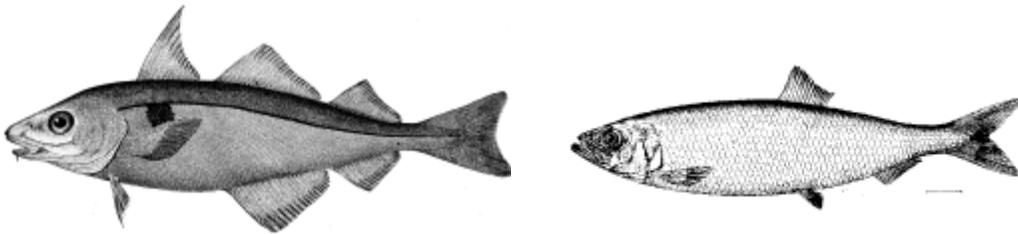


FRAMEWORK ADJUSTMENT 43
to the
Northeast Multispecies
(Groundfish)
Fishery Management Plan (FMP)



Including a
Regulatory Impact Review (RIR)
and
Initial Regulatory Flexibility Analysis (IRFA)

Prepared by the
New England Fishery Management Council

in consultation with
National Marine Fisheries Service
Atlantic States Marine Fisheries Commission
Mid-Atlantic Fishery Management Council

Date Submitted: February 23, 2006

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LIST OF ACRONYMS

ABC	Allowable Biological Catch
ACOE	Army Core of Engineers
AHE	Affected Human Environment
APA	American Pelagic Association
ASMFC	Atlantic States Marine Fisheries Commission or Commission
B	Biomass
BT	Border Transfer
CAA	Catch at Age
CEQ	Council on Environmental Quality
CHOIR	Coalition for the Atlantic Herring Fishery's Orderly, Informed, and Responsible Long-Term Development
CZMA	Coastal Zone Management Act
DAH	Domestic Annual Harvest
DAP	Domestic Annual Processing
DEA	Data Envelopment Analysis
DMF	Division of Marine Fisheries
DMR	Department of Marine Resources
DSEIS	Draft Supplemental Environmental Impact Statement
DWF	Distant-Water Fleets
EA	Environmental Assessment
ECPA	East Coast Pelagic Association
ECTA	East Coast Tuna Association
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
E.O.	Executive Order
ESA	Endangered Species Act of 1973
F	Fishing Mortality Rate
FEIS	Final Environmental Impact Statement
FMP	Fishery Management Plan
FSEIS	Final Supplemental Environmental Impact Statement
FY	Fishing Year
GB	Georges Bank
GEA	Gear Effects Evaluation
GIFA	Governing International Fisheries Agreement
GMRI	Gulf of Maine Research Institute

GOM	Gulf of Maine
GRT	Gross Registered Tons
HCA	Habitat Closed Area
HPTRP	Harbor Porpoise Take Reduction Plan
ICNAF	International Commission for the Northwest Atlantic Fisheries
IRFA	Initial Regulatory Flexibility Analysis
IOY	Initial Optimal Yield
IVR	Interactive Voice Response
IWC	International Whaling Commission
IWP	Internal Waters Processing
JVP	Joint Venture Processing
LWTRP	Large Whale Take Reduction Plan
M	Natural Mortality Rate
MA DMF	Massachusetts Division of Marine Fisheries
MAFMC	Mid-Atlantic Fishery Management Council
ME DMR	Maine Department of Marine Resources
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistical Survey
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum Sustainable Yield
mt	Metric Tons
NAO	North Atlantic Oscillation
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NS	National Standard
NT	Net Tonnage
NSGs	National Standard Guidelines
OCS	Outer Continental Shelf
OLE	Office of Law Enforcement
OY	Optimum Yield
PBR	Potential Biological Removal
PDT	Plan Development Team
PS/FG	Purse Seine/Fixed Gear
PRA	Paperwork Reduction Act

RFA	Regulatory Flexibility Act
RIR	Regulatory Impact Review
SARC	Stock Assessment Review Committee
SAV	Submerged Aquatic Vegetation
SAW	Stock Assessment Workshop
SSB	Spawning Stock Biomass
SSC	Scientific and Statistical Committee
SFA	Sustainable Fisheries Act
TAC	Total Allowable Catch
TALFF	Total Allowable Level of Foreign Fishing
TC	Technical Committee
TMGC	Trans-Boundary Management Guidance Committee
TRAC	Transboundary Resource Assessment Committee
USAP	U.S. At-Sea Processing
USFWS	US Fish and Wildlife Service
VEC	Valued Ecosystem Component
VMS	Vessel Monitoring System
VPA	Virtual Population Analysis
VTR	Vessel Trip Report

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1.0 INTRODUCTION

This framework adjustment proposes management measures to address the bycatch of regulated multispecies, primarily haddock, in the Atlantic herring fishery. These management measures were included and analyzed in the Draft EIS and public hearing document for Amendment 1 to the Atlantic Herring FMP, which also represented a framework adjustment to the Groundfish FMP, but the Council separated this action and is submitting it prior to Amendment 1 so that these measures can be implemented more expeditiously.

The Council is proposing this action to address bycatch in the summer/fall 2006 herring fishery and future years, particularly on Georges Bank (GB) where haddock bycatch has increased recently due to the presence of extremely large haddock year classes. This action is intended to replace the current Emergency Rule for haddock bycatch in the herring fishery (50 CFR 648, pp. 34055-34060, June 13, 2005), which was extended on December 8, 2005 and expires on June 6, 2006. The measures proposed in this framework adjustment include a **catch cap for haddock, an incidental catch allowance for other regulated multispecies, and a monitoring program for the catch cap**. These measures will apply to Category 1 herring vessels during the 2006 fishing year and to vessels with a limited access directed fishery permit for herring once Amendment 1 to the Herring FMP is implemented. The current classification of herring midwater trawl and purse seine gear relative to the multispecies fishery will be modified through this action, as described in this document. Amendment 1 will follow-up on this action and establish the “catch cap” approach as one potential mechanism to address bycatch of groundfish and other species in the Atlantic herring fishery over the long-term.

This action meets the criteria for a Categorical Exclusion (CE) under the National Environmental Policy Act (NEPA), based on guidance provided in NOAA Administrative Order 216-6. The criteria that apply to this action are specified in Sections 5.05 (general requirements for CE) and 6.03d.4 (CE for fisheries management actions) of NAO 216-6. See Section 6.2 of this document for additional discussion.

1.1 BACKGROUND

Regulations established under the FMP for the Northeast multispecies (groundfish) fishery prohibit vessels fishing for Atlantic herring from possessing or landing any groundfish species, including haddock. In July 2004, NMFS' Office of Law Enforcement (OLE) observed prohibited juvenile haddock in catches being landed by midwater trawl vessels fishing for herring on Georges Bank. Representatives from the herring industry reported that they were encountering haddock unusually high in the water column and were unable to avoid catching it, even with midwater trawl gear. Many midwater trawl vessels ceased fishing for herring on GB in the summer of 2004 due to concerns about haddock bycatch, and Area 3 (GB) herring landings decreased.

In response, the New England Fishery Management Council established an ad-hoc Bycatch Committee late in 2004 to develop specific recommendations to mitigate the potential for bycatch of haddock in several of the region's fisheries, including the herring fishery. The Council unanimously approved the following motion at its November 16-18, 2004 meeting:

Mr. Hill moved and Mr. Williamson seconded:

That the November 17, 2004 Council meeting be the initial meeting of a framework action to address the haddock bycatch issue.

The motion carried on a show of hands (15/0/0).

Due to the presence of the extremely large 2003 year class of haddock, reports of another large year class in 2004, and expectations that groundfish stocks will continue to recover, herring industry members expressed concern that they would continue to catch haddock in future years. The Bycatch Committee met several times to consider the issue, and recommended to the Council on March 30, 2005, that herring vessels should be allowed to catch haddock until the catch reaches a specified haddock incidental total allowable catch (TAC) level. The Committee further recommended that, if the incidental TAC is fully harvested, the directed herring fishery should be closed.

2005/2006 Emergency Rule

Because there was not time for the Council to develop and complete an action to implement the Bycatch Committee's recommendations, the Council requested Emergency Action to authorize herring vessels to possess up to 1,000 lb (454 kg) of haddock incidentally caught when fishing for herring. The Council's emergency request recommended that this measure apply only to vessels issued permits that authorize the catch of more than 500 mt of herring in 2005 (Category 1 herring vessels). Without the Emergency Action, the Council was concerned that, when herring move onto GB during the summer of 2005, vessel operators will decline to fish there for herring due to their concerns about violating the existing prohibition on possession of groundfish. Category 1 vessels accounted for 99.3 percent of the herring landings in 2004. Due to concerns regarding the immediacy of this problem, the Council requested that NMFS enact measures through an Emergency Rule, to be effective through December 31, 2005.

The Council's formal request for Emergency Action was made at the March 30, 2005, Council meeting and was followed by a written request received by NMFS on April 6, 2005. The Emergency Action was intended to provide an incidental catch allowance for haddock that will allow the herring fishery to operate on GB during 2005 while the Council develops a long-term solution. The Emergency Rule was published by NMFS in the Federal Register on June 13, 2005 and extended for 180 days on December 8, 2005. The current Emergency Rule expires on June 6, 2006, and measures implemented in this framework adjustment are intended to replace it.

The following provisions were implemented through the 2005/2006 Emergency Rule: (1) suspension of the prohibition on the possession of haddock by Category 1 herring vessels using purse seines or midwater trawls (including pair trawls), (2) establishment of a 1,000-lb (454-kg) haddock incidental possession allowance for Category 1 herring vessels, (3) suspension of the haddock minimum fish size for Category 1 herring vessels, (4) prohibition on the purchase and sale of haddock landed by Category 1 herring vessels for human consumption, (5) establishment of a provision to require herring processors to cull landings made by Category 1 herring vessels and to retain haddock for inspection by enforcement officials, (6) establishment of a requirement for all Category 1 herring vessels to provide advance notification of landing via the Vessel Monitoring System (VMS), whether or not such a vessel is carrying an at-sea observer, and (7) establishment of a cap of 270,000 lb (122,470 kg) on the total amount of observed and reported haddock that could be landed under the haddock incidental possession allowance.

The measures proposed in this framework adjustment include all of the provisions listed above except for the 1,000-pound incidental catch allowance, and with the addition of a 100-pound incidental catch allowance for regulated multispecies other than haddock. The catch cap for haddock has also been modified to equate to 0.2% of the total combined target TAC for Gulf of Maine and Georges Bank haddock in 2006 and future years until otherwise modified by the Council. With the implementation of this action, herring midwater trawl, pair trawl, and purse seine gear will no longer be considered *exempted gear* relative to the multispecies fishery (gear not capable of catching groundfish), and the Atlantic herring fishery will be classified as an *exempted fishery* (less than 5% groundfish bycatch). The proposed measures will apply to Category 1 herring permit holders until the implementation of Amendment 1, at which time they will apply to limited access directed fishery permit holders in all management areas.

1.2 PURPOSE AND NEED

The primary purpose of this framework adjustment is to modify regulations for the multispecies fishery to address bycatch in the herring fishery by:

1. Establishing a haddock catch cap and monitoring program and a multispecies incidental catch allowance for the directed herring fishery; and
2. Modifying the current classification of herring fishing gear as *exempted gear* relative to the multispecies fishery.

This action is needed because the current absolute prohibition on the possession of haddock by vessels targeting herring appears to be unrealistic, given the current abundance of haddock on GB. Unless action is taken to modify the existing provisions to reflect current conditions in the fishery, it appears likely that herring midwater trawl vessels may decrease and/or eliminate fishing time on GB (Area 3) due to concern about enforcement actions that could result from possession of even small amounts of haddock bycatch. Such an interruption in the herring fishery would have negative impacts on the fishery participants and could impact the supply of herring used as bait for the lobster fishery. It also would reduce opportunities for the herring TAC in Area 3 (and OY) to be fully utilized. Perhaps most important, reduced fishing effort in the Area 3 herring fishery may result in a shift of effort into Area 1A during the summer and fall, exacerbating concerns about the inshore GOM component of the resource and the impacts of concentrated midwater trawl fishing effort in this area. The Herring PDT has frequently recommended that development of the herring fishery should be encouraged in offshore areas like GB, where the herring resource appears to be larger and more robust.

2.0 PROPOSED MANAGEMENT ACTION

The Council received recommendations from its Groundfish and Herring Committees and Advisory Panels prior to making final decisions about the aspects of this action that will affect these fisheries. The measures proposed in this framework adjustment include a **catch cap for haddock, an incidental catch allowance for other regulated multispecies, and a monitoring program for the catch cap**. These measures will be applicable to **Category 1** herring vessels (those intending to catch 500 mt or more and using VMS) during the 2006 fishing year, and all vessels with a **limited access directed fishery permit for herring** once Amendment 1 to the Herring FMP is implemented (expected for the start of the 2007 fishing year).

- Herring purse seine and midwater trawl gear (single and paired) will no longer be defined as *exempted gear* relative to the multispecies fishery, since this status is not consistent with available information that documents catches of groundfish, nor is it consistent with catch caps that acknowledge groundfish catch and may allow the retention of small amounts of groundfish. Herring purse seine and midwater trawl fishing will instead be classified as an *exempted fishery* upon implementation of this framework adjustment.
- With the exception of the prohibition on catching regulated groundfish that will be revised by the catch caps, all current regulatory provisions for herring midwater and purse seine gear will be adopted as provisions for the exempted fishery. Current access to groundfish closed areas for these fisheries will not change as a result of this action.

Amendment 1 to the Atlantic Herring FMP will follow-up on this action and establish the “catch cap” approach as one potential mechanism to address bycatch of groundfish and other species in the Atlantic herring fishery over the long-term. Establishing and modifying catch caps, including the cap proposed in this framework adjustment, will be identified in Amendment 1 as measures that can be implemented through a framework adjustment to the Herring FMP or through the herring fishery specification process (with concurrent adjustments to regulations in other fisheries, as appropriate), whichever is most expeditious. Measures that could be implemented through a framework adjustment or the herring fishery specification process to address bycatch in the herring fishery will also include seasonal and temporal closures in high bycatch areas and catch/bycatch caps.

2.1 HADDOCK CATCH CAP AND MULTISPECIES INCIDENTAL CATCH ALLOWANCE

The measures described below will apply to Category 1 herring permit holders during the 2006 fishing year, on all trips that do not use Multispecies DAS. Once Amendment 1 to the Herring FMP is implemented, these measures will apply to all limited access directed fishery permit holders on all trips that do not use Multispecies DAS. Herring purse seine vessels are not exempt from these measures.

The elements of the measures proposed in this framework adjustment are as follows:

1. Incidental Catch Allowance for Limited Access Directed Herring Fishery Permit Holders (Category 1 permit holders in 2006) up to 0.2% of the Total U.S. Haddock Target TAC

- When the catch cap of 0.2% is projected to be reached, 90% of the area where the Gulf of Maine and Georges Bank haddock stocks are caught will be closed to directed herring fishing. The 2,000-pound incidental catch limit for herring would apply to all vessels in this area once it is closed to directed fishing. The statistical areas that would close are provided in Table 1. The statistical areas shown in this table may be modified should the catch distribution of haddock change in the future. Any changes will be implemented through framework adjustment to the Herring FMP or through the fishery specification process.
- The catch cap will be based on the multispecies fishing year (May 1 – April 30) but applied to the herring fishing year (January 1 – December 31). For example, the 2006 haddock catch cap will apply from May 1, 2006 – April 30, 2007, and the 2007 catch cap will apply from May 1, 2007 – April 30, 2008. If the 2006 catch cap is reached prior to April 30, 2007, 90% of the area where haddock is caught would remain closed until May 1, 2007, and directed herring fishing in that area would be prohibited until May 1, 2007 when the 2007 catch cap becomes available to the fishery.
- Prohibition on discarding haddock at sea,
- Prohibition on sale of haddock for human consumption
- Suspension of haddock minimum fish size

2. 100-pound Total Incidental Catch Possession Limit of all Other Regulated Multispecies (Cod, Witch Flounder, Plaice, Yellowtail Flounder, Pollock, Winter Flounder, Windowpane Flounder, Redfish, and White Hake)

- Suspension of minimum fish sizes for other regulated multispecies caught by limited access directed fishery permit holders (Category 1 permit holders in 2006) on all trips that do not use Multispecies DAS
- Prohibition on sale of regulated multispecies for human consumption

The haddock catch cap will remain at 0.2% of the total U.S. target TAC for haddock, unless modified by the Council through a future action. Fishing mortality associated with haddock bycatch in the herring fishery will be accounted for accordingly through the groundfish (haddock) stock assessment and fishery specification process to ensure that rebuilding objectives for the stock continue to be achieved. The impacts of any future modification to the haddock catch cap for the herring fishery will be analyzed as part of the action that implements the modification (framework adjustment or specification process, in accordance with the Groundfish and Herring FMP provisions).

The hard haddock TAC established through this action, and the target and incidental groundfish TACs identified in this action and proposed to continue under Framework 42 to the Multispecies FMP, are inclusive of total groundfish landings. The total amount of haddock set-aside for the herring fishery is not expected to cause the haddock TAC to be exceeded or impact the availability of haddock for groundfish vessels, as this amount recognizes groundfish bycatch that previously occurred in the herring fishery and, therefore, does not increase overall haddock catch.

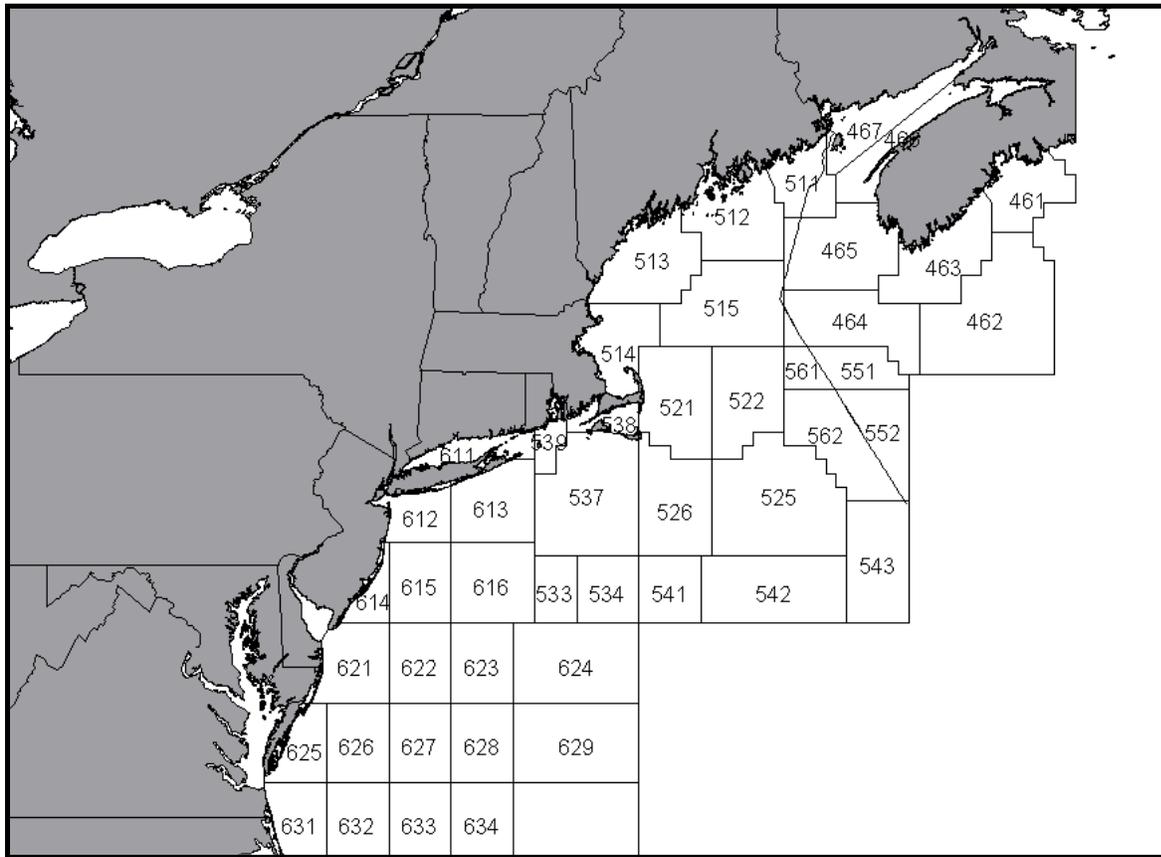
Note that the only stocks to which the catch cap applies at this time are Gulf of Maine and Georges Bank haddock collectively; the Council may implement caps for other species, including those listed in the following table, through a framework adjustment to the Herring FMP (and concurrent adjustments to other regulations as necessary) in the future, or through the fishery specification process, as described in Amendment 1 to the Herring FMP.

