297), New York (234), and Rhode Island (138).

Because the IVR phone number is a toll-free number, the cost of reporting via IVR is free. The estimated annual IVR reporting burden (i.e., time) would be the submission of 52 reports per vessel. Each IVR report is estimated to take 7 minutes to complete. Open access vessels are currently required to submit VTRs monthly. Under Alternative 5, the additional annual cost of submitting VTRs weekly would be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60. Each VTR report is estimated to take 5 minutes to complete. The annual IVR and VTR reporting burden is estimated to be 104 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 2,258 vessels issued open access herring permits, only 172 of those vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of vessels issued open access herring permits are already submitting weekly VTRs.

The ex-vessel value for the herring fishery varies by permit category. During 2008-2010, Category D vessels accounted for less than 1% of the annual landings value. The increased cost of reporting associated with Alternative 5 is 7.217% (\$3,027) of the average ex-vessel value of the fishery 2008-2010 for Category D vessels. While the increased reporting costs associated with Alternative 5 may seem high for open access vessels, open access vessels typically operate in several fisheries and revenue from herring catch is likely only a portion of their total ex-vessel value.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A. Under Alternative 5, catch data would be updated more frequently and would likely better inform catch projections. If catch projections contained less uncertainty, sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants and herring dealers associated with Alternative 5.

The phone system that supports IVR reporting sometimes malfunctions and does not allow callers to report their catch. Because of issues with phone reception, most callers phone the IVR system from land and do not have the option of reporting catch via the IVR system while at sea. These issues with the IVR system may have an indirect negative impact on fishery participants.

Overall, Alternative 5 would have low positive impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) associated with Alternative 5 are higher than those under Alternative 4, but are the same as those under Alternative 6. However, the increased reporting cost under Alternative 5 is still relatively low compared to ex-vessel value (7.2%). The number of IVR reports submitted under Alternative 5 would be higher than the number submitted under Alternative 4 and likely lower than the number submitted under Alternative 6. Under Alternative 5, the potential for indirect benefits (e.g., fewer sub-ACL overages, less operational costs due to premature implementation of a possession limit, less likely that a percentage of sub-ACL goes harvested) is greater than under Alternative 4, but similar to Alternative 6.

#### **4.3.2.3 Alternative 6: Trip-by-Trip IVR and Weekly VTR Reporting**

This alternative would require owners/operators of vessels issued open access herring permits to submit catch data via IVR trip-by-trip and submit VTRs weekly. IVR reports would be due within 24 hours of an offload or prior to the start of the next fishing trip, whichever occurred first. If no herring was caught, no IVR report would be required. VTRs would be due by Tuesday midnight, eastern time, for the previous week (Sunday-Saturday).

These requirements would increase the reporting frequency from status quo, but the required content of the IVR report and VTR would be unchanged from status quo. Category D vessels can make trips that are a day or two in length, so the number of IVR reports could be highest under Alternative 6.

Under Alternative 6, the direct economic impact to human communities would be the increased cost associated with trip-by-trip IVR reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued open access herring permits.

Because the IVR phone number is a toll-free number, the cost of reporting via IVR is free. The estimated annual IVR reporting burden (i.e., time) is likely a minimum the submission of 52 reports per vessel. Each IVR report is estimated to take 7 minutes to complete. Open access vessels are currently required to submit VTRs monthly. Under Alternative 6 the additional annual cost of submitting VTRs weekly would



be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60. Each VTR report is estimated to take 5 minutes to complete. The annual IVR and VTR reporting burden is estimated to be at least 104 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 2,258 vessels issued open access herring permits, only 172 of those vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of open access herring permits are already submitting weekly VTRs.

The ex-vessel value for the herring fishery varies by permit category. During 2008-2010, Category D vessels accounted for less than 1% of the annual landings value. The increased cost of reporting associated with Alternative 6 is 7.217% (\$3,027) of the average ex-vessel value of the fishery 2008-2010 for Category D vessels. While the increased reporting costs associated with Alternative 6 may seem high for open access vessels, open access vessels typically operate in several fisheries and revenue from herring catch is likely only a portion of their total ex-vessel value.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A. Under Alternative 6, catch data would be updated more frequently and would likely better inform catch projections. If catch projections contained less uncertainty, ACL/sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants and herring dealers associated with Alternative 6.

The phone system that supports IVR reporting sometimes malfunctions and does not allow callers to report their catch. Because of issues with phone reception, most callers phone the IVR system from land and do not have the option of reporting catch via the IVR system while at sea. These issues with the IVR system may have an indirect negative impact on fishery participants.

Overall, Alternative 6 would have low positive impacts to human communities. The direct costs of catch reporting (i.e., cost of reports, reporting burden) associated with Alternative 6 are higher than those under Alternative 4, but the same as those under Alternative 5. The increased reporting cost under Alternative 6 is still relatively low compared to ex-vessel value (7.2%). The number of IVR reports submitted under Alternative 6 would be higher than the number submitted under Alternative 4 and likely higher than the number submitted under Alternative 5. Under Alternative 6, the potential for indirect benefits (e.g., fewer sub-ACL overages, less operational costs due to premature implementation of a possession limit, less likely that a percentage of sub-ACL goes harvested) is greater than under Alternative 4, but similar to Alternative 5.

#### 4.4 IMPACTS SUMMARY

**Table 10. Summary of Impacts on VECs by Alternative.**

Alternatives	Target Species	Non-Target and Bycatch Species	Physical Environment and EFH	Endangered and Protected Species	Human Communities
<b>Limited Access Alternatives</b>					
No Action: Alt 1	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Negative</b> - measures least likely to prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; negligible additional cost and reporting burden for vessel owners; IVR system can malfunction; IVR reporting less flexible than VMS reporting
<b>Proposed Action: Alt 2</b>	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Positive</b> - measures most likely to help prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; highest additional cost and reporting burden for vessel owners; VMS reporting more flexible than IVR reporting
Action: Alt 3	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Positive</b> - measures most likely to help prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; lowest additional cost and reporting burden for vessel owners; IVR system can malfunction; IVR reporting less flexible than VMS reporting
<b>Open Access Alternatives</b>					
No Action: Alt 4	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Negative</b> - measures least likely to prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; negligible additional cost and reporting burden for vessel owners; VTRs not consistent with Mults requirements
<b>Proposed Action: Alt 5</b>	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Positive</b> - measures most likely to prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; lowest additional cost and reporting burden for vessel owners; VTRs consistent with Mults requirements
Action: Alt 6	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	Negligible - measures are administrative	<b>Low Positive</b> - measures most likely to prevent sub-ACL overages, interruptions to fishing season, or % of sub-ACL left unharvested; potentially highest additional cost and reporting burden for vessel owners; VTRs consistent with Mults requirements

## 5.0 CUMULATIVE EFFECTS ANALYSIS

The term “cumulative effects” is defined in the Council of Environmental Quality’s (CEQ) regulations in 40 CFR Part 1508.7 as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

Cumulative effects are linked to incremental actions or policy changes that individually may have small outcomes, but that, in the aggregate and combined with other factors, can result in greater environmental effects on the affected environment. At the same time, the CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action on the universe; analyses focus on those effects that are truly meaningful. The CEA baseline in this case consists of the combined effects of the proposed action, and the past, present, and reasonably foreseeable future fishing and non-fishing actions which are described below.

The following analysis will identify and characterize the impact on the environment from the Proposed Action when analyzed in the context of other past, present, and reasonably foreseeable future actions. The analysis is generally qualitative in nature because of the limitations of determining effects over the large geographic areas under consideration. This analysis is also based on the comprehensive cumulative effects analysis presented in the Amendment 1 FEIS document and updates information as appropriate. The Amendment 1 cumulative effects analysis (Section 8.7 of Amendment 1, completed May 2006) should be referenced for additional information. Additional information about cumulative effects related to the herring fishery can be found in the 2010-2012 herring specifications package.

Consistent with the guidelines for CEA, cumulative effects can be more easily identified by analyzing the impacts of the Proposed Action on valued ecosystem components (VECs). The affected environment is described in this document based on VECs that were identified for consideration relative to the proposed specifications. The VECs described in this document and considered in this cumulative effects analysis include: Target species; non-target and bycatch species; physical environment and EFH; endangered and other protected species; and human communities.

