AMENDMENT 5 TO THE ATLANTIC HERRING FMP: DRAFT DISCUSSION DOCUMENT

This document summarizes the work of the New England Fishery Management Council's Herring Committee, Advisory Panel (AP), and Plan Development Team (PDT) to date regarding the development of specific management measures and the range of alternatives that may be analyzed in the Draft EIS for Amendment 5 to the Herring FMP. Relevant background and supporting information/analyses provided by the Herring PDT are also included in this document.

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1.0 INTRODUCTION

The New England Fishery Management Council (Council) is developing an amendment to the Fishery Management Plan (FMP) for Atlantic herring (*Clupea harengus*) under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), recently reauthorized as part of the Magnuson-Stevens Reauthorization Act of 2006 (MSRA). In accordance with the National Environmental Policy Act (NEPA), the Council also intends to prepare an Environmental Impact Statement (EIS) that will analyze the impacts of this amendment on both the physical and human environment.

1.1 GOALS AND OBJECTIVES

1.1.1 Background – Goals and Objectives for the Herring Fishery Management Program (Amendment 1)

The goals and objectives of the Atlantic herring fishery management program were specified in Amendment 1 to the Herring FMP and will continue to frame the long-term management of the resource and fishery:

GOAL (AMENDMENT 1): Manage the Atlantic herring fishery at long-term sustainable levels consistent with the National Standards of the Magnuson-Stevens Fishery Conservation and Management Act.

OBJECTIVES (AMENDMENT 1):

1. Harvest the Atlantic herring resource consistent with the definition of overfishing contained in the Herring FMP and prevent overfishing.

2. Prevent the overfishing of discrete spawning components of Atlantic herring.

3. Avoid patterns of fishing mortality by age which adversely affect the age structure of the stock.

4. Provide for the orderly development of the herring fishery in inshore and offshore areas, taking into account the viability of current and historical participants in the fishery.

5. Provide for long-term, efficient, and full utilization of the optimum yield from the herring fishery while minimizing waste from discards in the fishery. Optimum yield is the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, taking into account the protection of marine ecosystems, including maintenance of a biomass that supports the ocean ecosystem, predator consumption of herring, and biologically sustainable human harvest. This includes recognition of the importance of Atlantic herring as one of many forage species of fish, marine mammals, and birds in the Northeast Region.

6. Prevent excess capacity in the harvesting sector.

7. Minimize, to the extent practicable, the race to fish for Atlantic herring in all management areas.

8. Provide, to the extent practicable, controlled opportunities for fishermen and vessels in other Mid-Atlantic and New England fisheries.

9. Promote and support research, including cooperative research, to improve the collection of information in order to better understand herring population dynamics, biology and ecology, and to improve assessment procedures.

10. Promote compatible U.S. and Canadian management of the shared stocks of herring.

11. Continue to implement management measures in close coordination with other Federal and State FMPs and the ASMFC management plan for Atlantic herring, and promote real-time management of the fishery.

1.1.2 Goals and Objectives of Amendment 5

At this time, it is intended that the management measures considered in this amendment will address one or more of the following:

GOAL (AMENDMENT 5)

To develop an amendment to the Herring FMP to improve catch monitoring and ensure compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA)

OBJECTIVES (AMENDMENT 5)

1. To implement measures to improve the long-term monitoring of catch (landings and bycatch) in the herring fishery;

2. To implement other management measures as necessary to ensure compliance with the MSA;

3. To implement management measures to address bycatch in the Atlantic herring fishery;

4. In the context of Objectives 1 -4 (above), to consider the health of the herring resource and the important role of herring as a forage fish and a predator fish throughout its range.

1.1.3 Goals and Objectives of the Amendment 5 Catch Monitoring Program

The Council has identified ***catch monitoring*** as a primary management issue for consideration in Amendment 5 and has directed the Herring Committee to focus on the development of specific management alternatives to improve catch monitoring in the herring fishery. "Catch monitoring" is intended to be comprehensive in nature and relates to improving the collection of information regarding shoreside (landings of herring and other species) and at-sea catch (including bycatch/discards and slippage/unsampled catch), as well as improving vessel/dealer reporting and real-time quota (ACL/sub-ACL) monitoring.

A catch monitoring program for the Atlantic herring fishery that supplements and improves the existing program can take on many forms and include several different approaches. In general, two important elements of the fishery must be adequately documented to improve catch monitoring and ensure that data are as complete and accurate as possible: (1) **at-sea catch**; and (2) **portside/dockside landings**. At-sea monitoring should focus on both total catch and bycatch– everything that enters the net and is either pumped aboard the fishing vessel or discarded at sea. Dockside monitoring and/or portside sampling should focus on accurate and real-time accounting of landings and incidental catch – all fish are is brought to port and offloaded from the vessel, either to a processing plant, a bait truck/dealer, other fish dealers, or to be disposed of as bycatch. Another important element of catch monitoring is improving reporting and ensuring real-time monitoring of the management area sub-ACLs for the Atlantic herring fishery.

A thorough understanding of the strengths and weaknesses of the existing catch monitoring program is a fundamental first step towards designing a new and better program. This has been the focus of the Herring Committee and Advisory Panel's discussions during and since the initiation of Amendment 5. The existing catch monitoring program will be described in detail and evaluated to the extent possible as part of the description and discussion of the no action alternative in the Amendment 5 Draft EIS.

In general, the goals (numbered) and objectives (bulleted) of the catch monitoring program established in Amendment 5 are:

1. **To create a cost effective and administratively feasible program for provision of accurate and timely records of catch of all species caught in the herring fishery;**
    - Review federal notification and reporting requirements for the herring fishery to clarify, streamline, and simplify protocols;
2. **Develop a program providing catch of herring and bycatch species that will foster support by the herring industry and others concerned about accurate accounts of catch and bycatch, i.e., a well-designed, credible program;**
    - Avoid prohibitive and unrealistic demands and requirements for those involved in the fishery, i.e., processors and fishermen using single and paired midwater trawls, bottom trawls, purse seines, weirs, stop seines, and any other gear capable of directing on herring;

- Improve communication and collaboration with sea herring vessels and processors to promote constructive dialogue, trust, better understanding of bycatch issues, and ways to reduce discards;
- Eliminate reliance on self-reported catch estimates;

3. Design a robust program for adaptive management decisions;

4. Determine if at-sea sampling provides bycatch estimates similar to dockside monitoring estimates;

- Assure at-sea sampling of at-sea processors' catches is at least equal to shoreside sampling;
- Reconcile differences in federal and states' protocols for dockside sampling, and implement consistent dockside protocols to increase sample size and enhance trip sampling resolution.

The objective of the portside sampling program and at-sea monitoring program improvements would be to sample enough landings events to aid in accurate estimations of catch/bycatch in the herring fishery. In addition, samplers may collect important biological information and commercial catch samples in order to support stock assessments and other biological needs.

1.2 AMENDMENT 5 – DEVELOPMENT OF ALTERNATIVES AND ANTICIPATED TIMELINE

The measures proposed in this amendment were originally developed as part of Amendment 4 to the Atlantic Herring FMP, but Amendment 4 was split in June 2009 so that the Council could develop annual catch limits (ACLs) and accountability measures (AMs) in a timely manner. The ACL/AM component was completed as part of Amendment 4, and other measures under consideration (catch monitoring program, river herring bycatch measures, criteria for midwater trawl access to groundfish closed areas, measures to address interactions with the Atlantic mackerel fishery) will be developed in Amendment 5.

After gathering information during the scoping period for Amendment 4 (through June 30, 2008), the Herring Committee began work on developing a range of alternatives to be considered and analyzed in a Draft Environmental Impact Statement (DEIS) and public hearing document for Amendment 4. Committee meetings were held during the scoping period so that background information could be provided by the Herring PDT and scoping comments could be submitted by the public and the Herring Advisory Panel (AP). The Committee met jointly with the Herring AP during July 2008 and met independently during September/October 2008 to continue work on the development of management alternatives and develop recommendations for the Council to review at its meeting in October 2008.

At the October 7-9, 2008 meeting, the Council reviewed work on the management alternatives and considered the Herring Committee's recommendations regarding specific management measures for further development in Amendment 4. Following the October Council meeting, the Committee continued to flesh out the details of the management alternatives that will be forwarded to the Council for approval and incorporation into a Draft EIS (DEIS) for Amendment 4. At its November 2008 meeting, the Council agreed to also develop measures during 2009 that establish criteria for midwater trawl access to the groundfish closed areas; these measures are now proposed for inclusion in Amendment 5.

In late 2008, the Council also solicited suggestions/proposals from stakeholders regarding the specific elements of a catch monitoring program for the Atlantic herring fishery. Stakeholder proposals were reviewed by the Herring Committee at the December 2008/January 2009 meetings, and some elements of the proposals have been incorporated into the Committee's alternatives for further consideration in this document. The Council approved these proposals for further consideration/development at its February 2009 meeting. In April 2009, the Council prioritized the management issues to be addressed in Amendment 4:

1. Annual Catch Limits and Accountability Measures;
2. Catch Monitoring Program;
3. Measures to Address River Herring Bycatch;
4. Criteria for Midwater Trawl Access to Groundfish Closed Areas; and
5. Measures to Address Interactions with the Mackerel Fishery.

The Herring Committee continued to work with the Herring Advisory Panel and Herring PDT on the development of management alternatives for Amendment 4 throughout the first half of 2009, and the Council reviewed progress on Amendment 4 at its June 2009 meeting. While some elements of the amendment were complete and ready to move forward at that time, the larger, more significant components of the catch monitoring program and other measures (river herring bycatch measures, groundfish closed area access) required additional work/discussion. To ensure that the ACL/AM provisions of Amendment 4 could be implemented for the 2011 fishing year (as mandated by the MSA), the Council was required to submit the ACL/AM action (i.e., Amendment 4) to NMFS no later than May 2010. This would have required completion of the development of alternatives and the Draft EIS for Amendment 4 during the fall of 2009; the Council recognized that this timeline was highly unlikely since the range of alternatives for catch monitoring and measures to address other issues in the amendment were not fully developed as of June 2009, and Council staff/Herring PDT work was diverted to the 2010-2012 specifications process for much of summer/fall 2009. The Council therefore decided to split Amendment 4 so that the ACL/AM provisions could be completed in a timely manner, and the other elements of the action could be further developed in Amendment 5, following completion of Amendment 4 and the 2010-2012 specifications. Development of the Amendment 5 catch monitoring alternatives continued through the summer/fall 2009 and early 2010 while the Council addressed the 2010-2012 fishery specifications and completed Amendment 4. The final Amendment 4 document was submitted to NMFS on April 23, 2010. During the management priority discussion in November 2009, the Council approved the continuation of the development of Amendment 5, with an additional issue to be addressed – spawning protection.

The Draft Environmental Impact Statement (DEIS) for Amendment 5 will be developed based on a range of alternatives identified for consideration by the Council and comment by the public and interested parties. Once the DEIS for Amendment 5 is prepared and approved, and once the Council identifies its preferred alternative(s) based on the information in the DEIS, the Council will distribute the DEIS as well as an abbreviated public hearing document for public review. A 45-day public hearing and comment period will allow interested stakeholders to comment on any aspects of the Amendment 5 DEIS, including the alternatives under consideration and the analyses of the impacts prepared by the Council's Herring PDT. Following a review of all public comments and input from the Herring Advisory Panel and Herring Committee, the Council will select the final management measures for submission to the Secretary of Commerce as Amendment 5 to the Herring FMP. The Council is scheduled to select the final measures for Amendment 5 in 2011.

The following "milestones" in the development of Amendment 5 are anticipated at this time:

1. Herring Committee, PDT, and Advisory Panel continue development of alternatives for Amendment 5	FEB – SEPT 2010
2. Council reviews Amendment 5 alternatives and provides guidance	SEPT 2010
3. Committee continues work on development of alternatives	OCT 2010 – JAN 2011
4. Council approves Amendment 5 alternatives for analysis in DSEIS	**JAN 2011**
5. Council approves Draft Amendment 5/DSEIS and public hearing document and selects preferred alternatives	SEPT 2011
6. Herring Amendment 5 Public Hearings	NOV/DEC 2011
7. Council reviews public and advisor comments and O/S recommendations; approves final Amendment 5 measures	JAN 2012
8. Staff submits Amendment 5	EARLY 2012
9. Amendment 5 Implementation	ASAP 2013 FY

2.0 DESCRIPTION OF THE STATUS QUO

Comment [lls1]: Work in progress

Atlantic herring vessel permit holders are required to report catch (landings and discards) using various reporting mechanisms. Reporting requirements differ among permit categories and also may depend on the activity of the vessel. Atlantic herring dealers have their own set of reporting requirements.

Herring is also managed in state waters under the Atlantic States Marine Fisheries Commission (ASMFC). Federal measures apply to a vessel issued a Federal herring permit, no matter where it fishes; however, individual states may set different reporting requirements. In cases where state measures differ from Federal regulations, fishery participants holding both state and federal herring permits must adhere to the more restrictive measure, either state or Federal.

2.1 STATUS QUO – INTERACTIVE VOICE RESPONSE SYSTEM (IVR)

The owner or operator of any vessel issued a limited access herring permit must report catch (retained and discarded) of herring each week to the IVR system, regardless of how much herring is caught (including weeks when no herring is caught). An owner or operator of any vessel issued an open access herring permit that catches 2,000 lb (907.2 kg) or more of herring on any trip in a week must also report that catch (retained and discarded) each week to the IVR system.

The IVR report must include at least the following information: Vessel identification, week in which species are caught, pounds retained, pounds discarded, management areas fished, and pounds of herring caught in each management area for the week.

The IVR reporting week begins on Sunday at 0001 hrs (12:01 AM) local time and ends Saturday at 2400 hrs (12 midnight). Weekly Atlantic herring catch reports must be submitted via the IVR system by midnight, Eastern Time, each Tuesday for the previous week. Herring should be reported for the week it was caught, even if it has not been landed yet.

IVR Requirements for Pair Trawl Vessels:

During pair-trawl operations, herring can be brought on board and landed by more than one vessel. Each vessel in the pair-trawl operation is required to report their herring catch separately through an IVR system. If all of the catch from a pair trawling operation is landed by one vessel only, both vessels are still required to call into the IVR system. The vessel landing the catch should report the pounds landed, and the vessel with no catch on board should report 0 lb for that trip.

IVR Requirements for Purse Seine Vessels:

During purse seine operations, herring can be brought on board and landed by more than one vessel. Each vessel in the purse seine operation is required to report their herring catch separately through an IVR system. If all of the catch from a purse seining operation is landed by one vessel only, other vessels are still required to call into the IVR system. The vessel landing

the catch should report the pounds landed, and the vessel(s) with no catch on board should report 0 lb for that trip.

IVR Requirements for Transfers at Sea:

Vessels acting as Atlantic herring carriers with a valid Letter of Authorization (LOA) from the Regional Administrator are not required to call into an IVR system. When herring is transferred to another vessel, the vessel that catches the fish (the catcher vessel) is required to report the catch to an IVR system. The carrier vessel should not report the catch to the IVR system to prevent double counting of landings.

2.2 STATUS QUO – VESSEL TRIP REPORTS (VTR)

All owners or operators issued a valid herring permit must have an accurate fishing vessel trip report on board the vessel for each fishing trip, regardless of the species harvested. The VTRs must be those supplied or approved by the NMFS Regional Administrator. VTRs for the herring fishery must be postmarked or received by NMFS within 15 days after the end of the reporting month, even if no fishing trip is made during that month. If a vessel owner or operator has any federal Northeast multispecies permit in addition to their herring permit, he/she must submit VTRs weekly by the first Tuesday following the end of the reporting week, regardless if a fishing trip was made or what species was caught. If no fishing trip is made during a reporting week or month, a report stating so must be submitted for each week or month, as applicable, based upon whether any fishing activity occurred during a particular reporting week or month (Note: starting a trip, landing, or offloading catch will constitute fishing during a reporting week or month).

At least the following information and any other information required by the Regional Administrator must be provided: Vessel name; USCG documentation number (or state registration number, if undocumented); permit number; date/time sailed; date/time landed; trip type; number of crew; number of anglers (if a charter or party boat); gear fished; quantity and size of gear; mesh/ring size; chart area fished; average depth; latitude/longitude (or loran station and bearings); total hauls per area fished; average tow time duration; hail weight, in pounds (or count of individual fish, if a party or charter vessel), by species, of all species, or parts of species, such as monkfish livers, landed or discarded; and, in the case of skate discards, “small” (i.e., less than 23 inches (58.42 cm), total length) or “large” (i.e., 23 inches (58.42 cm) or greater, total length) skates; dealer permit number; dealer name; date sold, port and state landed; and vessel operator's name, signature, and operator's permit number (if applicable).

VTR Requirements for Pair-Trawl Vessels:

During pair-trawl operations, herring can be brought on board and landed by more than one vessel. Each vessel in the pair-trawl operation is required to report their herring catch separately through VTR. If all catch is landed by one vessel, the other vessel is still required to report ‘no catch’ on their weekly or monthly VTR for that fishing trip. If more than one vessel lands catch from the pair-trawl operation, each vessel must submit VTRs and report the catch landed, as well as indicate that they were pair-trawling with another vessel. The VTRs should include the names and permit numbers all of vessels participating in the pair-trawling operation.

VTR Requirements for Purse Seine Vessels:

During purse seine operations, herring can be brought on board and landed by more than one vessel. Each vessel in the purse seine operation is required to report their herring catch separately through VTR. If all catch is brought on board one vessel, the other vessel is still required to report 'no catch' on their weekly or monthly VTR for that fishing trip. If more than one vessel lands catch from the purse seine operation, each vessel must submit VTRs and report the catch landed, as well as indicate that they were purse seining with another vessel. The VTRs should include the names and permit numbers all of vessels participating in the purse seine operation.

VTR Requirements for Transfers at Sea:

The transferring vessel may not fish for, catch, transfer, or possess more herring than allowed by the vessel permit category. Each vessel has the responsibility to record how fish is transferred at sea on their VTR; the information reported will vary slightly for each vessel type as follows:

- Transfers at sea from a catcher vessel to a vessel that receives herring for personal use as bait:
    - The catcher vessel must report all herring catch on their VTR and indicate on their VTR that herring catch was transferred to another vessel for use as bait. The vessel receiving herring for personal use as bait is not required to have a federal herring permit, and as such does not have any reporting requirements.
- Transfers at sea from a catcher vessel to a carrier vessel:
    - A carrier vessel must have an Atlantic herring Carrier LOA (carrier LOA) from the Regional Administrator, must operate exclusively as a herring carrier, and is prohibited from having any fishing gear on board. Vessels issued a carrier LOA may not have any species on board other than herring, with the exception of multispecies received from vessels issued an All Areas or Areas 2 and 3 Limited Access Permit.
    - The vessel that catches the herring (catcher vessel) is responsible for reporting all catch on their VTR. The catcher vessel's VTR for a trip should note the dealer name and permit number where the carrier vessel is going to land the herring. In addition, the catcher vessel is responsible for giving the carrier vessel a copy of their VTR serial number.
    - Carrier vessels must provide each catcher vessel's VTR serial number to each dealer purchasing the catch. The carrier vessel's VTR serial number should not be provided to the dealer(s).
    - The carrier vessel is required to submit VTRs which indicate 'no catch' for the days in which they were carrying, and should note the vessel name and permit number of the catcher vessel they were carrying for on their VTR.
    - Although the carrier vessel lands the catch, the dealer is responsible for attributing catch the catcher vessel using the vessel name, permit number, and VTR serial number the catcher vessel provided to the carrier vessel.
- Transfers at sea to another permitted herring vessel:
    - The catcher vessel must report all catch on their VTR. The catcher vessel should indicate on their VTR that herring catch was transferred to another federally

permitted herring vessel and include the name and permit number of the vessel receiving the catch.

- The permitted herring vessel that receives the catch is required to submit VTRs that indicate 'no catch' and should note the vessel name and permit number of the catcher vessel on their VTR.

2.3 STATUS QUO – DEALER REPORTING

Dealers, including at-sea processors, must submit, for each transaction, an electronic dealer report each week. Reports are due by midnight (Eastern Time) each Tuesday for the week that ended the previous Saturday at midnight. Reports must include the *correct* vessel name and Federal permit number of each vessel that **harvested** any fish received along with the correct weight units for purchased fish. Dealers must also report the VTR serial number used by each vessel that harvested fish. Dealers are required to submit a report even if there is no activity during a week.

Reporting herring landed by a carrier vessel:

Dealers must attribute catch to the vessel that harvested the herring, which may not necessarily be the vessel that landed the herring. Vessels acting as herring carriers must obtain the VTR serial number from the catcher vessel. Subsequently, dealers must request the name, permit number, and VTR serial number of the catcher vessel from the carrier vessel, and report the fish as being harvested by the catcher vessel. Dealers should not report landings from a carrier vessel, as it may lead to double counting landings and could lead to trip limit reductions in a particular management area.

Reporting haddock landing from herring vessels:

Dealers, including at-sea processors, that cull or separate all other fish from the herring catch must separate and retain all haddock offloaded from vessels that have an All Areas Limited Access Herring permit or an Areas 2 and 3 Limited Access Herring permit. Any haddock may not be sold, purchased, received, traded, bartered, or transferred, and must be retained, after it has been separated from the herring, for at least 12 hours for dealers and processors on land, and for 12 hours after landing on shore by at-sea processors for inspection by law enforcement officials. The dealer or at-sea processor must report all such haddock on the weekly electronic dealer report and must use the appropriate disposition code for the haddock. The weekly dealer report must clearly indicate the vessel name and permit number of the vessels that caught the retained haddock.