Table 1 Areas Closed to Herring Fishing When Catch Cap is Caught (Based on 90% of Three-Year Catch Distribution)

SPECIES	STOCK	Area Closed
		Statistical Areas
Cod	GB	521,522,525,526,561
	GOM	513,514,515
Haddock	GB	521,522,525,562
	GOM	512,513,514,515
Redfish		513,514,515,521,522,561
Pollock		513,514,515,521,522,561

**Gulf of Maine and Georges Bank haddock are the only stocks to which this measure would apply in Framework 43; other stocks may be added in the future as necessary (see Amendment 1 to the Herring FMP).*

Figure 1 Northeast Region Statistical Areas



Haddock catch caps are based on the target TACs for GB haddock and GOM haddock established in the Northeast Multispecies FMP. The target TACs are based on stock projections for the period 2006 through 2009. Target TACs are updated when new assessments are prepared and may change in the future. GB haddock is a trans-boundary resource, and management is coordinated with Canada through the Trans-Boundary Management Guidance Committee (TMGC). The TMGC provides management recommendations for only the part of the stock that is on eastern Georges Bank. The primary management measure used by the TMGC is a hard TAC on this portion of the haddock stock, with that TAC shared between the two countries. This TAC, and each country's share, is determined annually. Because this is an annual determination, the actual TAC for each country has not yet been determined for the period 2007 through 2009. Table 2 provides estimates of the haddock catch caps for 2007 through 2009. These estimates assume the future Canadian shares of the GB haddock TAC are the same as in FY 2006. The actual shares will be calculated in the future and may result in haddock catch caps that are different than those shown in Table 2. As an illustration of the impact of changes in the shares on the haddock catch caps, estimates are provided based on a ten percent increase and a ten percent decrease in the U.S. share. This illustration is expected to capture the range of possible changes, as shares have changed less than two percent since 2004.

Table 2 Haddock Catch Caps for Multispecies Fishing Years 2007 through 2009 (mt, live weight)

(1) FY 2006 U.S. target TAC incorporates TMGC recommendations for Eastern GB haddock. FY 2007 through 2009 assume U.S. share of total TAC remains the same as in FY 2006.

Stock	Multispecies Fishing Year			
	2006	2007	2008	2009
GB Haddock	49,829	103,329	121,681	92,888
GOM Haddock	1,279	1,254	1,229	1,187
GB Haddock – Canada TAC	14,520	TBD	TBD	TBD
US Share	71%	TBD	TBD	TBD
US Share-10%	61%	TBD	TBD	TBD
US Share+10%	81%	TBD	TBD	TBD
GB Haddock – US TAC ⁽¹⁾	35,309	73,219	86,224	65,821
Total US Haddock Target TAC	36,588	74,473	87,453	67,008
Haddock Catch Cap in mt (pounds in parentheses)		149 (328,489)	175 (385,809)	134 (295,419)
Possible Cap in mt - 10% lower illustration (pounds in parentheses)		127 (279,987)	150 (330,693)	115 (253,532)
Possible Cap in mt - 10% higher illustration (pounds in parentheses)		169 (372,581)	199 (438,720)	152 (335,103)

2.2 CATCH CAP MONITORING PROGRAM

The monitoring program proposed in this framework adjustment mirrors that in the current Emergency Rule for haddock bycatch in the herring fishery (50 CFR 648, pp. 34055-34060, June 13, 2005).

Four components will be used to facilitate monitoring of a catch cap for haddock. First, a catch cap will be monitored using observed reports from the NMFS Observer Program. Second, bycatch reported by vessels, dealers, and law enforcement agents will be incorporated. Third, this measure will also establish a provision to require certain herring processors to cull landings made by limited access herring vessels and to retain bycatch for inspection by enforcement officials. Fourth, this measure will include the establishment of a requirement for all limited access directed fishery holders to provide advance notification of landings via vessel monitoring system (VMS). Again, because no extrapolations are made from observed catches of haddock, this program will monitor only haddock catch that is observed to be taken as bycatch and haddock catch that is landed at the dock. In this case, the cap acts more as a backstop than an actual hard quota on bycatch because some amount of haddock bycatch will likely occur and not be observed and/or documented at the dock. Consequently, the Council reduced the catch cap to correspond more closely to the proportion of the fishery that will be observed.

The specific elements of this monitoring option are as follows:

- **Observer coverage** in the directed herring fishery will be used to monitor bycatch across the herring fishery. The level of observer coverage in the herring fishery will be determined by NMFS on an annual basis. Any observed bycatch of haddock in the herring fishery will be documented and counted against the catch cap. No extrapolations will be made from the observed trips to estimate haddock bycatch across the entire herring fishery. The Council expects that observer coverage will be 20% or more. NMFS will further address observer coverage in an omnibus amendment to the Northeast Region FMPs to implement a Standardized Bycatch Reporting Methodology (SBRM) in

accordance with the Magnuson-Stevens Fishery Conservation and Management Act (under development 2006).

- **Mandatory reporting of bycatch (all species)** by herring vessels and dealers (*Note: This is already a requirement under the Herring FMP. The intent of including this provision in the monitoring program is to highlight that these data would be used in conjunction with observer data to monitor an overall catch cap.*)
- **Cull of bycatch by herring processors** – this provision will require dealers that receive herring from limited access herring vessels that cull or separate out all fish other than herring in the course of normal operations to separate and retain haddock bycatch for at least 12 hours after the end of each vessel offload. Culled haddock bycatch may not be sold for any purpose.
- **Advanced notice of landing** – this provision would be required for all limited access directed fishery permit holders through the “herring pre-landings notification” from the VMS entry screen. Notification must be sent six hours prior to crossing the VMS demarcation line on the return trip to port, or, for vessels that have not fished seaward of the VMS demarcation line, at least six hours prior to landings.

3.0 ALTERNATIVES TO THE PROPOSED ACTION

3.1 NO ACTION ALTERNATIVE

Under the no action alternative, the current Emergency Rule, including a 1,000-pound possession limit for haddock, an overall cap for haddock bycatch in the herring fishery, and a monitoring program for the catch cap, would expire on June 6, 2006, and no additional measures would be implemented to replace it for the 2006 summer/fall fishery (it is assumed that measures would be implemented in Amendment 1 to address bycatch in 2007 and beyond). Catch and possession of regulated multispecies by herring vessels would be completely prohibited during the 2006 fishing year.

3.2 OTHER ALTERNATIVES CONSIDERED DURING THE DEVELOPMENT OF THIS ACTION

During the development of Amendment 1 to the Herring FMP, the Council considered a range of alternatives for implementing catch caps like the one proposed for haddock in Section 2.0 of this document. Several approaches were considered by the Bycatch Committee during the development of its recommendations during early 2005. In addition, the Herring and Groundfish PDTs developed options for catch caps for various groundfish stocks at this time, including cod, haddock, pollock, and redfish (see Bycatch Caps Discussion Paper in **Appendix I**).

4.0 AFFECTED ENVIRONMENT

The environment – biological, physical, and human – that may be affected by the proposed action has been fully described in related Council documents and is incorporated into this document by citation only. However, some general background information specific to the haddock resource, the multispecies fishery, and the herring fishery is provided in the following subsections as context for the analysis of impacts that is presented in Section 5.0 of this document. The sources of information identified below should be referenced for a more detailed description of the environment related to both the multispecies and herring fisheries.

- The biological environment for the Northeast multispecies fishery is described in section 9.2 of Amendment 13. The management unit for the fishery is described in Amendment 7 and 9. No changes are proposed in this framework adjustment.
- So much information has been generated by the Council staff about the multispecies fishery and its participants in recent months and years that it is not reasonable to include all of this information in this document. A very general description of the multispecies fishery is provided below to give readers some context for considering the impacts of the proposed action, and additional information is incorporated by reference to the following documents:
 - * Amendment 13 to the Northeast Multispecies FMP (NEFMC 2004);
 - * Framework Adjustment 40A to the Northeast Multispecies FMP (NEFMC 2004);
 - * Framework Adjustment 40B to the Northeast Multispecies FMP (NEFMC 2005);
 - * Framework Adjustment 42 to the Northeast Multispecies FMP (NEFMC in progress).
- Amendment 13 to the Northeast Multispecies FMP provided a thorough description of the physical environment of the Northeast multispecies fishery, including oceanographic and physical habitat conditions in the Gulf of Maine – Georges Bank region and the area south of New England. No changes to multispecies essential fish habitat (EFH), habitat areas of particular concern (HAPCs), or special access programs (SAPs) are proposed in this framework adjustment, and the analysis presented in this document as well as the DSEIS for Amendment 1 to the Herring FMP suggests that the proposed action is not expected to have any impacts on the physical environment or EFH.
- A detailed description of the Atlantic herring fishery is provided in the Herring FMP and is incorporated into this document by reference. In addition, the Stock Assessment and Fishery Evaluation (SAFE) Reports for the Atlantic herring fishery, developed by the Herring PDT since the implementation of the Herring FMP, as well as the Environmental Assessment for the specification package for the 2005/2006 fishing years provide updated information relative to the herring fishery and should be referenced for additional information. Much of this information is summarized in Framework Adjustment 40B to the Northeast Multispecies FMP.
- Amendment 1 to the Atlantic Herring FMP (DSEIS August 4, 2005 and FSEIS under development by NEFMC) includes all updated information about the Atlantic herring resource and fishery and also is incorporated by reference.

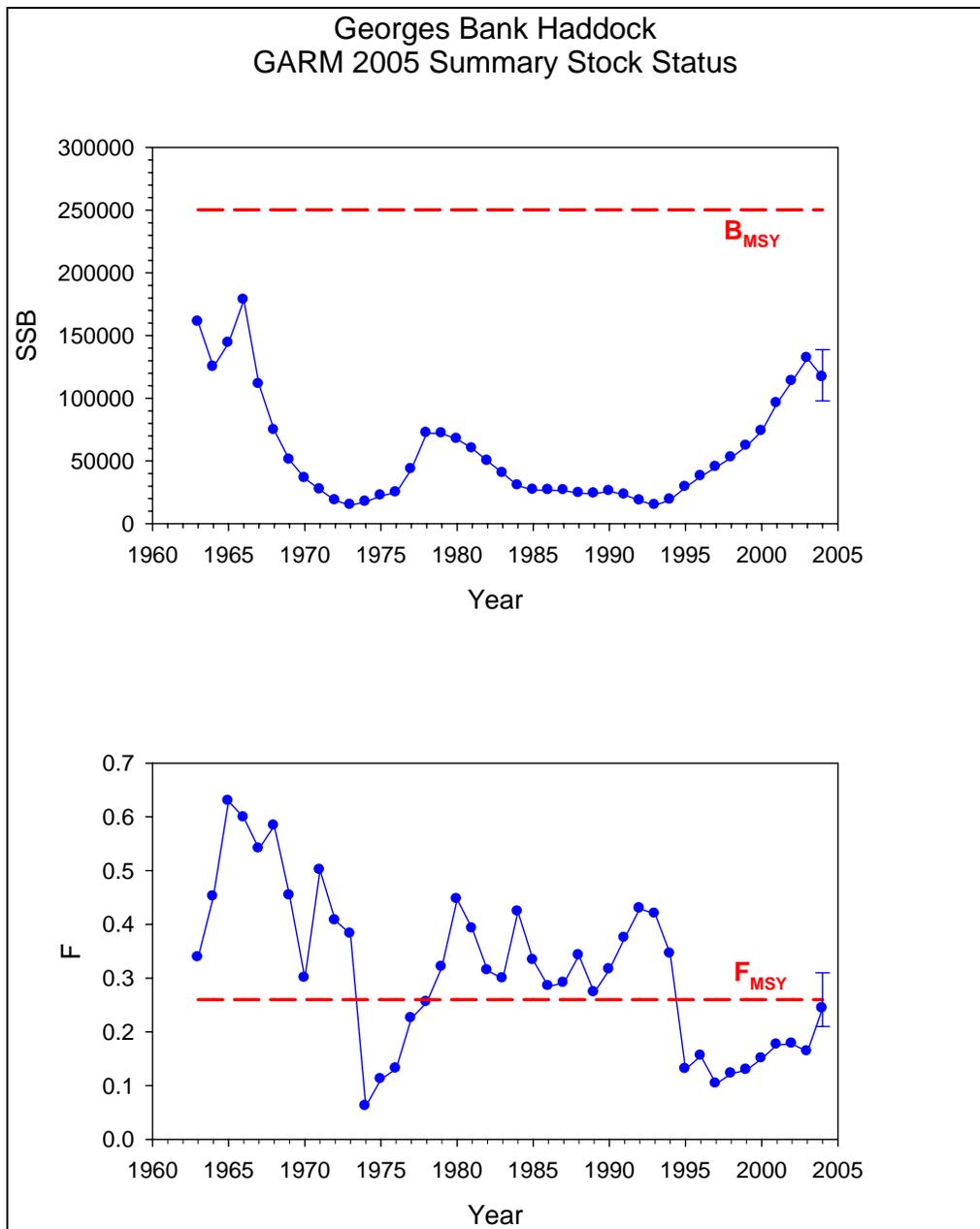
4.1 HADDOCK

The haddock, *Melanogrammus aeglefinus*, is a demersal gadid found on both sides of the North Atlantic (Figure 1). In the northwest Atlantic, haddock are distributed from Cape May, New Jersey to the Strait of Belle Isle, Newfoundland (Klein-MacPhee 2002). Six haddock stocks have been identified in the northwest Atlantic from Newfoundland to Georges Bank (Begg 1998). There are two haddock stocks in U.S. waters: Georges Bank and Gulf of Maine. U.S. haddock fisheries are managed by the New England Fishery Management Council under the Northeast Multispecies Fishery Management Plan (NEFMC 1993). The Georges Bank haddock stock is also a transboundary resource, which is co-managed with Canada.

Life history and habitat characteristics of the stocks managed by this FMP, including Gulf of Maine and Georges Bank haddock, can be found in the Essential Fish Habitat source documents (series) published as NOAA Technical Memorandums and available at <http://www.nefsc.noaa.gov/nefsc/habitat/efh/>.

Georges Bank haddock was overfished and was not experiencing overfishing in 2004. Spawning biomass has increased since 1993, with the exception of 2004. Fishing mortality has had an increasing trend since 1997. SSB and F estimates have no retrospective pattern. The 1998 (48 million) and 2000 (91 million) year classes are strong, while the 2003 year class appears to be exceptionally strong and may be the largest ever observed (789 million). Substantial growth in SSB is expected in the next few years as a result of this large year class. The status of the 2004 year class is unknown at this time but expected to be large as well.

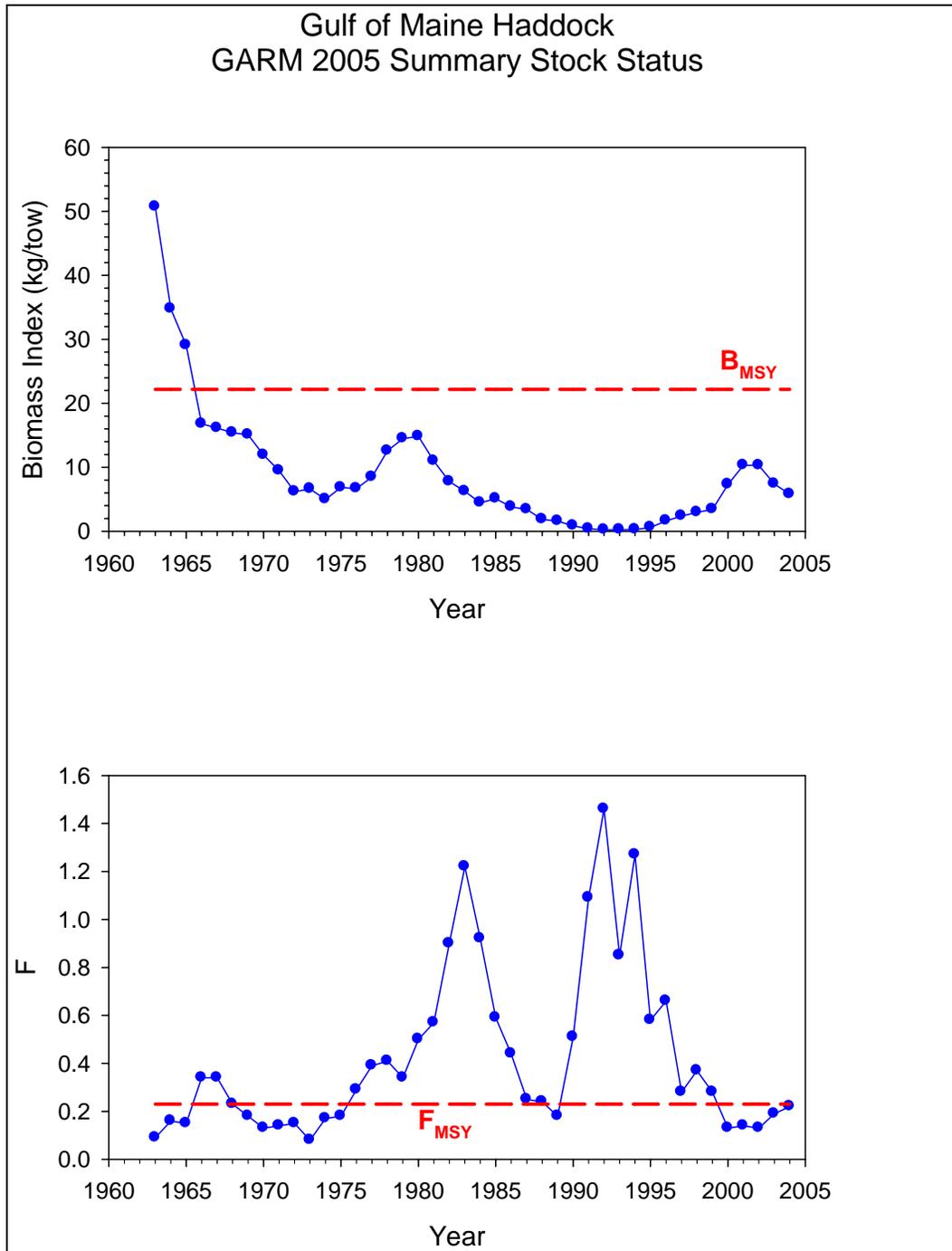
Figure 2 Georges Bank Haddock SSB and Fishing Mortality (F) Estimates During 1963-2004



As reported in GARM 2005, along with 80% confidence intervals for 2004 estimates.

Gulf of Maine haddock was overfished and was not experiencing overfishing in 2004. Biomass increased during 1994-2002 and has decreased since then. Fishing mortality decreased from 1992-2000 and has increased since then. Current estimates of both stock biomass and exploitation rate are below the projected values for 2004 that result from the planned rebuilding trajectory.

Figure 3 GOM Haddock Biomass (B) and Exploitation Rate (F) Indices During 1963-2004



4.2 MULTISPECIES FISHERY

The multispecies fishery in the Northeastern United States consists of a commercial and recreational harvesting sector. The commercial sector consists of a wide range of vessels of different sizes and using different gear types. These vessels are homeported in several coastal states, with most vessels claiming homeports in Maine, New Hampshire, Massachusetts, and Rhode Island. Gears that are typically used to prosecute the fishery include otter trawls, sink gillnets, bottom longlines, and hook gear. Detailed descriptions of these gears, and their impacts on EFH, are provided in section 9.2.3 of Amendment 13.