VECs represent the resources, areas, and human communities that may be affected by a Proposed Action or alternatives and by other actions that have occurred or will occur outside the Proposed Action. VECs are generally the “place” where the impacts of management actions are exhibited and are described in Section 3.0 of this document. An analysis of impacts is performed on each VEC to assess whether the direct/indirect effects of an alternative adds to or subtracts from the effects that are already affecting the VEC from past, present and future actions outside the Proposed Action (i.e., cumulative effects).

The geographic area that encompasses the physical, biological, and human environmental impacts to be considered in the cumulative effects analysis is described in detail in Section 7.0 of the Amendment 1 document. The physical environment, including habitat and EFH, is bounded by the range of the herring fishery, from the GOM through the Mid-Atlantic Bight, and includes adjacent upland areas (from which non-fishing impacts may originate). The geographic range for impacts to fish species is the range of each fish species in the western Atlantic Ocean, as described in Section 3.0. For Protected Species, the geographic range is the total range of herring. The geographic range for the human environment is defined to be those fishing communities bordering the range of the herring fishery.

Overall, while the effects of the historical herring fishery are important and are considered in the analysis, the temporal scope of past and present actions for herring, non-target and bycatch species, the physical environment and EFH, endangered and other protected species, and human communities is focused principally on actions that have occurred since 1996, when the MSA was enacted and implemented new fisheries management and EFH requirements. The temporal scope for marine mammals begins in the mid-1990s, when NMFS was required to generate stock assessments for marine mammals that inhabit waters of the U.S. EEZ that create the baseline against which current stock assessments are evaluated. For turtle species, the temporal scope begins in the 1970s, when populations were noticed to be in decline. The temporal scope for herring is focused more on the time since the Council's original Herring FMP was implemented at the beginning of the 2001 fishing year. This FMP serves as the primary management action for the herring fishery and has helped to shape the current condition of the resource.

Consistent with the cumulative effects analysis in Amendment 1, the temporal scope of future actions for all VECs, which includes the proposed fishery specifications for 2010-2012, extends five years into the future. This period was chosen because of the dynamic nature of resource management and lack of specific information on projects that may occur in the future, which make it difficult to predict impacts beyond this time frame with any certainty. This is also the rebuilding time frame for the herring resource, as defined in the Herring FMP, should the resource become overfished and subject to a rebuilding program in the future.

## **5.1 TARGET SPECIES**

### **Past and Present Actions**

Herring management measures were implemented in two related but separate FMPs in 1999 – one by the Federal government and one by the states. The status of the herring resource is described in 3.1.1 of this document, and the herring fishery is summarized in Section 3.1.5 of this document. The offshore stock has recovered from its collapse in the early 1970s and, overall, the herring resource is not overfished, and overfishing is not occurring. There is more concern for the inshore stock since it receives more fishing pressure, and recent survey trends in the inshore Gulf of Maine are declining. Additional past and present actions that affect the herring resource are discussed in the other VEC sections. These actions have generally had a positive impact on the herring resource.

The ASMFC adopted Amendment 2 in March of 2006 to herring management in state waters which revised management area boundaries, biological reference points, the specification process, research set-asides, internal waters processing operations, and measures to address fixed gear fisheries and required fixed gear fishermen to report herring catches through the IVR program. Further discussion can be found in the 2007-2009 Atlantic Herring specifications package.

In response to a 2009 stock assessment, that noted concern with the assessment's retrospective pattern that overestimated biomass, and in an effort to minimize fishing mortality on the inshore stock component, the 2010-2012 Herring Specifications were a substantial reduction from specifications in 2009. The 2010-2012 optimum yield was reduced to 91,200 mt from 145,000 mt. The herring management area allocations were also reduced from those in 2009. For 2010-2012, the Area 1A allocation is 26,546 (from 45,000 mt), the Area 1B allocation is 4,362 mt (from 10,000 mt), the Area 2

allocation is 22,146 mt (from 30,000 mt), and the Area 3 allocation is 38,146 mt (from 60,000 mt). This action is anticipated to have positive impacts on the herring resource.

Amendment 4 brings the Herring FMP into compliance with MSA requirements by: Revising definitions and the specifications-setting process, consistent with ACL requirements; and establishing fishery closure thresholds, a haddock incidental catch cap, and overage paybacks as AMs. In addition, measures approved in Amendment 4: Designate herring as a “stock in the fishery;” establish an interim acceptable biological catch (ABC) control rule; eliminate total foreign processing, including joint venture processing and internal waters processing, and reserve from the specifications process; and eliminate the Council’s consideration of total allowable level of foreign fishing. Because herring is not subject to overfishing, the Herring FMP is required to be in compliance with ACL and AM requirements by 2011. While this action was largely procedural, it is anticipated to have long-term positive impacts on the herring resource.

The ASMFC recently developed an Addendum which proposes modifications to Amendment 1 and Amendment 2 to the Interstate Fisheries Management Plan for Atlantic Sea Herring that would change the specification setting process and associated definitions. Based on the difficulty of having two sets of acronyms, one for the Council plan and one for the ASMFC plan, for one cooperatively managed species the addendum was developed to establish an identical set of definitions and acronyms as those that the Council is required to use under MSA. The addendum also proposes to establish a new specification setting process that is more in line with the ASMFC Sea Herring Section’s usual process for setting specifications while taking into account the new process being implemented in Amendment 4. While this action was largely procedural, it is anticipated to have long-term positive impacts on the herring resource.

### **Reasonably Foreseeable Future Actions**

A reasonably foreseeable future action that will likely affect the herring resource is Amendment 5 to the Herring FMP. Measures that will be developed under this amendment include a catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, and measures to address interactions with the Atlantic mackerel fishery. The Council anticipates adopting the Amendment 5 draft environmental impact statement (DEIS) for public hearings at its September 2011 meeting. While some elements of the amendment are complete and ready to move forward at this time, the larger, more significant components of the catch monitoring program and other measures (river herring measures, groundfish closed area access) still require additional work and/or discussion. As such, the impacts of the proposed measures cannot be predicted at this time.

### **Summary of Impacts**

Because the proposed action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the proposed action is administrative and would be expected to have negligible impacts on the herring resource.

Overall, the cumulative effect of past, present, and reasonably foreseeable future actions have resulted in positive impacts on target species.

## **5.2 NON-TARGET AND BYCATCH SPECIES**

### **Past and Present Actions**

Updated information about non-target and bycatch species affected by the herring fishery is provided in Section 3.1.2 of this document. In recent years, herring, spiny dogfish, Atlantic mackerel, and haddock have represented the majority of observed bycatch by directed herring vessels. Bycatch of haddock in the herring fishery was addressed through Framework 43 to the Northeast Multispecies FMP, and a description of the framework can be found in the 2007-2009 Atlantic Herring Specifications in which Amendment 2 to the ASMFC Interstate Herring FMP was also discussed.

### **Reasonably Foreseeable Future Actions**

One of the reasonably foreseeable future actions that will likely affect non-target and bycatch species in the herring fishery is Amendment 5. Measures that will be developed under this amendment include a catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, and measures to address interactions with the Atlantic mackerel fishery. The Council anticipates adopting the Amendment 5 DEIS for public hearings at its September 2011 meeting.

Another reasonable foreseeable future action that will affect non-target and bycatch species in the herring fishery is Framework 46 to the Northeast Multispecies FMP (Framework 46). Measures considered in this amendment revise the amount of haddock that can be harvested by the herring fishery and catch reporting requirements. Measures associated with Framework 46 are anticipated to be implemented in the fall of 2011.

### **Summary of Impacts**

Because the proposed action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the proposed action is administrative and would be expected to have negligible impacts on non-target and bycatch species. Species caught in the herring fishery, such as spiny dogfish and Atlantic mackerel, are managed under other FMPs.

Overall, the cumulative impacts of the proposed action, when combined with past, present, and reasonably foreseeable future actions, are not expected to be significant.

## **5.3 PHYSICAL ENVIRONMENT AND EFH**

### **Past and Present Actions**

The Herring EFH designation was developed as part of an Omnibus EFH Amendment prepared by the Council for its managed species. The Omnibus EFH Amendment was approved for herring by the Secretary of Commerce on October 27, 1999.