2.4 STATUS QUO – VESSEL MONITORING SYSTEM (VMS) PROVISIONS

Using VMS to declare into a fishery:

If a vessel has been issued a limited access herring permit, a vessel representative must activate the VMS unit and declare that the vessel is participating in the herring fishery by entering the code "HER" prior to leaving port. If a vessel representative declares the vessel out of the herring fishery ("DOF") prior to leaving port to target a non-VMS required species, such as mackerel, that vessel may not harvest, possess, or land herring on that trip. Vessels that maintain a VMS unit on board as a requirement for other fisheries, and are targeting a species that does not have a VMS requirement (ex. mackerel and squid) should declare "DOF" before leaving port.

Using VMS for pre-land notification:

All vessels that have an All Areas Limited Access Permit and/or an Areas 2 and 3 Limited Access Herring Permit using either midwater trawl or purse seine gear on a declared herring trip must notify NMFS Office of Law Enforcement through VMS of the time and place of offloading at least 6 hours prior to crossing the VMS demarcation line on their return trip to port, or for vessels that have not fished seaward of the demarcation line, at least 6 hours prior to landing.

2.5 STATUS QUO – OBSERVER NOTIFICATION

All vessels that have an All Areas Limited Access Permit and/or an Areas 2 and 3 Limited Access Herring Permit using either midwater trawl or purse seine gear on a declared herring trip must provide notice of the following information to NMFS at least 72 hours prior to beginning any trip for obtaining an at-sea observer: Vessel name, contact name for coordinating an at-sea observer, telephone number, date, time, and port of departure, and whether the vessel intends to fish in Closed Area 1.

There are three methods available for notifying the Northeast Fisheries Observer Program:

1) **ONLINE via the Pre-Trip Notification System (preferred method):** The Pre-Trip Notification System (PTNS) is accessible at https://fish.nefsc.noaa.gov/PTNS/. Vessels should log in using the same username (permit number) and password (PIN) as they use for Fish-On-Line. If you do not have access please contact NMFS immediately at (978) 281-9133 or by email at fso.data.requests@noaa.gov.

2) **EMAIL:** Please submit trip notification by email NEFSC.PTNS@noaa.gov.

3) **TELEPHONE:** Please call 508-495-2309 (M-F 7:00am-6:00pm) or the emergency cell phone number after hours 508-681-9104.

2.6 STATUS QUO – HERRING QUOTA (ACL/SUB-ACL) MONITORING

Vessel reported catch through the IVR system are the primary data source used for monitoring the herring ACL and sub-ACLs. Vessel reported catch through the IVR system are supplemented with dealer reported catch, only when dealer reported catch is higher. IVR reported catch is supplemented with dealer reported catch (called dealer supplemented reports) are the final data stream used for real-time monitoring herring ACL and sub-ACLs and implementing trip limit reductions in each herring management area. Vessels issued an open access permit for Atlantic herring that catch less than 2,000 lb of herring on any trip in a week are not required to report herring catch through the IVR system. Therefore, any landings by open access vessels less than 2,000 lb are captured through VTRs, which are submitted monthly.

Herring catch data is received through the IVR system and dealer database on Tuesday at midnight for the previous reporting week (ending Saturday at midnight). Therefore, herring that is caught on a Sunday is not required to be reported through the IVR system or by dealers until Tuesday of the following week. This results in a potential 10-day data lag between when the herring is caught and when it is reported. This 10-day data lag provides challenges to managing a pulse fishery where a large amount of herring can be caught in a short period of time. In addition, herring catch by vessels with open access permits that is less than 2,000 lb and is reported through VTR is only received on a monthly basis.

In addition, due to the frequency of transfers at sea in the herring fishery, misreporting by vessels and dealers is common. One of the most common mistakes is dealers attributing harvest to carrier vessels, instead of the catcher vessel. This may result in double counting as the same catch is attributed to two vessels. Herring catch data reported by vessels is reconciled with dealer reports throughout the fishing season and the data used to monitor the fishery is as accurate as possible. VTRs are used in the data reconciliation process to confirm vessel and dealer reported catch, including the management area fished, and any transfers at sea.

Recently, VMS is also being used to monitor the herring fishery as it allows NMFS to ensure that all vessels observed fishing in a particular management area have reported catch (even if catch is 0 lb) from that management area. Vessels that have been observed fishing, but have not reported on time or vessels who have been observed fishing in one management area, but have reported catch from a different area, are contacted by NMFS staff in the data reconciliation process.

3.0 PROPOSED ADJUSTMENTS TO THE FISHERY MANAGEMENT PROGRAM

3.1 ADMINISTRATIVE/GENERAL PROVISIONS

The management measures described in this section are proposed by the Council as general/administrative provisions that could apply to any of the alternatives under consideration in Amendment 5. If any of the measures described in the following subsections are not implemented in Amendment 5, then the status quo will continue to apply.

3.1.1 Establish a Regulatory Definition of "Transfer at Sea" for the Atlantic Herring Fishery

A *transfer* is currently defined in §648.2 as follows:

Transfer means to begin to remove, to remove, to pass over the rail, or to otherwise take away fish from any vessel and move them to another vessel.

The actions that qualify as transfers that are currently permitted for the herring fishery are described in the transfer at sea provisions at §648.13(f). The regulations allow permitted Atlantic herring vessels to engage in the following activities:

- Transfer, within the transferring vessel's permitted possession limits, to vessels not issued an Atlantic herring permit for personal use as bait, provided that the vessel does not have purse seine, midwater trawl, pelagic gillnet, sink gillnet, or bottom trawl gear aboard;
- Transfer, within the transferring vessel's permitted possession limits, to vessels issued an Atlantic herring carrier LOA, or to permitted at-sea processors;
- Transfer, within the transferring vessel's permitted possession limits, to another permitted herring vessel.

Amendment 5 would establish a regulatory definition of *transfer at sea* for the purposes of the Atlantic herring fishery to clarify provisions related to each vessel engaged in the operation.

Option: Define a herring transfer at sea as: *a transfer from an Atlantic herring vessel (i.e. in the vessel hold or on deck), codend, purse seine to another vessel for personal use as bait, to an Atlantic herring carrier or at-sea processor, or to another permitted herring vessel. Two vessels hauling one codend is pair trawling and is not considered a transfer at sea.*

3.1.2 Modify the Regulatory Definition of "Offload" for the Atlantic Herring Fishery

Amendment 5 proposes to modify the regulatory definition of *offload* for the purposes of the Atlantic herring fishery to clarify reporting provisions.

An *offload* is currently defined in §648.2 as follows:

Offload or offloading means to begin to remove, to remove, to pass over the rail, or to otherwise take away fish from any vessel…

If this provision is implemented in Amendment 5, the definition of offload would be modified as to add the following:

For the purposes of the Atlantic herring fishery, an offload or offloading means to remove, begin to remove, to pass over the rail, or otherwise take fish away from any vessel for sale to either a permitted At-sea Atlantic Herring dealer (as defined under Section 3.1.4 of this document) or a permitted land-based Atlantic herring dealer.

3.1.3 Expand Possession Restrictions to All Vessels Working Cooperatively in the Atlantic Herring Fishery (to Include Purse Seine Vessels and Vessels that Transfer Herring At-Sea)

The regulations at §648.204(b) state that both vessels involved in a pair trawl operation must be issued the herring permit appropriate for the amount of herring jointly possessed by both of the vessels participating in the pair trawl operation. This means that the more restrictive possession limit of the vessels participating in a pair trawl operation is the limit of the total amount of herring that the vessels may jointly fish for, possess, or land in any calendar day.

For example, if Vessel 1 has a Category A permit, which has no possession limit, and Vessel 2 has a Category C permit, with a possession limit of 55,000 lbs/day, then the vessels are only permitted to jointly fish for, possess, and land 55,000 lbs/day.

This measure would expand the provisions §648.204(b) to include paired purse seine operations and transfers at sea between vessels. In summary, vessels working cooperatively are subject to the vessels' the more restrictive possession limit.

3.1.4 Establish a New At-Sea Herring Dealer Permit

Amendment 5 would establish a new Federal At-Sea Herring Dealer permit that would be required for carrier or other vessels that sell Atlantic herring to any entity.

- The definition of "Atlantic Herring Dealer" in Section 648.2 (Definitions) would be modified to include carrier vessels that may sell fish.
- This permit would require compliance with federal dealer reporting requirements (Section 648.7) at any time the vessel is in possession of the at-sea dealer permit. A "dealer identifier" would have to be developed for at-sea for the purposes of reporting. Vessels that have both the At-Sea Herring Dealer Permit and a herring fishing permit would be required to fulfill the reporting requirements of both permits while in possession of both permits.

3.1.5 Eliminate the VMS "Power Down" Provision for Limited Access Herring Vessels

Amendment 5 would include a measure that would prohibit limited access herring vessels (and carrier vessels that utilize VMS) from turning off their VMS units when in port unless specifically authorized by NMFS through a Letter of Exemption, consistent with VMS provisions for the multispecies, scallop, and surf clam/ocean quahog fleet:

- The Northeast Fisheries Regulations allow vessels holding certain permits to turn off their VMS units during periods when the vessel will be out of the water or during extended periods of no fishing activity. The request must be made in advance of the intended exemption period, and a "Letter of Exemption" (LOE) must be issued by NMFS. Vessels may not turn VMS units off until they receive a LOE approval from NMFS.
  - **All Vessels.** May request a Letter of Exemption from NMFS if the vessel is expected to be out of the water for more than 72 consecutive hours.
  - **Limited Access Multispecies, Limited Access Scallop and Surfclam/Ocean Quahog Vessels (Proposed to Add Limited Access Herring Vessels).** May sign out of the VMS program for a minimum of 30 consecutive days by obtaining a Letter of Exemption from NMFS. The vessel may not engage in ANY fisheries until the VMS unit is turned back on.

3.1.6 Eliminate Vessel Trip Report (VTR) Reporting for Herring Carrier Vessels

Currently, herring carrier vessels report monthly via VTR. This measure would eliminate the monthly reporting requirement for herring carrier vessels when they are engaged in carrying activities. Because all catch is reported by the vessels harvesting the catch, eliminating this measure would help prevent the double counting of landings that may occur is a dealer mistakenly attributes the landings to the carrier vessel and not the harvesting vessel.

3.1.7 Require Vessel Trip Reports (VTRs) to be Submitted on a Weekly Basis

This measure would require all vessels with Atlantic herring permits to submit VTRs on a weekly basis (versus the current monthly requirement). This measure could facilitate timely cross-checking between VTRs and weekly dealer reports.

3.1.8 Proposed Requirements for Catch Monitoring Service Providers (Sea Sampling/Observer Coverage and Portside Sampling)

Comment [lls2]: Should be reviewed by Herring PDT/TC

Multiple service providers may be allowed to participate in both the at-sea and/or the portside sampling programs as determined in this amendment, provided they meet the requirements described in this section.

Amendment 5 will authorize the ASMFC States (ME-NJ) as approved service providers for Federal at-sea and portside sampling programs established for the Atlantic herring fishery, consistent with the provisions contained in this document. While the following requirements will not apply to States upon the implementation of this amendment, the ASMFC Technical Committee and the Herring PDT will review the following standards with respect to existing State sampling programs and provide additional comments/recommendations if necessary.

The following standards would be used by NOAA Fisheries to evaluate/certify additional service providers consistent with the observer and/or portside sampling requirements outlined in this document. NOAA Fisheries will certify/approve service providers and associated samplers as eligible to provide services based upon criteria specified below and can decertify/disapprove service providers and/or individual samplers if such criteria are no longer being met. NOAA Fisheries will publish a list of approved service providers consistent with the Administrative Procedures Act (APA). The following standards and criteria for approval can be further modified by a future Council action.

Both observer and portside sampling program service providers must apply for certification/approval from NOAA Fisheries. NOAA Fisheries shall approve or disapprove a service provider based upon the completeness of the application and a determination of the applicant's ability to perform the duties and responsibilities of an observer and/or portside monitoring service provider, as further defined below. As part of that application, potential service providers must include the following information:

- Identification of corporate structure, including the names and duties of controlling interests in the company such as owners, board members, authorized agents, and staff; and articles of incorporation, or a partnership agreement, as appropriate;
- Contact information for official correspondence and communication with any other office;
- A statement, signed under penalty of perjury, from each owner, board member, and officer that they are free from a conflict of interest with fishing-related parties including, but not limited to, vessels, dealers, shipping companies, sectors, sector managers, advocacy groups,

or research institutions and will not accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from such parties;

- A statement, signed under penalty of perjury, from each owner, board member, and officer describing any criminal convictions, Federal contracts they have had, and the performance rating they received on the contract, and previous decertification action while working as a service provider;
- A description of any prior experience the applicant may have in placing individuals in remote field and/or marine work environments – this includes, but is not limited to, recruiting, hiring, deployment, and personnel administration;
- A description of the applicant's ability to carry out the responsibilities and duties of an observer and/or portside monitoring service provider and the arrangements to be used;
- Evidence of adequate insurance to cover injury, liability, and accidental death for samplers (including during training). Workers' Compensation and Maritime Employer's Liability insurance must be provided to cover the samplers; vessel owners; processors/dealers; and service provider. Service providers shall provide copies of the insurance policies to samplers to display to the vessel owner, operator, vessel manager, or dealer/plant manager, when requested.
- Service providers shall provide benefits and personnel services in accordance with the terms of each sampler's contract or employment status.
- Proof that the service provider's samplers have passed an adequate training course that is consistent with the curriculum used in the current Northeast Fisheries Observer Program (NEFOP) training course, unless otherwise specified by NOAA Fisheries;
- An Emergency Action Plan (EAP) describing the provider's response to an emergency with a sampler, including, but not limited to, personal injury, death, harassment, or intimidation; and
- Evidence that the company is in good financial standing.

Observer and/or portside sampling service providers must be able to document compliance with the following criteria and requirements:

- A comprehensive plan to deploy NOAA Fisheries-certified samplers, according to a prescribed coverage level (or level of precision for catch estimation), as specified by NOAA Fisheries, including all of the necessary vessel reporting/notice requirements to facilitate such deployment, including the following requirements:
  - A service provider must be available to industry 24 hours per day, seven days per week, with the telephone system monitored a minimum of four times daily to ensure rapid response to industry requests;
  - A service provider must be able to deploy samplers to all ports in which service is required by this section;
  - A service provider must report samplers in a timely manner to determine whether the predetermined coverage levels are being achieved;

  - A service provider's sampler assignment must be representative of fishing activities must be able to monitor fishing activity throughout the fishing year;
- The service provider must ensure that samplers remain available to NOAA Fisheries, including NMFS Office for Law Enforcement, for debriefing for at least two weeks following any sampled trip/offload;
- The service provider must report possible sampler harassment; discrimination; injury; and any information, allegations, or reports regarding sampler conflict of interest or breach of the standards of behavior to NOAA Fisheries;
- Service providers must submit to NOAA Fisheries, if requested, a copy of each signed and valid contract (including all attachments, appendices, addendums, and exhibits incorporated into the contract) between the service provider and those entities requiring services and between the service provider and specific samplers;
- Service providers must submit to NOAA Fisheries, if requested, copies of any information developed and used by the service providers distributed to vessels, such as informational pamphlets, payment notification, description of duties, etc.;
- A service provider may refuse to deploy a sampler for any reason including, but not limited to, the following:
  - If the service provider does not have an available sampler prior to a vessel's intended date/time of landing
  - If the service provider is not given adequate notice of vessel departure or landing, as specified by the service provider
  - Any other reason, including failure to pay for previous deployments of samplers
- A service provider must not have a direct or indirect interest in a fishery managed under Federal regulations, including, but not limited to, fishing vessels, dealers, shipping companies, advocacy groups, or research institutions and may not solicit or accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from anyone who conducts fishing or fishing-related activities that are regulated by NOAA Fisheries, or who has interests that may be substantially affected by the performance or nonperformance of the official duties of service providers. This does not apply to corporations providing reporting, portside, and/or at-sea monitoring services to participants of another fishery managed under Federal regulations.
- A system to record, retain, and distribute the following information for a period specified by NOAA Fisheries:
  - Observer and/or portside sampling levels, including the number of refusals and reasons for refusals
  - Incident/non-compliance reports (e.g., failure to offload catch)
  - Hail reports, landings records, and other associated communications with vessels
- A means to protect the confidentiality and privacy of data submitted by vessels, as required by the Magnuson-Stevens Act; and

- A service provider must be able to supply samplers with sufficient safety and data-gathering equipment, as specified by NOAA Fisheries.

For an individual to be certified as an observer or portside sampler, service provider must demonstrate that each potential monitor meets the following criteria:

- A high school diploma or legal equivalent;
- Successful completion of all NOAA Fisheries -required training and briefings before deployment;
- Physical capacity for carrying out the responsibilities of a sampler pursuant to standards established by NOAA Fisheries such as being certified by a physician to be physically fit to work as a sampler. The physician must understand the sampler's job and working conditions, for example the possibility that a sampler may be required to climb a ladder to inspect fish holds and/or trucks;
- Absence of fisheries-related convictions based upon a thorough background check; and
- Independence from fishing-related parties including, but not limited to, vessels, dealers, shipping companies, advocacy groups, or research institutions to prevent conflicts of interest.

3.2 MEASURES TO ADDRESS CARRIER VESSELS AND TRANSFERS OF ATLANTIC HERRING AT-SEA

3.2.1 Background (Status Quo)

The Letters of Authorization (LOAs) issued by NMFS for the Atlantic herring fishery currently allow an unlimited amount of herring (or the amount allowed by the vessels' herring permit) to be transferred at-sea (a) from herring catcher vessels to carriers; (b) between federally-permitted herring vessels; and (c) from herring catcher vessels to non-permitted vessels for personal use as bait (see Table 1 as well as the example LOAs distributed at July 30, 2008 Herring Committee Meeting).

Table 1 Summary of Current Letters of Authorization for the Atlantic Herring Fishery

LOA	Who	Provisions
Transfer at Sea	Any permitted herring vessels wishing to transfer herring at sea	• Enrollment duration: Permit year • Transfer, within the transferring vessel's permitted possession limits, to vessels not issued an Atlantic herring permit for personal use as bait, provided that the vessel does not have purse seine, midwater trawl, pelagic gillnet, sink gillnet, or bottom trawl gear aboard; • Transfer, within the transferring vessel's permitted possession limits, to vessels issued an Atlantic herring carrier LOA, or to permitted at-sea processors; • Transfer, within the transferring vessel's permitted possession limits, to another permitted herring vessel
Carrier*	Any permitted herring vessels wishing to transport herring from catcher vessels to land-based dealers	• Enrollment period: Minimum 7 days • Receive, transport, and transfer Atlantic herring caught by another vessel. • No gear allowed on board • All reporting requirements associated with carrier's permit apply
Midwater trawl*	Any permitted herring vessels wishing to fish with midwater trawl gear in the Gulf of Maine (GOM)/Gorges Bank (GB) Regulated Mesh Area (RMA)	• Enrollment period: Minimum 7 days • Vessel may fish with midwater trawl gear in GOM/GB RMA, including Closed Area I, Closed Area II, and Nantucket Lightship Closed Area, with nets less than the minimum mesh size at §648.80(a)(3)(ii). • All reporting requirements associated with vessel's permit apply • NFMS observer program 72 hrs prior to trip • Notification call to OLE 6 hrs prior to landing
Purse Seine*	Any permitted herring vessels wishing to fish with purse seine gear in the GOM/GB RMA	• Enrollment period: Minimum 7 days • Vessel may fish with purse seine gear in GOM/GB RMA, including Closed Area I, Closed Area II, and Nantucket Lightship Closed Area, with nets less than the minimum mesh size at §648.80(a)(3)(ii). • All reporting requirements associated with vessel's permit apply • NFMS observer program 72 hrs prior to trip • Notification call to OLE 6 hrs prior to landing

3.2.2 Measures to Address Carrier Vessels

In this amendment, reporting provisions will be modified to require herring carrier vessels to report a NMFS-specified trip identifier (for example, VTR serial number) from the catcher vessel when the carrier offloads to a dealer. Carrier vessels acting as dealers would be required to report the NMFS-specified trip identifier from the catcher vessels in their dealer reports. This measure is intended to improve the reporting of herring transferred at-sea. Provisions to eliminate VTR reporting for carrier vessels are proposed in Section 3.1.6 of this document.

In addition to the above requirement, the Council is considering options to provide carrier vessels with more flexibility that the current Letter of Authorization (LOA) for carrying herring currently allows. These options are described in the following subsections.

3.2.2.1 Option 1: Require VMS on Carrier Vessels for Declaration Purposes and Eliminate Seven-Day LOA Enrollment Restriction

Under this option, vessels that want to act as Atlantic herring carriers could obtain a LOA from NMFS to do so for the entire fishing year, but they would be required to utilize a vessel monitoring system (VMS) and comply with the VMS provisions for limited access herring vessels. Carrier vessels would be required to use their VMS declaration to indicate whether or not they will be engaged in herring carrying activity.

Because carrier vessels would be required to utilize VMS for trip declaration purposes, this option would allow them to engage in other activities while in possession of the herring carrier LOA (versus being restricted to carrying activities only for the minimum seven-day enrollment period). Prior to each fishing trip, the carrier vessels could utilize VMS declarations to indicate what activity they intend to engage in during the trip. If the vessel declares "carrier other," then it cannot carry Atlantic herring on that fishing trip.