The multispecies fleet is composed primarily of small to medium-sized vessels. Vessels from 30 to 50 feet have consistently made up the greatest proportion of multispecies vessels from 1994 to 2001. In general, the number of smallest vessels has diminished most substantially, demonstrating the greatest percent declines from 1994 to 2001, particularly in the periods directly following Amendments 5 and 7. The smallest vessels, while contributing the least groundfish landings in all years from 1994 to 2001, demonstrated the greatest average annual percent increases from year to year during this time period, particularly after 1999. In general, larger vessels have home ports in southern states and at the southern range of Mid-Atlantic states (North Carolina, Virginia, Florida) while smaller vessels reside in the northern Atlantic states (Massachusetts, New Hampshire, Maine).

Bottom trawls were the top gear indicated as primary gear type from 1995 to 2001, followed by hook and line vessels and sink gillnets, the majority of these day boats. Between 1994 and 2001, bottom trawls accounted for a large majority of total and groundfish landings in each year. Total bottom trawl landings decreased overall from 1994 to 2001 primarily as a result of restrictions in other fisheries, evident in the fact that groundfish landings by bottom trawls increased over this time period. Following bottom trawls, the next four top contributors to total landings were “other” gears, sink gillnets, scallop dredges, and midwater trawls (Table 3). An investigation of the non-multispecies permits held by multispecies permit holders demonstrates that squid/mackerel/butterfish, lobster and scallop fisheries have been important fisheries to multispecies vessels which have sought diversification as a means of supplementing their income obtained from groundfish since 1994.

Since the implementation of Amendment 5 in 1994, all vessels that land regulated groundfish for commercial sale have been required to have a permit. Moratorium – commonly called limited access – permits were granted to vessels based on fishing history during a defined period. No new limited access permits have been granted since 1994, but the ownership of vessels issued permits has changed. Most limited access permits are restricted in the number of days at sea (DAS) that can be fished. Limited access permit holders land most regulated groundfish. In addition, there have been other, open access permit categories. Open access permits could be requested at any time, with the limitation that a vessel could not have a limited access and open access permit at the same time. Permits are issued in different categories, depending on the activity and history of the vessel. There have been several changes in the defined permit categories, as Amendment 5, Amendment 7, and Amendment 13 all changed the category definitions.

Amendment 13 to the Northeast Multispecies FMP provided a comprehensive review of the commercial groundfish harvesting sector from FY 1994 through FY 2001. Landings and revenues for vessels with groundfish permits were reported for each fishing year, aggregated by permit category, vessel length, homeport state, and gear type. In addition, since one of the primary effort controls used in the fishery is limits on the DAS fished, similar categories were used to describe the allocation and use of DAS by limited access vessels.

To generally characterize the multispecies fishery, landings of all species and regulated by multispecies permit holders are summarized in Table 3 and Table 4 respectively. Amendment 13 reported this information for both day and trip gillnet vessels, but that information was not available for this document. Bottom trawls, sink gillnets, and bottom longlines – the primary gears used to catch groundfish – all saw a decline in total landings from FY 2001 to FY 2002. Bottom trawls experienced a negligible decline in total revenue, however, while bottom longline total revenues declined 27.3 percent and sink gillnet total revenues declined 13.4 percent. Bottom trawls experienced a 16 percent decline in groundfish landings, while bottom longlines experienced a 64 percent decline and sink gillnets saw a 53 percent decline in regulated groundfish landings. The information presented in Table 3 and Table 4 suggest that midwater trawl vessels with multispecies permits are not active in the multispecies fishery.

Table 3 Total Landings (all species, 1,000s of pounds) by Vessels with Multispecies Permits, by Gear

Gear Type	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Bottom trawl*	237,964	228,269	214,830	227,433	242,471	206,073	201,259	198,586	182,732	172,046
Bottom longline*	8,965	8,905	7,869	8,970	8,559	6,921	7,083	7,105	4,672	4,279
Hook and line*	979	1,404	1,461	2,200	2,018	1,614	1,861	2,032	1,219	1,412
Sink gillnet, total*	41,991	53,056	49,983	43,990	46,003	37,854	30,462	35,165	29,323	36,563
Day Gillnet	N/A	N/A	N/A	24,417	25,906	17,903	13,081	18,391		
Trip Gillnet	N/A	N/A	N/A	7,303	5,529	6,168	6,941	8,685		
Midwater trawl	23,801	26,303	69,968	97,707	130,570	106,402	128,995	191,789	106,487	178,511
Shrimp trawl	12,438	15,888	15,440	9,491	3,893	6,210	3,665	1,384	3,105	1,881
Scallop dredge	16,671	15,482	16,460	14,185	13,993	21,482	30,557	41,879	44,426	51,332
Lobster trap	5,532	6,065	6,449	6,229	5,905	7,290	5,391	4,433	4,806	4,535
All other	69,730	83,125	71,079	118,584	69,271	74,085	77,029	68,189	49,747	45,395
Total	418,071	438,497	453,540	528,788	522,683	467,931	486,302	550,562	426,517	495,954

Table 4 Regulated Groundfish Landings (1,000s of pounds) by Vessels with Multispecies Permits, by Gear

Gear Type	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Bottom trawl*	54,237	48,837	54,518	54,232	55,224	56,048	73,622	85,422	71,516	67,347
Bottom longline*	5,337	4,120	2,870	3,912	4,068	2,706	2,192	2,767	982	1,128
Hook and line*	121	603	711	893	1,079	793	1,420	1,663	770	568
Sink gillnet, total*	15,172	13,643	13,829	13,280	10,962	11,555	12,653	13,769	10,475	12,016
Day Gillnet	N/A	N/A	N/A	7,278	4,783	5,122	5,123	6,884		
Trip Gillnet	N/A	N/A	N/A	3,768	3,714	3,694	4,984	5,171		
Midwater trawl	0	0	0	0	0	1	0	0	0	0
Shrimp trawl	23	35	32	41	1	1	24	2	1	4
Scallop dredge	245	206	176	177	162	165	216	309	147	11
Lobster trap	29	39	26	19	15	27	72	10	18	7
All other	171	295	221	179	137	220	576	382	185	114
Total	75,334	67,779	72,384	72,734	71,649	71,517	90,775	104,325	84,094	81,195

Groundfish revenues declined by four percent (in constant 1999 dollars) between 1994 and the adoption of Amendment 5 and FY 2002. The nadir was reached in 1996 and 1997 when revenues had declined by 13 percent from 1994. Groundfish revenues climbed until 2001 before showing the slight decline in FY 2002. The increase in groundfish revenues since 1994 was not evenly distributed. While bottom trawl vessels increased groundfish revenues by 16 percent between 1994 and 2001, longline revenues declined by 78 percent and gillnet revenues by 30 percent. Vessels fifty feet and more in length saw revenues increase five percent, while those less than fifty feet saw revenues decline by six percent.

Preliminary landings and revenue information for FY 2003 suggest a sharp decline in groundfish revenues since FY 2002 even though landings only declined 3.5 percent. In terms of constant 1999 dollars, revenues in FY 2003 were 13.4 percent lower than revenues in FY 1994 and 1.2 percent lower than revenues in FY 1996 (the year Amendment 7 was implemented). The three primary gears (trawl, longline, and sink gillnet) had lower groundfish revenues in FY 2003 than in FY 1994.

4.3 ATLANTIC HERRING FISHERY

Herring fisheries have existed in Europe for over 1,000 years and in the Northwest Atlantic for about 450 years. The U.S. Atlantic herring fishery occurs over the Mid-Atlantic shelf region from Cape Hatteras to Maine. In recent years, vessels have also pursued fish on Georges Bank. While fixed gear dominated the U.S. fishery in the 1960s, purse seines became the dominant gear type in the 1980s and early 1990s. Since the mid-1990s, the herring fishery has evolved and is now prosecuted primarily by midwater trawl (single and paired) vessels.

Table 5 reports the number of vessels engaged in the Atlantic herring fishery by principal herring gear for the 2002 – 2004 fishing years. In general, the directed herring fishery is dominated by midwater trawl and pair trawl vessels, and to a lesser extent, purse seines and fixed gear (other). Although many vessels obtain permits for the herring fishery (it is currently an open-access fishery), there are usually about 30-35 midwater trawl, pair trawl, and purse seine vessels that land the vast majority of herring in any given fishing year. During the 2005 fishing year, there were 115 vessels that held federal Category 1 permits for the Atlantic herring fishery, but less than 40 of those vessels averaged more than 2,000 pounds of herring per trip that documented herring landings. Preliminary information suggests that those vessels accounted for more than 95% of the total herring landings during the 2005 fishing year.

The DSEIS for Amendment 1 to the Atlantic Herring FMP should be referenced for more detailed information about the herring fishery participants.

Table 5 Number of Vessels by Principal Herring Gear for 2002 – 2004

	2002	2003	2004
Bottom Trawl	67	56	56
Midwater Pair Trawl	13	16	13
Midwater Trawl	15	10	9
Purse Seine	7	6	4
Other	45	52	43
Total	147	140	125

Most U.S. commercial catches of Atlantic herring occur between May and October in the Gulf of Maine, consistent with the peak season for the lobster fishery. In addition, there is a relatively substantial winter fishery in southern New England, and catches from Georges Bank have increased somewhat in recent years. There is a very small recreational fishery for Atlantic herring that generally occurs from early spring to late fall, and herring is caught by tuna boats for use as live bait in the recreational tuna fisheries. In addition, there is a Canadian fishery for Atlantic herring from New Brunswick to St. Lawrence, which primarily utilizes fixed gear. Fish caught in the New Brunswick (NB) weir fishery are assumed to come from the same stock (inshore component) as that targeted by U.S. fishermen.

Table 6 reports per vessel average value of herring landings and the average dependence on herring and mackerel by principal gear for vessels that averaged greater than 1 mt per trip. Vessels principally using purse seine gear are the most dependent on herring in that approximately 84% of the value of their catch is derived from herring. Purse seine vessels do not depend on mackerel for income. In 2004, purse seine vessels had the highest average yearly gross revenue of \$828,277 per vessel. Single midwater trawls get as much as 44% of their revenue from herring and as much as 25% from mackerel, on average. These vessels had yearly gross revenues from herring in 2004 of \$266,335 per vessel. Pair trawl vessels derive as much as 63% of their revenue from herring and as much as 49% of their revenue from mackerel. In 2004 their average yearly gross revenue was \$684,139 per vessel. Bottom trawl vessels are the least dependent on herring and only derive about 6% of their revenue from herring. Their average gross revenue from herring in 2004 was \$36,257.

Table 6 Per Vessel Average Herring Value and Dependency on Herring and Mackerel by Principal Herring Gear for 2002 – 2004 (for vessels averaging greater than 1 mt per trip)

		2002	2003	2004
Bottom Trawl	Average Herring Value	36,585	21,041	36,257
	Average Percent Herring	7.1%	4.1%	N/A
	Average Percent Mackerel	6.6%	7.6%	N/A
Pair Trawl	Average Herring Value	555,265	660,050	684,139
	Average Percent Herring	50.6%	63.1%	N/A
	Average Percent Mackerel	49.3%	31.6%	N/A
Midwater Trawl	Average Herring Value	297,454	289,282	266,335
	Average Percent Herring	31.4%	43.9%	N/A
	Average Percent Mackerel	24.8%	19.1%	N/A
Purse Seine	Average Herring Value	436,533	676,463	828,277
	Average Percent Herring	81.7%	85.6%	N/A
	Average Percent Mackerel	0.0%	0.0%	N/A

Some updated information about the herring fishery is provided in the following subsections and was extracted from the DSEIS for Amendment 1 to the Atlantic Herring FMP. This document should be referenced for additional information about the herring fishery.

4.3.1 Atlantic Herring Landings

Vessel Trip Reports

Table 7 summarizes herring landings by month and management area from 2000-2004, based on vessel trip reports. In general:

- Landings from Area 1A declined significantly after the implementation of the Herring FMP in 2000, including a 60,000 mt TAC for Area 1A. Landings from 1A averaged 74,967 mt from 1995-1999 compared to 58,844 mt from 2000-2004 (21.5% decline in landings from 1A).
- Landings from the Area 2 winter fishery also declined significantly after the implementation of the Herring FMP. Landings from Area 2 averaged 26,053 mt from 1995-1999 compared to 16,337 mt from 2000-2004 (37.3% decline in landings from Area 2). This could be attributable to recent increases in the Atlantic mackerel fishery in Area 2.
- Although more variable over the time series, landings from Area 3 (Georges Bank) increased after the implementation of the Herring FMP. Landings from Area 3 averaged 8,316 mt from 1995-1999 compared to 18,303 mt from 2000-2004 (120% increase in landings from Area 3). Landings from Area 3 in 2004 decreased, which is likely due, at least in part, to the fishery interactions with juvenile haddock bycatch on GB during the summer of 2004; many vessels claim to have tied up or fished in other areas during this time.

Table 7 Atlantic Herring Landings (Metric Tons) by Month and Management Area, 2000-2004 (VTR)

YEAR	AREA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2000	1A	3	99	76	1,607	7,357	9,947	15,055	12,189	4,806	9,081	713		60,931
	1B		0	127		169	234	432	73	410	0	5,926		7,372
	2X	9,079	9,842	2,358	203	19	0	0	2	4	2	860	4,552	26,923
	3X	54		537	87	38		743	3,078	6,979	2,048	27	0	13,591
TOTAL		9,137	9,941	3,098	1,896	7,582	10,181	16,230	15,342	12,200	11,132	7,526	4,552	108,818
2001	1A	3	1,715	1,273	2,814	6,587	8,578	8,190	7,254	5,046	9,243	2,689	137	53,530
	1B	63	1	68	45	134	110		839	1,925	369	5,717	6,402	15,674
	2X	9,084	4,429	447	869	56	100	55	2	96	3	64	623	15,828
	3X						755	7,492	8,271	12,136	5,972	314	53	34,992
TOTAL		9,150	6,144	1,788	3,728	6,778	9,543	15,738	16,367	19,203	15,587	8,784	7,215	120,025
2002	1A	1,653	1,223	852	2,987	249	9,792	13,290	7,455	7,805	5,897	8,771	311	60,284
	1B	1,701	793	436	112	1,133	374	531	135	293	20	14	1,766	7,310
	2X	5,499	4,237	593	79	187	0	1	1	138	1	125	449	11,310
	3X	589	0		43	733	792	3,324	2,064	3,853	2,750	4		14,154
TOTAL		9,442	6,253	1,881	3,222	2,302	10,959	17,146	9,655	12,089	8,668	8,913	2,526	93,057
2003	1A	185	11	14	260	4,151	9,826	6,082	12,557	12,518	6,821	7,129		59,552
	1B	0			122	9	194	980	239	113	1	1,608	2,100	5,366
	2X	4,535	3,188	1,931	343	352	0	1	2	453	3	115	5,014	15,938
	3X			17	172	97	673	11,011	2,677	1,653	3,551	6	2	19,859
	4X										121			121
TOTAL		4,720	3,199	1,962	897	4,609	10,693	18,072	15,475	14,737	10,497	8,858	7,116	100,836
2004	1A	53	3	13	456	5,274	10,286	10,318	8,655	7,721	8,800	8,234	108	59,922
	1B	2,667						139	696	2,596	687	4,147	2,698	13,629
	2X	1,631	4,220	1,447	1,646	90	1	1	1	3	2	132	2,510	11,684
	3X					17		1,432	4,852	2,114	317	181	2	8,917
TOTAL		4,351	4,223	1,461	2,102	5,381	10,287	11,890	14,204	12,435	9,806	12,695	5,318	94,152

Note: The Atlantic Herring FMP became effective at the start of the 2000 fishing year.

Area 4X includes landings that were reported with coordinates in Canadian waters.

**2004 data are preliminary.*

Interactive Voice Response (IVRs) – Preliminary 2005 Landings

The main reason for utilizing the IVR system in the Atlantic herring fishery is to monitor the Total Allowable Catch (TAC) limits set for the four Federal management areas. As part of the herring FMP, each management area is annually assigned a TAC (in metric tons). Although harvesters are required to report catches with VTR forms, near real-time data is obtained through the IVR system allowing the TACs to be monitored. When the catch in a management area is projected to reach 95% of its specified TAC, the Regional Administrator enacts a closure for all directed herring fishing.

Table 8 Total Allowable Catches for 2005

Management Area	TAC (mt)	95% of TAC (mt)
Area 1A (Jan 1 st – May 31 st)	6,000	5,700
Area 1A (June 1 st – Dec 31 st)	54,000	51,300
Area 1A TOTAL	60,000	57,000
Area 1B	10,000	9,500
Area 2	30,000	28,500
Area 3	50,000	47,500

Table 9 provides preliminary IVR catches for the 2005 fishing year. Overall, the IVR reports totaled 96,895 mt of herring across all management areas. The Area 3 landings remained relatively low, similar to 2004 (11,905 mt), and only 26% of the Area 3 TAC was utilized during the 2005 fishing year. Note that IVR reports do not include trip-level information and precise fishing locations, so some discrepancies in catch and area must be resolved by cross-checking the IVR data with VTR data. However, the IVR system is useful for near real-time quota monitoring but not so much for stock assessment, or management questions that require information by sub-area or gear.

Table 9 Preliminary IVR Herring Catch for 2005 Fishing Year

Management Area	IVR Catch (mt)	% of TAC
Area 1A (Jan 1 st – May 31 st)	0	0
Area 1A (June 1 st – Dec 31 st)	61,570	102.6% of 60,000
Area 1B	7,873	78.73% of 10,000
Area 2	14,423	48.1% of 30,000
Area 3	13,029	26.1% of 50,000

Spatial Distribution of Fishing Effort

Figure 4 illustrates the general distribution of herring fishing effort by management area during the 2000-2004 fishing years. The majority of the fishery occurs in Area 1A (inshore Gulf of Maine). The fisheries in Areas 2 and 3 continue to evolve as market, fishery, and environmental conditions allow.