Herring are pelagic and deposit their eggs on a variety of bottom substrates. Because the gears used in the herring fishery only occasionally contact the bottom and, with the possible exception of attached macroalgae, do not reduce the functionality of those substrates as EFH for the eggs. Because the noises produced by herring fishing operations only temporarily disperse schools of juvenile and adult herring,

EFH impact assessments have concluded that the herring fishery does not have more than a minimal or temporary adverse effect on herring EFH, or on the EFH for any other federally-managed species. In addition, these assessments have concluded that gears used in other Council-managed fisheries do not have more than a minimal adverse impact on Atlantic herring EFH.

Various measures have been implemented in the Northeast Region to protect the EFH of Council-managed species. In particular, all bottom-tending mobile gear is prohibited from the level 3 Habitat Closed Areas (HCAs) established in 2004 under Amendment 13 to the Northeast Multispecies FMP and Amendment 10 to the Atlantic Sea Scallop FMP. In large part, these HCAs overlap with areas established in 1994 and 1998 to protect overfished stocks of cod, haddock and other groundfish species. As mobile bottom-tending gear is largely prohibited from the groundfish closures, they have incidental EFH protection benefits. Other measures to protect EFH include spatially-specific roller gear restrictions in the Multispecies and Monkfish fisheries.

Non-fishing activities that occur in the marine nearshore and offshore environments and their watersheds can cause the loss or degradation of habitat and/or affect the species that reside in those areas. Herring reside in both inshore and offshore areas at different stages of their lives and during different seasons throughout the year. The following discussions of impacts are based on past assessments of activities and assume these activities will likely continue into the future as projects are proposed.

Construction and development activities include, but are not limited to, point source pollution, agricultural and urban runoff, land (roads, shoreline development, wetland loss) and water-based (beach nourishment, piers, jetties) coastal development, marine transportation (port maintenance, shipping, marinas), marine mining, dredging and disposal of dredged material, and energy-related facilities. These activities can introduce pollutants (through point and non-point sources), cause changes in water quality (temperature, salinity, dissolved oxygen, suspended solids), modify the physical characteristics of a habitat or remove/replace the habitat altogether. Many of these impacts have occurred in the past and present and their project effects would likely continue in the reasonably foreseeable future. It is likely that these projects would have negative impacts caused from disturbance, construction, and operational activities in the area immediately around the affected project area. However, given the wide distribution of the affected species, minor overall negative effects to offshore habitat, protected resources, and target and non-target species are anticipated since the affected areas are localized to the project sites, which involve a small percentage of the fish populations and their habitat. Thus, these activities for most biological VECs would likely have an overall low negative effect due to limited exposure to the population or habitat as a whole. Any impacts to inshore water quality from these permitted projects, including impacts to planktonic, juvenile, and adult life stages, are uncertain but likely minor due to the transient and limited exposure. It should be noted that wherever these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and, as such, may indirectly constrain the sustainability of the target species, other non-target species, and protected resources.

These projects are permitted by other Federal and state agencies that conduct examinations of potential biological, socioeconomic, and habitat impacts. In addition to guidelines mandated by the MSA and the Fish and Wildlife Coordination Act, NMFS, the Councils, and the other Federal and state regulatory agencies review these projects through a process required by the Clean Water Act; Rivers and Harbors Act; and the Marine Protection, Research, and Sanctuaries Act for certain activities that are regulated by

federal, state, and local authorities. These reviews limit and often mitigate the impact of these projects. The jurisdiction of these authorities is in the “waters of the U.S.” and ranges from inland riverine to marine habitats offshore in the EEZ.

Other regional projects that are restorative or beneficial in nature include estuarine wetland restoration; dam removal; offshore artificial reef creation, which provides structure and habitat for many aquatic species; and eelgrass (*Zostera marina*) restoration, which can provide habitat. Due to past and present adverse impacts from human activities on these types of habitat, restorative projects likely have positive effects at the local level.

### **Reasonably Foreseeable Future Actions**

At the present time, it is not known how Amendment 5 will affect EFH, however there are likely to be some effects as a result of the measures. The catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, and measures to address interactions with the Atlantic mackerel fishery all stand to alter either the amount of fishing effort or its spatial distribution within the region, and could possibly shift mid-water trawling activity into areas where or times of year when the gear is more likely to contact the bottom and disturb benthic habitats. However the larger, more significant components of the catch monitoring program and other measures still require additional work and/or discussion, and so the effects of the measures cannot be predicted at this time and will be evaluated thoroughly in the EIS for Amendment 5.

Reasonably foreseeable future actions that will likely affect habitat include the Omnibus EFH Amendment, currently under development. This action reviews and updates EFH designations, identifies Habitat Areas of Particular Concerns (HAPCs), reviews prey information for all managed species, reviews non-fishery impacts to EFH, and reviews the current science on fishing impacts to habitat. It will also include coordinated and integrated measures intended to minimize the adverse impact of NEFMC-managed fishing on EFH. The net effect of new EFH and HAPC designations and more targeted habitat management measures should be positive for EFH.

### **Summary of Impacts**

Because the proposed action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the proposed action is administrative and would be expected to have negligible impacts on the physical environment or EFH.

Overall, because fishing with midwater trawls and purse seines, the gears used in the directed herring fishery, does not impact EFH in a manner that is more than minimal or more than temporary in nature, the cumulative effects to EFH are negligible, regardless of how much fishing takes place in any particular area.

The impacts resulting from non-fishing activities like projects permitted under the Clean Water Act and Ocean Dumping Act, pollution, loss of coastal wetlands, marine transportation, and marine mining are unknown and/or unquantifiable. In general, the greatest potential for adverse impacts to herring and herring EFH occurs in close proximity to the coast where human induced disturbances, like pollution and dredging activities, are occurring. Because inshore and coastal areas support essential egg, larval, and juvenile herring habitats, it is likely that the potential threats to inshore and coastal habitats are of greater



importance to the species than threats to offshore habitats. It is also likely that these inshore activities will continue to grow in importance in the future. Activities of concern include chemical pollutants, sewage, changes in water temperature, salinity and dissolved oxygen, suspended sediment and activities that involve dredging and the disposal of dredged material. These impacts are discussed thoroughly in Amendment 1.

Though largely unquantifiable, it is likely that the non-fishing activities noted above would have negative impacts on habitat quality from disturbance and construction activities in the area immediately around the affected area. Given the wide distribution of the affected species, minor overall negative effects to offshore habitat are anticipated since the affected areas are localized to the project sites, which involve a small percentage of the fish populations and their habitat. Any impacts to inshore water quality from permitted projects and other non-fishing activities, including impacts to planktonic, juvenile, and adult life stages, are unknown but likely to be negative in the immediate vicinity of the activity.

## **5.4 ENDANGERED AND PROTECTED SPECIES**

### **Past and Present Actions**

A general description of protected species that may be affected by the Proposed Action is provided in Section 3.1.4 of this document. Large whales may be adversely affected by habitat degradation, habitat exclusion, acoustic trauma, harassment, or reduction in prey resources due to trophic effects resulting from a variety of activities including the operation of commercial fisheries. Ship strikes and fishing gear entanglement continue to be the most likely sources of human-related injury or mortality for right, humpback, fin and minke whales. Sei, blue and sperm whales are also vulnerable, but fewer ship strikes or entanglements have been recorded. Mobile bottom trawls, as well as midwater trawl gear, appear to be less of a concern for the large whale species. Other marine mammals, however, such as harbor porpoise, dolphins and to a greater degree seals, are vulnerable to entanglement in net gear, including midwater trawl gear and purse seines.

NMFS has implemented specific regulatory actions to reduce injuries and mortalities from gear interactions. The ALWTRP, implemented in 1999 with subsequent rule modifications, restrictions, and extensions, includes time and area closures for trap/pot fisheries (e.g., lobster and black sea bass) and gillnet fisheries (e.g., anchored gillnet and shark gillnet fisheries); gear requirements, including a general prohibition on having line floating at the surface in these fisheries; a prohibition on storing inactive gear at sea; and restrictions on setting shark gillnets off the coasts of Georgia and Florida and drift gillnets in the Mid-Atlantic. This plan also contains non-regulatory aspects, including gear research, public outreach, scientific research, a network to inform mariners when right whales are in an area, and increasing efforts to disentangle whales caught in fishing gear. The intent of the ALWTRP is to positively affect large whales by reducing injuries and deaths of large whales (North Atlantic right, humpback, and fin) in waters off the United States East Coast due to incidental entanglement in fishing gear.