- Herring vessels on standard fishing trips would declare HER-HER for a herring fishing trip, or DOF when not participating in the fishery.
- Carrier vessels that possess the Carrier LOA could declare HER-CAR. These vessels would be subject to the provisions of the LOA and would not be allowed to carry other species on that trip.
- Carrier vessels that possess the Carrier LOA could declare OTH-CAR. These vessels would not be allowed to carry Atlantic herring on that trip.

3.2.2.2 Option 2: Dual Option for Carriers (VMS or Current LOA)

This option would allow carriers to choose either:

1. Utilize a VMS for declaration, eliminate the minimum seven-day enrollment period for carrying (LOA restriction), and engage in other activities during LOA enrollment (identical to the provisions described above); or
2. Maintain the status quo (minimum seven day enrollment period with current LOA restrictions, described in Table 1).

This option accommodates smaller carrier vessels that do not utilize VMS and is similar to the multispecies requirements for common pool vessels fishing in the RGAs:

> *Common pool vessels fishing in the RGAs would be required to declare into these areas via VMS, as instructed by the Regional Administrator. In lieu of a VMS declaration, the Regional Administrator may authorize such vessels to obtain a letter of authorization (LOA) to fish in these RGAs. The minimum participation period for these LOAs would be 7 consecutive days, meaning that a vessel must agree to fish in these areas for a minimum of 7 consecutive days. If issued a LOA, a vessel must retain the LOA on board for the duration of the participation period.*

3.2.3 Measures to Address Transfers of Atlantic Herring At-Sea

NMFS has indicated that the current provisions and allowances for transfers of herring at sea are problematic and may be one of the most challenging problems when trying to resolve differences between databases and/or ensure completeness of Atlantic herring catch/landings data.

VTR records indicate that 933,862 pounds of herring were reported as "sold for bait" by vessels, presumably as transfers at sea. To date, during the 2008 fishing year, 25 unique vessels have been issued a Letter of Authorization to transfer Atlantic herring at-sea. VTR records for the 2008 fishing year are incomplete, and since most activity occurs during summer/fall, only 76,625 pounds have been reported as "sold for bait" in 2008 to date. Of the reported bait transactions during 2007 and 2008 to date, only 24 were for 10,000 pounds or more. The largest transaction reported was for 20,000 pounds. However, it is unclear what percentage of the total transfers at sea and/or bait transactions between vessels these numbers may represent because this activity may be under-documented due to the current reporting system and allowance of at-sea transfers to occur in this fishery without restriction on the amount or nature of the transfer. NMFS suspects that transfer at-sea activity may be substantially higher than the current data indicate; addressing this issue could help to resolve some discrepancies between databases and provide for more complete and accurate records of the activity occurring in this fishery.

In Amendment 5, the Council is considering measures to minimize transfers at sea and/or standardize reporting requirements for vessels transferring/receiving herring. Management options currently under consideration to address transfers of herring at sea are described below and are not necessarily independent of each other.

The current provisions for transferring herring at-sea (status quo) are summarized below:

- A vessel that transfers herring at sea to a vessel that receives it for personal use at bait must report all transfers on the Fishing Vessel Trip Report (VTR).
- A vessel that transfers herring at sea to an authorized carrier vessel must report all transfers weekly via the IVR system and must report all transfers on the VTR. Each time the vessel offloads to the carrier vessel is defined as a trip for the purposes of reporting requirements and possession allowances.
- A vessel that transfers herring at sea to an at-sea processor must report all transfers weekly via the IVR system and must report all transfers on the VTR. Each time the vessel offloads to the at-sea processing vessel is defined as a trip for the purposes of the reporting requirements and possession allowances. For each trip, the vessel must submit a VTR and the at-sea processing vessel must submit the detailed dealer report.
- A transfer between two vessels issued valid Atlantic herring permits requires each vessel to submit a VTR, filled out as required by the LOA to transfer herring at sea, and a weekly IVR report for the amount of herring each vessel lands.

3.2.3.1 Option 1: Restrict Transfers At-Sea to Only Vessels with Category A or B Limited Access Herring Permits

This measure would allow only vessels participating in the limited access directed fishery for Atlantic herring (Category A or B permits) to transfer herring at sea.

- Transferring and receiving vessels would be required to possess a limited access Category A or B permit for the herring fishery.
- Herring carrier vessels operating under a Carrier LOA would be exempt from this requirement.

3.2.3.2 Option 2: Prohibit Transfers At-Sea to Non-Permitted Vessels

This measure would allow only vessels that possess a federal Atlantic herring permit to transfer herring at sea. Non-permitted vessels would be prohibited from receiving herring at-sea, even for personal use as bait.

- Transferring and receiving vessels would be required to possess a Category A, B, C, or D permit for the herring fishery. The Category D permit is an open access permit, so any vessel can obtain this permit, but possession of this permit subjects the vessel to VTR and other reporting requirements.

This measure may improve reporting compliance. Requiring a federal permit of some sort by all vessels engaged in the transfer activity reduces the likelihood that some herring catch, even in small amounts, will not be documented. However, this measure would require that vessels with no Federal permits (recreational vessels, for example) obtain a permit for herring and comply with all related reporting requirements.

3.3 TRIP NOTIFICATION REQUIREMENTS

A comprehensive catch monitoring program will likely require notification by vessels prior to taking trips (to deploy observers) and/or prior to landing (to deploy portside samplers), so efforts should be made to clarify notification requirements and ensure that all vessels participating in the herring fishery are subject to the same requirements.

The existing notification requirement for vessels to request an observer before leaving port was established in response to concerns about haddock bycatch and the establishment of the haddock catch cap in the herring fishery (Framework 40B to the Multispecies FMP) and currently applies only to Category A and B vessels fishing on a declared herring trip with midwater trawl or purse seine gear. Although developed for a very specific purpose, this requirement has been helpful to the Observer Program to determine the schedule of observer coverage and know better where and when herring trips will occur. It also helps NMFS to estimate and target specific levels of coverage in the fishery during the fishing year. If the notification program is set up in the most efficient manner, it can help to reduce operating costs for the observer program, as fishing trips are more predictable and less time is spent determining when/where observed trips should occur. If the expectation is that all herring vessels should be observed during some or all of their fishing operations, then this measure could assist the Observer Program in deploying observers in the most efficient way across the entire fishery while minimizing the burden on the vessels. The proposed modifications to the current program (options for notification, timing) would both improve efficiency and reduce the burden on the industry.

Category A and B vessels fishing on a declared herring trip with midwater trawl or purse seine gear are also currently required to notify NMFS Law Enforcement via VMS of the time and place of offloading at least six hours prior to crossing the VMS demarcation line on their return trip to port (or six hours prior to landing if the vessel does not fish seaward of the demarcation line). Extending the VMS pre-landing requirement to all limited access herring vessels

encountering herring on a trip may be an appropriate option to consider, especially if the catch monitoring program developed in this amendment includes a portside sampling program. This notification could facilitate the deployment of portside samplers (the proposed portside sampling alternative in this amendment already includes some form of pre-landings notification, so the current VMS notification could possibly serve this purpose if it is extended to the entire limited access fleet). It would also provide consistency regarding vessels that would be subject to pre-trip and pre-landing notification requirements and may reduce the complexities associated with declarations into/out of the fishery.

Currently:

- The current notification requirement for vessels to request an observer at least 72 hours before leaving port applies to Category A and B vessels fishing on a declared herring trip with midwater or purse seine gear.
- Under the status quo, limited access herring vessels are required to declare a herring trip via VMS prior to leaving port when they participate in the herring fishery.
- Category A and B vessels fishing on a declared herring trip with midwater or purse seine gear are also required to notify NMFS Law Enforcement via VMS of the time and place of offloading at least six hours prior to crossing the VMS demarcation line on their return trip to port (or six hours prior to landing if the vessel does not fish seaward of the demarcation line).
- Category D vessels do not have any trip notification requirements. However, if a Category D vessel possesses a VMS because of other Federal permit requirements, it is recommended that the vessel declare out of fishery (DOF) prior to leaving port when participating in the herring fishery.

The above requirements would be maintained under the no action alternative.

3.3.1 Option 1: Modify and Extend the Pre-Trip Notification Requirements

Two modifications are proposed in this option:

1. ***Modifications to the Pre-Trip Notification System (for Observers):*** This option would require all limited access herring vessels (Category A, B, and C) and herring carrier vessels that use VMS to notify the Observer Program through the Pre-Trip Notification System (PTNS) **prior to any trip where the operator may harvest, possess, and land Atlantic herring.** It would also modify the notification requirements consistent with PTNS used in other fisheries (groundfish, loligo).

   In order to possess, harvest, or land herring, representatives for Category A, B, and C fishing vessels must provide notice to NMFS, including the vessel name, contact information for coordination of observer deployment, and the date, time, and port of departure **at least 72 hours** prior to beginning the trip. There are several methods available for the pre-trip notification: internet; email; and telephone. If a vessel has been issued a limited access herring permit but does not provide notification to NMFS before beginning the fishing trip, the vessel is prohibited from possessing, harvesting, or landing Atlantic herring on that trip.

If a trip is cancelled, a vessel representative must notify NMFS of the cancelled trip, even if the vessel is not selected to carry an observer. If a vessel representative cancels a trip after its vessel was selected to carry an observer, the vessel will be assigned an observer on the next trip.

Category D vessels that may fish under a higher possession limit in Areas 2/3 only (under consideration in Section 3.5) would be subject to the same notification requirements as Category C vessels (described in this section).

2. ***Pre-Trip VMS Declaration:*** This option would also add a gear declaration to the existing pre-trip VMS notifications for herring vessels.

**Vessels can still provide pre-trip notification for multiple trips at one time.*

3.3.2 Option 2: Modify and Extend the Pre-Trip Notification Requirement and Extend Pre-Landing Notification Requirement

In addition to the measures proposed in the above option to modify and extend the pre-trip notification requirements, this option would require limited access herring vessels (Category A, B, and C) and herring carrier vessels that use VMS to notify NMFS Law Enforcement via VMS of the time and place of offloading at least six hours prior to crossing the VMS demarcation line on their return trip to port (or six hours prior to landing if the vessel does not fish seaward of the demarcation line).

Category D vessels that may fish under a higher possession limit in Areas 2/3 only (under consideration in Section 3.5) would be subject to the same notification requirements as Category C vessels (described in this section).

3.4 ACL/SUB-ACL MONITORING ALTERNATIVES (REAL-TIME REPORTING)

Comment [lls3]: May need revision/may not be necessary if NMFS considers VMS-based catch reporting for the herring fishery through rulemaking in 2011.

The Council is considering two alternatives to modify the current ACL/sub-ACL monitoring program for the Atlantic herring fishery. The intent of these alternatives is to improve reporting compliance and the accuracy and timeliness of ACL/sub-ACL monitoring information.

3.4.1 Alternative 1: No Action (Status Quo)

Under the no action alternative, no changes would be made to the current quota monitoring program, which relies primarily on reports from the Interactive Voice Response (IVR) call-in system. Additional information about the no action alternative can be found in Section 2.0 of this document.

The IVR system is an automated, phone-based reporting method initially created for multispecies dealer reporting. It was later modified to include Atlantic herring catch reports in response to the need for real-time quota monitoring. Current regulations specify that the owner or operator of any vessel issued a limited access Atlantic herring permit must submit an Atlantic herring catch report via the IVR system **each week**, regardless of how much herring is caught (including weeks when no herring is caught), unless exempted from this requirement by the Regional Administrator. In addition, the owner or operator of any vessel issued an open access permit for Atlantic herring that catches 2,000 pounds of Atlantic herring on any trip in a week must submit an Atlantic herring catch report via the IVR system for that week as required by the Regional Administrator.

The main reason for utilizing the IVR system in the Atlantic herring fishery is to monitor the catch limits set for the four herring management areas (sub-ACLs). As part of the Atlantic herring fishery specification process, each management area is annually assigned a sub-ACL (in metric tons). Although vessels are also required to report catches with vessel trip report (VTR) forms, near real-time data is obtained through the IVR system allowing the sub-ACLs to be monitored.

The IVR system currently requires vessel owners/operators to submit herring catch reports through the IVR system even during weeks when the vessel may not have fished and/or may not have caught any herring. These are considered "negative reports," i.e., reports of zero catch. Negative IVR reports ensure that catch/landings data are more complete and affirm an action relative to vessels' fishing activity during any given week. Negative reports help to resolve potential problems with "missing" data; for example, if a vessel has been submitting herring catch reports through the IVR system and does not fish or catch herring for several weeks, the negative reports allow database managers to know that the vessel did not fish or catch herring during those weeks, versus making assumptions about the vessel's fishing activity and/or applying a proxy level of catch for the vessel's missing reports. Data gaps must be addressed in a timely fashion in order to use the IVR system for real-time quota monitoring, so if negative reports are not filed, it is less clear whether the available data accurately characterize catch in the fishery for quota monitoring purposes.

Current regulations for IVR reporting in Section 648.7 state the following for IVR reporting: The owner or operator of a vessel issued a permit to fish for Atlantic herring must report catches (retained and discarded) of herring each week to an IVR system, as specified in paragraphs (b)(2)(i)(A) and (B) of this section. The report shall include at least the following information, and any other information required by the Regional Administrator: Vessel identification, week in which species are caught, pounds retained, pounds discarded, management areas fished, and pounds of herring caught in each management area for the week.

The IVR reporting week begins on Sunday at 0001 hrs (12:01 AM) local time and ends Saturday at 2400 hrs (12 midnight). Weekly Atlantic herring catch reports must be submitted via the IVR system by midnight, Eastern Time, each Tuesday for the previous week. Reports are required even if herring caught during the week has not yet been landed.

Current IVR reporting provisions are as follows:

- The owner or operator of any vessel issued a limited access herring permit must submit an Atlantic herring catch report via the IVR system each week, regardless of how much herring is caught (including weeks when no herring is caught), unless exempted from this requirement by the Regional Administrator.
- An owner or operator of any vessel issued an open access permit for Atlantic herring that catches 2,000 lb (907.2 kg) of Atlantic herring on any trip in a week must submit an Atlantic herring catch report via the IVR system for that week as required by the Regional Administrator.
- The IVR report shall include at least the following information, and any other information required by the Regional Administrator: Vessel identification, week in which species are caught, pounds retained, pounds discarded, management areas fished, and pounds of herring caught in each management area for the week. The IVR reporting week begins on Sunday at 0001 hrs (12:01 a.m.) local time and ends Saturday at 2400 hrs (12 midnight). Weekly Atlantic herring catch reports must be submitted via the IVR system by midnight, Eastern Time, each Tuesday for the previous week. Reports are required even if herring caught during the week has not yet been landed.
- Atlantic herring IVR reports are not required from Atlantic herring carrier vessels.

3.4.2 Alternative 2: Maintain/Modify IVR Reporting

Under this alternative, management area quotas (ACLs and sub-ACLs) would continue to be monitored through the Interactive Voice Response (IVR) reporting system, but the system would be modified to improve the timeliness and quality of information. Options under consideration to modify the IVR system are described in this section.

3.4.2.1 IVR Option 1: Trip-by-Trip IVR Reporting

Under this option, the following provisions would apply to limited access permit holders:

Limited Access Permit Holders (Categories A, B, C)

- All limited access permit holders (Category A, B, and C) would be required to submit an Atlantic herring catch report via the IVR system on a trip-by-trip basis.
- Negative reports would continue to be submitted on a weekly basis (status quo).
- Limited access permit holders also would be required to report a NMFS-specified trip identifier (ex., first page VTR serial number for the trip); this will establish a mechanism to more accurately match/link trips between the IVR, VTR, and dealer databases.
- Offloading to at-sea herring dealers (i.e., carriers that sell fish) would be considered the same as offloading to a shoreside dealer for the purposes of IVR reporting.

3.4.2.1.1 Sub-Options for Trip-by-Trip IVR Reporting Deadlines

Deadline Sub-Option 1:

For permit holders that would be subject to a requirement to report catch via the IVR system on a trip-by-trip basis, the deadline for reporting would be within **24 hours** of each offload or prior to starting the next fishing trip, whichever is less.

Deadline Sub-Option 2:

For permit holders that would be subject to a requirement to report catch via the IVR system on a trip-by-trip basis, the deadline for reporting would be within **6 hours** of each offload or prior to starting the next fishing trip, whichever is less.

3.4.2.1.2 Sub-Options for Open Access Permit Holders (Category D)

Open Access Sub-Option 1:

- Open access permit holders would be required to submit an Atlantic herring catch report via the IVR system on a trip-by-trip basis for any trips on which herring is caught (landed or discarded).
- Negative IVR reports would not be required for open access permit holders.
- Open access permit holders also would be required to report a NMFS-specified trip identifier (ex., first page VTR serial number for the trip); this will establish a mechanism to more accurately match/link trips between the IVR, VTR, and dealer databases.
- Offloading to at-sea herring dealers (i.e., carriers that sell fish) would be considered the same as offloading to a shoreside dealer for the purposes of IVR reporting.

Open Access Sub-Option 2:

- Open access permit holders that possess a Letter of Authorization (LOA) to transfer Atlantic herring at sea would be required to submit an Atlantic herring catch report via the IVR system on a trip-by-trip basis for any trips on which herring is caught (landed or discarded). These permit holders also would be required to report a NMFS-specified trip identifier (ex., first page VTR serial number for the trip); this will establish a mechanism to more accurately match/link trips between the IVR, VTR, and dealer databases.
- Negative IVR reports (weekly) would be required for open access permit holders that possess a LOA to transfer Atlantic herring at sea. The current LOA would be revised to include this requirement.
- Open access permit holders that do not receive a LOA to transfer Atlantic herring at sea would continue to be subject to current (status quo) IVR reporting requirements (weekly reporting for vessels that catch 2,000 pounds of Atlantic herring on any trip in a week, negative reports not required).
- Offloading to herring carrier vessels would be considered the same as offloading to a shoreside dealer for the purposes of IVR reporting.

3.4.2.2 IVR Option 2: Weekly IVR Reporting with New Deadline

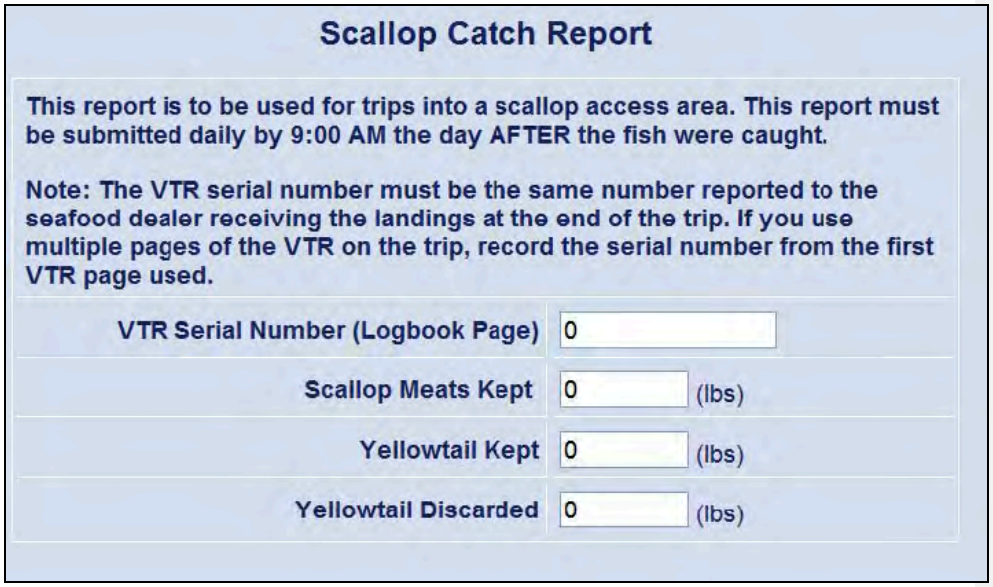
Under this option, IVR weekly reporting deadlines would be changed from Tuesday midnight (current) to Monday midnight – this would provide better lead time for projections and management area closures. For permit holders that would be subject to a requirement to report catch via the IVR system on a weekly basis (proposed in the alternative described above for open access permit holders and negative reports for limited access permit holders), weekly Atlantic herring catch reports and negative reports must be submitted via the IVR system by midnight, Eastern Time, each Monday for the previous week.

3.4.3 Alternative 3: Eliminate IVR and Require VMS for Catch Reporting and Quota Monitoring

This alternative would eliminate the IVR call-in program for quota monitoring and would instead rely on reporting through vessel monitoring systems (VMS) for the purposes of monitoring the ACLs/sub-ACLs in the herring fishery. New requirements for VMS catch reporting would be established, and the options under consideration are described below.

There are currently three vendors that offer VMS equipment approved for use in the NE Region: Boatracs, Inc.; Thrane and Thrane; and Skymate (OrbComm). Limited access Atlantic Scallop and Multispecies permit holders are required transmit catch data through their VMS units via a catch report form that is included in VMS software (Figure 1). The most common report timing used in these fisheries requires that permit holders send a completed catch report before 9 a.m. local time each day for the previous day's catch. The data entered into the catch report form is sent by email as a comma-delimited string to a general NMFS Office of Law Enforcement (OLE) email address; the catch report emails must come from registered VMS units. The submitted data is then automatically uploaded to NMFS Fisheries Statistics Office (FSO) databases for quota monitoring and analysis. Data supplied via VMS is generally available no more than one hour after transmission.