Figure 4 Distribution of Herring Fishing Effort by Management Area, 2000-2004

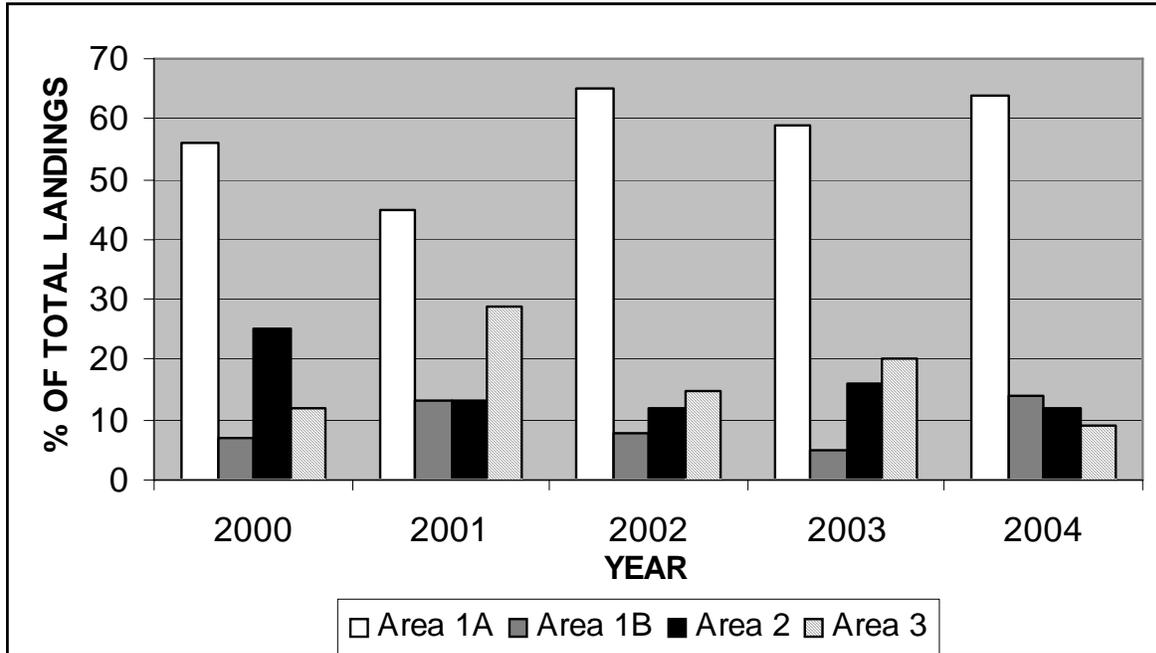
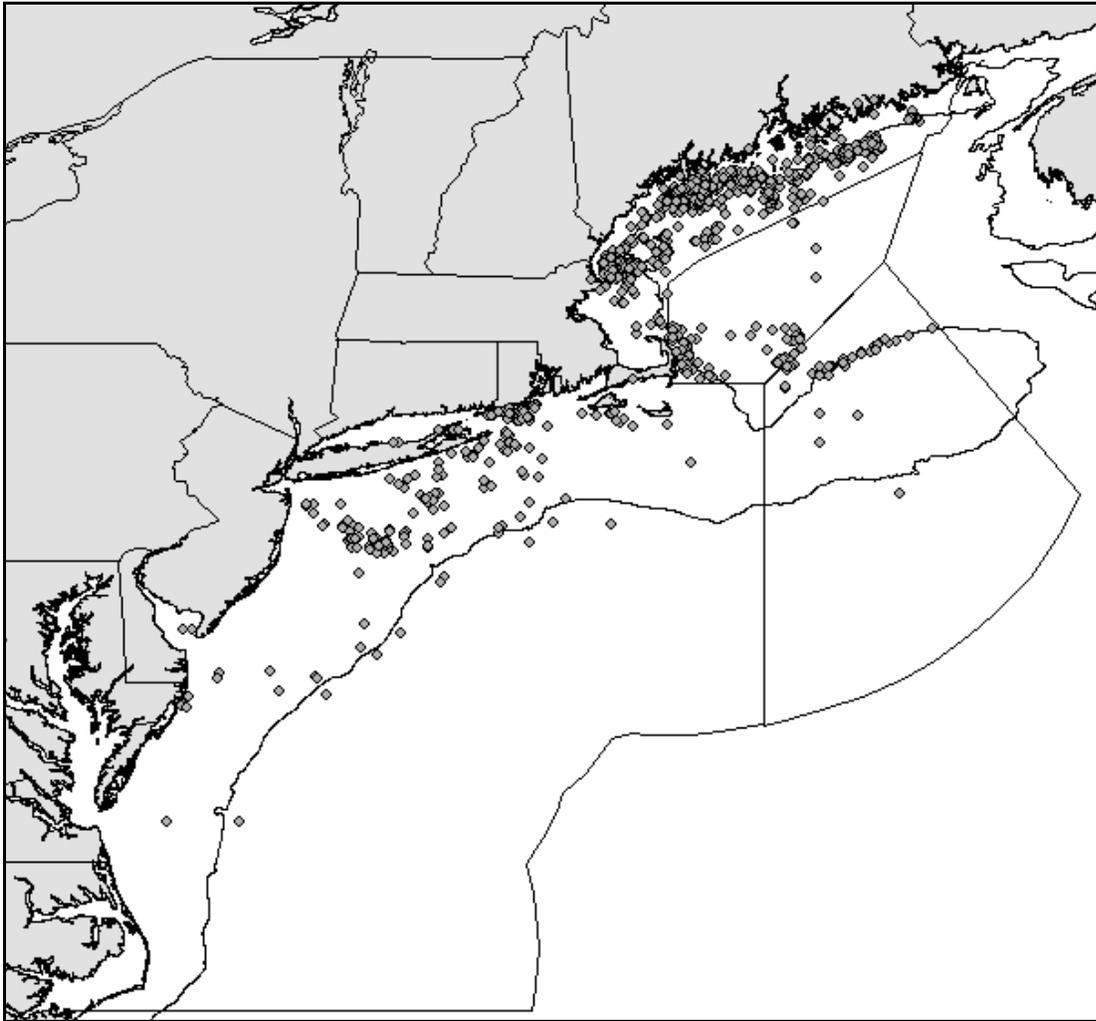


Figure 5 illustrates the spatial distribution of effort in the Atlantic herring fishery for the 2004 fishing year. Total landings in 2004 were 94,152* mt with 64% from Area 1A (59,922 mt), 14% from Area 1B (13,629 mt), 12% from Area 2 (11,984 mt) and 9% from Area 3 (8,917 mt). In Area 1A, fishing activity remained relatively the same as in 2003 with perhaps slightly more fish removed from banks off midcoast Maine. Fishing activity in Area 1B was again focused along the eastern shore of Cape Cod. There was also some activity on the portion of Franklin Swell in Area 1B. The fishery in Area 2 was widely distributed between Block Island, RI and Hudson Canyon located southeast of New York City. Fishing in Area 3 was scattered along the northern edge of Georges Bank and a small amount of activity occurred on Franklin Swell.

The Area 3 catch was extremely reduced in 2004 to only 8,917 mt or 15% of the available quota. The reduction in catch from Area 3 may be due in large part to increased encounters with juvenile haddock bycatch on Georges Bank during the summer of 2004; many vessels reported significant reductions in fishing activity on GB during this time due to concerns about the potential for violations associated with possessing juvenile haddock. Additional catches occurred throughout all management areas and largely represent reports of small amounts of herring from vessels engaged in other fisheries. These catches include herring landed in conjunction with mackerel from waters off the mid-Atlantic coast.

Figure 5 VTR Catches of Atlantic Herring (>500 lb) for 2004



4.3.2 Bycatch

4.3.2.1 Background

The herring fishery primarily targets herring in the Georges Bank and the Gulf of Maine regions. The primary sectors of this fishery, based on the gear types employed, include midwater trawl, pair trawl, and purse seines. Fishing with single and paired midwater trawls currently accounts for approximately 75% or more of the herring landings.

Regulatory discards comprise a small percentage of the bycatch in the herring fishery. Regulatory discards occur when retention of certain species is limited or prohibited by regulations, such as by trip limits, overall catch quotas, and/or minimum fish sizes. Most of the bycatch species in the herring fishery attributable to regulatory discards are spiny dogfish. However, discretionary discards (e.g., discards that occur because the fish are not marketable) and protected species (i.e., species listed as threatened or endangered under the Endangered Species Act, and marine mammals) bycatch also occur in this fishery.

Bycatch is defined as “fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.”

Incidental catch is defined as any non-targeted fish which are retained for sale or personal use. Incidental catch is different from bycatch in that it is **not discarded**.

Regulated species (also referred to as regulated multispecies) are defined in the Northeast Multispecies Fishery Management Plan to include: Atlantic cod, witch flounder, American plaice, yellowtail flounder, haddock, pollock, winter flounder, windowpane flounder, redfish, and white hake.

Small-mesh multispecies means the subset of Northeast multispecies that includes silver hake, offshore hake, and red hake.

Bycatch of all species in the Atlantic herring fishery is discussed in great detail in Amendment 1 to the Atlantic Herring FMP. Amendment 1 and its DSEIS/FSEIS provides information about bycatch in the Atlantic herring fishery from all sources:

- Vessel Trip Reports (VTRs);
- Interactive Voice Response Reports (IVRs);
- NEFSC Sea Sampling (Observer) Data;
- Catch Reports from Foreign Vessels Fishing Under Allocations for Total Allowable Level of Foreign Fishing (TALFF) in 2001 and Observer Reports (Raw Data) from Foreign Processing Vessels Engaged in Joint Venture (JV) Operations in 2001;
- ME DMR Observer Data 1997/1998, Collected in Cooperation with Manomet Center for Conservation Sciences;
- Results from a Herring Portside Bycatch Survey Conducted by ME DMR; and
- Observer Data from the Canadian Midwater Trawl Fishery on Georges Bank.

Summary information relative to NEFSC observer data only is provided in the following subsections of this document. The Amendment 1 DSEIS and FSEIS should be referenced for more information. In addition, bycatch data specific to groundfish in the herring fishery is presented in **Appendix I** of this framework adjustment document.

4.3.2.2 Sea Sampling (Observer) Data

The NMFS Sea Sampling Database is the basis for the Council’s current SBRM and the primary source of bycatch information at this time. The database was queried for catch and bycatch data on all observed trips using midwater trawl, pair trawl, and purse seine gear between 1994 and 2004 inclusive. The query pulled all trips from the Observer Database that listed Atlantic herring as one of five target species or that documented 2,000 pounds or more of Atlantic herring as “kept.”

A total of 156 trip records were obtained from 1994-2004:

- 26 purse seine trips;
- 41 midwater trawl trips; and
- 89 pair trawl trips.

4.3.2.2.1 Purse Seines 1994-2004

Table 10 and Table 11 summarize all catch and bycatch information observed by NMFS on 26 purse seine trips between 1994-2004. Twenty five of these 26 trips were observed during the 2004 fishing year. Overall, bycatch amounted to 2.04% of the total catch on the observed purse seine trips. The vast majority of observed bycatch (99.6%) was Atlantic herring and spiny dogfish. Regulated species bycatch totaled 220 pounds and accounted for 0.0043% of the total catch observed. Redfish (ocean perch) was the only regulated species observed as bycatch on herring purse seine vessels.

Table 10 Catch and Discards (Lbs.) of All Species on 26 Observed Herring Purse Seine Trips from 1994 – 2004

SPECIES CAUGHT	DISCARD LBS.	KEPT LBS.	TOTAL CATCH LBS.
BLUEFISH	0	26	26
DOGFISH, SPINY	13,493	170	13,663
HERRING, ATLANTIC	91,365	5,053,250	5,144,615
LOBSTER, AMERICAN	75	0	75
LUMPFISH	29	0	29
MACKEREL, ATLANTIC	42	319	361
REDFISH, NK (OCEAN PERCH)	220	0	220
SEAWEED, NK	8	0	8
SQUID, NK	15	0	15
SQUID, SHORT-FIN	68	5	73
GRAND TOTAL	105,315	5,053,770	5,159,085

Source: NMFS Observer Database

Some purse seine trips prior to 2001 may be missing from the database (three trips from 2000 are known to be missing).

Note: The purse seine fishery is primarily a summer/fall fishery (June – November).

Regulated species catch highlighted in grey.

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

Table 11 Observed Purse Seine Bycatch Percentages (26 Trips 1994-2004)

BYCATCH	TOTAL LBS. BYCATCH	BYCATCH % OF TOTAL BYCATCH (105,315 lbs.)	BYCATCH % OF TOTAL CATCH (5,159,085 lbs.)
Atlantic Herring	91,365	86.8%	1.77%
Atlantic Mackerel	42	0.04%	0.0008%
Regulated Multispecies	220	0.21%	0.0043%
Small Mesh Multispecies	0	0%	0%
Spiny Dogfish	13,493	12.81%	0.26%
All Species	105,315	100%	2.04%

Source: NMFS Observer Database

Some purse seine trips prior to 2001 may be missing from the database (three trips from 2000 are known to be missing).

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

4.3.2.2.2 Midwater Trawls (Single) 1994-2004

Table 12 and Table 13 summarize all catch and bycatch information observed by NMFS on 41 midwater trawl (single) trips between 1994-2004. Twenty of these 41 trips were observed during the 2004 fishing year. Total bycatch accounted for 3.68% of the total catch, by weight, on these observed trips. The vast majority (98%) of the bycatch observed on these trips consisted of Atlantic herring and spiny dogfish. Regulated species bycatch amounted to 1,034 pounds on these 41 trips (0.014% of total catch) and consisted primarily of haddock and pollock, along with small amounts of redfish and white hake, and even smaller amounts of some flounder species.

Table 12 Catch and Discards (Lbs.) of All Species on 41 Observed Herring Midwater Trawl (Single) Trips from 1994 – 2004

SPECIES CAUGHT	DISCARD LBS.	KEPT LBS.	TOTAL CATCH LBS.
ALEWIFE	1	66,138	66,139
BLUEFISH	305	73	378
BUTTERFISH	1	1	2
COD, ATLANTIC	109	11	120
DEBRIS, FISHING GEAR	20	0	20
DOGFISH, SMOOTH	40	0	40
DOGFISH, SPINY	70,998	0	70,998
EEL, NK	3	0	3
FISH, NK	2,000	0	2,000
FLOUNDER, AMERICAN PLAICE	5	0	5
FLOUNDER, SAND DAB (WINDOWPANE)	2	0	2
FLOUNDER, WINTER (BLACKBACK)	8	2	10
FLOUNDER, WITCH (GREY SOLE)	3	0	3
FLOUNDER, YELLOWTAIL	4	1	5
HADDOCK	377	418	795
HAKE, LONGFIN	10	0	10
HAKE, RED (LING)	26	0	26
HAKE, SILVER (WHITING)	643	2	645
HAKE, WHITE	81	0	81
HERRING, ATLANTIC	204,650	7,175,258	7,379,908
HERRING, BLUEBACK	0	3,602	3,602
HERRING, NK (SHAD)	740	10,700	11,440
JELLYFISH, NK	1	0	1
LUMPFISH	313	0	313
MACKEREL, ATLANTIC	206	113,833	114,039
MONKFISH (ANGLER, GOOSEFISH)	36	9	45
OCEAN POUT	13	0	13
POLLOCK	359	4	363
REDFISH, NK (OCEAN PERCH)	86	0	86
SCULPIN, LONGHORN	4	0	4
SCULPIN, NK	1	0	1
SHAD, AMERICAN	2	0	2
SHRIMP, NK	0	0	0
SKATE, NK	75	0	75
SKATE, SMOOTH	5	0	5
SQUID, ATL LONG-FIN	5	0	5
SQUID, NK	1	0	1
SQUID, SHORT-FIN	135	0	135
STARFISH, SEASTAR, NK	1	0	1
GRAND TOTAL	281,269	7,370,052	7,651,321

Source: NMFS Observer Database

Regulated species catch highlighted in grey.

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

Table 13 Observed Midwater Trawl (Single) Bycatch Percentages (41 Trips 1994-2004)

BYCATCH	TOTAL LBS. BYCATCH	BYCATCH % OF TOTAL BYCATCH (281,269 lbs.)	BYCATCH % OF TOTAL CATCH (7,651,321 lbs.)
Atlantic Herring	204,650	72.76%	2.68%
Atlantic Mackerel	206	0.073%	0.003%
Regulated Multispecies	1,034	0.37%	0.014%
Small Mesh Multispecies	669	0.24%	0.009%
Spiny Dogfish	70,998	25.24%	0.93%
All Species	281,269	100%	3.68%

Source: NMFS Observer Database

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

4.3.2.2.3 Pair Trawls 1994-2004

Table 14 and Table 15 summarize all catch and bycatch information observed by NMFS on 85 midwater pair trawl trips between 1994-2004. Sixty of these 85 trips were observed during the 2004 fishing year. Total bycatch accounted for 1.44% of the total catch, by weight, on these observed trips. The majority (92.7%) of the bycatch observed on these trips consisted of Atlantic herring and spiny dogfish. Regulated species bycatch amounted to 11,342 pounds on these 85 trips (0.05% of total catch) and consisted primarily of haddock and redfish, along with small amounts of cod, pollock, and white hake.

Table 14 Catch and Discards (Lbs.) of All Species on 85 Observed Herring Pair Trawl Trips from 1994 – 2004*

SPECIES CAUGHT	DISCARD LBS.	KEPT LBS.	TOTAL LBS.
ALEWIFE	3,104	26,714	29,818
BASS, STRIPED	50	0	50
BLUEFISH	222	0	222
BUTTERFISH	736	359	1,095
COD, ATLANTIC	110	5	115
DEBRIS, FISHING GEAR	182	0	182
DOGFISH, SPINY	116,284	300	116,584
FLOUNDER, AMERICAN PLAICE	22	0	22
FLOUNDER, NK	1	0	1
FLOUNDER, WITCH (GREY SOLE)	2	0	2
HADDOCK	8,357	661	9,018
HAKE, RED (LING)	33	7	39
HAKE, SILVER (WHITING)	4,285	3,485	7,770
HAKE, WHITE	83	0	83
HERRING, ATLANTIC	201,107	22,456,459	22,657,566
HERRING, BLUEBACK	0	15,206	15,206
HERRING, NK (SHAD)	100	0	100
LUMPFISH	225	0	225
MACKEREL, ATLANTIC	3,328	864,642	867,970
MACKEREL, NK	40	9,260	9,300
MENHADEN, ATLANTIC	85	0	85
MONKFISH (ANGLER, GOOSEFISH)	77	0	77
POLLOCK	92	10	102
REDFISH, NK (OCEAN PERCH)	2,676	107	2,783
ROSEFISH, BLACK BELLY	2	0	2
SCULPIN, LONGHORN	276	0	276
SEAWEED, NK	25	0	25
SHAD, AMERICAN	20	1,476	1,496
SHAD, HICKORY	0	5,968	5,968
SHRIMP, NK	400	0	400
SQUID, ATL LONG-FIN	46	300	346
SQUID, NK	1	1,600	1,601
SQUID, SHORT-FIN	323	1,572	1,895
GRAND TOTAL	342,291	23,388,130	23,730,421

Source: NMFS Observer Database

*Four additional trips observed in 2003 did not record any data (no hauls were made).

Regulated species catch highlighted in grey.

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

Table 15 Observed Midwater Pair Trawl Bycatch Percentages (85 Trips 1994-2004*)

BYCATCH	TOTAL LBS. BYCATCH	BYCATCH % OF TOTAL BYCATCH (342,291 lbs.)	BYCATCH % OF TOTAL CATCH (23,730,421 lbs.)
Atlantic Herring	201,107	58.75%	0.85%
Atlantic Mackerel	3,328	0.97%	0.014%
Regulated Multispecies	11,342	3.31%	0.05%
Small Mesh Multispecies	4,318	1.26%	0.018%
Spiny Dogfish	116,284	33.97%	0.49%
All Species	342,291	100%	1.44%

Source: NMFS Observer Database

*Four additional trips observed in 2003 did not record any data (no hauls were made).

These data should not be interpreted or extrapolated to represent fishery-wide bycatch for any gear type or area at this time.

4.3.2.2.4 Haddock Bycatch

Table 16 and Table 17 summarize haddock bycatch observed on directed trips in the Atlantic herring fishery from 1994-2004. In the past, haddock bycatch has been an insignificant component of the herring fishery. Of the 156 trips observed in this fishery from 1994-2004, only 21 encountered haddock bycatch, and 17 of these 21 trips were observed during the 2004 fishing year, at the same time the industry expressed concern about increasing encounters with an exceptionally large year class of haddock on Georges Bank.

Table 16 Observed Haddock Bycatch by Gear Type, Statistical Area, and Month (156 trips, 1994-2004)

STAT AREA	513		514	521		522					561	Grand Total
YEAR	2004		2004	2004		2000	2003	2004			2003	
MONTH	07	08	08	11	12	01	10	07	08	09	10	
MIDWATER TRAWL	263			435		0.5			96.9			795.4
PAIR TRAWL		38	2	404.4	1,433		41	6,507	320.5	260.2	12	9,018.1
Grand Total	263	38	2	839.4	1,433	0.5	41	6,507	417.4	260.2	12	9,813.5

Table 17 Haddock Bycatch (Pounds) Observed Per Observed Trip

2000	2003	2004	
0.5			
	10		
		190	
	2		
	41		
		28.2	
		15	
		6,507	
		240	
		80.5	
		40	
		55	
		70	
		3	
		1,433	
		96.9	
		41	
		136	
		404	
		0.4	
		420	
TOTAL 0.5	TOTAL 53	TOTAL 9,760	TOTAL 9,813.5

156 trips observed 1994-2004; 21 of these trips had haddock bycatch.

105 trips observed in 2004; 17 of these trips had haddock bycatch.