Turtles in general have documented entanglements in shrimp trawls, pound nets, bottom trawls and sink gillnets. Shrimp trawls are required to use turtle excluder devices. The diversity of the sea turtle life history also leaves them susceptible to many other human impacts, including impacts on land, in the benthic environment, and in the pelagic environment. Anthropogenic factors that impact the success of

nesting and hatching include: Beach erosion, beach armoring and nourishment; artificial lighting; beach cleaning; increased human presence; recreational beach equipment; beach driving; coastal construction and fishing piers; exotic dune and beach vegetation; and poaching. An increased human presence at some nesting beaches or close to nesting beaches has led to secondary threats such as the introduction of exotic fire ants, and an increased presence of native species (e.g., raccoons, armadillos, and opossums) which raid and feed on turtle eggs. Entanglement in debris or ingestion of marine debris are also seen as possible threats.

### **Reasonably Foreseeable Future Actions**

One of the reasonably foreseeable future actions that will likely affect the herring resource is Amendment 5. Measures that will be developed under this amendment include a catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, and measures to address interactions with the Atlantic mackerel fishery. The Council anticipates adopting the Amendment 5 DEIS for public hearings at its September 2011 meeting.

The likely impacts of the Omnibus EFH Amendment on protected resources cannot be determined at this time. The Harbor Porpoise Take Reduction Plan for the GOM and Mid Atlantic Coasts was originally implemented in 1998, and NMFS published a proposed rule in July 2009 indicating additional management restrictions for gillnetters. Future measures of this plan may be implemented if take reduction goals are not met, which could further reduce fishing effort and may have a positive effect on the population of this species.

The sea turtle Strategy is a gear-based approach to addressing sea turtle bycatch. Under the Strategy, NMFS has identified trawl gear as a priority for reducing sea turtle bycatch and is considering proposing changes to the turtle excluder device (TED) requirements in the trawl fisheries. TED requirements are designed to have a positive effect on protected resources, specifically turtles by allowing for most turtles caught in trawl nets to escape. NMFS is working to develop and implement bycatch reduction measures in all trawl fisheries in the Atlantic and Gulf of Mexico when and where sea turtle takes have occurred or where gear, time, location, fishing method, and other similarities exist between a particular trawl fishery and sea turtle takes have occurred by trawls. On February 15, 2007, NMFS issued an advance notice of proposed rulemaking to announce that it is considering amendments to the regulatory requirements for TEDs (72 FR 7382). On May 8, 2009, NMFS issued a notice of intent to prepare an EIS (74 FR 88 May 8, 2009), and held public scoping meetings throughout the East coast.

### **Summary of Impacts**

Because the proposed action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the proposed action is administrative and would be expected to have negligible impacts on endangered and other protected species. Despite ongoing negative effects on endangered and protected species, as described above, the proposed action will not add or significantly contribute to negative cumulative effects.

Despite ongoing negative effects on endangered and protected species, as described above, the proposed action, due to its administrative nature, will not add or significantly contribute to negative cumulative impacts.

## 5.5 HUMAN COMMUNITIES

### Past and Present Actions

Updated information about the human environment is provided in Section 3.1.5 of this document. Landings have declined dramatically since the 1960s, but have been variable since then. There was a shift to more mobile gear (purse seines and midwater trawls) from fixed gear in the early 1980s. With that change, the domestic fishery transformed from what was primarily a canning industry for human consumption to a fishery that supplies lobster bait and an overseas market for frozen herring.

The ASMFC adopted Amendment 2 in March of 2006 to herring management in state waters which revised management area boundaries, biological reference points, the specification process, research set-asides, internal waters processing operations, and measures to address fixed gear fisheries and required fixed gear fishermen to report herring catches through the IVR program. Further discussion can be found in the 2007-2009 Atlantic Herring Specifications.

In response to a 2009 stock assessment, that noted concern with the assessment's retrospective pattern overestimates biomass, and in an effort to control mortality on the inshore stock component, the 2010-2012 Herring Specifications were a substantial reduction from specifications in 2009. The 2010-2012 optimum yield was reduced to 91,200 mt from 145,000 mt. The herring management area allocations were also reduced from those in 2009. For 2010-2012, the Area 1A allocation is 26,546 (from 45,000 mt), the Area 1B allocation is 4,362 mt (from 10,000 mt), the Area 2 allocation is 22,146 mt (from 30,000 mt), and the Area 3 allocation is 38,146 mt (from 60,000 mt). This action is anticipated to have short-term negative impacts on human communities, due to a loss of revenue, but long-term positive benefits on human communities, associated with a sustainable herring fishery.

Amendment 4 brings the Herring FMP into compliance with MSA requirements by: Revising definitions and the specifications-setting process, consistent with ACL requirements; and establishing fishery closure thresholds, a haddock incidental catch cap, and overage paybacks as AMs. In addition, measures approved in Amendment 4: Designate herring as a "stock in the fishery;" establish an interim acceptable biological catch (ABC) control rule; eliminate total foreign processing, including joint venture processing and internal waters processing, and reserve from the specifications process; and eliminate the Council's consideration of total allowable level of foreign fishing. Because herring is not subject to overfishing, the Herring FMP is required to be in compliance with ACL and AM requirements by 2011. While this action was largely procedural, it is anticipated to have long-term positive impacts on human communities.

The ASMFC recently developed an Addendum which proposes modifications to Amendment 1 and Amendment 2 to the Interstate Fisheries Management Plan for Atlantic Sea Herring that would change the specification setting process and associated definitions. Based on the difficulty of having two sets of acronyms, one for the Council plan and one for the ASMFC plan, for one cooperatively managed species the addendum was developed to establish an identical set of definitions and acronyms as those that the Council is required to use under MSA. The addendum also proposes to establish a new specification setting process that is more in line with the ASMFC Sea Herring Section's usual process for setting specifications while taking into account the new process being implemented in Amendment 4. While this action was largely procedural, it is anticipated to have long-term positive impacts on human communities.

### **Reasonably Foreseeable Future Actions**

One of the reasonably foreseeable future actions that will likely affect the Atlantic herring fishery is Amendment 5. Measures that will be developed under this amendment include a catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, and measures to address interactions with the Atlantic mackerel fishery. Although the measures and associated analysis have not been fully developed, this action would potentially reduce fishing effort and consequently reduce revenue; therefore negative impacts may occur for the herring fishery. However, this analysis is not complete and the impacts will be discussed in future documents relating to Amendment 5.

The future actions of the Harbor Porpoise Take Reduction Plan could have negative impacts if it reduces effort, as the reduction may also mean a loss in revenue. Cumulative effects of the Omnibus EFH Amendment cannot easily be determined, but if additional effort restrictions were implemented, or if new areas are closed for habitat protection that further restrict access to fishing grounds this action too would likely have a negative impact.

The sea turtle Strategy is a gear-based approach to addressing sea turtle bycatch. NMFS is currently considering proposing changes to the regulatory requirements for trawl fisheries to protect sea turtles. As described in an NOI to prepare an EIS (74 FR 88 May 8, 2009), NMFS is considering expanding the use of TEDs to other trawl fisheries and modifying the geographic scope of the TED requirements. TED requirements would likely have a negative economic effect because of the costs associated with adding and/or modifying TEDs to comply with the new regulation and the costs associated with a decrease in landed species if vessels would not offset a loss in catch.

### **Summary of Impacts for Human Communities**

As described in Section 4.3, the proposed action would directly affect the cost of catch reporting and reporting burden for owners/operators of vessels issued herring permits, and perhaps indirectly affect the likelihood of sub-ACL overages, interruptions to fishing season, and/or a percentage of a sub-ACL left unharvested, but impacts on human communities would not be expected to be significant.

Overall, the cumulative impacts of the proposed action, when combined with past, present, and reasonably foreseeable actions, are negative but are not expected to be significant for human communities.

## **5.6 NON-FISHING ACTIVITIES**

### **Past, Present, and Reasonably Foreseeable Future Actions**

Non-fishing activities that occur in the marine nearshore and offshore environments and their watersheds can cause the loss or degradation of habitat and/or affect the species that reside in those areas. Herring reside in both inshore and offshore areas at different stages of their lives and during different seasons throughout the year. The following discussions of impacts are based on past assessments of activities and assume these activities will likely continue into the future as projects are proposed.