Figure 1 Example: VMS Scallop Catch Report



3.4.3.1 VMS Option 1: Require Daily VMS Reporting of Atlantic Herring Catch and Discards

This measure would require that limited access herring vessels (Category A, B, and C) report Atlantic herring catch and discards, and management area fished on a daily basis through their vessel monitoring systems (VMS) on any declared herring trip (i.e., when they are not declared out of the Atlantic herring fishery (DOF)).

> *The operator of a limited access herring vessel must submit reports via VMS, in accordance with instructions provided by the Regional Administrator, for each day of the fishing trip when declared into the herring fishery. The reports must be submitted in 24-hour intervals for each day, beginning at 0000 hr and ending at 2400 hr, and must be submitted by 0900 hr of the following day, or as instructed by the Regional Administrator. The reports must include at least the following information:*
>
> *(A) Total pounds of Atlantic herring kept and discarded;*
>
> *(B) Date fish were caught and management area in which fish were caught; and*
>
> *(C) NMFS-specified trip identifier (ex., VTR serial number), as instructed by the Regional Administrator.*

Because herring catch from Category D vessels represents a very small percentage of the total (see below), Category D vessels would not be subject to the VMS reporting requirement and would report their catch through VTRs (except vessels that may fish under a higher possession limit in Areas 2/3 only, under consideration in Section 3.5). Requirements for weekly VTR reporting are being considered in this amendment (see Section 3.1.7).

Table 2 summarizes herring landings from VTRs for Category D permit holders during the 2008, 2009, and 2010 fishing years. Data were queried in November 2010, so 2010 numbers are preliminary and incomplete, but the information in Table 2 demonstrate the landings from D permit holders represent a very small percentage of the herring fishery.

Of the 56 Category D vessels that reported Atlantic herring landings through VTR during the 2010 fishing year, 35 vessels (63%) currently have and use VMS.

Table 2 VTR Herring Landings from Category D (Open Access) Permit Holders, 2008-2010

Year	Total landings for all herring permit categories (lbs)	All Cat D herring landings (lbs)	All Cat D herring landings % of total for all permit categories
2008	183,754,003	1,000,942	0.54%
2009	226,948,684	195,248	0.09%
2010 (Inc.)	82,519,466	501,495	0.61%

3.4.3.2 VMS Option 2: Require Trip-by-Trip VMS Reporting of Atlantic Herring Catch and Discards

This measure would require that limited access herring vessels (Category A, B, and C) report Atlantic herring catch and discards, and management area fished through their vessel monitoring systems (VMS) on any declared herring trip (i.e., when they are not declared out of the Atlantic herring fishery (DOF)).

> *The operator of a limited access herring vessel must submit reports via VMS, in accordance with instructions provided by the Regional Administrator, for each trip when declared into the herring fishery. The reports must be submitted within 24 hours of offloading to an at-sea or land-based herring dealer, or prior to the start of the next fishing trip, whichever is less. The reports must include at least the following information:*
>
> *(A) Total pounds of Atlantic herring kept and discarded;*
>
> *(B) Date fish were caught and management area in which fish were caught; and*
>
> *(C) NMFS-specified trip identifier (ex., VTR serial number), as instructed by the Regional Administrator*

Because herring catch from Category D vessels represents a very small percentage of the total (see above), Category D vessels would not be subject to the VMS reporting requirement and would report their catch through VTRs (except vessels that may fish under a higher possession limit in Areas 2/3 only, under consideration in Section 3.5). Requirements for weekly VTR reporting are being considered in this amendment (see Section 3.1.7).

3.5 CHANGES TO OPEN ACCESS PERMIT PROVISIONS FOR LIMITED ACCESS MACKEREL VESSELS IN AREAS 2/3

The limited access permit program implemented in Amendment 1 to the Herring FMP established three types of herring limited access permits: (1) a limited access directed fishery permit that allows access to all management areas with no possession limit (Category A); (2) a limited access directed fishery permit that allows access to Areas 2/3 only with no possession limit (Category B); and (3) a limited access incidental catch permit that allows access to all management areas with a possession limit of 25 mt (55,000 pounds) and a restriction of one landing per calendar day (Category C). The limited access Category C incidental catch permit was developed primarily to address the incidental catch of herring by mackerel vessels that do not qualify for a directed fishery permit in any of the management areas. Qualification criteria for the limited access incidental catch permit were less restrictive and spanned a longer qualifying time period (15 mt in any calendar year from 1988 – 2003).

Amendment 1 also established an open access incidental catch permit for vessels that do not qualify for either of the limited access permits (Category D). The possession limit associated with the open access incidental catch Category D permit is 3 mt per trip in all management areas, with a restriction of one landing per calendar day.

Since the implementation of Amendment 1, concerns have been raised about vessels participating in the Atlantic mackerel fishery that do not qualify for any of the limited access herring permits, either because they do not have adequate herring landings history between 1988 and 2003, or because they are new participants in the mackerel fishery. These vessels are currently required to fish with the open access incidental catch permit to retain any herring, and they may encounter herring in amounts larger than 3 mt on some fishing trips. Without a permit that allows them to retain an adequate amount of herring, these vessels may be forced to discard any herring they catch incidentally. As the mackerel fishery continues to grow, a herring bycatch problem could become an increasing concern.

The management alternatives currently under consideration in Amendment 5 to address this issue were developed by the Herring PDT based on Herring Committee and Advisory Panel guidance and are described in the following subsections.

Background – Mackerel Limited Access Program

The Mid-Atlantic Fishery Management Council (MAFMC) submitted Amendment 11 and its FEIS to the Mackerel, Squid, and Butterfish (MSB) FMP on January 3, 2011. The Notice of Availability for the FEIS is expected to be published in March 2011. The Proposed Rule is expected to be published around May 2011, and the Final Rule in July 2011. Regulations are anticipated to become effective around August 2011, when the 12-month mackerel limited access application period will begin.

During the development of Amendment 11, the MAFMC considered four alternatives which related to capping capacity in the Atlantic Mackerel fishery:

- **Alternative Set 1:** Alternatives to develop a tiered limited access system in the Atlantic mackerel fishery.
- **Alternative Set 2:** Alternatives to allocate quota to limited access tiers based on historical landings.
- **Alternative Set 3:** Alternatives to specify trip limits for each tier.
- **Alternative Set 4:** Alternatives to indicate Council intent on a variety of standard policy and administrative matters inherent in Northeast limited access systems.

The No Action Alternative was chosen for Alternative 2, although one quota provision would be enacted in conjunction with the Alternative chosen for Alternative Set 1 (described below for Tier 3). Alternative Set 4 is mostly administrative, and is therefore not covered in the summary below.

The preferred alternative for Alternative Set 1, as chosen by the MAFMC, would limit access to the directed mackerel fishery to vessels with permits on March 21, 2007 (see following):

Implement a 3-tiered limited access system. Vessels would be grouped based on the highest tier (Tier 1 highest) qualified for based on the following thresholds:

- *Tier 1: At least 400,000 pounds landed in any one year 1997-2005*
- *Tier 2: At least 100,000 pounds landed in any one year 3/1/1994-2005*
- *Tier 3: At least 1,000 pounds in any one year 3/1/1994-2005.*
    - *Tier 3 would be capped for a maximum catch up to 7% of the commercial quota, set annually during the specifications process (no other allocations).*
- *Open Access: All other vessels.*

The preferred alternative for Alternative Set 3, chosen by the MAFMC, would subject vessels to trip limits based on the access category they are assigned to:

All trip limits are adjustable via specifications. No Tier 1 directed fishery trip limit. Initially set the Tier 2 trip limit to be 135,000 pounds, adjustable during specifications. Initially set the Tier 3 trip limit to be 100,000 pounds, adjustable during specifications. Initially set the open access trip limit to be 20,000 pounds, adjustable up to 20,000 pounds during specifications. Initially set directed fishery closure trip limits as: Tiers 1, 2, and 3: 20,000 pounds; open access stays at same level during a closure

The number of vessels that would qualify for each tier and associated trip limits, based on Preferred Alternatives 1 and 3, are summarized below. The resulting capacity estimate for the preferred Alternative Set 1 was 107, 578 mt. The estimates for Vessels in each Tier are based on analysis of unpublished NMFS dealer weighout data and all numbers are likely variable and subject to change:

Table 3 Summary of Mackerel Limited Access Program and Predicted Number of Qualifiers

Access Category	Years Used for Qualification	Threshold of Poundage Needed to Qualify	Vessels Predicted to Qualify	Initial Trip Limits (adjustable via Specifications)
Tier 1	1997-2005	400,000	29	None
Tier 2	1994-2005	100,000	45	135,000
Tier 3	1994-2005	1,000	329	100,000
Open Access	N/A	N/A	N/A	20,000

Overall, it is predicted that there are 403 vessels that will be given mackerel Limited Access Permits (LAPs) in Tiers 1-3. Of the 403, approximately 50 vessels have a limited access Category A, B, or C Atlantic herring permit. This includes 25 of the 29 Tier 1 mackerel vessels. Any of the remaining 353 vessels that qualify for Tiers 1-3 mackerel permits may possess an open access Category D herring permit. Most of those 353 are Tier 3 boats that have relatively low mackerel landings, however. The rest of the herring fleet with Category A, B or C permits will qualify for an Open Access mackerel permit (20,000 pounds).

Table 4 Limited Access Herring Permits Held by Potential Mackerel Limited Access Vessels

		Herring Permit Category		
		A	B	C
Mackerel Limited Access Category	Tier 1	20	0	5
	Tier 2	0	1	5
	Tier 3	3	2	14
	Open Access	18	1	25

The MAFMC considered qualifying vessels with Atlantic Herring permits for Tier 3, regardless of their landing records. MAFMC staff found that although some herring boats catch mackerel, the amount was not substantial. A New England representative concurred that the 20,000 pounds afforded by the open access permit should be sufficient to cover mackerel catch for these vessels in the future. The MAFMC also noted that Tier 3 is allowed 100,000 pounds of mackerel per trip, which would be a substantial amount for a large number of vessels if they increase their catch. The MAFMC therefore made the decision to not qualify all herring vessels for a Tier 3 LAP.

3.5.1 Mackerel Option 1 – No Action

Under this option, no action would be taken in Amendment 5 to address herring/mackerel fishery interactions and concerns about the potential for herring bycatch in the directed mackerel fishery.

- The open access incidental catch permit for herring (Category D) would continue to apply to all management areas.
- Vessels that obtain the open access incidental catch herring permit would continue to be restricted by a possession limit of 3 mt of herring per trip (6,600 pounds) in all management areas and limited to one landing per calendar day up to the 3 mt possession limit.
- When the sub-ACL in a management area is projected to be reached and the directed fishery closes, incidental catch in the area would be limited to 2,000 pounds per trip, as it is currently.

3.5.2 Mackerel Option 2 – Increase the Open Access Possession Limit to 20,000 Pounds in Areas 2/3 for Vessels that also Possess a Federal Limited Access Mackerel Permit

Comment [lls4]: May 2009 – Herring AP recommends that this be the preferred alternative

Under this option, two open access permits for herring would be created, one for all management areas and one for mackerel fishery participants in Areas 2/3 only:

1. The current provisions for the Category D permit, including the 3 mt possession limit, reporting requirements, and landings restrictions, would apply to an open access permit for all management areas, as described in the no action option;
2. A new open access incidental catch permit would be created for limited access mackerel fishery participants in Areas 2/3 only that do not have a limited access herring permit; this permit would be associated with a 20,000 pound possession limit for herring; all other provisions currently associated with the current open access Category D permit would apply:
    - Vessels that do not qualify for a limited access herring permit and possess a federal limited access permit for Atlantic mackerel would be eligible for this herring permit.
    - Vessels that obtain this permit would be restricted to fishing for herring in Areas 2/3 only, under a possession limit of 20,000 pounds of herring and limited to one landing per calendar day up to the 20,000 pound possession limit.
    - For quota/ACL monitoring purposes, reporting requirements for vessels that posses this permit would be consistent with requirements for limited access Category C vessels; this includes requirements for IVR or VMS reporting, described in Section 3.4 of this document.
    - When the sub-ACL in a management area is projected to be reached and the directed fishery closes, incidental catch in the area would be limited to 2,000 pounds per trip, as it is currently.

Note: The Council may determine that mackerel limited access permit holders should be treated differently, depending on their level of activity in both the herring and mackerel fisheries and the limited access mackerel permit that they may possess.

3.5.3 Mackerel Option 3 – Increase the Open Access Possession Limit to 10,000 Pounds in Areas 2/3 for Vessels that also Possess a Federal Limited Access Mackerel Permit

Under this option, two open access permits for herring would be created, one for all management areas and one for mackerel fishery participants in Areas 2/3 only:

1. The current provisions for the Category D permit, including the 3 mt possession limit, reporting requirements, and landings restrictions, would apply to an open access permit for all management areas, as described in the no action alternative;
2. A new open access incidental catch permit would be created for limited access mackerel fishery participants in Areas 2/3 only that do not have a limited access herring permit; this permit would be associated with a 10,000 pound possession limit for herring; all other provisions currently associated with the current open access Category D permit would apply:
    - Vessels that obtain this permit would be restricted to fishing for herring in Areas 2/3 only, under a possession limit of 10,000 pounds of herring and limited to one landing per calendar day up to the 10,000 pound possession limit.
    - For quota/ACL monitoring purposes, reporting requirements for vessels that posses this permit would be consistent with requirements for limited access Category C vessels; this includes requirements for IVR or VMS reporting, described in Section 3.4 of this document.
    - When the sub-ACL in a management area is projected to be reached and the directed fishery closes, incidental catch in the area would be limited to 2,000 pounds per trip, as it is currently.

Note: The Council may determine that mackerel limited access permit holders should be treated differently, depending on their level of activity in both the herring and mackerel fisheries and the limited access mackerel permit that they may possess.

4.0 CATCH MONITORING: AT-SEA

4.1 REQUIREMENTS FOR AT-SEA SAMPLING (OBSERVER) SERVICE PROVIDERS

If third parties are used to provide services related to monitoring catch in the Atlantic herring fishery, these third parties may be providers of at-sea monitoring (observer) services. The requirements for any NMFS-approved at-sea monitoring service providers are specified in Section 3.1.8 of this document. Amendment 5 will authorize the ASMFC States (ME-NJ) as approved service providers for Federal at-sea and portside sampling programs established for the Atlantic herring fishery, consistent with the provisions contained in this document.

4.2 OPTIONS FOR OBSERVER COVERAGE LEVELS

Comment [lls5]: May 2009 – Herring AP recommends that the Interspecies Committee task its technical staff to develop an observer allocation program to support Hard TAC-managed fisheries with appropriate levels of accuracy and precision

4.2.1 Option 1 – No Action

The no action option would retain observer coverage levels in the Atlantic herring fishery as they currently are. The process for setting coverage levels is based on the Standardized Bycatch Reporting Methodology (SBRM) amendment.

As established by the Standard Bycatch Reporting Methodology (SBRM) omnibus amendments (NEFMC 2007; NMFS 2008), the Councils and public are provided an opportunity to consider and provide input into decisions regarding prioritization of at-sea observer coverage allocations if the expected resources necessary may not be available to achieve CV-based performance goals. In any year in which external operational constraints would prevent NMFS from fully implementing the required at-sea observer coverage levels, the Regional Administrator and Science and Research Director will consult with the Councils to determine the most appropriate prioritization for how the available resources should be allocated. If re-prioritization is undertaken, the re-prioritized sea day allocations will be summarized in a subsequent document.

The analytical basis for allocation of future sea day coverage rests on a target level of precision (i.e., 30% CV) and an expectation that the pattern of fishing activity observed in the prior year will be similar to the next year. Fishing activity by fleets often changes in response to patterns of stock abundance, weather, and fishery regulations. The SBRM is designed to adapt to these changing circumstances. As specified in the SBRM Omnibus Amendment, when a shortfall occurs, a prioritized sea day allocation is made. This allocation uses a combination of statistical methods and ad-hoc methods to assign sea days while keeping within the funded constraints.

4.2.2 Option 2: 100% Observer Coverage

Under this option, at-sea observers would be required on every trip taken by limited access herring vessels unless they are declared out of the herring fishery.

4.2.3 Option 3: Require SBRM Observer Coverage Levels

Comment [lls6]: This option needs further discussion – consideration of how SBRM fishing modes relate to the vessels subject to the Amendment 5 catch monitoring requirements (limited access A/B/C)

This measure would require that observer coverage in the Atlantic herring fishery be allocated at levels required by the Standardized Bycatch Reporting Methodology (SBRM) amendment on an annual basis. The process for determining coverage levels using the SBRM methodology is described under the no action option. Under this option, however, SBRM levels would not be a target and would not be adjusted based on other priorities. At-sea monitoring for the herring fishery would be prioritized by NMFS in such a way that the necessary levels of coverage could be achieved for the Atlantic herring fishery every year regardless of other considerations.

4.2.4 Option 4: Observer Coverage Levels Based on Council Targets

This option would require that levels of observer coverage in the Atlantic herring fishery be designed to achieve the target priorities identified by the New England Fishery Management Council: a **30% CV on catch/bycatch estimates for Atlantic herring and haddock, and a 20% CV on catch/bycatch estimates for river herring.**

The Council emphasized the need to be practical when determining an appropriate sampling design for at-sea monitoring, especially given available resources. When designing the sampling program, priority should be given to the species of greatest concern, from a biological perspective. It is acknowledged that all species will be sampled regardless of the priorities, and CVs of 30% or even less may be achieved for many of the other species. Atlantic herring, haddock, and river herring have all been identified by the Council as priority bycatch species within the herring fishery, however.

Under this option, an SBRM approach would be used to determine, on an annual basis, the level of coverage to target a 30% CV on bycatch estimates for herring and haddock, and a 20% CV on bycatch estimates for river herring. The Herring PDT has evaluated observer coverage levels and determined that it is not possible at this time to specify a level of coverage that can consistently achieve these CVs from year to year. The intent of this option, therefore, is to utilize these CVs as targets and annually evaluate the appropriate level of coverage to achieve these targets.

An approach like SBRM can be used to accomplish the first step of setting a goal. As part of the development of the omnibus amendment to address standardized bycatch reporting methodology (SBRM), the National Working Group on Bycatch (NWGB) concluded that, *"for fishery resources, excluding protected species, caught as bycatch in a fishery, the recommended precision goal is a 20-30% CV for estimates of total discards (aggregated over all species) for the fishery; or if total catch cannot be divided into discards and retained catch then the goal is a 20-30% CV for estimates of total catch."* (NMFS 2004) As the NWGB pointed out, "Ideally, standards of precision would be based on the benefits and costs of increasing precision" (NMFS 2004). They also noted that under some circumstances, attaining the precision goal alone would not be an efficient use of the public resources. **The tradeoffs associated with increasing**

precision to meet a specified goal are very important to understand when developing an observer program.

Background Information – Preliminary Analysis (Using 2009 Data)

To begin to explore this issue in Amendment 5, the Herring PDT provided an *example approach* to determining levels of observer coverage necessary to meet a specific goal. This data was analyzed with the methodology and formulas specified by the SBRM amendment to calculate variance and to estimate the number of trips necessary to achieve certain levels of precision for **river herring** over a range of desired CVs (a similar exercise will be performed for haddock and Atlantic herring in the Draft EIS). This example helps to better illustrate the trade-offs associated with the choices that would need to be made, based on goals and priorities for observer coverage as well as available resources. This exercise also shows how the SBRM methodology can be used to develop a statistical approach to sampling the herring fishery to meet a specific goal under this option for observer coverage levels.

Table 5 provides the results of the updated SBRM analysis using 2009 observer data. The results illustrate the levels of observer coverage that would be required for the midwater trawl (single and paired), purse seine, and bottom trawl sectors of the herring fishery (based on trips with 2,000 pounds or more herring kept) in various areas (Gulf of Maine, Georges Bank/East of Cape Cod, and southern New England) to achieve target levels of precision for river herring catch estimates (10%, 20%, and 30% CVs). In this example, observer records for midwater trawl (single and paired), purse seine, and bottom trawl vessels keeping 2,000 pounds or more Atlantic herring during 2009 were used to generate catch ratios for river herring. These ratios were used in formulas specified by the SBRM amendment to first calculate variance, and then determine, based on available information, how many sea days/observer trips would be necessary to achieve that level of precision. The output (#trips) has been translated to observer sea days using an average days per trip from vessel trip reports.

Darker cells in Table 5 represent strata (gear type and area) with no herring trips occurring in 2009. Lighter cells represent strata with trips occurring but no observer coverage. The lighter cells would likely be candidates for "pilot" levels of observer coverage, to establish a baseline and better determine appropriate levels of coverage in the future.

This preliminary analysis/example highlights a few key points with respect to designing an observer program:

- The preliminary results suggest that, based on the SBRM approach, observer coverage should be increased in strata (gear type/area – purse seine, midwater trawl, otter trawl/GOM, GB, SNE) with high variability to reduce the CVs around catch/bycatch estimates. These are generally the strata with very limited observer coverage but high variability in estimates of river herring bycatch, but these may not be strata that one would expect to cover at higher rates.
- There are a few important caveats to consider when applying the SBRM approach to river herring – the assumptions about linearity and normality in the SBRM analysis may not hold for river herring because the distribution of the data is not normal (there is a high proportion

of zeros), and there is a high degree of variability associated with the data. Seasonality (of the fishery and of river herring migrations/encounters) is also very important to consider.