4.3.2.2.5 2005 Observer Data (Preliminary)

For calendar year 2005, observer days for the herring fishery were allocated by area, gear, and month by using average landings from 2001-2003. Stratified landings were used to calculate relative proportions that were used to allocate the sea days. During the 2003 herring fishing year, the purse seine, midwater trawl, and pair trawl fleet fished a total of 3,027 days on trips where landings were at least 1 metric ton (the FMP's definition of a directed trip).

A total of 66 days were carried forward from the 2004 schedule to 2005 and 500 additional days were available for 2005 for a total of 566 sampling days. Based on the number of trips in 2003, this would provide for a coverage rate of 18.7% in 2005 (Table 18). This is the same method that was used to allocate days in 2004.

Table 18 Number of NMFS Observer Days Scheduled for 2005 by Area, Gear, and Quarter Based on Landings Patterns During 2001-2003

Gear Type	Management Area	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Midwater Trawl	Area 1	3	26	20	27	76
	Area 2	15	3	0	3	21
	Area 3	1	2	33	10	46
Pair Trawl	Area 1	10	47	67	71	195
	Area 2	20	0	1	9	30
	Area 3	0	3	64	19	86
Purse Seine	Area 1	0	14	77	21	112
	Area 2	0	0	0	0	0
	Area 3	0	0	0	0	0
Totals		49	95	262	160	566

Preliminary analysis of the 2005 observer data (Feb 2005) provides information for a total of 172 trips – 41 purse seine trips (one combined trip with midwater trawl gear), 44 midwater trawl trips (one combined trips with purse seine gear), and 88 pair trawl trips. Based on preliminary information about the number of trips taken in the herring fishery during 2005, the current database of observed trips represents **20.3%** of purse seine trips, **15.1%** of midwater trawl trips, and **17%** of pair trawl trips taken in the fishery in 2005. In total, the observer coverage in 2005 represents about 17% of the herring fishery (Note: discussion in the Amendment 1 DSEIS should be referenced for information about how pair trawl trips in the herring fishery are counted).

Total catch on the observed trips in 2005 was 43,579,472 pounds, with 1,171,301 pounds of bycatch (2.688%, see Table 19). Total observed bycatch percentages were lowest for midwater trawl trips (0.972%), followed by purse seine trips (1.864%) and pair trawl trips (3.558%).

Table 19 Total Observed Catch and Bycatch in the Herring Fishery, 2005

	MIDWATER TRAWL	PAIR TRAWL	PURSE SEINE	TOTAL
DISCARD LBS	80,877	909,931	180,492	1,171,301
KEPT LBS	8,241,521	24,665,474	9,501,175	42,408,169
UNKNOWN LBS			2	2
GRAND TOTAL LBS	8,322,398	25,575,405	9,681,668	43,579,472
% BYCATCH	0.972%	3.558%	1.864%	2.688%

Table 20 summarizes all catch and bycatch information observed by NMFS on 41 purse seine trips during the 2005 fishing year (no matter what species was the primary target of the trip). This represents a significant increase in observer coverage for this gear type, as only 26 purse seine trips were observed in total between 1994-2004. Overall, bycatch amounted to 1.864% of the total catch on the observed purse seine trips in 2005. Regulated species bycatch totaled 2 pounds of redfish on these trips. Herring and spiny dogfish accounted for the majority of observed purse seine bycatch in 2005; no haddock bycatch was observed on these trips.

Table 20 Catch and Discards (Lbs.) of All Species on 41 Observed Herring Purse Seine Trips in 2005

SPECIES	DISCARD	KEPT	UNKNOWN	TOTAL
BASS, STRIPED	6			6
BLUEFISH	90			90
DOGFISH, SPINY	4,990			4,990
FLOUNDER, YELLOWTAIL		4		4
HAKE, SILVER (WHITING)		5		5
HERRING, ATLANTIC	175,304	9,497,993		9,673,297
HERRING, BLUEBACK		8		8
LOBSTER, AMERICAN	46			46
LUMPFISH	0			0
MACKEREL, ATLANTIC	37	2,808		2,845
REDFISH, NK (OCEAN PERCH)			2	2
SCULPIN, LONGHORN	9	83		92
SCULPIN, NK	6			6
SHAD, AMERICAN		59		59
SKATE, LITTLE		10		10
SKATE, NK	2			2
SQUID, NK	2			2
SQUID, SHORT-FIN		205		205
GRAND TOTAL	180,492	9,501,175	2	9,681,668

Table 21 summarizes all catch and bycatch information observed by NMFS on 44 midwater trawl trips during the 2005 fishing year (no matter what species was the primary target of the trip). Overall, bycatch amounted to 0.972% of the total catch on the observed midwater trawl trips in 2005. Regulated species catch (kept and discard) totaled 23,925 pounds and accounted for 0.287% of the total catch observed. Most of the regulated species bycatch consisted of haddock, redfish, and white hake. Spiny dogfish, herring, mackerel, and haddock accounted for the majority of bycatch on the observed midwater trawl trips during 2005.

Table 21 Catch and Discards (Lbs.) of All Species on 44 Observed Herring Midwater Trawl Trips in 2005

SPECIES	DISCARD	KEPT	TOTAL
ALEWIFE	801	2,660	3,461
BASS, STRIPED	476	31	507
BLUEFISH	12		12
BUTTERFISH	1	9	10
COD, ATLANTIC	33	8	41

Table 21 continued. Catch and Discards (Lbs.) of All Species on 44 Observed Herring Midwater Trawl Trips in 2005

SPECIES	DISCARD	KEPT	TOTAL
DEBRIS, FISHING GEAR	355		355
DEBRIS, NK	30		30
DEBRIS, PLASTIC	5		5
DOGFISH, SPINY	21,050	72	21,122
FISH, NK	1,000		1,000
FLOUNDER, AMERICAN PLAICE	20		20
FLOUNDER, NK	19		19
FLOUNDER, SUMMER (FLUKE)		100	100
FLOUNDER, WINTER (BLACKBACK)	13		13
FLOUNDER, WITCH (GREY SOLE)	5		5
FLOUNDER, YELLOWTAIL	8		8
HADDOCK	18,650	1,108	19,758
HAKE, NK	809	5	814
HAKE, RED (LING)	439		439
HAKE, SILVER (WHITING)	7,645	955	8,600
HAKE, WHITE	698	413	1,111
HERRING, ATLANTIC	15,603	7,127,206	7,142,809
HERRING, BLUEBACK		155	155
LUMPFISH	479	32	511
MACKEREL, ATLANTIC	7,428	1,089,541	1,096,969
MENHADEN, ATLANTIC		20	20
MONKFISH (ANGLER, GOOSEFISH)	29	51	80
OCEAN POUT		3	3
POLLOCK	102		102
REDFISH, NK (OCEAN PERCH)	2,467	400	2,867
SCULPIN, LONGHORN	51		51
SCUP	2,201	18,000	20,201
SEA ROBIN, NORTHERN		50	50
SEAWEED, NK	28		28
SHAD, AMERICAN	62	56	118
SHAD, HICKORY	1	10	11
SHRIMP, NK	201	8	209
SHRIMP, SCARLET		3	3
SKATE, LITTLE	1		1
SQUID, ATL LONG-FIN	9	602	611
SQUID, NK	8		8
SQUID, SHORT-FIN	140	2	142
STARFISH, SEASTAR, NK	1		1
WEAKFISH (SQUETEAGUE SEA TROUT)	1	20	21
WHITING, BLACK (OFFSHORE)		1	1
GRAND TOTAL	80,877	8,241,521	8,322,398

Table 22 summarizes all catch and bycatch information observed by NMFS on 88 pair trawl trips during the 2005 fishing year (no matter what species was the primary target of the trip). Overall, bycatch amounted to 3.558% of the total catch on the observed pair trawl trips in 2005. Regulated species catch (kept and discard) totaled 11,876 pounds and accounted for 0.046% of the total catch observed. Most regulated species bycatch consisted of haddock and pollock. Spiny dogfish, herring, mackerel, and haddock represented the majority of observed bycatch by pair trawl vessels during the 2005 fishing year.

Table 22 Catch and Discards (Lbs.) of All Species on 88 Observed Herring Pair Trawl Trips in 2005

SPECIES	DISCARD	KEPT	TOTAL
ALEWIFE	36	27,127	27,163
BASS, STRIPED	1,867		1,867
BLUEFISH	279	4	283
BONE, NK	5		5
BUTTERFISH		77	77
COD, ATLANTIC	192		192
DEBRIS, FISHING GEAR	120		120
DEBRIS, PLASTIC	0		0
DOGFISH, SPINY	55,074	75	55,149
FISH, NK	45	6	51
FLOUNDER, AMERICAN PLAICE	6		6
FLOUNDER, WITCH (GREY SOLE)	1		1
FLOUNDER, YELLOWTAIL	2		2
HADDOCK	8,658	1,475	10,133
HAGFISH, ATLANTIC	1		1
HAKE, NK	1		1
HAKE, RED (LING)	13	30	43
HAKE, SILVER (WHITING)	929	788	1,717
HAKE, WHITE	3		3
HERRING, ATLANTIC	810,450	22,661,930	23,472,380
HERRING, BLUEBACK	60	10,611	10,671
LAMPREY, NK	3		3
LUMPFISH	2,037	20	2,057
MACKEREL, ATLANTIC	27,689	1,953,141	1,980,830
MONKFISH (ANGLER, GOOSEFISH)	177	6	183
OCTOPUS, NK	0		0
POLLOCK	1,108		1,108
REDFISH, NK (OCEAN PERCH)	431		431
SCULPIN, LONGHORN	3		3
SEAWEED, NK	1		1
SHAD, AMERICAN	27	5,636	5,663
SHAD, HICKORY	15	2,805	2,820
SKATE, LITTLE	2		2
SQUID, NK	1		1
SQUID, SHORT-FIN	698	1,736	2,434
WOLFFISH, ATLANTIC		7	7
GRAND TOTAL	909,931	24,665,474	25,575,405

Table 23 summarizes observed haddock catch in the herring fishery during the 2005 fishing year for purse seine, midwater trawl, and pair trawl gear (no matter what species was the primary target of the trip). All observed haddock bycatch occurred on midwater trawl and pair trawl trips, and total observed haddock catch was 29,891 pounds, 27,308 of which was discarded (kept fish was mostly reported to have been consumed by crew).

Based on data through February 4, 2006, NMFS reports that 30,388 pounds of haddock have been documented through either observer, VTR, or dealer records for the Atlantic herring fishery. This represents 11.2% of the current catch cap of 270,000 pounds that was implemented with the NMFS Emergency Rule on June 13, 2005. This catch cap will remain effective, and haddock catch in the herring fishery will be counted against it, until June 6, 2006 when the Emergency Rule is scheduled to expire. It is anticipated that the haddock catch cap implemented with this framework adjustment will replace the Emergency Rule.

Table 23 Observed Haddock Bycatch in the Herring Fishery, 2005

GEAR	HAD DISCARD LBS	HAD KEPT LBS	HADDOCK TOTAL
MIDWATER TRAWL	18,650	1,108	19,758
PAIR TRAWL	8,658	1,475	10,133
GRAND TOTAL	27,308	2,583	29,891

4.4 PROTECTED RESOURCES

As discussed in Amendment 13 to the Northeast Multispecies FMP (NEFMC 2003), the following protected species are found in the environment utilized by the fisheries regulated by the amendment. A number of them are listed under the Endangered Species Act of 1973 (ESA) as endangered or threatened, while others are identified as protected under the Marine Mammal Protection Act of 1972 (MMPA). Two right whale critical habitat designations are located in the area of the multispecies fishery. While a list of the species is included in this document, the full descriptions are provided in the Amendment 13 Final Supplemental Environmental Impact Statement.

The identification of protected resources provided in this document addresses those species that overlap with the Atlantic herring fishery as well, since the herring fishery and multispecies fishery generally occur in the same areas in the Northeast Region. Information about protected species relative to the herring fishery is provided in its entirety in the DSEIS and Final EIS for Amendment 1 to the Herring FMP and should be referenced for more detail. The information about protected resources has been updated from the Atlantic Herring FMP (March 1999) and the recently-published Final Environmental Impact Statement (FEIS) for Minimizing Impacts of the Atlantic Herring Fishery on Essential Fish Habitat (NMFS, January 2005). Both of these documents, as well as the Environmental Assessment for the EFH components of the Herring FMP (October 1998) as well as the Amendment 1 DSEIS (August 4, 2005) and Final EIS (under development), should be referenced for additional information about protected resources that may be affected by the Atlantic herring fishery or its governing regulations.

Cetaceans

Northern right whale (<i>Eubalaena glacialis</i>)	Endangered
Humpback whale (<i>Megaptera novaeangliae</i>)	Endangered
Fin whale (<i>Balaenoptera physalus</i>)	Endangered
Blue whale (<i>Balaenoptera musculus</i>)	Endangered

Sei whale (<i>Balaenoptera borealis</i>)	Endangered
Sperm whale (<i>Physeter macrocephalus</i>)	Endangered
Minke whale (<i>Balaenoptera acutorostrata</i>)	Protected
Harbor porpoise (<i>Phocoena phocoena</i>)	Protected
Risso's dolphin (<i>Grampus griseus</i>)	Protected
Pilot whale (<i>Globicephala</i> spp.)	Protected
White-sided dolphin (<i>Lagenorhynchus acutus</i>)	Protected
Common dolphin (<i>Delphinus delphis</i>)	Protected
Spotted and striped dolphins (<i>Stenella</i> spp.)	Protected
Bottlenose dolphin (<i>Tursiops truncatus</i>)	Protected

Seals

Harbor seal (<i>Phoca vitulina</i>)	Protected
Gray seal (<i>Halichoerus grypus</i>)	Protected
Harp seal (<i>Phoca groenlandica</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
Hawksbill sea turtle (<i>Eretmochelys imbricata</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

Birds

Roseate tern (<i>Sterna dougallii dougallii</i>)	Endangered
Piping plover (<i>Charadrius melodus</i>)	Endangered

Critical Habitat Designations

Right whale Cape Cod Bay and Great South Channel

Critical Habitat Designations

Right whale Cape Cod Bay
Great South Channel

Although all of the species listed above are found in the general geographical area covered by the Multispecies and Herring FMPs, not all are affected by these fisheries. Some species may inhabit areas other than those in which the fisheries are prosecuted, prefer a different depth or temperature zone, or may migrate through areas at times when the fisheries are not in operation. In addition, certain protected species may not be vulnerable to capture or entanglement with the gears used in either the multispecies or herring fisheries. Therefore, protected species are divided into two groups. The first contains those species not likely to be affected by the proposed measures in this framework, while a second group is the subject of a more detailed assessment because of potential or documented interactions with protected species. That discussion is available in both Amendment 13 to the Northeast Multispecies FMP as well as the DSEIS and the Final EIS for Amendment 1 to the Herring FMP.

Protected Species and Critical Habitat Not Likely to be Affected by the Multispecies FMP

Following a review of the current information available on the distribution and habitat needs of the endangered, threatened, and otherwise protected species listed above in relation to the action being considered, the Council considers that multispecies and herring fishing operations and the measures proposed in Framework 43 to the Northeast Multispecies FMP are unlikely to affect the shortnose sturgeon, and the hawksbill sea turtle, both of which are species listed under the ESA. As discussed in Amendment 13 and in the herring documents, given their preferred habitat and distribution, there is little overlap between these species and the multispecies and herring fisheries making the likelihood of encounters uncommon events.

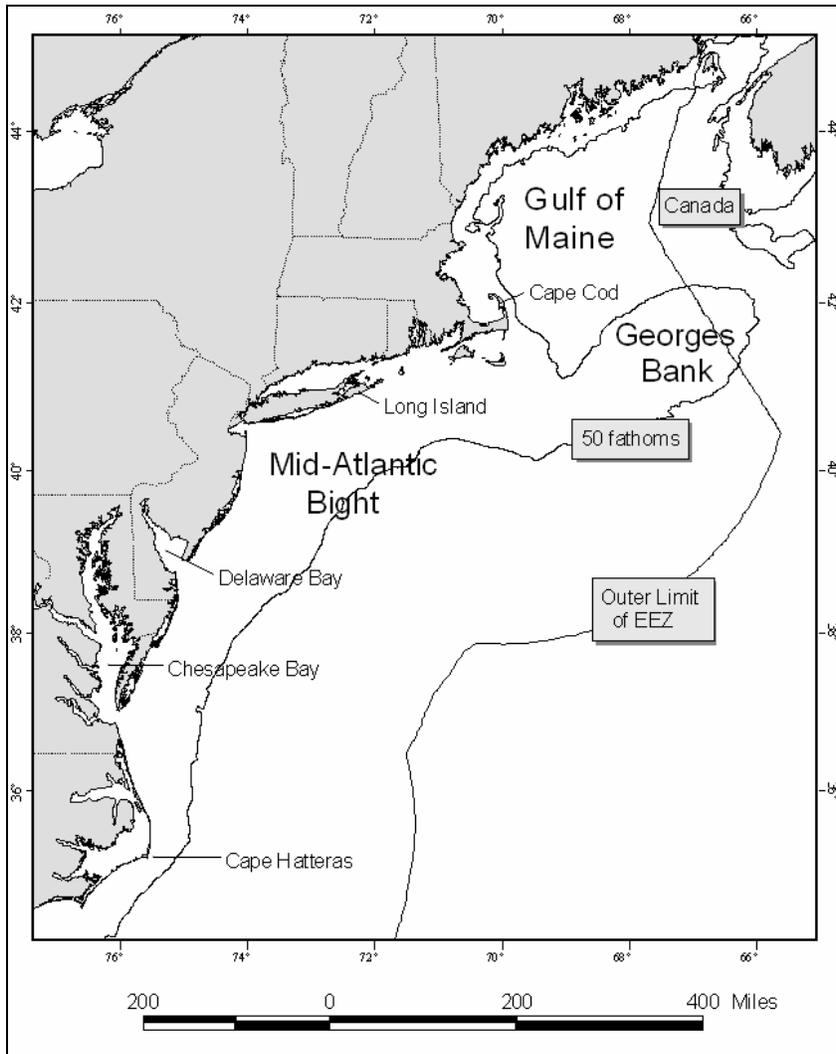
No evidence to date suggests that operation of these fisheries adversely affects the value of critical habitat designated to protect right whales. Right whale critical habitat, therefore, is not discussed further in this document.

4.5 PHYSICAL ENVIRONMENT AND ESSENTIAL FISH HABITAT (EFH)

Amendment 13 provided a detailed description of the habitat associations and functions for the multispecies fishery, throughout its range. Similarly, Amendment 1 to the Herring FMP addressed habitat associations and functions related to the Atlantic herring fishery throughout its range. These documents are incorporated by reference and should be reviewed for more detailed information. In addition, life history and habitat characteristics of the stocks managed by this FMP can be found in the Essential Fish Habitat source documents (series) published as NOAA Technical Memorandums and available at <http://www.nefsc.noaa.gov/nefsc/habitat/efh/>.

Amendment 13 to the Northeast Multispecies FMP provided a thorough description of the physical environment of the Northeast multispecies fishery, including oceanographic and physical habitat conditions in the Gulf of Maine – Georges Bank region and the area south of New England. The **Northeast Shelf Ecosystem** (Figure 6) has been described as including the area from the Gulf of Maine south to North Carolina, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream (Sherman et al. 1996). The continental slope of this region includes the area east of the shelf, out to a depth of 2000 m. A number of distinct sub-systems comprise the region, including the Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. Occasionally another subsystem, Southern New England, is described; however, Amendment 13 incorporated the distinctive features of this region into the descriptions of Georges Bank and the Mid-Atlantic Bight. No changes to multispecies essential fish habitat (EFH), habitat areas of particular concern (HAPCs), or special access programs (SAPs) are proposed in this framework adjustment, and the analysis presented in this document as well as the DSEIS for Amendment 1 to the Herring FMP suggests that the proposed action is not expected to have any impacts on the physical environment or EFH.