Construction and development activities include, but are not limited to, point source pollution, agricultural and urban runoff, land (roads, shoreline development, wetland loss) and water-based (beach nourishment, piers, jetties) coastal development, marine transportation (port maintenance, shipping, marinas), marine mining, dredging and disposal of dredged material, and energy-related facilities. These activities can introduce pollutants (through point and non-point sources), cause changes in water quality (temperature, salinity, dissolved oxygen, suspended solids), modify the physical characteristics of a habitat or remove/replace the habitat altogether. Many of these impacts have occurred in the past and present and their project effects would likely continue in the reasonably foreseeable future. It is likely that these projects would have negative impacts caused from disturbance, construction, and operational activities in the area immediately around the affected project area. However, given the wide distribution of the affected species, minor overall negative effects to offshore habitat, protected resources, and target and non-target species are anticipated since the affected areas are localized to the project sites, which involve a small percentage of the fish populations and their habitat. Thus, these activities for most biological VECs would likely have an overall low negative effect due to limited exposure to the population or habitat as a whole. Any impacts to inshore water quality from these permitted projects, including impacts to planktonic, juvenile, and adult life stages, are uncertain but likely minor due to the transient and limited exposure. It should be noted that wherever these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and, as such, may indirectly constrain the sustainability of the target species, other non-target species, and protected resources.

These projects are permitted by other Federal and state agencies that conduct examinations of potential biological, socioeconomic, and habitat impacts. In addition to guidelines mandated by the MSA and the Fish and Wildlife Coordination Act, NMFS, the Councils, and the other Federal and state regulatory agencies review these projects through a process required by the Clean Water Act; Rivers and Harbors Act; and the Marine Protection, Research, and Sanctuaries Act for certain activities that are regulated by federal, state, and local authorities. These reviews limit and often mitigate the impact of these projects. The jurisdiction of these authorities is in the “waters of the U.S.” and ranges from inland riverine to marine habitats offshore in the EEZ.

Other regional projects that are restorative or beneficial in nature include estuarine wetland restoration; dam removal; offshore artificial reef creation, which provides structure and habitat for many aquatic species; and eelgrass (*Zostera marina*) restoration, which can provide habitat. Due to past and present adverse impacts from human activities on these types of habitat, restorative projects likely have positive effects at the local level.

The NMFS final Rule on Ship Strike Reduction Measures (73 FR 60173, October 10, 2008) is a non-fishing action in the United States-controlled North-Atlantic that is likely to affect endangered species and protected resources. The goal of this rule is to significantly reduce the threat of ship strikes on North-Atlantic right whales and other whale species in the region. Ship strikes are considered the main threat to North-Atlantic right whales; therefore, NMFS anticipates this regulation will result in population improvements to this critically endangered species.

Cape Wind Associates (CWA) is permitted to construct a wind farm on Horseshoe Shoal, located between Cape Cod and Nantucket Island in Nantucket Sound, Massachusetts. The CWA project would have 130 wind turbines located as close as 4.1 miles off the shore of Cape Cod in an area of approximately 24

square miles with the turbines being placed at a minimum of 1/3 of a mile apart. The turbines would be interconnected by cables, which would relay the energy to the shore-based power grid. If constructed, the turbines would preempt other bottom uses in an area similar to oil and natural gas leases. The potential impacts associated with the CWA offshore wind energy project include the construction, operation, and removal of turbine platforms and transmission cables; thermal and vibration impacts; and changes to species assemblages within the area from the introduction of vertical structures.

Other offshore projects that can affect VECs include the construction of offshore liquefied natural gas (LNG) facilities such as the project “Neptune.” The first phase of this project construction included the installation of a 13-mile subsea pipeline. The second phase connected the new pipeline to an existing pipeline network called HubLine east of Marblehead, and installed the two off-loading buoys 10 miles off the coast of Gloucester, Massachusetts. Currently, the LNG facility consists of an unloading buoy system where specially designed vessels moor and offload their natural gas into a pipeline, which delivers the product to customers in Massachusetts and throughout New England. This project is expected to have small, localized impacts where the pipelines and buoy anchors contact the bottom.

### **Summary of Impacts**

In summary, the cumulative effects of non-fishing activities pose a risk to the herring resource. As discussed in detail in the Final EIS for Herring EFH (NMFS, January 7, 2005), impacts resulting from non-fishing activities like projects permitted under the Clean Water Act and Ocean Dumping Act, pollution, loss of coastal wetlands, marine transportation, and marine mining are unknown and/or unquantifiable. In general, the greatest potential for adverse impacts to herring and herring EFH occurs in close proximity to the coast where human induced disturbances, like pollution and dredging activities, are occurring. Because inshore and coastal areas support essential egg, larval, and juvenile herring habitats, it is likely that the potential threats to inshore and coastal habitats are of greater importance to the species than threats to offshore habitats. It is also likely that these inshore activities will continue to grow in importance in the future. Activities of concern include chemical pollutants, sewage, changes in water temperature, salinity and dissolved oxygen, suspended sediment and activities that involve dredging and the disposal of dredged material. These impacts are discussed thoroughly in Amendment 1.

Though largely unquantifiable, it is likely that the non-fishing activities noted above would have negative impacts on habitat quality from disturbance and construction activities in the area immediately around the affected area. Given the wide distribution of the affected species, minor overall negative effects to offshore habitat are anticipated since the affected areas are localized to the project sites, which involve a small percentage of the fish populations and their habitat. Any impacts to inshore water quality from permitted projects and other non-fishing activities, including impacts to planktonic, juvenile, and adult life stages, are unknown but likely to be negative in the immediate vicinity of the activity.

## **6.0 OTHER APPLICABLE LAWS**

### **6.1 MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT (MSA)**

Pursuant to section 304 (b)(1)(A) of the MSA, the NMFS Assistant Administrator has determined preliminarily that this action is consistent with the Atlantic Herring FMP, other provisions of the MSA, and other applicable law, subject to further consideration after public comment.

## **6.2 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

NEPA provides a mechanism for identifying and evaluating the full spectrum of environmental issues associated with Federal actions, and for considering a reasonable range of alternatives to avoid or minimize adverse environmental impacts. This document is designed to meet the requirements of both the MSA and NEPA. The Council on Environmental Quality (CEQ) has issued regulations specifying the requirements for NEPA documents (40 CFR 1500-1508). All of those requirements are addressed in this document.

An environmental assessment (EA) has been prepared that describes the impact on the human environment that would result from implementation of this action. Based on the EA, the regulatory impact review, the initial regulatory flexibility analysis (IRFA) under the Regulatory Flexibility Act, and review of the NEPA criteria for significant events (40 CFR 1508.27) and NMFS criteria for significance evaluated above (NOA 216-6 Section 6.02), no significant effect on the quality of the human environment is anticipated from this action.

### **6.2.1 FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a Proposed Action. On July 22, 2005, NOAA published a Policy Directive with guidelines for the preparation of a Finding of No Significant Impact (FONSI). In addition, CEQ regulations at 40 CFR 1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant in making a finding of significant impact and has been considered individually, as well as in combination with the others. This significance of this action is analyzed based on the NAO 216-6 criteria, the recent Policy Directive from NOAA, and CEQ’s context and intensity criteria. These include:

#### **1. Can the Proposed Action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?**

Response: No. The Proposed Action is not reasonably expected to jeopardize the sustainability of the herring resource as discussed in Section 4.1. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would be expected to have negligible impacts on target species.

#### **2. Can the Proposed Action reasonably be expected to jeopardize the sustainability of any non-target species?**

Response: No. The Proposed Action is not reasonably expected to jeopardize the sustainability of any non-target species as discussed in Section 4.2. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would be expected to have negligible impacts on non-target species.

**3. Can the Proposed Action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in FMPs?**

Response: No. The Proposed Action is not reasonably expected to cause substantial damage to the ocean and coastal habitats and/or EFH. The conclusion in the EFH Assessment (Section 4.2) is that the actions in this amendment will have minimal impact on EFH. Measures to protect EFH were implemented in Amendment 1, and are not expected to change with this administrative action.