- The SBRM approach considers variability associated with observed trips, but does not consider variability associated with any strata where coverage has been limited or absent. It also does not consider the variability associated with sub-sampling and extrapolation, and portside versus at-sea coverage, all of which are important especially with respect to river herring.
- There are costs associated with increasing precision of bycatch estimates resulting from observer data. The lower the CV, the higher the precision, and the more sea days/observer trips are required to achieve that level of precision. When catch ratios are small but variability is high, observed bycatch events are rare, so capturing these events in the future will require more coverage. These tradeoffs must be thoroughly explored when designing an appropriate observer program and prioritizing available resources.

Table 5 Example Approach to Determining Levels of Observer Coverage for Herring Vessels–Based on 2009 Observer Data for River Herring

		10% CV			20% CV		30% CV	
		# days/trip	# Trips	#Sea Days	# Trips	#Sea Days	# Trips	#Sea Days
GB	**BT**							
	MW	3.0	119	357	113	339	105	314
	PS							
GOM	**BT**							
	MW	2.0	94	189	70	140	49	97
	PS	1.5	184	276	122	183	78	117
SNE	**BT**	1.0	100	100	54	54	31	31
	MW	4.0	141	563	87	349	53	214
	PS							
Total			639	**1,486**	447	**1,065**	316	**773**

4.2.5 Option 5: Observer Coverage Levels Based on Seasonal Stratification (River Herring)

Under this option, observer coverage levels in the Atlantic herring fishery would be determined based on an evaluation that utilizes a seasonal stratification of river herring observer data. This approach would be applied to improve the accuracy and precision of (river herring) bycatch estimates, overlaid on the SBRM approach to determine baseline levels of coverage in the herring fishery. For example, managers could choose strata with high river herring bycatch to have a higher level of coverage (beyond SBRM rates) to increase the accuracy of resulting bycatch estimates. This approach would require an annual evaluation of coverage levels in the fishery to determine the best way to improve CVs for river herring bycatch in the following year.

Details TBD, example to be provided in the Draft EIS

4.3 OPTIONS TO IMPROVE/MAXIMIZE SAMPLING AT-SEA AND MEASURES TO ADDRESS NET SLIPPAGE

Current regulations for vessels carrying NMFS-approved sea samplers/observers on board (Section 648.11(d)) specify that owners/operators of fishing vessels must:

1. Provide accommodations and food that are equivalent to those provided to the crew.
2. Allow the sea sampler/observer access to and use of the vessel's communications equipment and personnel upon request for the transmission and receipt of messages related to the sea sampler's/observer's duties.
3. Provide true vessel locations, by latitude and longitude or loran coordinates, as requested by the observer/sea sampler, and allow the sea sampler/observer access to and use of the vessel's navigation equipment and personnel upon request to determine the vessel's position.
4. Notify the sea sampler/observer in a timely fashion of when fishing operations are to begin and end.
5. Allow for the embarking and debarking of the sea sampler/observer, as specified by the Regional Administrator, ensuring that transfers of observers/sea samplers at sea are accomplished in a safe manner, via small boat or raft, during daylight hours as weather and sea conditions allow, and with the agreement of the sea samplers/ observers involved.
6. Allow the sea sampler/observer free and unobstructed access to the vessel's bridge, working decks, holding bins, weight scales, holds, and any other space used to hold, process, weigh, or store fish.
7. Allow the sea sampler/observer to inspect and copy any the vessel's log, communications log, and records associated with the catch and distribution of fish for that trip.

Additional management measures are being considered in Amendment 5 to enhance regulations pertaining to the current at-sea monitoring program. The Council is considering options to maximize the sampling of catch by NMFS-approved observers on board limited access Atlantic herring vessels (Categories A, B, and C) and to address net slippage. **Any one option or any combination of the following options could be selected to enhance the at-sea catch monitoring program in Amendment 5.**

For the purposes of Amendment 5, *slippage* is defined as:

Unobserved catch, i.e., catch that is discarded prior to being observed, sorted, sampled, and/or brought on board the fishing vessel. Slippage can include the release of fish from a codend or seine prior to completion of pumping or the release of an entire catch or bag while the catch is still in the water.

- Fish that cannot be pumped and that remain in the net at the end of pumping operations are considered to be operational discards and not slipped catch. Observer protocols include documenting fish that remain in the net in a discard log before they are released, and existing regulations require vessel operators to assist the observer in this process. Management measures are under consideration in this amendment to address this issue and improve the observers' ability to inspect nets after pumping to document operational discards.
- Discards that occur at-sea after catch brought on board and sorted are also not considered slipped catch.

4.3.1 No Action Option

Under the no action option, no provisions would be implemented in Amendment 5 to improve/maximize sampling by at-sea observers or to address net slippage.

4.3.2 Option 1: Requirements for a Safe Sampling Station

This measure would require that vessel operators provide at-sea observers with a safe sampling station adjacent to the fish deck– this may include a safety harness (if footing is compromised and grating systems are high above the deck), a safe method to obtain samples, and a storage space for baskets and sampling gear. Vessels must maintain safe conditions on the vessel for the protection of observers including adherence to all U.S. Coast Guard and other applicable rules, regulations, or statutes pertaining to safe operation of the vessel.

4.3.3 Option 2: Requirements for "Reasonable Assistance"

This measure would require that vessel operators provide at-sea observers with reasonable assistance to enable observers to carry out their duties, including but not limited to obtaining samples and sorted discards.

"Reasonable assistance" could be defined as:

- Measuring decks, codends, and holding bins;
- Collecting bycatch when requested by the observers;
- Collecting and carrying baskets of fish when requested by the observers;

4.3.4 Option 3 – Provide Slippage Details

Measure: Require vessel operators to provide accurate details to the observer why a net (purse seine or trawl) may be partially pumped and fish released

Under this option, vessel operators would be required to provide information about whether a net was partially/fully slipped, the reason for the slippage, and the estimated weight of fish that were released.

4.3.5 Option 4 – Provide Notice

Measure: Require vessel operators to provide observers notice when pumping may be starting and when to allow sampling of the catch, and when pumping is coming to an end

4.3.6 Option 5 – Requirements for Trips with Multiple Vessels

Measure: When observers are deployed on herring trips involving more than one vessel, require observers on any vessel taking on fish where/when possible

4.3.7 Option 6 – Communication on Pair Trawl Vessels

Measure: In pair trawl operations, require additional communication between the boats if fish are being pumped to both vessels with to keep the observer informed of catch

4.3.8 Option 7 – Flow Scale for Processing Vessels

Measure: Require a flow scale on a processing vessel since there is no other method to estimate volume of catch

4.3.9 Option 8 – Codend Viewing (Trawls)

Measure: Requirement that observers be allowed to view the codend of a midwater trawl or pair trawl after pumping has ended, before the pump is removed

4.3.10 Option 9 – Provide Visual Access to Net/Codend

Measure: Requirement for vessel operators to provide the observer with visual access to the net/codend and its contents after pumping has ended

Under this option, the vessel operator would be required to ensure that the observer has visual access to the codend (or purse seine net) and any of its contents after pumping has ended. This can be achieved in a number of ways. Ideally, on a trawl vessel, the codend and any remaining contents would be brought on board after pumping. If this is not possible, the vessel operator must work with the observer to ensure that the observer can see the codend and its contents as clearly as possible. The observer will document this process and what he/she was able to see/sample in the observer log.

4.3.11 Option 10 – Closed Area I Sampling Provisions

Measure: Require that all fish must be at least pumped aboard the boat so that the entire catch can be sampled by an observer

This option would apply management measures similar to those for herring vessel access to Multispecies Closed Area I based on the Final Rule for the Closed Area I provisions, published on November 2, 2009. The following provisions would apply to limited access herring vessels (all gear types) carrying an observer on board (for any trip with an observer):

- Vessels would be required to pump aboard all fish from the net for inspection and sampling by the observer. Vessels that do not pump fish would be required to bring all fish aboard the vessel for inspection and sampling by the observer. Unless specific conditions are met (see below), vessels would be prohibited from releasing fish from the net, transferring fish to another vessel that is not carrying a NMFS-approved observer, or otherwise discarding fish at sea, unless the fish have first been brought aboard the vessel and made available for sampling and inspection by the observer.
- Vessels may make short test tows in the area to check the abundance of target and bycatch species without pumping the fish on board if the net is reset without releasing the contents of the test tow. In this circumstance, catch from the test tow would remain in the net and would be available to the observer to sample when the subsequent tow is pumped out.

Comment [lls7]: Council – Revise to reflect changes to Closed Area I sampling provisions November 30, 2010? (If yes, this would eliminate the grey shaded bullet below)

- The above prohibition on releasing fish/discarding would not extend to fish that cannot be pumped and that remain in the net at the end of pumping operations. Observer protocols include documenting fish that remain in the net before they are released, and existing regulations require vessel operators to assist the observer in this process. Additional measures are being considered in this amendment to improve this process (see Section 4.3 of this document).

- Fish that have not been pumped aboard may be released if the vessel operator finds that:
  1. pumping the catch could compromise the safety of the vessel;
  2. mechanical failure precludes bringing some or all of the catch aboard the vessel; or
  3. spiny dogfish have clogged the pump and consequently prevent pumping of the rest of the catch.

- If the net is released for any of the reasons stated above, the vessel operator would be required to complete and sign a Released Catch Affidavit providing information about where, when, and why the net was released, as well as a good-faith estimate of the total weight of fish caught on the tow and weight of fish released. The Released Catch Affidavit must be submitted within 48 hours of completion of the fishing trip.

4.3.12 Option 11 – Require Released Catch Affidavit for Slippage Events

This option requires that a Released Catch Affidavit be created for slippage events on both trawl and purse seine vessels with Category A, B, or C herring permits, to be signed by vessel operators under penalty of perjury. The Released Catch Affidavit will contain detailed information including (1) the reason for slippage; (2) an estimate of the quantity and species composition of the slipped fish; and (3) the location and time that the slippage event occurred. When an observer is present on the vessel during a slippage event, the event would be fully documented with photographs.

Discussion: The proposed affidavit would be required in addition to VTRs because VTRs do not include requirements to provide detailed information slippage events. The affidavit would facilitate the collection of more information about slippage events and would require captains to report the events individually when they occur (versus reporting total discards on VTRs at a trip-level).

4.3.13 Option 12 – Catch Deduction (and Possible Trip Termination) for Slippage Events

Under this option, the following provisions would apply to limited access herring vessels (all gear types) carrying an observer on board (for any trip with an observer):

For slippage events that occur if the vessel operator finds that (1) pumping the catch could compromise the safety of the vessel or (2) mechanical failure precludes bringing some or all of the catch aboard the vessel:

- It will be assumed that the sea herring not pumped on board will equal 100,000 lbs. to be counted as part of the catch and against the sub-ACL for that management area. Vessel operators will be responsible for reporting this catch through the quota monitoring mechanism (IVR or VMS) and their VTRs, under penalty of perjury.
- Once ten slippage events are observed in a particular management area, each additional slippage event for reasons specified in (1) and (2) above will cause trip termination and the vessel will be required to return to port.

Additional details TBD

Comment [lls8]: This option needs further discussion/development. Herring PDT discussed briefly and expressed some concerns that should be discussed further.

Comment [lls9]: Needs to be identified in such a way that the number of events can be tracked and resulting discrepancies between datasets can be identified.

4.4 MAXIMIZED RETENTION ALTERNATIVE (EXPERIMENTAL FISHERY)

The Council is considering an alternative to require maximized retention (MR) of catch when NMFS-approved observers are on board Atlantic herring limited access vessels.

Comment [lls10]: May 2009 – Herring AP recommends moving all MR alternatives to the considered but rejected section of the document, consistent with Enforcement Committee recommendations re. safety

May 2009 – Herring AP recommends that the issue of full retention in NE fisheries be considered first in the Multispecies Committee before given further consideration by the Herring Committee

4.4.1 Alternative 1: No Action

Under the no action alternative, no provisions would be implemented in Amendment 5 to evaluate maximized retention in the herring fishery. Herring vessels would continue to operate under the regulations and possession limits for any fisheries for which they possess permits. Other measures to address at-sea monitoring (described in other sections of this document) may be implemented in Amendment 5 even if no action is taken regarding MR.

4.4.2 Alternative 2: Evaluate Maximized Retention through the Annual Issuance of Exempted Fishing Permits

Under this alternative, the experimental fishery process would be utilized to determine whether maximized retention is appropriate for the Atlantic herring fishery, and if so, which species should be part of the maximized retention program and which FMPs should be amended to allow for long-term implementation of the program.

Under this alternative, **for four years following the implementation of Amendment 5**, Category A, B, and C Atlantic herring vessels would be issued an Exempted Experimental Fishing Permit (EFP) by the Sustainable Fisheries Division (SFD) at NERO as part of the annual herring permit renewal process. The EFP would provide the regulatory relief necessary to allow the currently non-permitted landings to take place when the vessels are required to comply with maximized retention provisions.

During the EFP years (four years), vessels would be required to comply with the maximized retention provisions specified in this section on any trip with an observer on board (NEFOP or other NMFS-certified observer).

4.4.2.1 General Provisions

- For the first four years after implementation of Amendment 5, limited access Category A, B, and C vessels would be required to obtain an exempted experimental fishery permit (EFP) to fish for Atlantic herring in any management area(s). Conditions of the EFP include a requirement to retain all species identified for maximized retention on any trip with a NEFOP or NMFS-certified observer on board (discarding would be prohibited on observed trips).
- The EFP would allow the herring vessel to keep all catch of the species identified for the maximized retention program on observed trips only, including catch above trip limits/quotas for the maximized retention species. The sale of the non-permitted species (and landings above the possession limit/quota) caught by herring limited access vessels for *human consumption* would be prohibited on maximized retention trips. Atlantic herring dealers and processors would also be prohibited from purchasing these fish to be sold for human consumption. This does not apply to sale for use as bait because herring catches that are landed for sale as bait are generally offloaded by pumping the fish from the vessel hold into tanker trucks. It is not possible to require all such landings to be culled and sorted and would be inequitable to make downstream purchasers of such bait legally liable for the presence of these fish in their bait.
- All observed trips in the fishery would become maximized retention trips and would form a "study group" for the fishery. Catch/landings data would be collected and documented by observers, as well as by vessels based on the reporting and monitoring provisions associated with the vessels' permits and specified in this amendment.

Comment [LLS11]: Council may also consider requirements for portside sampling as part of the maximized retention experimental fishery.

- During Year 3, the Herring PDT would begin to analyze the data collected by observers through the maximized retention program and: evaluate the strengths/weaknesses and costs/benefits of a maximized retention program; determine the need for a long-term maximized retention program in the herring fishery; evaluate the appropriateness of each species selected for maximized retention; and develop recommendations for the Herring Committee/Council regarding future regulatory action. The technical review and ensuing discussion regarding the need for management action would likely be time-consuming and would occur throughout most of the third year of the program as data from the experimental program continued to be collected.
- During Year 4, the Council would receive input from the herring industry and advisors and would review the Herring PDT's recommendations to determine whether or not a long-term maximized retention program should be established for the Atlantic herring fishery. The experimental fishery for maximized retention and the EFP requirements and provisions would expire after four years regardless of the determination. Other catch monitoring and reporting requirements implemented in this amendment would continue to be effective.
- If the Council supports a long-term maximized retention program, then development of the corresponding management actions would begin during Year 4 of the experimental fishery program with the intention of implementing the program as soon as all regulatory mechanisms are in place. This includes an amendment to the Herring FMP to design the program and implement the specific requirements as well as amendments to all other relevant species FMPs in the Northeast Region (NEFMC, MAFMC, and ASMFC) to authorize the catch/landing of the species in the herring fishery (including allowances for landings above possession limits and/or quotas).

4.4.2.2 Options for Exemption to Maximized Retention Provisions

There may be instances that a vessel cannot pump all fish aboard. The Council could consider incorporating exemptions into the EFP provisions that allow a vessel to release some catch under certain circumstances, and possibly with specific consequences. Any or all of the following provisions could be incorporated into the EFP for maximized retention:

- Fish that have not been pumped aboard may be released if the vessel operator finds that:
  1. pumping the catch could compromise the safety of the vessel;
  2. mechanical failure precludes bringing some or all of the catch aboard the vessel; or
  3. spiny dogfish have clogged the pump and consequently prevent pumping of the rest of the catch.
- A Released Catch Affidavit would be required for slippage events on both trawl and purse seine vessels, to be signed by vessel operators under penalty of perjury. The Released Catch Affidavit would contain detailed information including (1) the reason for slippage; (2) an estimate of the quantity and species composition of the slipped fish; and (3) the location and time that the slippage event occurred. Since an observer will be present on the vessel when the maximized retention provisions apply, slippage events would require an affidavit and would be fully documented by the observer with photographs.

5.0 CATCH MONITORING: PORTSIDE

The Council is considering a portside element of the Federal catch monitoring program established in Amendment 5, which would likely include measures to ensure that catch/landings data are reported in a timely and accurate manner and provide a basis for comparing/cross-checking bycatch data that may be collected by observers at-sea.

The portside sampling provisions in Amendment 5 would apply to the first point of landing during a trip selected for sampling.

Comment [lls12]: Should consider/address landings in remote and island communities

Coordination with ASMFC

At its September 1-2, 2010 meeting, the Herring Committee passed the following motion:

Request that States continue and expand their portside sampling programs provided funds are found for the program, in support of the Council's priority for portside sampling coverage and that the Herring PDT and Technical Committee jointly meet to review the States shoreside monitoring programs in order to address the goals and objectives of Amendment 5

5.1 NO ACTION ALTERNATIVE (STATUS QUO)

Under the no action alternative, a portside sampling program for the herring fishery would not be established in Amendment 5. States may continue to conduct portside sampling programs as resources allow, but no Federally-administered program would be established.

ME DMR Portside Sampling Program

ME DMR's portside sampling program represents an opportunity to collect data in an inexpensive but efficient and accurate way. The program takes advantage of normal processing plant operations by quantifying bycatch that enters the facilities. Processing plants have to manually remove other species from the production line before the fish are sorted and cut or frozen. In normal operations, bycatch removed from the product is segregated into xactix bins or totes and removed from the processing floor at the end of each lot. Plants process one lot (fish caught by one vessel on a particular trip, delivered by truck or boat) at a time and then reset the plant in preparation for the next lot. Therefore, the bycatch removed from each lot can be documented and assigned to a catch location, gear type, date and a total lot amount. Additionally, the plants generally buy herring from vessels throughout the fishery and therefore cover multiple gear types, vessel sizes and individual fishing practices.

The bait industry has changed tremendously in the last seven years resulting in a much more centralized distribution structure. Generally the herring used for bait goes through a large wholesale dealer to smaller dealers and lobster wharfs along the coast. The wholesale dealers generally have facilities where they sort, barrel, freeze and store bait for redistribution. It is at these sites where effective bycatch surveys can also be done, thereby including the bait sector in this study.

The sampling takes place at processing plants dewatering boxes, and bait dealers in Maine, New Hampshire, Massachusetts, Rhode Island and New Jersey. . A sampling level of five percent per sampler of the entire herring fishery is targeted. The mackerel fishery will be sampled when herring samples are not available. This scenario is most likely to occur in the winter months when many of the herring vessels switch to the mackerel fishery. The samplers quantify bycatch from individual lots according to a NMFS specified protocol. The total weight of any observed bycatch are recorded along with species identification, total species weight, individual lengths and weights of all fish or a representative sub-sample.

MA DMF Portside Sampling Program

The goal of the MA DMF portside sampling program is to document landing activities and record and quantify catch composition, including size and age, of the fish landed by the Northwest Atlantic herring and mackerel pelagic fishery. The objectives are to:

- Sample fishermen's catches at sea and landings at the dock to acquire information on catch and landings and other biological aspects of fisheries with particular emphasis on the Atlantic herring and Atlantic mackerel fisheries;
- Collaborate with Maine Department of Marine Resources (ME DMR) to implement consistent dockside sampling protocols in the Atlantic herring and Atlantic mackerel fisheries in both port sampling studies and to enhance the quantity of information and trip sampling resolution being collected;
- Collect biological information and samples to assist stock assessments; and
- Supply data, information, and support for fisheries management purposes through accessing and analyzing state and federal landings and vessels trip reports, sea sampling, and port sampling.

Partial funding for the MA DMF program was created through a grant by the Atlantic Costal Fisheries Cooperative Management Act (ACFCMA). This grant encumbers funds for travel, supplies and salary for the field coordinator. In addition, MA DMF, has provided in-kind support by adding samplers based out of the New Bedford and Gloucester field stations. The term of the ACFAMA grant is for one year. Before the grant expires, MA DMF will pursue avenues to renew the grant and, if funding is not available from the same source, will seek additional funding to continue the program. Some additional funding for portside sampling by MA DMF has been provided by NFWF to support the Sustainable Fisheries Coalition (SFC) river herring bycatch avoidance program (see Section 6.2.2.3 for more information).

5.2 PORTSIDE SAMPLING SERVICE PROVIDERS

If third parties are used to provide services related to monitoring catch in the Atlantic herring fishery, these third parties may be providers of at-sea monitoring services. The requirements for any NMFS-approved at-sea monitoring service providers are specified in Section 3.1.8 of this document. Amendment 5 will authorize the ASMFC States (ME-NJ) as approved service providers for Federal at-sea and portside sampling programs established for the Atlantic herring fishery, consistent with the provisions contained in this document.