Figure 6 Northeast U.S. Shelf Ecosystem



5.0 ENVIRONMENTAL CONSEQUENCES – ANALYSIS OF IMPACTS

5.1 OVERALL IMPACTS

The analysis of the measures contained in the Emergency Rule and proposed in the Amendment 1 DSEIS concludes that there is little risk to the haddock resource associated with this action and that this action will result in positive impacts for the herring fishery relative to the no action alternative. Overall, no significant impacts are expected from the measures proposed in this framework adjustment.

The measures in this framework adjustment should allow the herring fleet to continue its normal fishing operations (particularly on GB), despite the presence of two large year classes of haddock. The measures provide no incentive for the industry to target haddock and any haddock landed cannot be sold for human consumption. Further, haddock culled by processors cannot be sold for any purpose. The measures maintain a haddock possession tolerance as close to zero as practicable, without causing harm to the haddock resource or slowing the haddock rebuilding schedule.

While the haddock from these two large years classes have not been fully recruited to the fishery (i.e., they are too small to be included in the calculation of the target TAC for haddock established under the NE Multispecies FMP), NMFS noted in the Emergency Rule that, on May 6, 2005 (70 FR 23939), the agency published the suspension of the haddock daily and maximum trip limits for vessels fishing under a limited access NE multispecies DAS permit. This suspension of the haddock restrictions was deemed necessary to provide the opportunity to harvest at least 75 percent of the TAC for haddock for the fishing year, which extends through April 30, 2006. Even so, given current projections of landings, the NE multispecies fishery may not fully harvest the GB haddock TAC for the current fishing year, supporting the conclusion that these measures pose very little risk to the haddock resource.

5.2 IMPACTS ON THE MULTISPECIES FISHERY

5.2.1 Biological Impacts (Multispecies)

No Action Alternative

The biological impacts of this measure depend on the behavior of herring fishermen. The no action alternative should have the fewest biological impacts on regulated groundfish. Prior to 2004, there was little data showing that herring vessels caught regulated groundfish. In 2004, however, interactions between midwater trawlers and haddock increased as the Georges Bank haddock stock increased in numbers. In order to comply with existing prohibitions on the catch and retention of groundfish, the herring fishery stopped fishing in areas where they caught groundfish. If this type of behavior were to continue and expanded into other areas as other stocks rebuilt, there would be little bycatch or incidental catch of regulated groundfish in the herring fishery.

It is also possible that as a result of increasing groundfish stocks, herring fishermen will not be able to identify either areas or seasons when they can avoid catching regulated groundfish. This could lead to two likely reactions. First, herring fishermen might develop fishing gear or methods that eliminate catches of regulated groundfish. If this were to occur, the no action alternative would continue to have the least impact on groundfish mortality. A second possible reaction would be that herring fishermen would continue to fish without avoiding or reducing groundfish catches. If this were to occur, then catches of groundfish might actually increase under the no action alternative, and those catches might be unreported as herring fishermen find ways to evade enforcement actions.

Proposed Action

The proposed action imposes a catch cap for GB and GOM haddock of 0.2 percent of the TAC for those stocks. In addition, the catch of all other regulated multispecies is limited to 100 pounds per trip, similar to the provision proposed in Bycatch Measure 2 (see the DSEIS for Amendment 1 to the Herring FMP).

This measure does not provide any incentive to target haddock, and any haddock landed cannot be sold for human consumption. Moreover, this measure should discourage herring vessels from catching large amounts of haddock as bycatch since all bycatch counts towards the overall cap for the fishery. The potential incentive to avoid catching haddock as bycatch is why this measure is proposed at this time. The overall catch cap would place a backstop on the total amount of haddock that could be caught as bycatch in the herring fishery. Moreover, this measure was widely supported by industry and other members of the public when it was originally proposed by the Bycatch Committee in March 2005.

The Council recommends elimination of haddock minimum size because herring vessels use small mesh that does not allow for escapement of herring (and, in this case, small haddock). The reason for specifying that haddock not be sold *for human consumption* is that vessels pumping herring directly into trucks for delivery into the bait market technically are selling the intermingled haddock. Recognizing that

the fishing mortality rate on haddock has been below F_{MSY} for several years, and that the biomass is expected to increase many-fold with the recruitment of the 2003 year class, allowing herring vessels to possess a limited amount of haddock should not have a significant impact on the haddock resource, the rebuilding plan, or the groundfish fishery and its communities. In the Emergency Rule published on June 13, 2005, NMFS reaches the same conclusion that there is little risk to the Georges Bank haddock stock associated with this action. This measure is intended to maintain a haddock possession tolerance as close to zero as practicable, without causing harm to the haddock resource or slowing the haddock rebuilding schedule.

The Council recommends allowance of 100 pounds total combined additional multispecies so that interactions between herring vessels and other groundfish species at very low levels do not present problems for the operation of the herring fishery, as was the case when interactions with haddock were experienced on Georges Bank during the summer 2004. The current absolute prohibition on possession of these species appears to be unrealistic given the recovery of the groundfish resources and the (presumably) increasing abundance of many of the groundfish species. Available data suggest that bycatch of other regulated species is not a significant problem in the herring fishery. The Council is proposing this measure to acknowledge that some small amounts of bycatch may occur in the herring fishery and to take a more realistic approach to limiting bycatch in this high-volume fishery. This measure will ensure that very small amounts of groundfish bycatch do not put herring vessels in violation while also maintaining a bycatch tolerance as close to zero as practicable.

One additional factor to be considered is that only catches actually documented will be applied against the proposed catch cap. Unlike other TACs that are monitored in the groundfish fishery, sea sampling observations will not be extrapolated to the fleet as a whole. To account for this, the Council decreased the haddock catch cap to 0.2% of the haddock target TAC, consistent with the expectation of at least 20% observer coverage in the herring fishery.

It is not reasonable to assume that catches of haddock take place only on observed trips or landings. If the entire catch cap is caught, it is likely that the actual catch of haddock by the herring fishery will exceed the cap. For this reason, the following discussion should be interpreted as the minimum impacts on groundfish if the catch cap is caught.

Target TACs for GOM and GB haddock will be published as part of FW 42 to the Northeast Multispecies FMP. GB haddock TACs (the largest proportion of the total haddock TAC) are set annually based on recommendations from the Trans-boundary Management Guidance Committee. Since future TACs are not known, the FW 42 estimates for FY 2007 are used to illustrate the magnitude of allowed haddock catches under this measure, and to evaluate whether that will threaten mortality targets adopted by Amendment 13. The GB haddock target TAC for FY 2007 was estimated at 73,219 mt, while the GOM haddock TAC was estimated as 1,254 mt. Recent catches for GB haddock have approached 7,500 mt, and GOM haddock catches have been about 1,000 mt.

The FY 2007 catch cap for the herring fishery of **149 mt** (328,489 lbs.) is not high enough to threaten mortality objectives if it is distributed between the two haddock stocks. If all 149 mt is captured from the GOM haddock stock, it would exceed ten percent of the total FY 2007 target TAC. Given that recent catches by groundfish fishermen have been on the order of 1,000 mt to 1,200 mt, if this entire cap is caught in the Gulf of Maine it is possible that the target TAC of GOM haddock will be exceeded, and if this is the case, rebuilding of that stock could be slowed. This comparison assumes that the herring fishery and commercial groundfish fisheries catch similar-sized fish. If the herring fishery catches smaller fish, then the haddock mortality that results from this measure will be more than inferred by comparing the catch cap to the target TAC.

Under any scenario, however, it is highly unlikely that (1) the haddock catch cap will be fully utilized by the herring fishery, and (2) the majority of haddock taken in the herring fishery will come from the Gulf of Maine. Data from the 2005 herring fishery (see Section 4.3.2.2 of this document) indicate that about 30,000 pounds of haddock bycatch was documented through either observer or dealer reports. Moreover, most of the haddock bycatch occurred on Georges Bank. Information presented in the DSEIS for Amendment 1 to the Herring FMP demonstrates that the vast majority of haddock bycatch in the herring fishery has occurred in Statistical Areas 521 and 522 (GB) in recent years. In fact, the primary reason for developing this framework adjustment is to respond to industry concerns about the recent encounters with juvenile haddock on GB, due to exceptionally large year classes in the early 2000s. The GB haddock resource continues to rebuild, and the target TAC remains less than fully utilized. For these reasons, the impacts of the proposed action on the haddock resource are expected to be minimal.

It is also helpful to evaluate the relative impacts of the removals in terms of their potential impacts on stock rebuilding and potential yield, using forgone yield or forgone spawning stock biomass (SSB). Forgone yield is an estimate of the lost landings associated with the removal of a fish at a given age. The number of individuals killed is multiplied by the yield per recruit that would occur if the group had lived out the remainder of its life subjected to an F of 0.14 and the PR pattern associated with the haddock resource. Yield forgone represent the summation of yield from all future ages and can thus be considered a measure of the net present landings value of the lost fish. The same concept can be applied to SSB, the difference being that the quantity of SSB forgone represents a reduction from the target SSB. Forgone yield and SSB are equilibrium concepts and reflect what would occur under *status quo* conditions. The realized effects are distributed over some future time frame. If conditions change over time, then the projected values will also change. Nonetheless, the “forgone” concept is useful for comparisons among scenarios.

Table 25 provides estimates of haddock forgone yield and foregone SSB under the proposed catch cap (+/- 10%) and assuming that the herring fishery is catching age 2 or 3 haddock and that haddock are exhibiting average growth patterns. Fishing mortality by groundfish vessels is assumed to be 0.14, that which is anticipated under the Amendment 13 management measures. Depending on what level the catch cap is set and how much of it is utilized by the herring fishery, foregone yield estimates range from 210,492 – 571,145 pounds, and foregone SSB ranges from 1,010.3 mt – 2,251 mt. Relative to overall yield and SSB for the haddock stocks, these losses are expected to be insignificant. While the losses are clearly more important if the majority of bycatch comes from the Gulf of Maine haddock stock, this outcome is unlikely given recent performance in the fishery and the nature of the problem that this action addresses (see previous discussion in this section).

With respect to other regulated groundfish stocks, the impacts of this measure will be the same as for Bycatch Measure 2 (see Amendment 1 DSEIS). Table 24 illustrates the possible catch of other groundfish stocks given different levels of the herring TAC in Management Area 3. It is possible that the haddock catch cap may be binding on herring vessels and could reduce the number of trips. For example, if herring trips average 1,000 lbs. of haddock, then only 328 trips would be completed before the GB haddock catch cap were reached and the catch of other species might also be reduced.

Table 24 Illustration of Groundfish Incidental Catch Amounts Under Various Herring Management Area 3 TACs

Herring TAC (mt)	Trips	Haddock (mt)	Other Groundfish Species (mt) (for each species)
50,000	435	197	20
40,000	348	158	16
30,000	261	118	12
20,000	174	79	8
10,000	87	39.5	4

In addition to removals of groundfish, this measure could result in increased interference with groundfish spawning activity if, as a result of being allowed to retain groundfish, herring vessels fish during groundfish spawning. This is of most concern for GB cod, given its depressed stock size and recent poor recruitment. There is evidence that fishing activity can disrupt spawning of cod due to the nature of spawning and the impacts of fishing gear. Cod have been shown to have distinctive spawning behaviors. Male cod compete for females and display for female individuals through circling behavior. Males also form a dominance hierarchy based on size. Female cod descend to the bottom to spawn, select males, and initiate spawning. The females release eggs about five hours after ovulation. If spawning behavior is disturbed, viable eggs may become non-viable if retained too long in the female ovary (Hutchings et al. 1999). Another study has shown that males arrive at spawning areas first and establish territories. Both female and male-dominated shoals form. The male-dominated shoals tend to be shallower and are where spawning occurs, whereas the female-dominated shoals consist mostly of spent females (Morgan and Trippel 1996). Morgan et al. (1997) reported direct evidence of the disruption of spawning aggregations by bottom trawls. An echosounder transect of a trawl track showed that trawling produced a 300-meter wide hole in spawning aggregations of cod. Densities were very low in an near the trawl track and increased up to a distance of 200-400 meters on each side of the track, with the disturbances observed to last for over an hour. These disturbances extended for a distance greater than the “hole” caused by removal of fish by the net.

Peak spawning for GB cod occurs in February and March. Most other groundfish species on GB also spawn in the spring (see Table 26). In general, the herring fishery on Georges Bank takes place later in the year, so it is likely that this measure will have little impact on groundfish spawning.

5.2.2 Economic Impacts (Multispecies)

The proposed Bycatch Measures could have economic impacts on the groundfish fishery. Catches of groundfish by herring fishing vessels could result in lost yield to groundfish vessels. The extent of the loss depends not only on the weight of groundfish caught, but on the size of fish caught.

The largest economic loss to the groundfish fishery will probably be due to haddock catches by herring vessels. Table 25 illustrates possible economic losses to groundfish fishermen at different percentages of the GB haddock TAC, with the herring fishery catching Age 2 or Age 3 fish, and assuming average haddock growth rates. This illustration is based on the 2003 year class of haddock (note these fish were already two years old in FY 2005). Fishing mortality applied by groundfish vessels is assumed to be $F=0.14$, the estimated mortality expected to result from Amendment 13 vessels. Catches by herring vessels are assumed to occur during summer months, since in recent years that is when the herring fishery takes place on Georges Bank. At 0.2 percent of the GB haddock TAC, foregone yield to the groundfish

fishery ranges from \$349,330 to \$775,939. Total nominal groundfish revenues in recent years range have been about \$80 million, so this lost yield represents less than one percent of total groundfish revenues.

Table 25 Impact of Different Levels of Haddock Bycatch Assuming Average Growth

		Haddock Discard Weight (mt)			
		Assuming Average Growth & Only Age 2 Fish		Assuming Average Growth & Only Age-3 Fish	
		Percent of haddock TAC (by weight)			
Month	0.2%	Month	0.2%		
July	37.2	July	15.0		
August	37.2	August	15.0		
Sept	37.2	Sept	15.0		
October	37.2	October	15.0		
Total	148.9	Total	60.0		
Haddock Bycatch (number of age-2 fish)		Haddock Bycatch (number of age-3 fish)			
July	134,939	July	45,812		
August	119,159	August	43,017		
Sept	105,733	Sept	40,444		
October	94,239	October	38,071		
Total	454,069	Total	167,344		
Haddock Forgone Yield (pounds)		Haddock Forgone Yield (pounds)			
Yield per age-2 recruit at F=0.14 is		1.5363425	Yield per age-3 recruit at F=0.14		1.8704185
		pounds	is		pounds
July	169,731		July	70,383	
August	149,882		August	66,089	
Sept	132,995		Sept	62,136	
October	118,538		October	58,490	
Total	571,145		Total	210,492	
Haddock Forgone Ex-vessel Value					
Assuming 2003 average price/lb with 3% inflation= \$1.36					
July	\$230,591		July	\$95,632	
August	\$203,625		August	\$89,798	
Sept	\$180,682		Sept	\$84,427	
October	\$161,041		October	\$79,473	
Total	\$775,939		Total	\$349,330	
Haddock Forgone Spawning Biomass (mt)					
Spawning biomass per age-2 recruit at F=0.14 is		6.03734062	Spawning biomass per age-3 recruit at F=0.14 is		5.81720492
		kg			kg
July	668.9		July	276.6	
August	590.7		August	259.7	
Sept	524.1		Sept	244.2	
October	467.2		October	229.8	
Total	2251.0		Total	1010.3	

Table 26 Spawning Periods for North Atlantic Finfish (Source: Essential Fish Habitat Source Documents)

 spawning months
 peak spawning months

Species	January	February	March	April	May	June	July	August	September	October	November	December	Notes
American Plaice, GM													Berrien and Sibunka 1999
GB Atlantic Cod													
GOM Atlantic Cod													
Atlantic Halibut													Atlantic Canada waters
GB Atlantic Herring													
GOM Atlantic Herring													
Scotian Shelf Atlantic Herring													
Jeffreys Ledge Atlantic Herring													*no peak times evident
Nantucket Shoals Atlantic Herring													
Goosefish													
GB Haddock													
GOM Haddock													
Browns Bank Haddock													
Northern Ocean Pout													
Southern Ocean Pout													
Offshore Hake													*no peak times evident
Pollock													
Redfish													*copulation from Oct-Jan; fertilization from Feb-April; no peak times evident
GB Red Hake													
GOM Red Hake													
NYB Red Hake													
GB Sea Scallop													*no peak times evident
GOM Sea Scallop													*no peak times evident
Penobscot Bay Sea Scallop													
New Jersey Sea Scallop													*no peak times evident
MAB Sea Scallop													*no peak times evident

Table 26 Spawning Periods for North Atlantic Finfish (Source: Essential Fish Habitat Source Documents)

<i>Species</i>	<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>	<i>November</i>	<i>December</i>	<i>Notes</i>
GB Silver Hake													
GOM Silver Hake													*no peak times evident
SNE Silver Hake													*no peak times evident
MAB Silver Hake													*no peak times evident
Scotian Shelf White Hake													*no peak times evident
GB-GOM White Hake													*no peak times evident
GB Windowpane													
Northern MAB Windowpane													
Southern MAB Windowpane													*split spawning seasons
GOM Winter Flounder													
SNE Winter Flounder													
GB Winter Flounder													
MAB Winter Flounder													
GB-GOM Witch Flounder													
MAB Witch Flounder													
CC-GOM Yellowtail Flounder													
GB Yellowtail Flounder													
SNE Yellowtail Flounder													
MAB Yellowtail Flounder													
Red Deepsea Crab													*fall - spring; no peak times evident
Barndoor Skate													*no peak times evident
Clearnose Skate													*no peak times evident
Little Skate													
Rosette Skate													*no peak times evident
Smooth Skate													*no peak times evident
Thorny Skate													*no peak times evident
Winter Skate													*no peak times evident

5.2.3 Social Impacts (Multispecies)

Analysis of social impacts typically focuses on fishing communities. In the context of the proposed Bycatch Measures, however, the social impacts may be different for different groups of fishermen. First, the fishing communities that are considered important for the herring fishery, as described in the Amendment 1 DSEIS, include some communities that are of only minor importance for the groundfish fishery. Second, fishermen in the herring and groundfish fisheries have different concerns, so even in those communities with overlap between the two fisheries, the social impacts of the proposed measures may differ for fishermen in each fishery. For this reason, the following discussion highlights the social impacts of the proposed bycatch measures on groundfish fishermen. The impacts on fishing communities will be a combination of the impacts on participants in the different fisheries.

Amendment 13 (NEFMC 2003) identified five key factors for evaluating social impacts of management measures on groundfish fishing communities. They are:

- Regulatory discarding;
- Safety;
- Disruption in daily living;
- Changes in occupational opportunities and community infrastructure; and
- Formation of attitudes

Of these five factors, the first four are unlikely to be affected by the proposed bycatch measures, since these measures do not alter fishing practices for groundfish fishermen. The fifth factor – formation of attitudes – may be affected by the proposed measures.

Formation of attitudes is described as positive or negative feelings, beliefs, or positions expressed by impacted members of communities involved in fishing regarding the proposed action. A brief review of recent groundfish management actions will help frame the reaction of groundfish fishermen to proposed Bycatch Measures 2 and 3. Since 1994, groundfish fishermen have been coping with a complex array of increased regulatory restrictions designed to rebuild depressed groundfish stocks. The most recent action, Amendment 13, was implemented May 1, 2004. Amendment 13 reduced DAS allocations to almost all groundfish vessels in order to achieve fishing mortality reductions of 20 to 65 percent on groundfish stocks. Many groundfish fishermen are reportedly struggling to keep their fishing businesses solvent until the rebuilding programs are successful.

One of the first stocks to show signs of benefiting from the restrictive management measures is GB haddock. The stock is increasing rapidly in size, and growth is expected to continue as a result of a large 2003 year class that will enter the fishery in the next few years. Groundfish fishermen are just now starting to benefit from this increase in haddock stock size, and many fishermen hope that it will help them survive the effort reductions of Amendment 13.