**4. Can the Proposed Action be reasonably expected to have a substantial adverse impact on public health or safety?**

Response: No. The Proposed Action is not reasonably expected to have substantial adverse impacts on public health or safety. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the Proposed Action is administrative in nature and would not affect public health or safety.

**5. Can the Proposed Action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?**

Response: No. The Proposed Action is not reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. Sections 3.1.4.1 and 3.1.4.2 describe the endangered or threatened species that are found in the affected area. Section 4.2 summarizes the impacts of the Proposed Action on endangered and threatened species. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would be expected to have negligible impacts on any endangered or threatened species, marine mammals, or critical habitat of these species.

**6. Can the Proposed Action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?**

Response: No. The Proposed Action is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area. Section 3.1.1 describes the role of herring in the Northeast Region ecosystem, and acknowledges their role as an important forage species. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would not be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area.

**7. Are significant social or economic impacts interrelated with natural or physical environmental effects?**

Response: No. There are no significant social and economic impacts of the Proposed Action that are interrelated with natural or physical environmental effects. Discussion of the impacts of the Proposed Action is presented in Section 4.0 of this document. Because the Proposed Action would affect catch



reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would be expected to have negligible impacts on natural or physical environments.

**8. Are the effects on the quality of the human environment likely to be highly controversial?**

Response: No. The effects on the quality of the human environment are not expected to be highly controversial. Section 4.3 describes both the economic and social impacts of the Proposed Action, and Section 5.0 describes the potential cumulative effects of this action on the human environment. This action would directly affect reporting burden for owners/operators of vessels issued herring permits. The Proposed Action is not expected to be highly controversial because the same reporting requirements are considered in Amendment 5, and were developed in that amendment with the support of the Council, herring fishery participants, environmental advocates, and fishing industry members engaged in non-herring fisheries.

**9. Can the Proposed Action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?**

Response: No. Unique areas, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas are not located within the affected area. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would be expected to have negligible impacts on unique areas, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas. Therefore, there are no impacts on these components of the environment from the Proposed Action.

**10. Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?**

Response: No. The effects on the human environment are not likely to be highly uncertain or involve unique or unknown risks. This action would directly affect reporting burden for owners/operators of vessels issued herring permits, and perhaps indirectly affect the duration of the fishing season and availability of herring, but impacts on human communities are not expected to be significant. As the actions considered within the action are not expected to effect the human environment significantly there are no highly uncertain effects or unique or unknown risks to be taken.

**11. Is the Proposed Action related to other actions with individually insignificant, but cumulatively significant impacts?**

Response: No. The Proposed Action would not have any significant impacts when considered individually or in conjunction with any of the other actions presented in Section 5.0 (fishing and non-fishing related). Section 5.0 describes the expected cumulative effects that may occur as a result of this action. The target species, non-target and bycatch species, physical environment and EFH, endangered and protected and other endangered species, and human communities have been impacted by past and present actions in the area and are likely to continue to be impacted by these actions in the future.

**12. Is the Proposed Action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?**

Response: No. The Proposed Action is administrative and would not affect the amount of herring available for harvest, fishing effort, or fishing behavior. Therefore, the Proposed Action would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources.

**13. Can the Proposed Action reasonably be expected to result in the introduction or spread of a nonindigenous species?**

Response: No. The Proposed Action is not reasonably expected to result in the introduction or spread of a nonindigenous species. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative and would not be expected to result in the introduction or spread of nonindigenous species.

**14. Is the Proposed Action likely to establish a precedent for future actions with significant effects or represents a decision in principle about future consideration?**

Response: No. The Proposed Action is not likely to establish a precedent for future actions with significant effects, and it does not represent a decision in principle about future consideration. Because the Proposed Action would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort, the measures proposed in this amendment are administrative. This action would directly affect reporting burden for owners/operators of vessels issued herring permits, but impacts on human communities are not expected to be significant or precedent setting.

**15. Can the Proposed Action reasonably be expected to threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment?**

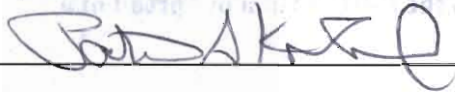
Response: No. The Proposed Action is not reasonably expected to threaten a violation of Federal, state, or local law or requirements imposed for the protection of the environment. Section 6.0 describes how this action is consistent with applicable law. The Proposed Action is administrative and does not propose any changes that would provide incentive for environmental laws to be broken.

**16. Can the Proposed Action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?**

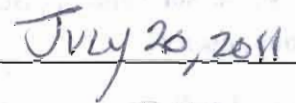
Response: No. The Proposed Action is not reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species, as described in Section 5.0 of this document. The Proposed Action is administrative in nature and would affect catch reporting requirements for vessel owners/operators of vessels issued herring permits, but not fishing behavior or effort.

**FONSI DETERMINATION:**

In view of the information presented in this document and the analysis in the EA/RIR/IRFA for the Catch Reporting Regulatory Amendment, revising the catch reporting requirements for the Atlantic herring fishery will not have a significant effect on the human environment, with specific reference to the criteria contained in Section 6.02 of NOAA Administrative Order NAO 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, the preparation of an Environmental Impact Statement for the action proposed in this document is not necessary.



*Regional Administrator, Northeast Region, NOAA Fisheries*



Date

**6.3 MARINE MAMMAL PROTECTION ACT (MMPA)**

Section 3.1.4.2 contains a description of the marine mammals potentially affected by the herring fishery and Section 4.2 provides a summary of the impacts of the alternatives presented in this EA. NMFS reviewed the impacts of this action on marine mammals and has concluded that the management actions proposed are consistent with the provisions of the MMPA, and will not alter existing measures to protect the species likely to inhabit the herring management unit. The proposed actions are administrative in nature, revising reporting requirements for the Atlantic herring fishery, and would have limited to no effect on marine mammals.

**6.4 ENDANGERED SPECIES ACT (ESA)**

Section 7 of the ESA requires Federal agencies conducting, authorizing, or funding activities that affect threatened or endangered species to ensure that those effects do not jeopardize the continued existence of listed species. NMFS has determined that the proposed actions are not likely to result in jeopardy to any ESA-listed species under NMFS jurisdiction, or alter or modify any critical habitat, based on the analysis in this document. For further information on the potential impacts of the fisheries and the proposed management action, see Sections 3.1.4 and 4.2 of this document.

The most recent consultation, signed (February 9, 2010), considered ESA-listed Atlantic salmon after new information revealed that the herring fisheries may affect Atlantic salmon to an extent not previously considered. This reinitiated section 7 consultation, concluded that the continued authorization of the herring fishery was not likely to adversely affect any ESA-listed cetaceans, sea turtles, or fish species and would not result in the destruction or adverse modification of designated critical habitat under NMFS jurisdiction.

The proposed action does not constitute a modification to the operation of the herring fishery under the Atlantic Herring FMP that would cause an effect to ESA-listed species or critical habitat not considered in the February 9, 2010, consultation. There have been no new species listed or critical habitat designated that may be affected by the action. Therefore, NMFS concludes that the proposed

action does not trigger the need to reinitiate consultation. This determination is contained in a memo dated June 8, 2011.

## **6.5 PAPERWORK REDUCTION ACT (PRA)**

The purpose of the PRA is to control and, to the extent possible, minimize the paperwork burden for individuals, small businesses, nonprofit institutions, and other persons resulting from the collection of information by or for the Federal Government. The authority to manage information and recordkeeping requirements is vested with the Director of the Office of Management and Budget (OMB). This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications.

The proposed action contains a collection-of-information requirement subject to review and approval by OMB under the PRA. This requirement has been submitted to OMB for approval. Public reporting burden for catch reporting is estimated to average five minutes per individual per VMS response, seven minutes per individual per IVR response, and five minutes per individual per VTR response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

## **6.6 INFORMATION QUALITY ACT (IQA)**

Pursuant to NOAA Fisheries guidelines implementing Section 515 of Public Law 106-554 (Information Quality Act), all information products released to the public must first undergo a Pre-Dissemination Review to ensure and maximize the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies. The following section addresses these requirements.