5.3 PORTSIDE SAMPLING PROGRAM– SAMPLING DESIGN AND SAMPLING PROTOCOLS

Comment [lls13]: Some elements need further discussion
-Provisions for administration/oversight of a Federal portside sampling program remain unclear.

The provisions in this amendment would require NMFS, in consultation with the Council and the Atlantic States Marine Fisheries Commission (ASMFC), and the Herring Plan Development Team (PDT), to establish and oversee a Federal portside sampling program. While service providers may be contracted for sampling and data collection, NMFS would serve as the administrative agency responsible for general administration of the program and portside sampling database maintenance. Amendment 5 will establish general protocols for sampling that are consistent with the Council's priorities and will specify elements of data collection including standard reporting forms and criteria for sampling (number of samples, methodology, etc). This will ensure that all information collected is comparable and rigorous, regardless of whom it is collected by (State, Federal, or other samplers).

5.3.1 Sampling Design

NOAA Fisheries (through the NEFSC), in consultation with the Herring PDT, Council, and ASMFC, would be required to annually specify a sampling design/trip selection protocol for portside sampling based on the Council's specified sampling priorities, trip selection priorities, and target levels of coverage identified in this amendment (see below). This information would be provided to approved portside sampling program service providers on an annual basis to assist them in developing plans for sampling and ensuring that portside samplers can be made available at the appropriate times/places.

As specified in this document, herring vessels would be required to contact NOAA Fisheries and notify the agency of a landings event at least six hours prior to landing (see options for notification requirements in Section 3.3 of this document). The current pre-landing notification system could be used to provide ample notice to NOAA Fisheries prior to landing, in order to arrange for samplers when they may be available and/or to communicate instructions for the vessel to contact a service provider. The vessel must indicate when/where the boat will land, the approximate amount of the catch, and whether or not the offload will be to a processing facility, bait dealer, or truck. NOAA Fisheries will inform the vessel if the landings event requires sampling, and if the vessel must contact a portside sampling program service provider. Portside sampling program service providers will work with the vessels to ensure that trips that require portside sampling are met by a sampler at the first point of landing.

Comment [lls14]: Need to consider exception/waiver if a sampler cannot be provided in a timely manner.

On an annual basis, NOAA Fisheries will supply each approved portside sampling program service provider with the following:

- List of certified vessels and dealers subject to portside sampling program requirements;
- Summary of portside sampler duties;
- List of relevant NOAA Fisheries contacts;
- Sampling design/trip selection criteria for the upcoming fishing year;
- Protocols for complete sampling, sub-sampling, and calculating the weight of fish;

- Other relevant protocols and directives.

5.3.1.1 Portside Sampling and Trip Selection Priorities

At its November 30, 2010 meeting, the Herring Committee identified the following sampling priorities for a portside sampling program:

- Providing a third-party estimate of total landings;
- Sampling/sub-sampling offloads to estimate species composition and amount of landings on trips with at-sea observers on board;
- Sampling/sub-sampling offloads to estimate species composition and amount of landings on trips subject to catch caps;
- Collecting commercial catch samples to support stock assessments; and
- Collecting commercial catch samples to evaluate spawning condition.

Trip Selection Priorities

When designing the portside sampling program and selecting trips to sample, trips that meet any of the following criteria should be given priority:

- Trips in river herring monitoring/avoidance areas;
- Trips in groundfish closed areas;
- Trips with landings that will count against a catch cap; and/or
- Trips with observers on board.

5.3.1.2 Options for Portside Sampling Target Coverage Levels

5.3.1.2.1 Option 1 – 10% Target Coverage

Under this option, the portside sampling program established in Amendment 5 will be designed to target 10% of landings events in the Atlantic herring fishery.

5.3.1.2.2 Option 2 – 25% Target Coverage

Under this option, the portside sampling program established in Amendment 5 will be designed to target 25% of landings events in the Atlantic herring fishery.

5.3.1.2.3 Option 3 – 50% Target Coverage

Under this option, the portside sampling program established in Amendment 5 will be designed to target 50% of landings events in the Atlantic herring fishery.

5.3.1.2.4 Option 4 – 100% Target Coverage

This measure requires rigorous sampling of the landed fish and certification of the offload weigh-outs (census of all landing events) by certified portside samplers. Under this option, there would be a target of 100% coverage of offloads by certified portside samplers who execute a robust protocol to derive total species-level landings composition would be necessary as part of this option.

5.3.2 Sampling Protocols/Methods

Comment [lls15]: Needs review by Herring PDT/ASMFC Technical Committee

Should consider including protocols for sampling to achieve all priorities identified by the Council

The sampling protocols will address the sampling priorities identified by the Council. To the extent possible, sampling methodology will be consistent with NOAA Observer Program protocols, with some modifications to decrease variance in extrapolation of bycatch estimates and reduce potential sampling bias. Due to the large quantities of fish that are typically landed in the herring fishery, sub-sampling will likely be necessary for many offloading events. Sub-sampling is used when the volume of fish that the sampler is attempting to quantify is too large to obtain actual weights or if the amount of bycatch is too abundant. During sub-sampling, the sampler will collect smaller batches of fish, sort and weigh by species, and then extrapolate to the total catch.

In the Atlantic herring fishery, no offload points/events are the same. The methodology described in this section provides some general guidelines and examples for sampling landings events in the herring fishery. NOAA Fisheries should coordinate efforts with portside sampling program service providers to better determine the most appropriate sampling approaches given the logistical differences in offload points and other complicating factors.

The two fundamental elements necessary for a portside sampler to know in order to successfully sample a landings event are a volumetric estimate of the total landings and the species composition of the catch. Landings will be either sampled completely or sub-sampled to determine the species composition of the catch (see protocols for complete sampling and sub-sampling below). In most situations, sampling will be conducted over the entire offloading period to capture any stratification that may occur throughout the entire fishing activity (e.g. while being pumped aboard while out at sea, due to the difference in species size and composition between tows, settling in the vessel's holding tanks, etc.). Because the catch is not unloaded the same way at every dealer or plant, sampling techniques may vary (examples are provided below). Typically, samples will be collected systematically at set intervals with predetermined sample sizes. All samples will be sorted by species and actual weights will be taken. Lengths will be taken according to the NOAA Observer Program species priority list by

statistical area, and commercial catch samples for assessment purposes will be collected using current protocols.

Complete Sampling Protocol (Processing Plants and Whenever Possible)

A complete sampling protocol can be utilized in cases where the entire offload can be observed and sampled, and all bycatch can be sorted and counted. Complete sampling is desirable for offload events that occur at processing plants. The samplers collect and quantify all landings from individual lots of fish (transported by trucks or vessels) that enter the processing facilities. Samplers position themselves at the point of entry into the facility along an assembly line or at the base of the hoppers where the fish are unloaded. Sampling is conducted before grading or sorting of the catch occurs. All bycatch is removed from the assembly line or hopper and placed in bushel baskets or buckets specific to each species. The total weight of any observed bycatch is recorded along with species identification, total species weight, individual lengths and weights of all fish according to a NOAA Fisheries and ACCSP specified protocol. If there is a large amount of one incidental species, the total weight is recorded and then length frequencies and weight are gathered from a sub-sample of 50-100 individuals.

Sub-Sampling Protocol

A sub-sampling protocol can be utilized when sampling a very large volume of catch and/or when facilities at the offload point make complete sampling impossible. Instances where this is likely to occur include offload points where fish are pumped directly into trucks. Sub-sampling is also appropriate in instances when the volume of fish pumped is greater than the manpower available at the sampling point can observe with certainty. In these cases, it may not be possible to use the complete sampling protocol regardless of the amount inspected (< 80,000 lbs.). These situations are also likely to occur when vessels are fishing mixed groups of herring and mackerel, some of which can have a 50-50 composition.

Sub-samples are to be collected using bushel baskets at timed intervals during the pumping or unloading process following the NOAA Fisheries at-sea observer sampling protocol. To accomplish this type of sub-sampling, the portside monitor/sampler needs to know the total lot weight and the duration of time it will take to unload the catch. After sampling, the bushel baskets of fish should be sorted by species, and total weight of each species and length frequencies should be recorded (sub sample n=50, for length frequencies if more than fifty of any species occurs).

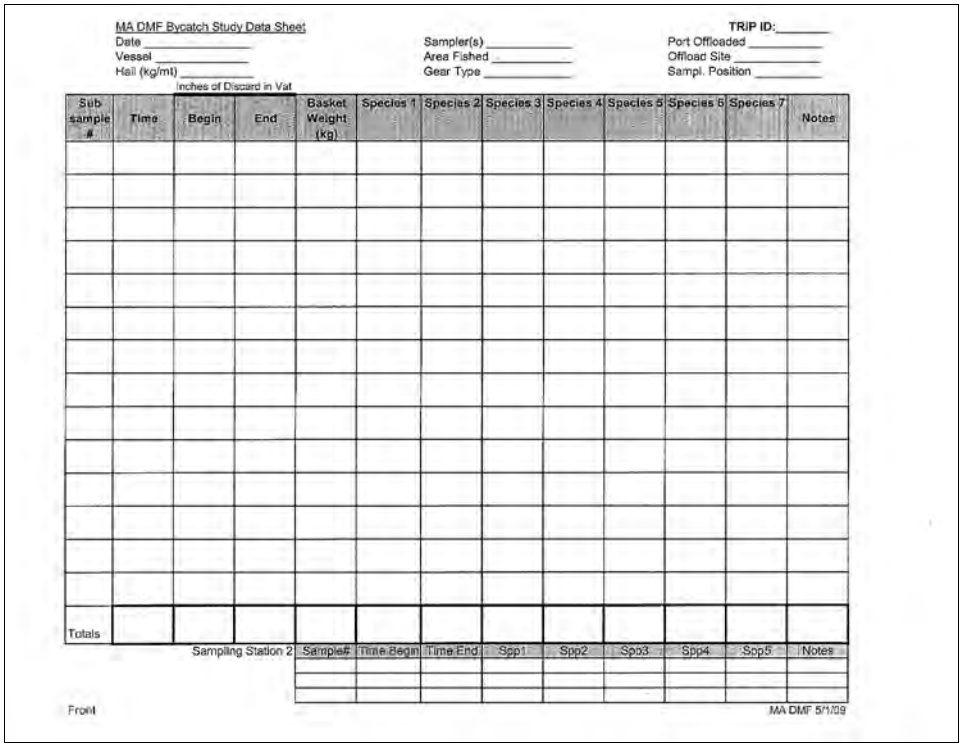
Sub-Sample Example (Trucks, Bait Dealers)

1. Lot size (determined by the sampler) = 120,000 lbs (3 Trucks)
2. Pumping or unloading time = 3 hours (180 minutes)
3. If a sample basket is to be collected for every 10,000 lbs of fish, then 12 sample baskets need to be collected over the entire pumping or unloading process.
   - 120,000 lbs/10,000 lbs = 12
4. If the entire pumping or unloading process takes an estimated 180 minutes, then a basket sample should be taken every 15 minutes

5. If the catch composition from the bushel baskets is 99% Atlantic Herring, then one can extrapolate that out of the 120,000 lbs unloaded, then 118,800 lbs is Atlantic Herring.
   - 99% Atlantic Herring = 120,000 lbs x 0.99 = 118,800 lbs of Atlantic Herring
6. If the remaining 1% of the catch composition is Atlantic Mackerel, then one can extrapolate that out of the 120,000 lbs unloaded, 1,200 lbs is Atlantic Mackerel.
   - 1% Atlantic Mackerel = 120,000 lbs x 0.01 = 1,200 lbs of Atlantic Mackerel

Data will be recorded on sheets consistent with ME DMR and MA DMF data collection sheets for the existing portside bycatch sampling programs (Figure 2 – Figure 4). The sampling sheet for the processing plant (Figure 2) is designed to collect and record all data needed to comprehensively quantify discards through the field "inches in vat." Once the discard composition is recorded, along with pump rate and data for "kept" catch, Excel worksheets are used to derive the composition of the landings. Sub-sampling data sheets (Figure 3) are used to sample baskets of unsorted catch at intervals set by the sampler based on the total volume of catch and pump rates.

Figure 2 Example Data Sheet for Processing Plant and Complete Sampling



MA DMF Bycatch Study Data Sheet

Date _____ Sampler(s) _____ TRIP ID:_____

Vessel _____ Area Fished _____ Port Offloaded _____

Hail (kg/mt) _____ Gear Type _____ Offload Site _____

Sampl. Position _____

Inches of Discard in Vat

Sub sample #	Time	Begin	End	Basket Weight (kg)	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Species 7	Notes
Totals												

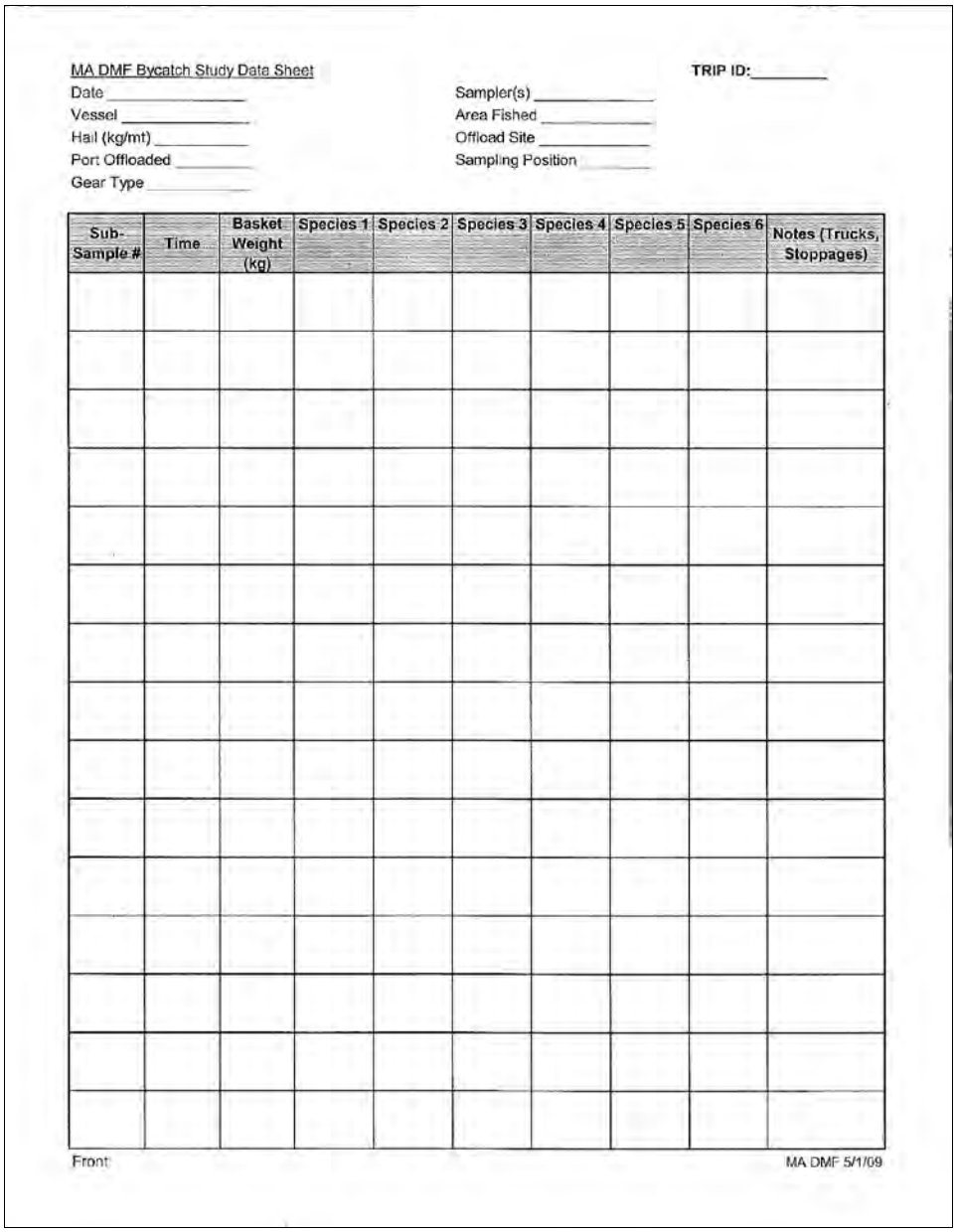
Sampling Station 2

Sample#	Time Begin	Time End	Spp1	Spp2	Spp3	Spp4	Spp5	Notes

Front

MA DMF 5/1/09

Figure 3 Example Data Sheet for Sub-Sampling



MA DMF Bycatch Study Data Sheet

TRIP ID:_____

Date _____ Sampler(s) _____

Vessel _____ Area Fished _____

Hail (kg/mt) _____ Offload Site _____

Port Offloaded _____ Sampling Position _____

Gear Type _____

Sub-Sample #	Time	Basket Weight (kg)	Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Notes (Trucks, Stoppages)

Front

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Figure 4 Example Length Frequency Data Collection Sheet

SMALL PELAGIC PORTSIDE BYCATCH SURVEY

YEAR _____ SPECIES _____ AREA _____ SAMPLERS _____ PAGE ____ OF ____

MONTH _____ LOT WT _____ SAMPLE NO. _____ DATA ENTRY COMPLETE ____

Species				Species				Species				Species			
Tot Wt (kg)				Tot Wt (kg)				Tot Wt (kg)				Tot Wt (kg)			
Sub Wt (kg)				Sub Wt (kg)				Sub Wt (kg)				Sub Wt (kg)			
Lt (cm)		Frequency	Sub Wt (kg)	Lt (cm)		Frequency	Sub Wt (kg)	Lt (cm)		Frequency	Sub Wt (kg)	Lt (cm)		Frequency	Sub Wt (kg)
	0				0				0				0		
	1				1				1				1		
	2				2				2				2		
	3				3				3				3		
	4				4				4				4		
	5				5				5				5		
	6				6				6				6		
	7				7				7				7		
	8				8				8				8		
	9				9				9				9		
	0				0				0			Species			
	1				1				1			Tot Wt (kg)			
	2				2				2			Sub Wt (kg)			
	3				3				3						
	4				4				4			Lt (cm)		Frequency	Sub Wt (kg)
	5				5				5				0		
	6				6				6				1		
	7				7				7				2		
	8				8				8				3		
	9				9				9				4		
	0		Notes		0		Notes		0		Notes		5		
	1				1				1				6		
	2				2				2				7		
	3				3				3				8		
	4				4				4				9		
	5				5				5			COMMENTS			
	6				6				6						
	7				7				7						
	8				8				8						
	9				9				9						

Protocol for Collecting Commercial Catch Samples

As part of the portside sampling program, there would be a procedure in plan for collecting commercial catch samples for stock assessment purposes when sampling landings events. Currently, ME DMR collects commercial catch samples using the following protocol (provided here as an example):

1. Herring must have been caught in U.S. waters.
2. Two samples per week from each statistical area where the fish are being caught (see map section).
3. One sample per week from each type of fishing gear where possible (midwater trawl, pair trawl, purse seine, stop seine, weir and gill net).
4. 50 herring are randomly selected from the load (plus a couple to allow for damaged fish). The fish are placed in DMR herring sample boxes.
5. The sample boxes are labeled and transported to DMR headquarters in W. Boothbay Harbor.
6. The following information should be recorded on the sample boxes:
    a. Amount of herring landed (lbs or metric tons)
    b. Date of catch
    c. Catch location: NMFS Statistical Area # and Sub-Area #
    d. Port landed
    e. Fishing vessel
    f. Location of where sample was collected (sometimes different than where fish were landed)
    g. Name of collector
    h. Under remarks note gear type (purse seine, midwater/pair trawl, stop seine, gillnet or weir)
    i. Label number of boxes per sample (i.e. 1 of 2 and 2 of 2)

5.4 ALTERNATIVES FOR VERIFYING SELF-REPORTED LANDINGS

The Herring Committee identified, as a sampling priority for the portside sampling program, that total landings be provided by a third-party estimate. The measures in this section would meet this priority by requiring standardization and certification of volumetric measurements used to estimate herring landings. They require boats or dealer trucks to be certified and sealed to assure accurate reports of volume-based catch estimates. The independent landings weight verification would be required when a third party is available/provided as a part of the portside sampling program.

5.4.1 Alternative 1: Vessel-Level Verification – Require Sealing and Certification of Vessel Fish Holds or Use of Standard Fish Totes

This alternative requires that herring Limited Access Category A and B vessels and all herring carrier vessels seal and certify the volume of their fish holds to obtain a more accurate estimate of catch. Under this option Limited Access Category C vessels are required to either certify the volume of their fish holds (as described below for Category A/B vessels and carriers) or hold herring in standard fish totes on all fishing trips (also described below for Category C vessels that do not pump fish). Weight verification of landings by an independent third-party as a part of the portside sampling program for some portion of landings events (TBD through portside sampling program design) would also be required.

5.4.1.1 Option for Limited Access Category A/B Vessels and Herring Carriers

As part of the permit requirements, Limited Access Category A and B vessels as well as herring carrier vessels would be required to obtain a fish hold measurement from either the State Sealer of Weights and Measures, the State Sealer's designee, an individual credentialed as a Certified Marine Surveyor with a fishing specialty by the National Association of Marine Surveyors (NAMS) or from an individual credentialed as an Accredited Marine Surveyor with a fishing specialty by the Society of Accredited Marine Surveyors (SAMS). The owner of the boat pays a fee for the measuring as determined by the State Sealer of Weights and Measures or by the marine surveyor, who bases it on the carrying capacity of the boat. In terms of hold changes, vessels that are upgraded or replacement vessels would have to be resurveyed by a surveyor (accredited as above) unless the replacement vessel already had an appropriate certification and the documentation would have to be submitted to NMFS. The measure must be in the unit of hogshead, and measured by liquid measure from a calibrated prover to the top of the hatch coaming.