At the same time that groundfish fishermen have been subject to increasing restrictions, herring fishermen have been prohibited from catching groundfish. There have long been claims by groundfish fishermen (not supported by observer data and not independently documented) that herring fishermen were illegally catching and discarding groundfish. What was particularly galling to groundfish fishermen is that in spite of these allegations herring midwater trawl vessels were allowed to fish in groundfish closed areas. When several herring vessels were found to possess under-sized haddock in 2004, many groundfish fishermen believed this was finally proof that herring fishermen were illegally catching groundfish, and argued that

additional restrictions should be placed on this fishery to prevent this from continuing. The proposed action reacts to this news by allowing herring fishing vessels to catch small amounts of groundfish but establishes a cap on the catch of haddock. Many groundfish fishermen are likely to view these two measures as an unjustified reward for illegal fishing activity: herring fishermen will now be allowed to retain groundfish, albeit at low levels and with the catch of haddock subject to an overall cap.

5.3 IMPACTS ON THE HERRING FISHERY

5.3.1 Biological Impacts (Herring)

The measures proposed in this framework adjustment to address bycatch of groundfish species in the Atlantic herring fishery are not expected to result in any significant impacts on the Atlantic herring resource. They are intended to allow the herring fishery to continue its normal operations, particularly in Area 3 (GB). The proposed action is similar to the current Emergency Rule, which has been in effect since June 2005.

To the extent that these measures will prevent a shift of midwater trawl fishing effort into the inshore GOM, the impacts of the measures proposed in this framework adjustment will be positive relative to the no action alternative. Moreover, there may be indirect benefits associated with improving the collection of bycatch information. If better information about bycatch in the herring fishery can be utilized to develop more effective management measures, the Atlantic herring resource will likely benefit over the long-term.

5.3.2 Economic and Social Impacts (Herring)

The measures to address bycatch proposed in this framework adjustment include a **catch cap for haddock, an incidental catch allowance for other regulated multispecies, and a monitoring program for the catch cap**. These measures will be applicable to vessels with a **limited access directed fishery permit for herring** once Amendment 1 is implemented and to vessels with federal Category 1 herring permits until Amendment 1 is implemented. These measures specifically addresses Objective #5 of Amendment 1 (full utilization of OY), as well as National Standard 9 of the Magnuson-Stevens Act (minimize bycatch) without compromising the continued rebuilding of haddock and other important groundfish species.

The Council recommends these measures because the current absolute prohibition on the possession of haddock by vessels targeting herring appears to be unrealistic, given the current abundance of haddock on Georges Bank. This measure is consistent with the recommendations of the New England Fishery Management Council's Bycatch Committee in March 2005 when the Council considered requesting emergency action to address herring fishery interactions with haddock.

The suspension of haddock possession prohibitions would result in positive economic benefits to the herring fishery because the fishery would be allowed to operate throughout the range and especially in Area 3 until the 90% of the haddock catch cap is reached. Based on recent observed levels of haddock bycatch in the herring fishery, the catch cap is unlikely to be reached in the short-term, but provides a backstop and establishes a mechanism to better document bycatch. Without these provisions, herring fishing in Area 3, and area where effort in the fishery is encouraged, would likely decrease. Landings from Area 3 have been as high as 39,600 metric tons in 2001, and the average for 2001-2004 was 19,214 mt. Landings decreased significantly in 2004 due to haddock bycatch problems on Georges Bank, and 2005 IVR data indicate that landings from Area 3 during the 2005 fishing year were about 13,000 mt.

This action should prevent direct economic loss resulting from herring harvest that would otherwise likely be foregone, particularly in a management area that is not fully utilized and can support increased fishing effort (Area 3, GB). Estimate foregone revenues from not fishing in Area 3 would be \$2,123,727 based on reported landings during 2005 and an average price for herring of \$163 per mt. Foregone revenues could be as high as \$8,150,000 based on utilization of the entire available TAC from Area 3. This assumes that the herring fleet would not fish in Area 3 at all for fear of being in violation of the prohibition on the possession of haddock on every trip and therefore represents an upper bound to the range of expected impacts.

The estimate of foregone future haddock revenue as a result of this action ranges from \$349,330 to \$775,939 based on an average of \$1.36 per pound of haddock. Thus, the negative economic consequences would be much greater under the no action alternative. The no action alternative essentially increases the negative economic impacts and shifts them from the groundfish fishery to the herring fishery.

5.4 IMPACTS ON PROTECTED RESOURCES

Protected resources affected by the Multispecies and Herring FMPs are identified in Section 4.4 of this document and are discussed in great detail in Amendment 13 to the Multispecies FMP and Amendment 1 to the Atlantic Herring FMP.

The herring fishery is prosecuted by midwater trawl gear (single), paired midwater trawls, purse seines, stop seines and weirs. A full description of the gear used in the fishery is provided in the DSEIS for Amendment 1 to the Herring FMP. Only the first three are considered to be primary gears in the Atlantic herring fishery. Weirs and stop seines are responsible for a only a small fraction of herring landings, operate exclusively within state waters and are not regulated by the Federal FMP, and therefore will not be discussed further in the this document relative to protected species. It should be noted, however, that both gear types have accounted for interactions with protected species, notably right, humpback and minke whales, harbor porpoise as well as harbor and gray seals (see Amendment 1 DSEIS for additional discussion). Animals are generally released alive. Consequently, both the weir and stop seine fisheries are classified as Category III in the NMFS *List of Fisheries for 2005* – fisheries with a remote likelihood of incidental mortality and serious injury of marine mammals.

The same *List of Fisheries* places the herring midwater trawl fishery, which includes “pair trawls”, in Category II, denoting a fishery that has been determined to have occasional serious injury and mortality of marine mammals. The purse seine fishery is considered to have a remote likelihood of interactions and, similar to stop seines and weirs, is listed in Category III. Species with documented interactions in midwater trawl gear include Atlantic white-sided dolphins and pilot whales.

The impacts of the herring fishery on endangered and threatened whales, sea turtles and fish were discussed in the Biological Opinion prepared for the Atlantic Herring FMP in September 1999. Informal consultations also have been conducted by NMFS in accordance with Section 7 of the Endangered Species Act for each framework adjustment and/or specifications package. They have addressed the impacts of the fishery and any new management actions on marine mammals and listed species.

Bycatch incidental catch limits and caps for haddock relate to addressing all sources of groundfish fishing mortality and are associated with the rebuilding program adopted in Amendment 13 to the Northeast Multispecies FMP. For these measures, both taking action as well as no action are unrelated to the status of protected resources inhabiting the management unit and should have no discernable impacts. The

proposed action is simply a mechanism to allow the herring fishery to continue its normal operations, particularly on Georges Bank, and account for groundfish that is taken incidentally to fishing operations.

A potential benefit could result if increases in monitoring occur. Such activities could enhance the information available not only for the herring fishery in the Gulf of Maine and Georges Bank, but also in the Southern New England and Mid-Atlantic portions of the fishery. The seasonal nature of landings will likely preclude turtle takes, but monitoring of potential interactions with these and other protected species could provide useful information as to the nature and level of encounters. The analysis of Framework 43 measures does not change the conclusion that there should be few if any impacts on protected species beyond those already identified in Amendment 13 to the Northeast Multispecies FMP and/or in Draft Amendment 1 to the Herring FMP.

5.5 IMPACTS ON PHYSICAL ENVIRONMENT AND EFH

The gear effects evaluation for the Atlantic herring fishery (Appendix VI, Volume II of Amendment 1 DSEIS) found there to be no adverse impact that is more than minimal or temporary in nature of gear used in the directed herring fishery (purse seines and midwater trawls) on EFH in for Atlantic herring or for other species in federal waters, including regulated multispecies. The proposed action is intended to allow vessels to prosecute the Atlantic herring fishery on GB as they have in past years. Therefore, there are no habitat impacts associated with the measures proposed in this framework adjustment. However, any habitat-related bycatch information (sediments, epifauna, etc.) that can be generated from bycatch collection efforts are beneficial to better understanding the role that habitat plays in herring life history.

6.0 APPLICABLE LAW

6.1 MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT (MSFCMA)

6.1.1 National Standards

Section 301 of the Magnuson-Stevens Fishery Conservation and Management Act requires that fishery management plans (FMPs) contain conservation and management measures that are consistent with the ten National Standards:

In General. – Any fishery management plan prepared, and any regulation promulgated to implement any such plan, pursuant to this title shall be consistent with the...national standards for fishery conservation and management.

(1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

Amendment 13 to the Multispecies FMP adopted status determination criteria for regulated groundfish species, formal rebuilding programs for overfished stocks, and management measures to comply with those criteria and programs. The measures in Amendment 13 are designed to prevent overfishing and achieve optimum yield on a continuing basis. The management measures proposed in this action are designed to be consistent with Amendment 13 and are not expected to compromise the continued rebuilding of any overfished change groundfish species. The haddock catch cap is set at a level that will not threaten mortality targets and will not result in overfishing. Moreover, the target TAC for haddock is not yet fully utilized by the groundfish fishery.

This action is also consistent with the goals and objectives of the herring management program, as described in the Atlantic Herring FMP and addressed in Amendment 1 to the Herring FMP (currently under development). The measures proposed in this framework adjustment should provide herring fishery participants with a better opportunity to achieve OY for the herring fishery and fully utilize the herring TAC in the offshore areas where haddock bycatch has become a recent problem (Georges Bank, Area 3).

(2) Conservation and management measures shall be based upon the best scientific information available.

The technical basis for this framework adjustment as well as the analyses of the proposed action are based on the best scientific information available. Background information and analyses related to the proposed action are based on data from the NMFS Sea Sampling (Observer) Database, VTR Reports, IVR Reports, and dealer weighouts. Furthermore, the analyses were prepared by and reviewed by the Council's Herring and Groundfish Plan Development Teams and complies with the Data Quality Act (DQA). Additional discussion related to the DQA can be found in Section 6.8 of this document.

(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

The primary regulated groundfish stocks that are affected by this action are GOM and GB haddock. The management measures proposed in this framework adjustment are the same for both haddock stocks and apply to the Atlantic herring fishery in all management areas. The action proposed in this framework also does not alter the management unit for Atlantic herring. As a result, the measures proposed by this action are consistent with the standard to manage these stocks as a unit or in close coordination.

(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

The proposed action does not discriminate between residents of different States, nor does it allocate fishing privileges among various sectors of the fishery. The proposed allocation of the haddock catch cap applies across both stocks of haddock throughout the range of the species and all management areas in the Atlantic herring fishery.

(5) Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.

The proposed action should promote efficiency in the utilization of fishery resources by minimizing waste and providing herring fishery participants with a better opportunity to harvest the optimum yield from the herring resource without compromising the stock rebuilding objectives for haddock. Economic allocation is not the sole purpose of the action proposed in this framework adjustment.

(6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

Changes in fisheries occur continuously, both as the result of human activity (for example, new technologies or shifting market demand) and natural variation (for example, oceanographic perturbations). The Council established a process to review stock status and adjust groundfish management measures according to such variations. Nothing proposed in this framework adjustment changes or modifies the process through which the Council reviews fishery conditions.

The measures proposed in this framework adjustment directly account for variations among and contingencies in fisheries by responding to a recent phenomenon on Georges Bank and the emerging strong year classes of haddock that the herring fishery is starting to encounter as bycatch. This situation could not have been anticipated in advance; the Council is responding as expeditiously as possible by utilizing the framework adjustment process to implement management measures that provide opportunities in the herring fishery without compromising groundfish stock rebuilding. The measures proposed in this framework adjustment represent a step towards integrated management of catch and bycatch of various species across fisheries.

(7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

As always, the Council considered the costs and benefits associated with the proposed action when developing this framework adjustment. The proposed action allows for greater fishing opportunity and planning flexibility for herring fishery participants at minimal administration and enforcement costs. In addition, the measures proposed in this framework adjustment are similar to those currently in effect through the NMFS Emergency Rule, so additional administrative and enforcement costs associated with implementing the proposed action are expected to be minimal.

(8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

The fishing communities involved in and dependent on the multispecies fishery are described in detail in section 9.4 of Amendment 13 to the Multispecies FMP. The information provided in Amendment 13 is useful for understanding the response of the fishery to past management actions and in predicting how the fishery may respond to the management actions implemented by this framework adjustment. That discussion also helps meet the M-S Act requirement to take into account the importance of fishery resources to fishing communities in order to provide for the sustained participation of those communities, and, consistent with the conservation requirements of the M-S Act, to the extent practicable, minimize the adverse economic impacts on such communities. Section 9.4 of Amendment 13 also helps fill a NEPA requirement to consider the interactions of the natural and human environments and the impacts on both systems of any changes due to governmental actions or policies. Nothing proposed in this framework adjustment is expected to impact the participation of fishing communities involved in the multispecies fishery, and no adverse economic impacts on those communities are expected from the proposed action.

A complete description of the fishing communities engaged in the Atlantic herring fishery is provided in the DSEIS for Amendment 1 to the Herring FMP and is incorporated into this document by reference. The measures proposed in this framework adjustment are expected to have a positive impact on herring fishing communities to the extent that they allow fishing operations, particularly on Georges Bank, to continue to occur throughout the year. They are intended to provide for the sustained participation of communities in the herring fishery and allow vessels to fully utilize OY for the fishery and harvest the available TAC in all management areas without compromising groundfish stock rebuilding. Relative to the no action alternative, the measures proposed in this framework adjustment are expected to have positive impacts on communities engaged in and dependent on the Atlantic herring fishery.

(9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

One of the primary objectives of this framework adjustment is to sustainably manage the bycatch of multispecies in the Atlantic herring fishery and, to the extent practicable, minimize bycatch and bycatch mortality. Information related to bycatch of groundfish and other species in the Atlantic herring fishery is summarized in Section 4.3.2 of this document and provided in more detail in the DSEIS for Amendment 1 to the Herring FMP. The Amendment 1 DSEIS also describes the Council's current Standardized Bycatch Reporting Methodology for the herring fishery, which will be addressed further in an upcoming omnibus amendment to Northeast FMPs (NMFS, under development).

Amendment 1 to the Atlantic Herring FMP will follow-up on this action and establish the "catch cap" approach as one potential mechanism to address bycatch of groundfish and other species in the Atlantic herring fishery over the long-term. Establishing and modifying catch caps, including the cap proposed in this framework adjustment, will be identified in Amendment 1 as measures that can be implemented through a framework adjustment to the Herring FMP or through the herring fishery specification process (with concurrent adjustments to regulations in other fisheries, as appropriate), whichever is most expeditious. Measures that could be implemented through a framework adjustment or the herring fishery specification process to address bycatch in the herring fishery will also include seasonal and temporal closures in high bycatch areas and catch/bycatch caps.

(10) Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The Council is aware of the safety implications of its management decisions, both through extensive public comment and the practical experience of many of its members. The management measures implemented through Framework 43 promote the safety of human life at sea by providing an opportunity for herring fishery participants to continue their normal fishing operations offshore. There are no impacts on the safety of multispecies vessels expected from the proposed action.

6.1.2 Other Required Provisions of the Magnuson-Stevens Act

Section 303 of the Magnuson-Stevens Fishery Conservation and Management Act contains 14 additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, shall:

- (1) *contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are-- (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery; (B) described in this subsection or subsection (b), or both; and (C) consistent with the National Standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;*

None of the measures proposed in this framework adjustment apply to foreign fishing vessels. Relative to domestic vessels, Section 2.0 of this document contains a description of the action proposed in this framework adjustment. Section 6.1.1 discusses the framework adjustment's consistency with the National Standards of the MSFCMA.

- (2) *contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any;*

The measures proposed in this framework adjustment are found to be consistent with the goals, objectives, and provisions of both the Northeast Multispecies and Atlantic Herring FMPs and their related amendments and adjustments. A detailed description of the multispecies and herring fisheries is included in the Affected Human Environment section of Amendment 13 and Amendment 1 respectively. Much of this information is incorporated into this framework adjustment by reference only. A brief summary of the elements of these fisheries that are affected by the proposed action is included in Section 4.0 of this document.

- (3) *assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;*

The measures proposed in this framework adjustment are found to be consistent with the goals, objectives, and provisions of both the Northeast Multispecies and Atlantic Herring FMPs and their related amendments and adjustments. Maximum sustainable yield is described in Amendment 13, section 3.1.5 with a short explanation of the source of this estimate. Optimum yield continues to be defined as in Amendment 9. The condition of the fishery is included in section 5.5, while information on landings and revenues from the fishery is in section 9.4 of Amendment 13. Probable future stock conditions are estimated in section 5.2.1.1 of Amendment 13. The future economic condition of the fishery is described in section 5.4 of Amendment 13 and updated to reflect the impacts of the proposed action in section 6.0.

Allowable biological catch and optimum yield for the herring fishery are addressed through the annual specification process and were fully analyzed in the Environmental Assessment for the 2005/2006 fishery specifications. Amendment 1 to the Herring FMP proposes a new, precautionary proxy for MSY until scientific agreement can be reached as to the most appropriate value for MSY for the herring fishery.

None of the measures proposed in this amendment modify MSY or optimum yield for the multispecies and/or herring fisheries.

- (4) *assess and specify-- (A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3); (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing; and (C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;*

Fishing vessels of the U.S. will harvest the optimum yield from the multispecies and herring fisheries, and none will be available to foreign fishing. The measures proposed in this framework adjustment do not change the Council's specification for optimum yield in these fisheries.

- (5) *specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;*

The measures proposed in this framework adjustment are found to be consistent with the goals, objectives, and provisions of both the Northeast Multispecies and Atlantic Herring FMPs and their related amendments and adjustments. Reporting requirements for the multispecies fishery are defined in section 3.4.14 of Amendment 13, and reporting requirements for the Atlantic herring fishery are addressed in both the Herring FMP and the recent Emergency Rule to address haddock bycatch. The reporting requirements proposed in this framework adjustment are consistent with those that were implemented by NMFS as part of the 2005/2006 Emergency Rule.

- (6) *consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery;*

The action proposed in this framework adjustment does not alter any adjustments made in the Multispecies and/or Herring FMPs that address opportunities for vessels that would otherwise be prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fisheries. No consultation with the Coast Guard is required relative to this issue.

- (7) *describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;*

Essential fish habitat was defined in earlier groundfish and herring actions. This framework adjustment does not address or modify those definitions. As discussed in Section 5.5 of this document, there are no additional impacts to the physical environment or EFH expected from the action proposed in this framework adjustment.

- (8) *in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan;*

Additional research needs for multispecies are specified in Sections 6.0 and 9.3.4 of Amendment 13. Data and research needs for the Atlantic herring fishery will be identified in Amendment 1 to the NEFMC Herring FMP and Amendment 2 to the ASMFC Herring FMP. These documents should be referenced for additional discussion relative to the data and research needs for the multispecies and herring fisheries.

- (9) *include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on-- (A) participants in the fisheries and fishing communities affected by the plan or amendment; and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;*

This framework document includes analyses and discussion of the impacts of the proposed action on the affected human environment, including multispecies and herring fishery participants and communities. The Council developed the measures proposed in this framework adjustment in consultation with the Mid-Atlantic Fishery Management Council as well, through the participation of its members on the Herring and Groundfish PDTs, Advisory Panels, and Committees, as well as attendance at Council meetings.

- (10) *specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;*

These criteria for multispecies are defined in section 3.1 of Amendment 13 and are not changed by the proposed action. The criteria for Atlantic herring were established in the Herring FMP and are further addressed in Amendment 1. All criteria for identifying when the fisheries to which this action applies are overfished remain unchanged by this framework adjustment.

- (11) *establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority-- (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided;*

Amendment 1 to the Atlantic Herring FMP will follow-up on this action and establish the “catch cap” approach as one potential mechanism to address bycatch of groundfish and other species in the Atlantic herring fishery over the long-term. Establishing and modifying catch caps, including the cap proposed in this framework adjustment, will be identified in Amendment 1 as measures that can be implemented through a framework adjustment to the Herring FMP or through the herring fishery specification process (with concurrent adjustments to regulations in other fisheries, as appropriate), whichever is most expeditious. Measures that could be implemented through a framework adjustment or the herring fishery specification process to address bycatch in the herring fishery will also include seasonal and temporal closures in high bycatch areas and catch/bycatch caps.