### **Utility**

Utility means that disseminated information is useful to its intended users. “Useful” means that the content of the information is helpful, beneficial, or serviceable to its intended users, or that the information supports the usefulness of other disseminated information by making it more accessible or easier to read, see, understand, obtain or use. The information presented in this document is helpful to the intended users (the affected public) by presenting a clear description of the purpose and need of the Proposed Action, the measures proposed, and the impacts of those measures. A discussion of the reasons for selecting the Proposed Action is included so that intended users may have a full understanding of the Proposed Action and its implications. The intended users of the information contained in this document are participants in the herring fishery and other interested parties and members of the general public. The information contained in this document may be useful to owners of vessels holding a herring permit as well as herring dealers and processors since it serves to notify these individuals of any potential changes to management measures for the fishery. This information will enable these individuals to make appropriate business decisions based on the new management measures and corresponding regulations.

The information being provided in this document concerning the status of the herring fishery is updated based on landings and effort information through the 2010 fishing year. Information presented in this document is intended to support the proposed changes to reporting requirements in the herring fishery.

Consequently, the information pertaining to management measures contained in this document has been improved based on comments from the public, fishing industry, and NMFS.

The media being used in the dissemination of the information contained in this document will be contained in a *Federal Register* notice announcing the Proposed and Final Rules for this action. This document is available in several formats, including printed publication, CD-ROM, and online through the NMFS Northeast Regional Office website. The *Federal Register* notice that announces the Proposed Rule and the Final Rule and implementing regulations will be made available in printed publication, on the website for the NMFS Northeast Regional Office and through the Regulations.gov website.

### **Integrity**

Integrity refers to security – the protection of information from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification. Prior to dissemination, information associated with this action, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information. All electronic information disseminated by NMFS adheres to the standards set out in Appendix III, “Security of Automated Information Resources,” of OMB Circular A-130; the Computer Security Act; and the Government Information Security Act. All confidential information (e.g., dealer purchase reports) is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business, and financial information); the Confidentiality of Statistics provisions of the Magnuson-Stevens Act; 50 CFR 229.11, Confidentiality of Information collected under the Marine Mammal Protection Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

### **Objectivity**

Objective information is presented in an accurate, clear, complete, and unbiased manner, and in proper context. The substance of the information is accurate, reliable, and unbiased; in the scientific, financial, or statistical context, original and supporting data are generated and the analytical results are developed using sound, commonly-accepted scientific and research methods. “Accurate” means that information is within an acceptable degree of imprecision or error appropriate to the particular kind of information at issue and otherwise meets commonly accepted scientific, financial, and statistical standards.

For purposes of the Pre-Dissemination Review, this document is considered to be a “Natural Resource Plan.” Accordingly, the document adheres to the published standards of the MSA; the Operational Guidelines, Fishery Management Plan Process; the Essential Fish Habitat Guidelines; the National Standard Guidelines; and NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing NEPA. Several sources of data were used in the development of this document, including the analysis of potential impacts. These data sources include, but are not limited to: Catch data from the IVR system and VTRs, data from the dealer weighout purchase reports, and ex-vessel price information. Although there are some limitations to the data used in the analysis of impacts of management measures and in the description of the affected environment, these data are considered to be the best available.

This information product uses information of known quality from sources acceptable to the relevant scientific and technical communities. Stock status (including estimates of biomass and fishing mortality) reported in this product are based on either assessments subject to peer-review through the Transboundary Resource Assessment Committee (TRAC) or on updates of those assessments. Catch and revenue information is based on information collected through the IVR system, VTRs, and Commercial Dealer databases. Original analyses in this document were prepared using data from accepted sources, and the analyses have been reviewed by NMFS.

The policy choices (i.e., management measures) proposed in this document are supported by the best available scientific information. The supporting science and analyses, upon which the policy choices are based, are summarized and described in Sections 3.0 and 4.0 of this document. All supporting materials, information, data, and analyses within this document have been, to the maximum extent practicable, properly referenced according to commonly accepted standards for scientific literature to ensure transparency. Qualitative discussion is provided in cases where quantitative information was unavailable, utilizing appropriate references as necessary.

The review process for any action under an FMP involves the Northeast Regional Office (NERO) of NOAA Fisheries, the Northeast Fisheries Science Center (Center), and NOAA Fisheries Headquarters. Reviews by staff at NERO are conducted by those with expertise in fisheries management and policy, habitat conservation, protected species, and compliance with the applicable law. The Center's technical review is conducted by senior-level scientists with specialties in population dynamics, stock assessment methodology, fishery resources, population biology, and the social sciences.

Final approval of this amendment document and clearance of the Proposed and Final Rules is conducted by staff at NOAA Fisheries Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget. This review process is standard for any action under an FMP, and provides input from individuals having various expertise who may not have been directly involved in the development of the Proposed Action. Thus, the review process for any FMP modification, including the changes to the management program proposed in this amendment, is performed by technically-qualified individuals to ensure the action is valid, complete, unbiased, objective, and relevant.

## **6.7 IMPACTS OF FEDERALISM/EXECUTIVE ORDER 13132**

The Executive Order (E.O.) on Federalism established nine fundamental federalism principles to which Executive agencies must adhere in formulating and implementing policies having federalism implications. The E.O. also lists a series of policy making criteria to which agencies must adhere when formulating and implementing policies that have federalism implications. However, no federalism issues or implications have been identified relative to the Proposed Action. The Proposed Action does not contain policies with federalism implications sufficient to warrant preparation of an assessment under E.O. 13132.

## **6.8 ADMINISTRATIVE PROCEDURES ACT (APA)**

This action was developed in compliance with the requirements of the Administrative Procedures Act, and these requirements will continue to be followed when the proposed regulation is published. Section 553 of the Administrative Procedure Act establishes procedural requirements applicable to informal

rulemaking by Federal agencies. The purpose of these requirements is to ensure public access to the Federal rulemaking process, and to give the public adequate notice and opportunity for comment.

## **6.9 COASTAL ZONE MANAGEMENT ACT (CZMA)**

Section 307(c)(1) of the Federal CZMA of 1972 requires that all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. Pursuant to the CZMA regulations at 15 CFR 930.35, a negative determination may be made if there are no coastal effects and the subject action: (1) Is identified by a state agency on its list, as described in § 930.34(b), or through case-by-case monitoring of unlisted activities; or (2) which is the same as or is similar to activities for which consistency determinations have been prepared in the past; or (3) for which the Federal agency undertook a thorough consistency assessment and developed initial findings on the coastal effects of the activity.

NMFS has determined that this administrative action is consistent to the maximum extent practicable with the enforceable policies of the approved coastal management programs of Maine, New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina. This determination will be submitted for review by the responsible state agencies under section 307 of the CZMA.

## **6.10 REGULATORY FLEXIBILITY ACT/EXECUTIVE ORDER 12866**

### **6.10.1 Regulatory Impact Review and Initial Regulatory Flexibility Analysis (IRFA)**

This section provides the analysis and conclusions to address the requirements of Executive Order 12866 and the Regulatory Flexibility Act (RFA). Since many of the requirements of these mandates duplicate those required under the MSA and NEPA, this section contains references to other sections of this document. The following sections provide the basis for concluding that the Proposed Action is not significant under E.O. 12866 and will not have a significant impact on a substantial number of small entities based on the provisions of the RFA.

### **6.10.2 Description of Management Objectives**

The goals and objectives of the Proposed Action are described in Section 1.1 of this document and Section 2.0 of this document describes how the Proposed Action is designed to achieve the goals and objectives.

### **6.10.3 Description of the Fishery**

Section 4.0 of the Herring FMP contains a detailed description of the Atlantic herring fishery. Section 7.4 of Amendment 1 updates the information in the Herring FMP and provides a comprehensive description of fishery-related businesses and communities. In addition, following development of the Herring FMP, Stock Assessment and Fishery Evaluation (SAFE) Reports have been prepared by the Herring PDT for each fishing year. The 2010-2012 herring fishery specifications updates the information provided in Amendment 1 through the 2008 fishing year where possible. This document provides updated

information about the Atlantic herring fishery through the 2010 fishing year where possible. The updated fishery information is presented in Section 3.1.5 of this document.

#### **6.10.4 Statement of the Problem**

The statement of the problem that this amendment addresses can be found in the Purpose and Need for Action section of this document (Section 1.0).

#### **6.10.5 Description of the Alternatives**

The Proposed Action, alternatives to the Proposed Action, and the no action alternative are described in Section 2.0 of this document.