The measurement must be marked and permanently sealed, both forward and aft, in the hold, in the most practicable manner, while the boat is afloat. Under this alternative, the boat owner is required to immediately notify NMFS of any alteration or the breaking of any seal. After measuring and sealing each boat, the State Sealer of Weights and Measures or marine surveyor provides documentation to the vessel owner/operator, including the name of the owner, the name

and capacity of each vessel, and a calibrated volume table that converts hogsheads to pounds of fish using a conversion of 1 hogshead = 1,225 pounds of herring. The vessel owner/operator is responsible for providing the documentation to NMFS before or upon renewal of the limited access permit. The vessel owner/operator is responsible for providing the calibrated volume table to the third party responsible for verifying the catch.

When possible, catch weighing or verification is to be conducted by an independent third party. The third party may be incorporated into the portside sampling program. As specified, vessels would be required to use the existing pre-landing notification requirement to notify NMFS prior to landing; they also may be required to contact a service provider to arrange for a sampler to meet the vessel.

Under this option, if a vessel has a certified hold, then the vessel submits to a "sounding" process during the portside sampling, by which the sampler drops either a small weight connected to the end of a tape measure or similar device into the hold until it settles on top of the fish. The third party provides the implement of measure. The measurement is to be checked against a calibrated volume table, which is specific to the boat and provided by the vessel owner/operator, and the cubic volume of fish in the tank is to be calculated. Fish may not be removed from or added to the container until the third party indicates that volume estimates have been completed and any samples of catch required by the observer have been taken. The process is repeated on all the other tanks that contain fish and the total cubic volume is calculated, which can then be converted into a weight using a conversion of 1 hogshead = 1,225 pounds of herring. The data should be recorded by the third party and should include:

1. The vessel name;
2. The date the third party conducted the measurements;
3. The total estimated weight of fish on board;
4. The third party's name and signature and the date on which the inspection was completed.

The portside sampler/third party is responsible for delivering the record to NMFS. This information will be used to cross-check catch estimates provided through ACL/quota monitoring (IVR or VMS – hail weights), VTRs, and dealer reports. Captain and Dealer VTRs should be submitted separately by the responsible parties.

Comment [lls16]: The PDT/TC will review all portside sampling program protocols during the development of the Draft EIS.

5.4.1.2 Options for Limited Access Category C Vessels

5.4.1.2.1 Option 1 (Weight Estimated Using Standard Fish Totes)

Under this option, Limited Access Category C vessels are required to either certify the volume of their fish holds (as described above) or store herring catch in "standard totes" on all fishing trips (if the vessel does not pump fish) as a condition of possessing the limited access permit. A "standard tote" is defined in the Code of Federal Regulations (648.2) as:

> "*a box typically constructed of plastic, designed to hold 100 lb (45.3 kg) of fish plus ice, and that has a liquid capacity of 70 L, or a volume of not more than 4,320 cubic in (2.5 cubic ft or 70.79 cubic cm)*"

When possible, herring catch weighing or verification is to be conducted by an independent third party. The third party may be incorporated into the portside sampling program. As specified, vessels would be required to use the existing pre-landing notification requirement to notify NMFS prior to landing; they also may be required to contact a service provider to arrange for a sampler to meet the vessel.

Under this option, if vessels utilize standard totes to store the herring catch, then the catch must be inspected by the portside sampler. The sampler is responsible for providing an estimate of weight of herring catch based on the number of fish totes and confirming that weight with the captain. Fish may not be removed from or added to a container until the sampler indicates that the container weight estimates have been completed and any samples of catch have been taken. The data should be recorded by the third party and should include:

1. The vessel name;
2. The date the third party conducted the measurements;
3. The number of herring totes and the total estimated weight of herring landed by the vessel;
4. The estimated weight of any other species observed/sampled in the totes; and
5. The third party's name and signature and the date on which the inspection was completed.

The portside sampler/third party is responsible for delivering the record to NMFS. This information will be used to cross-check catch estimates provided through ACL/quota monitoring (IVR or VMS – hail weights), VTRs, and dealer reports. Captain and Dealer VTRs should be submitted separately by the responsible parties.

5.4.1.2.2 Option 2 (Weight Estimated by Third Party)

Comment [lls17]: This differs from Option 1 in that Option 1 requires the use of standard totes. This option allows for any containers to be used and places the responsibility of estimating the weight of herring catch on the portside sampler.

Under this option, Limited Access Category C vessels are required to either certify the volume of their fish holds (as described above) or store their herring catch separately for inspection or catch weighing/verification (if the vessel does not pump fish).

When specified as part of the portside sampling program or required for enforcement, herring catch weighing or verification is to be conducted by an independent third party. As specified, vessels would be required to use the existing pre-landing notification requirement to notify NMFS prior to landing; they also may be required to contact a service provider to arrange for a portside sampler to meet the vessel.

Under this option, C vessels that do not pump fish must store/transport herring catch separately (in totes or other containers) and make the catch available to a portside sampler if one is deployed/required. The portside sampler/third party is responsible for providing an estimate of weight of herring catch and confirming that weight with the captain. The data should be recorded by the third party and should include:

1. The vessel name;
2. The date the third party conducted the measurements;
3. The total estimated weight of herring landed by the vessel;
4. The estimated weight of any other species observed/sampled in the herring catch; and
5. The third party's name and signature and the date on which the inspection was completed.

The portside sampler/third party is responsible for delivering the record to NMFS. This information will be used to cross-check catch estimates provided through ACL/quota monitoring (IVR or VMS – hail weights), VTRs, and dealer reports. Captain and Dealer VTRs should be submitted separately by the responsible parties.

5.4.1.3 Background Information

Table 6 summarizes herring catch (from VTR data) by each gear type, organized by permit category, for 2008 and 2009, with some gears and catch omitted for confidentiality reasons.

Table 6 Atlantic Herring Catch (in mt, from VTR) by Gear Type and Permit Category, 2008-2009

	2008		2009	
	Gear Type Used	Caught Herring (MT)	Gear Type Used	Caught Herring (MT)
A	OTTER TRAWL BOTTOM FISH	1401.4	OTTER TRAWL BOTTOM FISH	3054.7
	OTTER TRAWL MIDWATER	4021.6	PURSE SEINE	22226.7
	PURSE SEINE	26727.1	OTTER TRAWL MIDWATER PAIRED	68994.3
	OTTER TRAWL MIDWATER PAIRED	50507.1		
C	OTTER TRAWL BOTTOM SHRIMP	2.1	OTTER TRAWL BOTTOM SHRIMP	63.8
	OTTER TRAWL BOTTOM FISH	1121.4	PURSE SEINE	285.3
			OTTER TRAWL BOTTOM FISH	1641.9

Table 7 summarizes herring catch (from VTR data) by each gear type, in metric tons, organized by vessel size, for 2008 and 2009. Only Category A, B and C permit data are included in the table, and some gears and catch were omitted for confidentiality reasons. In 2009, there were 8590.9 metric tons caught by purse seine gear on vessels that are listed as being longer than 80 feet in length.

Table 7 Atlantic Herring Catch (in mt, from VTR) for Category A/B/C Vessels, by Gear Type and Vessel Size, 2008-2009

	2009		2008	
	Gear Used	Caught Herring (MT)	Gear Used	Caught Herring (MT)
Over 80 ft	PURSE SEINE	8590.9	OTTER TRAWL BOTTOM FISH	580.0
	OTTER TRAWL MIDWATER PAIRED	67208.5	PURSE SEINE	8520.9
			OTTER TRAWL MIDWATER PAIRED	48867.0
60 to 80 ft	OTTER TRAWL BOTTOM FISH	4605.1	OTTER TRAWL BOTTOM FISH	2917.5
Under 60 ft	OTTER TRAWL BOTTOM SHRIMP	63.8	OTTER TRAWL BOTTOM FISH	70.4
	OTTER TRAWL BOTTOM FISH	750.9		
	PURSE SEINE	7773.8		

Table 8 summarizes the primary ports listed on permit applications for Category C limited access herring vessels during the 2008 and 2009 fishing years. In 2008, there were nine Category C vessels which listed their primary port as bring somewhere along the ME Coast. These vessels should already have their holds sealed and certified based on regulations for the State of ME.

Table 8 Number of Category C Vessels by Primary Port

2008	
Location	Number of C Vessels
Maine Coast	9
Between Portsmouth NH and Gloucester MA	10
Between New Bedford MA and New London CT	19
Long Island, NY Area	5
Cape May, NJ Area	11
Miscellaneous	4
Total	58
2009	
Location	Number of C Vessels
Maine Coast	10
Between Portsmouth NH and Gloucester MA	9
Between New Bedford MA and New London CT	18
Long Island, NY Area	5
Cape May, NJ Area	9
Miscellaneous	4
Total	55

Table 9 reports the size of each herring vessel, as listed on permit applications, by gear category. For instance, in 2008 there were 33 Category A and B vessels which were listed as being longer than 80 feet in length, and a total of 271 vessels of that size possessing any herring permit.

Table 9 Atlantic Herring Vessel Size (from Permit Applications), 2008-2009

2008

		Permit Category			Total # of Vessels
		A and B	C	D	
Size of Vessel	>80 ft	33	8	230	271
	60-80 ft	13	29	432	474
	<60 ft	6	21	1766	1793
Total # of Vessels		52	58	2428	

2008

		Permit Category		Total # of Vessels
		A and B	C	
Size of Vessel	>80 ft	33	8	41
	60-80 ft	13	29	42
	<60 ft	6	21	27
Total # of Vessels		52	58	

2009

		Permit Category			Total # of Vessels
		A and B	C	D	
Size of Vessel	>80 ft	31	7	224	262
	60-80 ft	12	26	410	448
	<60 ft	7	22	1761	1790
Total # of Vessels		50	55	2395	

2009

		Permit Category		Total # of Vessels
		A and B	C	
Size of Vessel	>80 ft	31	7	38
	60-80 ft	12	26	38
	<60 ft	7	22	29
Total # of Vessels		50	55	

5.4.2 Alternative 2: Dealer-Level Verification

Comment [lls18]: Needs further discussion/revision

Under this alternative:

As a condition of possessing a Federal dealer permit for Atlantic herring, dealers would be required to contract the State Sealer of Weights and Measures, the State Sealer's designee, or an individual credentialed as a Certified Marine Surveyor with a fishing specialty by the National Association of Marine Surveyors (NAMS) or from an individual credentialed as an Accredited Marine Surveyor with a fishing specialty by the Society of Accredited Marine Surveyors (SAMS) to measure the capacity of transport vehicles. The dealer would pay a fee for the measuring as determined by the State Sealer of Weights and Measures or by the surveyor or architect, based on the capacity of the vehicle. The measurement would be in hogsheads, and measured by a method TBD.

Comment [lls19]: These organizations are standard for marine purposes; the Committee may want to use other organizations for trucks.

Comment [lls20]: Personal communication with AP members has revealed that many of the trucks used to transport herring are rented or leased. One suggestion was to standardize the fish containers used on flatbeds and require their use and allow tankers and dump trucks to be certified in a manner determined to be best by the surveyor being used.

After measuring the vehicles, the State Sealer of Weights and Measures or marine surveyor would document the name of the owner and the name and capacity of each vehicle, a document which the vehicle owner or operator would be responsible for providing to the party responsible for certifying the catch. The catch weighing would be conducted by an independent third party (e.g. portside sampler, state agent, law enforcement). The third party may be incorporated into the portside sampling program; the intent, however, is that this be a standalone requirement to improve accuracy of landed catch throughout the fishery, including sectors of the fishery for which full portside sampling is limited or where coverage is less than optimal.

As required or necessary, vessels would contact the portside sampler/third party in order to allow enough time for the party to meet the vessel at the first point of landing. This could be incorporated into the existing pre-landing notification requirement, especially if a portside sampling program is developed that utilizes this requirement as well. Once filled with the entirety of the herring that the vehicle will be transporting, and all vessels or compartments have been drained *to the extent possible*, trucks would be required to submit to a "sounding" process, by which the portside sampler/third party would drop a small weight connected to the end of a tape measure or similar device into any and all beds, tanks or compartments which hold herring. The portside sampler/third party would provide the implement of measure. The portside sampler/third party would then check the measurement against a calibrated volume table, provided by NMFS (see above) but specific to the truck, and calculate the cubic volume of fish in all the individual beds, tanks or compartments, and then the total cubic volume for the truck would be calculated, which can then be converted into a weight using a conversion factor of 1 hogshead = 1,225 pounds of herring. The data would be recorded by the portside sampler/third party and reported to NMFS in addition to the VTRs and dealer reports. All transport vehicles subject to these provisions would be required to carry the calibrated volume tables for beds, tanks and/or containers.

6.0 MANAGEMENT MEASURES TO ADDRESS RIVER HERRING BYCATCH

The Council is considering three management alternatives to address river herring bycatch in Amendment 5 (in addition to the no action alternative). Each of these alternatives relates to a general management goal. While there may be some overlap and flexibility in combining management measures to achieve more than one of these goals, a range of options is being considered to achieve the goal identified within each of these alternatives.

6.1 ALTERNATIVE 1 – NO ACTION

XXX

6.2 ALTERNATIVE 2 – RIVER HERRING MONITORING/AVOIDANCE

The management goal associated with this alternative is to monitor river herring bycatch and encourage bycatch avoidance. Under this alternative, additional management measures would apply during certain times and in certain areas (identified below) where river herring encounters with the herring fishery were observed between 2005 and 2009. The intent of the additional management measures would be to increase sampling (above and beyond the provisions in the Amendment 5 catch monitoring program) and closely monitor the catch of river herring by the Atlantic herring fleet (defined by permit category). Some bycatch avoidance options are also being considered.

6.2.1 Identification of Monitoring/Avoidance Areas (Alternative 2)

The areas identified in this alternative will be considered River Herring Monitoring/Avoidance Areas. The Avoidance Areas will be identified bimonthly as the quarter degree squares with (Figure 5 – Figure 10):

- At least one tow of river herring catch greater than 40 pounds, using 2005-2009 Northeast Fisheries Observer Program data from trips with greater than 2,000 pounds of kept Atlantic herring.

Figure 5 Alternative 2 – River Herring Monitoring/Avoidance Areas January – February