One of the primary objectives of this framework adjustment is to sustainably manage the bycatch of multispecies in the Atlantic herring fishery and, to the extent practicable, minimize bycatch and bycatch mortality. Information related to bycatch of groundfish and other species in the Atlantic herring fishery is summarized in Section 4.3.2 of this document and provided in more detail in the DSEIS for Amendment 1 to the Herring FMP. The Amendment 1 DSEIS also describes the Council’s current Standardized Bycatch Reporting Methodology for the herring fishery, which will be addressed further in an upcoming omnibus amendment to Northeast FMPs (NMFS, under development).

- (12) *assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish;*

The groundfish management plan does not include any catch and release recreational management measures, and this proposed action does not address recreational fishing regulations.

- (13) *include a description of the commercial, recreational, and charter fishing sectors which participate in the fishery and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter fishing sectors;*

A detailed description of the multispecies and herring fisheries is included in the Affected Human Environment section of Amendment 13 and Amendment 1 respectively. Descriptions of the commercial, recreational, and charter fishing sectors which participate in the multispecies fishery, including trends in landings by these sectors, are in section 9.4 of Amendment 13. Much of this information is incorporated into this framework adjustment by reference only. A brief summary of the elements of these fisheries that are affected by the proposed action is included in Section 4.0 of this document.

- (14) *to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery.*

The action proposed in this framework adjustment does not reduce the overall harvest from the multispecies or Atlantic herring fisheries. The small percentage of the target TAC for haddock that is proposed to be allocated for herring bycatch does not preclude harvest for the multispecies fishery, as the

TACs for Gulf of Maine and Georges Bank haddock are targets and have not been fully utilized in recent years.

6.2 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

This action meets the criteria for a Categorical Exclusion (CE) under the National Environmental Policy Act (NEPA), based on guidance provided in NOAA Administrative Order 216-6. The criteria that apply to this action are specified in Sections 5.05 (general requirements for CE) and 6.03d.4 (CE for fisheries management actions) of NAO 216-6.

The first criteria for a CE is that the proposed action, individually or cumulatively, does not have the potential to pose significant effects to the quality of the human environment. The analyses discussed in Section 5.0 of this document and presented in the DSEIS for Amendment 1 to the Atlantic Herring FMP support the conclusion that the proposed action is expected to have, individually and cumulatively, an insignificant impact on the human environment. This action would not increase or alter activities that currently take place in the herring fishery and that have been previously analyzed in the EA for the 2005/2006 annual specifications and the DSEIS for Amendment 1 to the Herring FMP. Similarly, the harvest of haddock allowed under this rule will not undermine the stock rebuilding plan for haddock as specified in the NE Multispecies FMP. Additionally, this project does not involve: (1) A geographic area with unique characteristics; (2) uncertain environmental impacts or unique or unknown risks or public controversy about such risks; (3) establishment of a precedent or decision in principle about future proposals; (4) cumulatively significant impacts; or (5) adverse effects upon endangered or threatened species or their habitats. There remains conflict between businesses engaged in competing fisheries in New England. However, this conflict is not based on controversy about the potential environmental consequences from this action; rather it lies in the discussion of the utilization of fishery resources in New England as a whole. Therefore, the project does not trigger the exceptions for categorical exclusions listed in NAO 216-6, Section 5.05c.

Section 6.03d.4 of NAO 216-6 states that fisheries management actions may receive a CE if they include ongoing or recurring fisheries actions of a routine administrative nature, when the action will not have any impacts beyond those already assessed. The criteria also state that a CE can apply if the proposed action does not have the potential to pose significant effects to the quality of the human environment, such as: re-allocation of yield within the scope of a previously published FMP or fishery regulation, combining management units in a related FMP, and extension or change of the period of effectiveness of an FMP or regulation. The proposed action also has been determined to meet these criteria for a CE under NEPA.

6.3 MARINE MAMMAL PROTECTION ACT

The NEFMC has reviewed the impacts of the proposed action on marine mammals and has concluded that the measures proposed are consistent with the provisions of the MMPA. The measures proposed in this framework adjustment will not alter the effectiveness of existing MMPA measures, such as take reduction plans, to protect those species.

For further information on the potential impacts of the fishery and the proposed management action on marine mammals, see Section 4.4 of this document as well as the Final EIS for Amendment 13 to the Northeast Multispecies FMP and the Draft EIS for Amendment 1 to the Herring FMP.

6.4 ENDANGERED SPECIES ACT

Section 7 of the Endangered Species Act requires federal agencies conducting, authorizing or funding activities that affect threatened or endangered species to ensure those effects do not jeopardize the continued existence of listed species. The NEFMC has concluded, at this writing, that the proposed framework adjustment and the continued prosecution of the herring fishery is not likely to jeopardize any ESA-listed species or alter or modify any critical habitat, based on the discussion of impacts in this document and on the assessment of impacts in the existing Biological Opinion prepared by NMFS.

The NEFMC is now seeking the concurrence of the National Marine Fisheries Service with respect to this action. For further information on the potential impacts of the fishery and the proposed management action on listed species, see Section 4.4 of this document as well as the Final EIS for Amendment 13 to the Northeast Multispecies FMP and the Draft EIS for Amendment 1 to the Herring FMP.

6.5 ADMINISTRATIVE PROCEDURES ACT

The Council is not requesting relief from the requirements of the APA for notice and comment rulemaking.

6.6 PAPERWORK REDUCTION ACT

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 collection of information requirements associated with the measures proposed in this framework adjustment were implemented on a permanent basis as part of the Emergency Rule to address haddock bycatch in the herring fishery. The PRA package prepared in support of this action, including the required forms and supporting statements, was submitted by the NMFS Northeast Regional Office.

6.7 COASTAL ZONE MANAGEMENT ACT

The Council determined that the management measures proposed in this framework adjustment are consistent with the approved coastal management programs of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina.

This determination was submitted for review by the responsible state agencies under §307 of the Coastal Zone Management Act.

6.8 DATA QUALITY ACT

Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554, also known as the Data Quality Act or Information Quality Act) directed the Office of Management and Budget (OMB) to issue government-wide guidelines that “provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by federal agencies.” OMB

directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with the OMB guidelines, and report periodically to OMB on the number and nature of complaints. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the Data Quality Act. Information must meet standards of utility, integrity and objectivity. This section provides information required to address these requirements.

6.8.1 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 intended users of the information contained in this document are participants in the multispecies and Atlantic herring fisheries as well as other interested parties and members of the general public. The information contained in this framework adjustment may be useful to owners of vessels holding Federal multispecies and/or Atlantic herring permits as well as herring dealers and processors, since this document serves to notify these individuals of any potential changes to management measures for these fisheries. This information will enable these individuals to adjust their fishing practices and make appropriate business decisions based on the new management measures and corresponding regulations.

The information being provided in this framework adjustment concerning the status of the multispecies and herring fisheries is based on information contained in the Draft EIS for Amendment 1 to the Atlantic Herring FMP and other recent groundfish documents. The information is updated through the 2003 and 2004 fishing years for the most part, and preliminary 2005 data are provided if available. Information presented in this document is intended to support the proposed management measures, which have been developed through a multi-stage process involving all interested members of the public. Consequently, the information pertaining to management measures contained in this document has been improved based on comments from the public, fishing industry, members of the Council, and NOAA Fisheries.

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 information will be made available through printed publication and on the Internet website for the Northeast Regional Office (NERO) of NOAA Fisheries. In addition, the final Framework 43 document will be available on the Council’s website (www.nefmc.org) in standard PDF format. Copies will be available for anyone in the public on CD ROM and paper from the Council’s office.

6.8.2 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, NOAA information, independent of the intended mechanism for distribution, 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 NOAA adheres to the standards set out in Appendix III, “Security of Automated Information Resources,” OMB Circular A-130; the Computer Security Act; and the Government Information Security Reform Act. If information is confidential, it is safeguarded

pursuant to the Privacy Act and Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business and financial information).

6.8.3 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.

This document uses information of known quality from sources acceptable to the relevant scientific and technical communities. 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: landings data from vessel trip reports, landings data from individual voice reports, information from resource trawl and hydroacoustic surveys, data from the dealer weighout purchase reports, descriptive information provided (on a voluntary basis) by processors and dealers of Atlantic herring, 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. In addition, information about bycatch is based on reports collected by the NEFSC Sea Sampling (Observer) Branch and incorporated into the NOAA Fisheries observer database. The observer data are collected using an approved, scientifically-valid sampling process.

In preparing this framework adjustment document, the Council(s) must comply with the requirements of the Magnuson-Stevens Act, Regulatory Flexibility Act, Administrative Procedures Act, Paperwork Reduction Act, Coastal Zone Management Act, Endangered Species Act, Marine Mammal Protection Act, Data Quality Act, and Executive Orders 12612 (Federalism), 12630 (Property Rights), 12898 (Environmental Justice), 12866 (Regulatory Planning), and 13158 (Marine Protected Areas). The policy choices (i.e., management measures) proposed in this specifications package are supported by the best available scientific information. 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 (Headquarters). The Council review process involves public meetings at which affected stakeholders have the opportunity to provide comments on the proposed changes to the FMP. 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 framework adjustment package 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 those proposed in this framework adjustment, is performed by technically-qualified individuals to ensure the action is valid, complete, unbiased, objective, and relevant.

6.9 IMPACTS RELATIVE TO FEDERALISM/E.O. 13132

The Executive Order 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. The affected States have been closely involved in the development of the proposed management measures through their involvement in the Regional Fishery Management Council process (i.e., all affected states are represented as voting members on at least one Council) as well as the ASMFC process. The proposed measures were developed with the full participation and cooperation of the State representatives of the New England Council. No comments were received from any State officials relative to any federalism implications of the proposed management measures.

6.10 IMPACTS RELATIVE TO MARINE PROTECTED AREAS/E.O. 13158

The Executive Order on Marine Protected Areas requires each federal agency whose actions affect the natural or cultural resources that are protected by an MPA to identify such actions, and, to the extent permitted by law and to the maximum extent practicable, in taking such actions, avoid harm to the natural and cultural resources that are protected by an MPA.

The E.O. directs federal agencies to refer to the MPAs identified in a list of MPAs that meet the definition of MPA for the purposes of the Order. The E.O. requires that the Departments of Commerce and the Interior jointly publish and maintain such a list of MPAs. As of the date of submission of this framework adjustment, no further guidance related to this Executive Order is available at this time.

6.11 REGULATORY FLEXIBILITY ACT/E.O. 12866

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 Magnuson-Stevens Act, 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 economic impact on a substantial number of small entities under the RFA.

6.11.1 Description of Management Objectives

Background information, including the purpose and need for this action, is provided in Section 1.0 of this document. This action is consistent with the goals and objectives of the Multispecies and Atlantic Herring FMPs.

6.11.2 Description of the Fishery

A very brief description of the multispecies and Atlantic herring fisheries is provided in Section 4.0 of this document. In addition:

- So much information has been generated by the Council staff about the multispecies fishery and its participants in recent months and years that it is not reasonable to include all of this information in this document. A very general description of the multispecies fishery is provided below to give readers some context for considering the impacts of the proposed action, and additional information is incorporated by reference to the following documents:
 - * Amendment 13 to the Northeast Multispecies FMP (NEFMC 2004);
 - * Framework Adjustment 40A to the Northeast Multispecies FMP (NEFMC 2004);
 - * Framework Adjustment 40B to the Northeast Multispecies FMP (NEFMC 2005);
 - * Framework Adjustment 42 to the Northeast Multispecies FMP (NEFMC in progress).
- A detailed description of the Atlantic herring fishery is provided in the Herring FMP and is incorporated into this document by reference. In addition, the Stock Assessment and Fishery Evaluation (SAFE) Reports for the Atlantic herring fishery, developed by the Herring PDT since the implementation of the Herring FMP, as well as the Environmental Assessment for the specification package for the 2005/2006 fishing years provide updated information relative to the herring fishery and should be referenced for additional information. Much of this information is summarized in Framework Adjustment 40B to the Northeast Multispecies FMP.
- Amendment 1 to the Atlantic Herring FMP (DSEIS August 4, 2005 and FSEIS under development by NEFMC) includes all updated information about the Atlantic herring resource and fishery and also is incorporated by reference.

6.11.3 Statement of the Problem

The problem that this framework adjustment proposes to address is discussed in Section 1.0 of this document.

6.11.4 Description of Alternatives

The proposed action is described in detail in Section 2.0 of this document, and other alternatives are discussed in Section 3.0. During the development of Amendment 1 to the Herring FMP, the Council considered a range of alternatives for implementing catch caps like the one proposed for haddock in Section 2.0 of this document. Several approaches were considered by the Bycatch Committee during the development of its recommendations during early 2005. In addition, the Herring and Groundfish PDTs developed options for catch caps for various groundfish stocks at this time, including cod, haddock, pollock, and redfish (see Bycatch Caps Discussion Paper in **Appendix I**).

6.11.5 Economic Analysis

This action should prevent direct economic loss resulting from herring harvest that would otherwise likely be foregone, particularly in a management area that is not fully utilized and can support increased fishing effort (Area 3, GB). Estimate foregone revenues from not fishing in Area 3 would be \$2,123,727 based on preliminary reported landings during 2005 and an average price for herring of \$163 per mt. Foregone revenues could be as high as \$8,150,000 based on utilization of the entire available TAC from Area 3. This assumes that the herring fleet would not fish in Area 3 at all for fear of being in violation of the

prohibition on the possession of haddock on every trip and therefore represents an upper bound to the range of expected impacts.

The estimate of foregone future haddock revenue as a result of this action ranges from \$349,330 to \$775,939 based on an average of \$1.36 per pound of haddock. Thus, the negative economic consequences would be much greater under the no action alternative. The no action alternative essentially increases the negative economic impacts and shifts them from the groundfish fishery to the herring fishery.

6.11.6 Determination of Significance Under E.O. 12866

E.O. 12866 requires a review of proposed regulations to determine whether the expected effects would be significant, where a significant action is any regulatory action that may:

- Have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- 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 aggregate economic impact of the proposed measures would not rise to the \$100 million threshold for a significant action. As discussed in this document, the potential forgone revenue of not lifting the current haddock bycatch prohibition in the herring fishery is \$2,123,727 based on preliminary reported landings during 2005 and an average price for herring of \$163 per mt. The upper-bound estimate of forgone haddock revenue likely to be incurred if the prohibitions are lifted is approximately \$775,939. While accurate assessment of economic impacts of changes to other provisions is not possible due to data limitations and/or the nature of the changes, such changes are reasonably expected to have only a small economic impact. Therefore, the proposed framework adjustment is not significant for purposes of E.O. 12866.

6.11.7 Regulatory Flexibility Act (RFA)

The objective of the RFA is to require consideration of the capacity of those affected by regulations to bear the direct and indirect costs of regulation. If an action would have a significant impact on a substantial number of small entities, an Initial Regulatory Flexibility Analysis (IRFA) must be prepared to identify the need for action, alternatives, potential costs and benefits of the action, the distribution of these impacts, and a determination of net benefits. The RFA requires the Federal rulemaker to examine the impacts of proposed and existing rules on small businesses, small organizations, and small Governmental jurisdictions.

The Small Business Administration has defined all fish-harvesting or hatchery businesses that are independently owned and operated, not dominant in their field of operation, and with annual receipts (gross revenues) not in excess of \$3,500,000 as small businesses. In addition, seafood processors with 500 or fewer employees, wholesale industry members with 100 employees or fewer, not-for-profit

enterprises, and Government jurisdictions with a population of 50,000 or less are considered small entities.

If an action is determined to affect a substantial number of small entities, the analysis must include:

1. A description and estimate of the number of small entities and total number of entities in a particular affected sector, and a total number of small entities affected: and
2. Analysis of economic impact on small entities, including the direct and indirect compliance costs of completing paperwork or recordkeeping requirements, effect on the competitive position of small entities, effect on the small entity's cash flow and liquidity, and ability of small entities to remain in the market.

Determination of significance is based on two criteria: Disproportionality and profitability.

Disproportionality means small firms are placed at a significant competitive disadvantage relative to large firms. Profitability means that firms' profits are significantly reduced. Because different classes of entities are not an issue here (all of the affected parties can be defined as small entities), there are no entities that are disproportionately affected. The criterion of profitability has been considered in this case.

6.11.8 Reasons for Considering the Action

The reasons for considering this action are discussed in Section 1.0 of this document.

6.11.9 Objectives and Legal Basis for the Action

The legal basis for this action is discussed in Section 1.0 of this document. This action is consistent with the goals and objectives of the Multispecies and Atlantic Herring FMPs.

6.11.10 Description and Number of Small Entities to Which the Rule Applies

A very brief description of the multispecies and Atlantic herring fisheries is provided in Section 4.0 of this document and information sources for small entities to which the rule applies are listed again in Section 6.11.2 of this document.

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 \$3.5 million annually. During the 2005 fishing year, there were 115 vessels that possessed a Category 1 federal herring permit. Only about 40 of these vessels currently participate in the herring fishery at levels greater than those characterized as incidental catch (2,000 pounds). The analysis provided in the DSEIS for Amendment 1 to the Atlantic Herring FMP suggests that there will be 39 vessels that will receive limited access directed fishery permits once Amendment 1 is implemented. The universe of small entities to which this rule applies is expected to be the same, in general, once Amendment 1 to the Atlantic Herring FMP is implemented.

6.11.11 Recordkeeping and Reporting Requirements

The new recordkeeping and reporting requirements associated with the proposed action were already implemented in the fishery by NMFS as part of the Emergency Rule for haddock bycatch in the herring fishery on June 13, 2005. No new requirements are proposed in this framework adjustment.

6.11.12 Duplication, Overlap, or Conflict with Other Federal Rules

The proposed action does not duplicate, overlap or conflict with any other Federal rules.

6.11.13 Economic Impacts on Small Entities Resulting from the Proposed Action

Section 5.0 of this document includes analyses of the impacts of the proposed action on small entities participating in both the multispecies and herring fisheries. The proposed action combines two alternatives that were considered separately during the development of Framework 43. The first would have established possession limits of 1,000 lb (454 kg) per trip for haddock and 100 lb (45 kg) per trip for the other regulated multispecies, with no cap on haddock landings. The other would have established a cap on haddock landings, with no possession limits. The Council combined these measures, but eliminated the requirement for a possession limit of haddock. The other alternative was no action, which would have continued to prohibit vessels fishing for Atlantic herring from possessing or landing any groundfish species.

Compared to the no-action alternative, the other alternatives significantly minimize the economic impacts on herring vessels. Both the proposed action and the non-selected alternatives prevent direct economic loss resulting from herring harvest that would be foregone by vessel owners concerned about haddock bycatch and the potential for resulting regulatory violations under the no-action alternative. By allowing for the incidental catch of groundfish, both the proposed action and the other alternatives would enable herring vessels to continue fishing even if they encounter groundfish. This is particularly important in herring Management Area 3 (GB), where herring vessels are most likely to encounter groundfish.

Estimate foregone revenues from not fishing in Area 3 would be \$2,123,727 based on reported landings during 2005 and an average price for herring of \$163 per mt. Foregone revenues could be as high as \$8,150,000 based on utilization of the entire available TAC from Area 3. This assumes that the herring fleet would not fish in Area 3 at all for fear of being in violation of the prohibition on the possession of haddock on every trip and therefore represents an upper bound to the range of expected impacts.

The estimate of foregone future haddock revenue as a result of this action ranges from \$349,330 to \$775,939 based on an average of \$1.36 per pound of haddock. Thus, the negative economic consequences would be much greater under the no action alternative. The no action alternative essentially increases the negative economic impacts and shifts them from the groundfish fishery to the herring fishery.

7.0 LIST OF PREPARERS AND AGENCIES CONSULTED

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- NOAA Fisheries, National Marine Fisheries Service, Northeast Regional Office, Gloucester MA
- Northeast Fisheries Science Center, Woods Hole MA
- Atlantic States Marine Fisheries Commission and Atlantic Herring Section
- Mid-Atlantic Fishery Management Council

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