#### **6.10.6 Economic Analysis**

The economic impacts of the Proposed Action, alternatives to the Proposed Action, and the no action alternative are described in Section 4.3 of this document. Economic impacts on the human community are not expected to be significant.

#### **6.10.7 Determination of Significance Under E.O. 12866**

NMFS Guidelines provide criteria to be used to evaluate whether a Proposed Action is significant. A significant regulatory action means any regulatory action that is likely to result in a rule that may:

1. Have an annual effect on the economy of \$100 million or more, or adversely effect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities.

The Proposed Action will not have an effect on the economy in excess of \$100 million (see Section 4.3 for additional information). The Proposed Action is not expected to adversely impact in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local or tribal governments or communities.

2. Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.

The Proposed Action will not create a serious inconsistency with or otherwise interfere with an action taken or planned by another agency. No other agency has indicated that it plans an action that will affect the reporting requirements for the herring fishery.

3. Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof.

The Proposed Action will not materially alter the budgetary impact of entitlements, grants, user fees or loan programs, or the rights and obligations of their participants.



4. Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The Proposed Action does not raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in E.O. 12866.

### **6.10.8 Initial Regulatory Flexibility Analysis**

The following sections contain analyses of the effect of the Proposed Action on small entities. Under Section 603(b) of the RFA, each initial regulatory flexibility analysis is required to address:

1. Reasons why the agency is considering the action,
2. The objectives and legal basis for the proposed rule,
3. The kind and number of small entities to which the proposed rule will apply,
4. The projected reporting, record-keeping and other compliance requirements of the proposed rule, and
5. All Federal rules that may duplicate, overlap or conflict with the proposed rule.

#### **6.10.8.1 Reasons for Considering the Action**

The reasons for considering the management action proposed in this document are discussed in the Purpose and Need for Action section of this document (Section 1.1). The need for this action is to require more timely catch data in the herring fishery. The purpose of this action is to better monitor herring catch against the stock-wide herring ACL and management areas sub-ACLs, as well as helping prevent sub-ACL overages.

#### **6.10.8.2 Objectives and Legal Basis for the Action**

The background and legal basis for this action are described in Section 1.0 of this document; the objectives of this action are described in Section 1.1 of this document. In general, this action is designed to better monitor herring catch against the herring stock-wide annual catch limit ACL and management area sub-ACLs, as well helping prevent sub-ACL overages. The Proposed Action is consistent with these goals and objectives and has been developed in accordance with the MSA, NEPA, and all other applicable laws, which are addressed in various sections of this document (see Table of Contents).

#### **6.10.8.3 Description and Number of Small Entities to Which the Rule Applies**

All of the potentially-affected businesses are considered small entities under the standards described in NOAA Fisheries guidelines because they have gross receipts that do not exceed \$4 million annually and employ fewer individuals than the denoted thresholds. In 2010, 42 vessels were issued Category A herring permits, 4 vessels were issued Category B herring permits, 55 vessels were issued Category C herring permits, and 2, 258 vessels were issued Category D herring permits. A complete description of the number of small entities to which this rule applies is provided in Section 3.1.5 of this document.

#### **6.10.8.4 Recordkeeping and Reporting Requirements**

The proposed action contains a collection-of-information requirement subject to review and approval by OMB under the PRA. This requirement will be submitted to OMB for approval. Public reporting burden for catch reporting is estimated to average five minutes per individual per VMS response, seven minutes per individual per IVR response, and five minutes per individual per VTR response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

#### **6.10.8.5 Duplication, Overlap, or Conflict with Other Federal Rules**

The Proposed Action does not duplicate, overlap or conflict with any other Federal rules.

#### **6.10.8.6 Economic Impacts on Small Entities Resulting from the Proposed Action**

The Proposed Action would directly affect the cost of catch reporting and reporting burden for owners/operators of vessels issued herring permits, and perhaps indirectly affect the likelihood of sub-ACL overages, interruptions to fishing season, and/or a percentage of a sub-ACL left unharvested, but impacts on human communities would not be expected to be significant.

##### **Limited Access Vessels**

Under the Proposed Action, the direct economic impact to human communities would be the increased cost associated with daily VMS reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued limited access herring permits.

The cost of transmitting a catch report via VMS is \$0.60 per transmission. In 2010, the average number of fishing days for a limited access herring vessel was 93. Therefore, the annual cost of daily VMS reporting is estimated to be \$55.80 per vessel. The estimated annual VMS reporting burden (i.e., time) would be the submission of 93 reports per vessel.

Limited access vessels are currently required to submit VTRs monthly. The additional annual cost of submitting VTRs weekly would be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60.) The annual VTR reporting burden would be the submission of 52 reports per vessel.

The annual cost of daily VMS reporting plus the additional cost of weekly VTR reporting is estimated to be \$73.40 per vessel. The annual VMS and VTR reporting burden is estimated to be 145 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 101 vessels issued limited access herring permits, only 8 of the Category A vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of vessels issued limited access herring permits are already submitting weekly VTRs.

The ex-value value for the herring fishery varies by permit category. During 2008-2010, limited access vessels accounted for more than 99% of the annual landings value. The increased cost of reporting associated with the Proposed Action varies by permit category. Specifically, the increased cost of reporting, based on the average ex-vessel value for the fishery during 2008-2010, would be 0.012% (\$2,485) of the fishery value for the Category A vessels, 0.118% (\$223) of the fishery value for Category B vessels, and 1.780% (\$3,069) of the fishery value for Category C vessels.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A.

Under the Proposed Action, catch data would be updated more frequently and would likely better inform catch projections. If catch projections contained less uncertainty, ACL/sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants with the Proposed Action.

The VMS system that would be used for catch reporting is already used by owners/operators of vessels issued limited access herring permits for trip declarations and pre-landing notifications. The system is reliable and malfunctions are rare. Because VMS messages can be sent while a vessel is at sea, VMS reporting may be a convenient method for owners/operators to report catch. For these reasons, there may be an indirect positive impact for fishery participants associated with the Proposed Action.

### **Open Access Vessels**

Under the Proposed Action, the direct economic impact to human communities would be the increased cost associated with weekly IVR reporting and weekly VTR reporting. The affected entities would be owners/operators of vessels issued open access herring permits.

Because the IVR phone number is a toll-free number, the cost of reporting via IVR is free. The estimated annual IVR reporting burden (i.e., time) would be the submission of 52 reports per vessel.

Open access vessels are currently required to submit VTRs monthly. Under the Proposed Action, the additional annual cost of submitting VTRs weekly would be \$17.60. This cost was calculated by multiplying 40 (52 weeks in a year minus 12 (number of monthly reports)) by \$0.44 (cost of a postage stamp) to equal \$17.60. The annual IVR and VTR reporting burden is estimated to be 104 reports per vessel.

The submission of weekly VTRs is currently required for owners/operators of vessels issued Northeast multispecies permits. In 2010, of the 2,258 vessels issued open access herring permits, only 172 of those vessels were not also issued a Northeast multispecies permit. Therefore, the vast majority of owners/operators of vessels issued open access herring permits are already submitting weekly VTRs.

The ex-value value for the herring fishery varies by permit category. During 2008-2010, Category D vessels accounted for less than 1% of the annual landings value. The increased cost of reporting

associated with the Proposed Action is 7.217% (\$3,027) of the average ex-vessel value of the herring fishery 2008-2010 for Category D vessels. While the increased reporting costs associated with the Proposed Action may seem high for open access vessels, open access vessels typically operate in several fisheries and revenue from herring catch is likely only a portion of their total ex-vessel value.

2010 was the first year that NMFS monitored herring catch against the recently reduced management area sub-ACLs (area allocations were 20 to 60 percent lower than those in 2009). NMFS experienced difficulty projecting catch associated with a pulse of fishing effort in Area 1B and experienced difficulty projecting catch associated with the highly variable catch rates in Area 1A.

Under the Proposed Action, catch data would be updated more frequently and would likely better inform catch projections. If catch projections contained less uncertainty, sub-ACL overages, and the subsequent overage deduction, may be less likely. Additionally, the fleet may be allowed to harvest up to the 95% sub-ACL closure threshold without the management area being prematurely closed and herring potentially left unharvested. Therefore, there may be indirect positive impacts for fishery participants with the Proposed Action.

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## **9.0 AGENCIES CONSULTED**

No other agencies were consulted. ESA and MMPA consultations were performed within NMFS.