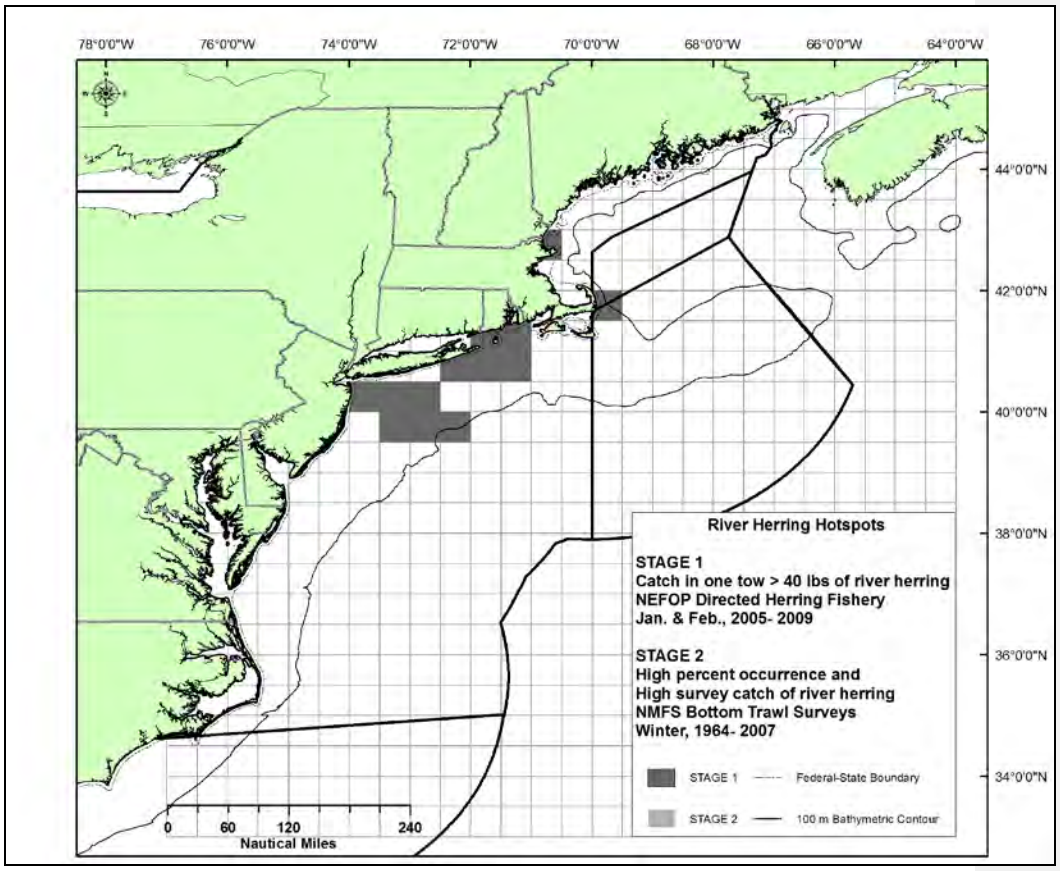


Figure 6 Alternative 2 – River Herring Monitoring/Avoidance Areas March – April

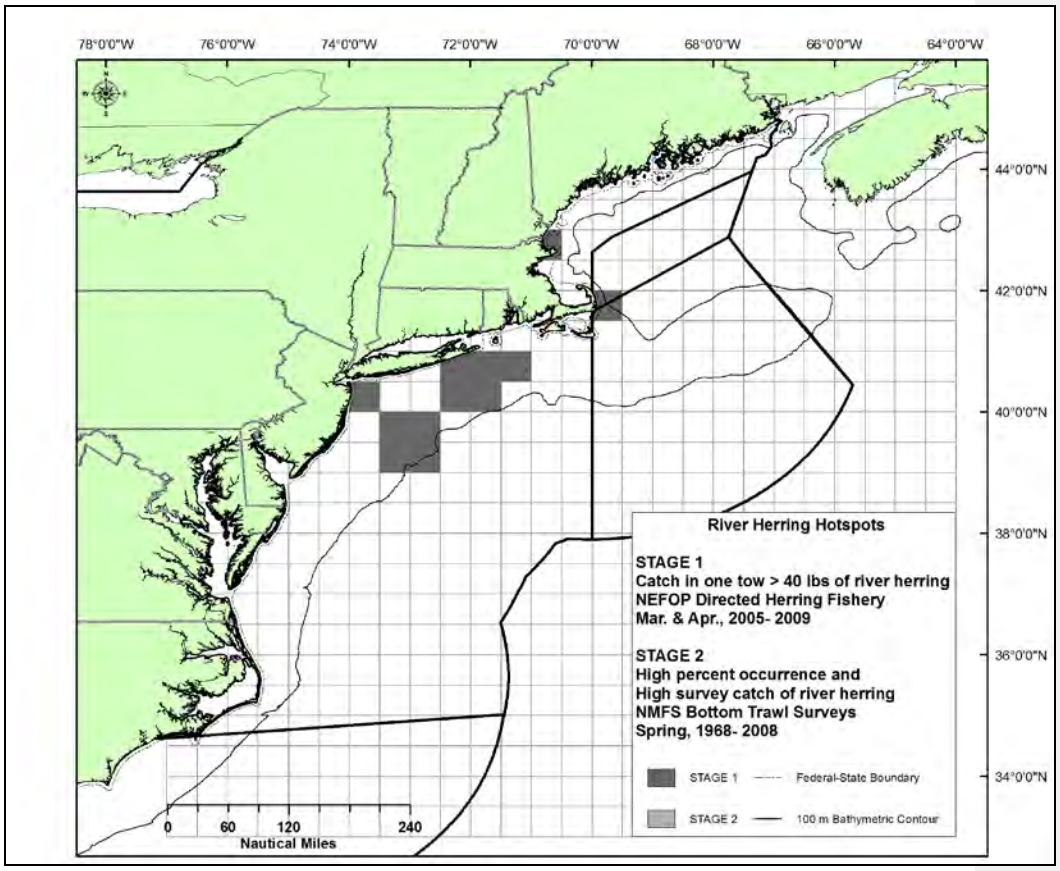


Figure 7 Alternative 2 – River Herring Monitoring/Avoidance Areas May – June

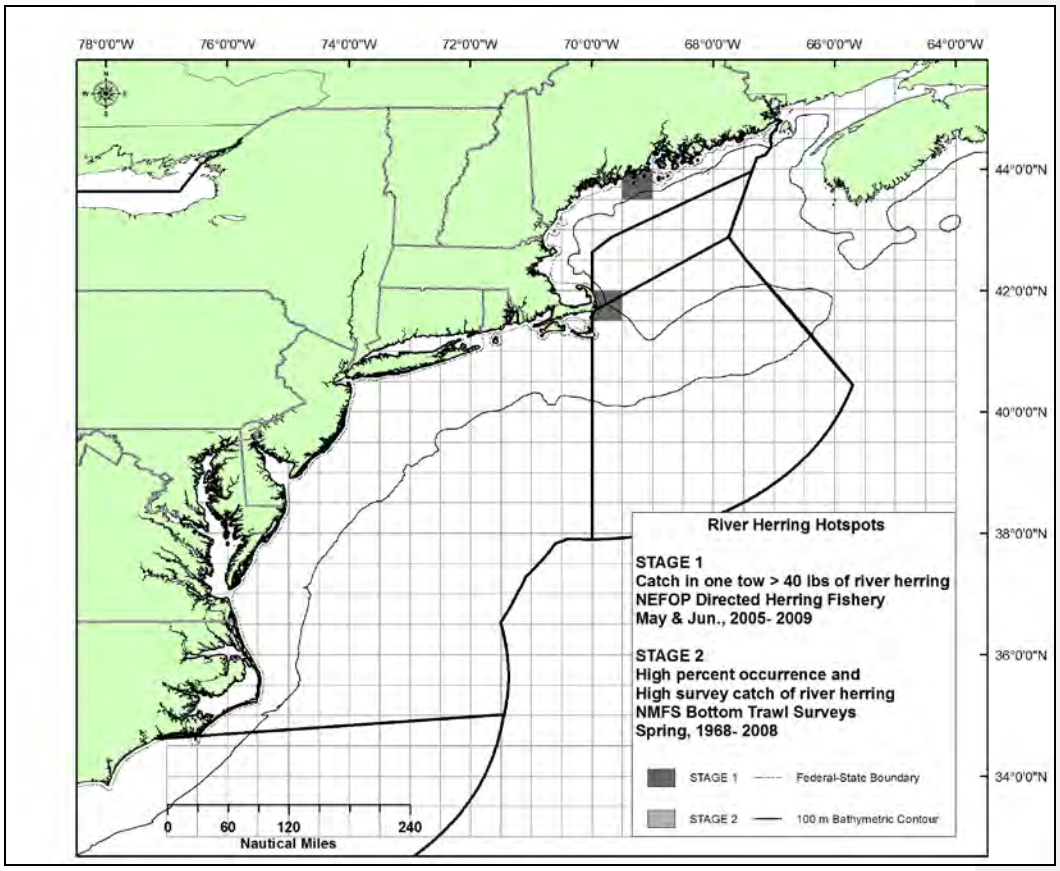


Figure 8 Alternative 2 – River Herring Monitoring/Avoidance Areas July – August

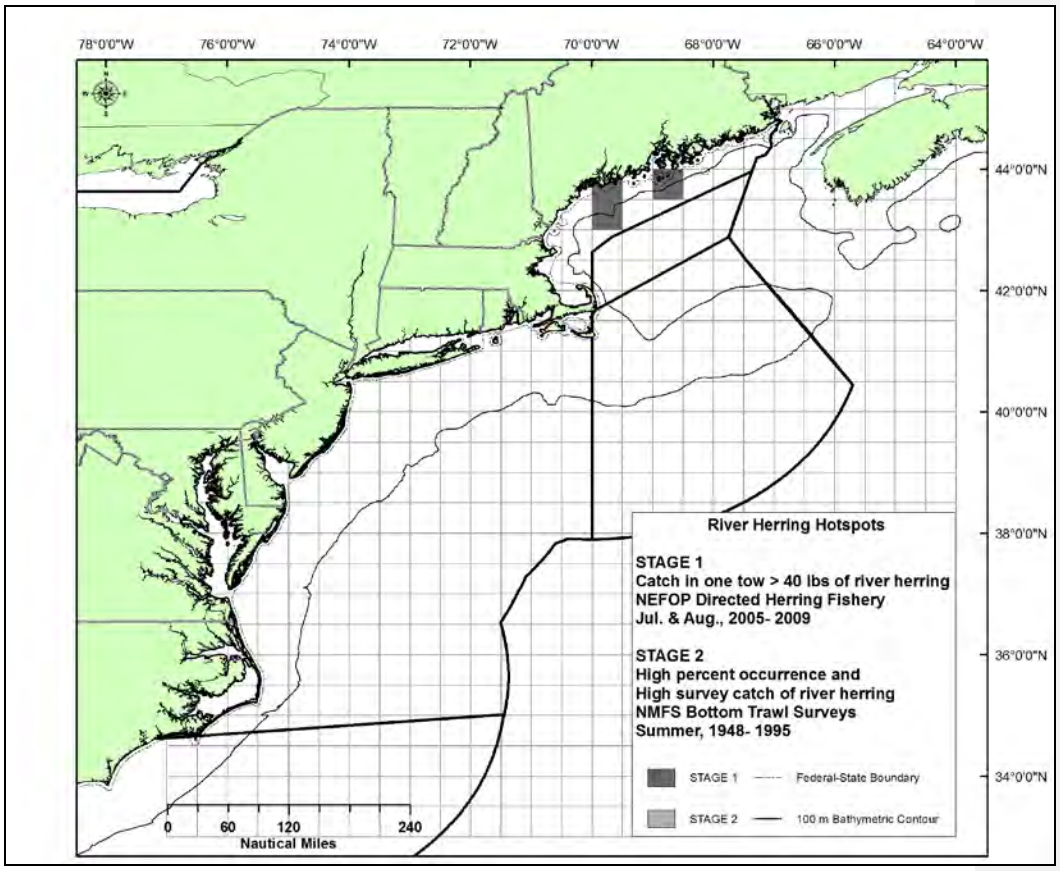


Figure 9 Alternative 2 – River Herring Monitoring/Avoidance Areas September – October

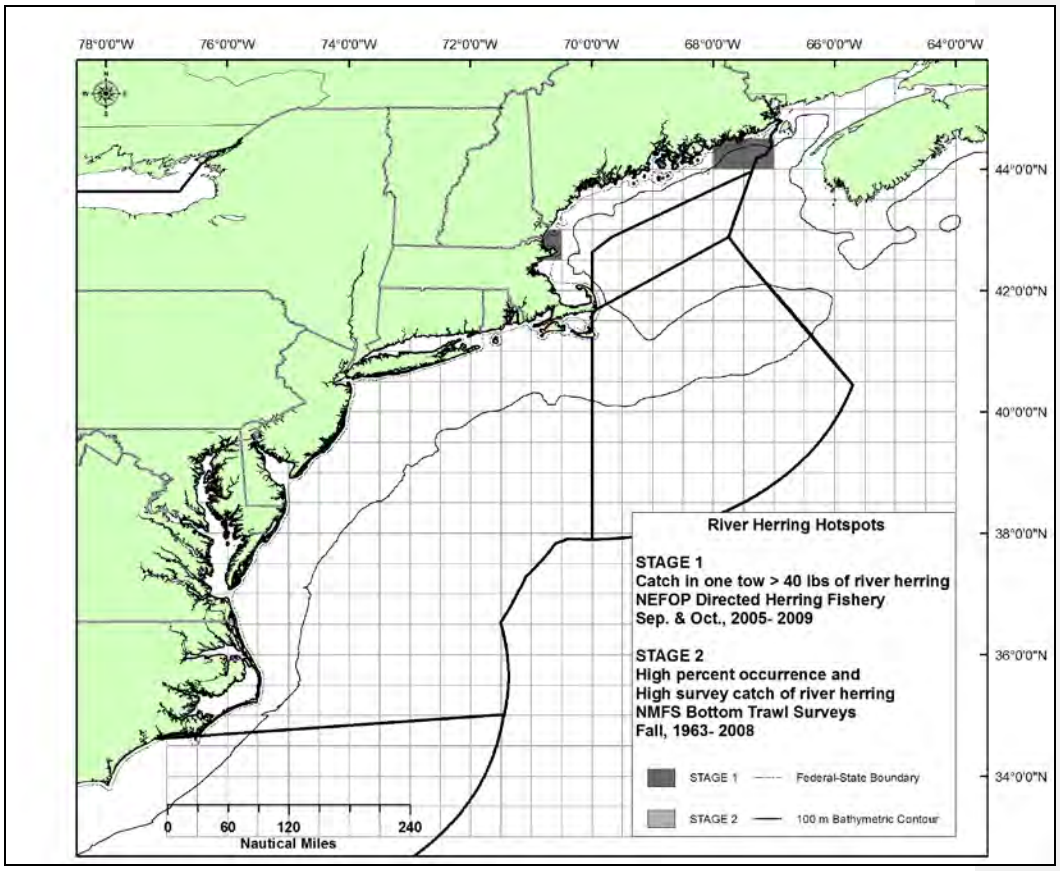
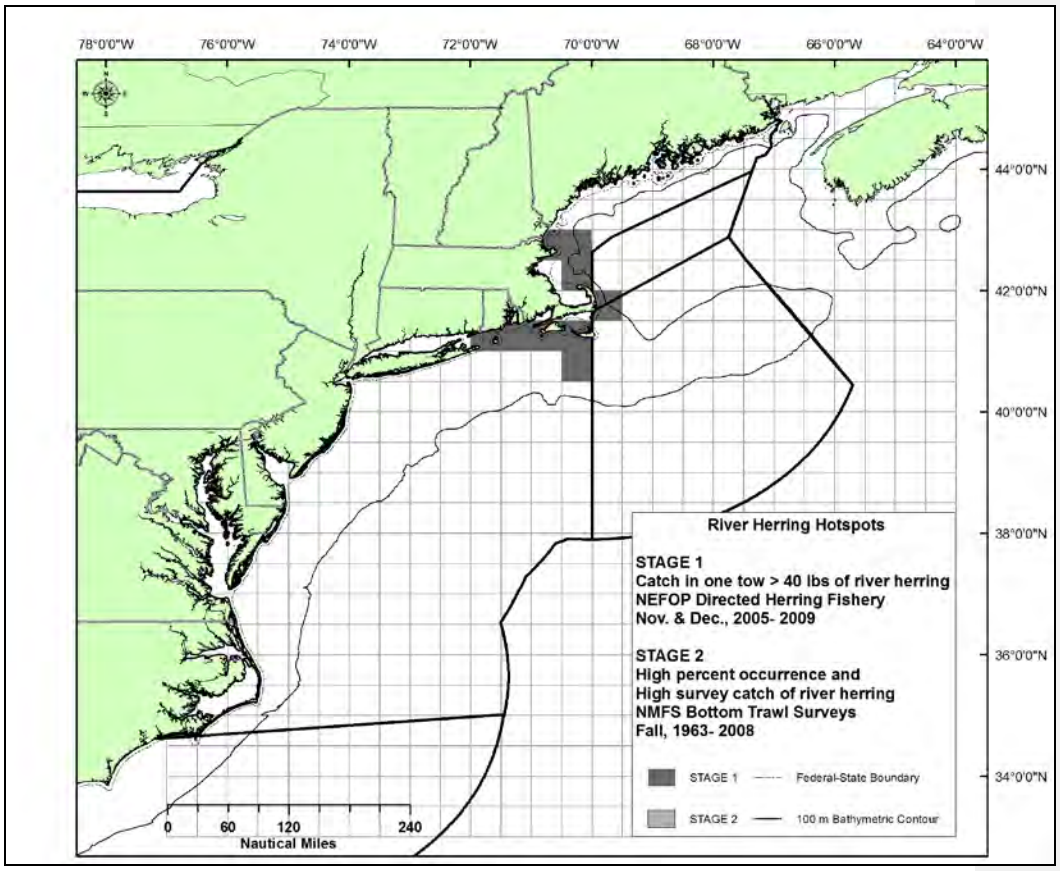


Figure 10 Alternative 2 – River Herring Monitoring/Avoidance Areas November – December



6.2.2 Alternative 2 – Management Options Under Consideration (Monitoring/Avoidance)

Comment [lls21]: Requirements for Category D permit holders need further discussion/clarification in all of the management options.

6.2.2.1 Option 1 – 100% Observer Coverage

This option would require 100% observer coverage on any trips in the River Herring Monitoring/Avoidance Areas identified in this alternative. Category XXX herring vessels would be required to carry a NMFS-approved observer on any trip where fishing may occur in the River Herring Monitoring/Avoidance Areas. Limited access herring vessels would be required to indicate their intention to fish in the River Herring Monitoring/Avoidance Areas when scheduling an observer through the pre-trip notification system (see Section 3.3 of this document for a description of options under consideration to address trip notification requirements). To ensure 100% coverage, vessels would be prohibited from fishing in the River Herring Monitoring/Avoidance Areas without an observer on board.

Sub-Option A: This option applies to limited access herring vessels – Categories A, B, and C when on a declared herring trip.

Sub-Option B: This option applies to all herring vessels – Categories A, B, C, and D.

6.2.2.2 Option 2 – Apply Closed Area I Sampling Provisions

This option would apply management measures in River Herring Monitoring/Avoidance Areas similar to those for herring vessel access to Multispecies Closed Area I based on the Final Rule for the Closed Area I provisions, published on November 2, 2009. Under this option, the following provisions would apply to Category XXX herring vessels fishing in the River Herring Monitoring/Avoidance Areas:

Comment [lls22]: Council – Revise to reflect changes to Closed Area I sampling provisions November 30, 2010? (If yes, this would eliminate the grey shaded bullet below)

- ***Sub-Option A – Require 100% Observer Coverage:*** Category XXX herring vessels would be required to carry a NMFS-approved observer on any trip where fishing may occur in the River Herring Monitoring/Avoidance Areas. Vessels would be required to indicate their intention to fish in the River Herring Monitoring/Avoidance Areas when scheduling an observer through the pre-trip notification system. To ensure 100% coverage, vessels would be prohibited from fishing in the River Herring Monitoring/Avoidance Areas without an observer on board.
- ***Sub-Option B – Less Than 100% Observer Coverage:*** Observer coverage would be distributed throughout the fishery based on the provisions in Amendment 5 (catch monitoring). Category XXX herring vessels would be required to indicate their intention to fish in the River Herring Monitoring/Avoidance Areas when scheduling an observer through the pre-trip notification system but would not be prohibited from fishing in the River Herring Monitoring Areas if an observer is not deployed.

Comment [lls23]: Staff suggestion – consider a requirement for portside sampling on trips with no observer on board.

- When fishing in a River Herring Monitoring/Avoidance Area with an observer on board, vessels would be required to pump aboard all fish from the net for inspection and sampling by the observer. Vessels that do not pump fish would be required to bring all fish aboard the

vessel for inspection and sampling by the observer. Unless specific conditions are met (see below), vessels would be prohibited from releasing fish from the net, transferring fish to another vessel that is not carrying a NMFS-approved observer, or otherwise discarding fish at sea, unless the fish have first been brought aboard the vessel and made available for sampling and inspection by the observer.

- Vessels may make short test tows in the area to check the abundance of target and bycatch species without pumping the fish on board if the net is reset without releasing the contents of the test tow. In this circumstance, catch from the test tow would remain in the net and would be available to the observer to sample when the subsequent tow is pumped out.
- The above prohibition on releasing fish/discarding would not extend to fish that cannot be pumped and that remain in the net at the end of pumping operations. Observer protocols include documenting fish that remain in the net before they are released, and existing regulations require vessel operators to assist the observer in this process. Additional measures are being considered in this amendment to improve this process (see Section 4.3 of this document).
- Fish that have not been pumped aboard may be released if the vessel operator finds that:
  1. pumping the catch could compromise the safety of the vessel;
  2. mechanical failure precludes bringing some or all of the catch aboard the vessel; or
  3. spiny dogfish have clogged the pump and consequently prevent pumping of the rest of the catch.
- If the net is released for any of the reasons stated above, the vessel operator would be required to complete and sign a Released Catch Affidavit providing information about where, when, and why the net was released, as well as a good-faith estimate of the total weight of fish caught on the tow and weight of fish released. The Released Catch Affidavit must be submitted within 48 hours of completion of the fishing trip.
- Following the release of the net for one of the three exemptions specified above, the vessel would be required to exit the River Herring Monitoring/Avoidance Area. The vessel may continue to fish but may not fish in the River Herring Monitoring/Avoidance Areas for the remainder of the trip.

Sub-Option C: This option applies to limited access herring vessels – Categories A, B, and C when on a declared herring trip.

Sub-Option D: This option applies to all herring vessels – Categories A, B, C, and D.

6.2.2.3 Option 3: Two-Phase Bycatch Avoidance Approach Based on SFC/SMAST/DMF Project

Comment [lls24]: Work in progress; needs more discussion

This option would implement a two-phase river herring bycatch avoidance program developed in cooperation with the fishing industry, represented by the Sustainable Fisheries Coalition (SFC) working in partnership with Massachusetts Division of Marine Fisheries (MA DMF) and UMASS Dartmouth School of Marine Science and Technology (SMAST). The current (ongoing) SFC river herring bycatch avoidance project has been funded by the National Fish and Wildlife Foundation (NFWF, see additional information below).

Under this option, a long-term river herring bycatch avoidance strategy would be implemented in the Atlantic herring fishery through a two-phase approach:

1. **Phase I (Amendment 5) –**

   A. Identify Preliminary Bycatch Avoidance Areas (Section 6.2.1);

   B. Focus/increase monitoring/sampling in the Monitoring/Avoidance Areas (through Amendment 5 catch monitoring program and/or the additional management options proposed in Section 6.2.2);

   C. Establish mechanism for adjusting Monitoring/Avoidance Areas and implementing long-term river herring bycatch avoidance strategies in the future through a framework adjustment to the Herring FMP;

   D. Work with SFC, SMAST, and MA DMF to support the current project, encourage the collection of additional information, and promote the development of long-term bycatch avoidance strategies

   During the continued development, and upon the implementation of Amendment 5, the Council, through its staff and the Herring PDT, will continue to work with the SFC, SMAST, and MA DMF to evaluate progress related to the SFC river herring bycatch avoidance program. As details emerge and additional information becomes available, the PDT will update the Herring Committee/Council and assess various elements of the project, including data (nature, quality, and timeliness), and fleet compliance and communication. The herring PDT will work with the SFC/SMAST/DMF during this time to evaluate the appropriateness of the River Herring Monitoring/Avoidance Areas and will develop recommendations for any adjustments to those areas, which would occur during Phase II (see following).

2. Phase II (2013 Framework Adjustment) –

Upon completion of the SFC bycatch avoidance project (late 2012), the Council will review the results and develop a framework adjustment to implement any additional bycatch avoidance strategies that it deems to be appropriate. If the SFC/SMAST/DMF project is successful, the Council may develop a framework adjustment during Phase II to implement some or all elements of the project as part of a long-term bycatch reduction strategy in the Atlantic herring fishery. During Phase II, the Council would:

A. Formally evaluate the SFC/SMAST/DMF project and its results (through the Herring PDT, Herring Committee, and Council, with input from project participants and the Herring Advisory Panel) upon the project completion (late 2012/early 2013);

B. Receive recommendations from the Herring PDT and Herring Committee (with input from the AP) regarding the need for/appropriateness of follow-up action to implement a long-term strategy for river herring bycatch reduction through a framework adjustment (early 2013);

C. Conduct an initial Framework Adjustment meeting during 2013 – An initial framework meeting would be required by this amendment during 2013 in order to formally evaluate the results of the SFC/SMAST/DMF project and develop follow-up management action as necessary. During this process, and depending on the results of the SFC/SMAST/DMF project, the Council may determine that follow-up action is not necessary or appropriate. To emphasize the importance of this issue and express the Council's intent to follow-through with further consideration of management action, however, the initial framework meeting would be **required** in 2013 regardless of whether additional action is deemed necessary/appropriate.

D. Conduct a final Framework Adjustment meeting during 2013 (optional, if the Council determines that a follow-up framework action is necessary/appropriate, based on the outcome of the SFC/SMAST project and the Herring PDT/Committee recommendations)

While it is unclear exactly what will result from the SFC/SMAST/DMF project, it is expected that some strategies for reducing bycatch in the fishery will emerge, possibly through a flexible system of communications to enact real-time "move-along rules." Consequently, elements to be specified in the Phase II framework adjustment (if the Council determines that a framework adjustment is appropriate) could include (but are not limited to):

- Adjustments to the River Herring Monitoring/Avoidance Areas;
- The mechanism and process for tracking fleet activity, reporting bycatch events, compiling data, and notifying the fleet of changes to the area(s);
- The definition/duration of "test tows," if test tows would be utilized to determine the extent of river herring bycatch in a particular area(s);
- The threshold for river herring bycatch that would trigger the need for vessels to be alerted and move out of the area(s);
- The distance that vessels would be required to move from the area(s); and
- The time that vessels would be required to remain out of the area(s).

The Draft EIS for this amendment will evaluate the potential impacts of implementing this type of program through a framework adjustment, as well as the factors to be considered during the development of the framework. The groundwork will be laid in the Draft EIS for this approach to be utilized as a bycatch management/avoidance measure in the future. Management measures to address bycatch and bycatch monitoring are already included in the list of measures that can be implemented through a framework adjustment to the Herring FMP (CFR Section 648.206).

Background – SFC/SMAST/DMF River Herring Bycatch Avoidance Project

The SFC project proposes to develop a bycatch avoidance incentive system based on finer scale details of bycatch encounters. Products will be: (1) a predictive model of where river herring are likely to occur in space and time; (2) a real-time bycatch avoidance intra-fleet communication system; (3) a complimentary bycatch avoidance incentive system; and (4) additional support for port sampling to continue informing the initiative.

To develop a model to identify, refine, and predict river herring hotspots, the project will compile observer data, examine tagging data and independent fisheries information, and plot the data using FVCOM, which is an ocean circulation model that will help identify the specific water masses associated with herring, mackerel, and river herring. The intent is ultimately to predict river herring hotspots amidst the distribution of Atlantic herring and mackerel, which could be avoided by vessels to reduce bycatch incidents.

The project will rely on real-time communication between fishing vessels and SMAST to circulate information regarding river herring hotspots and to relay this information to fishing captains before and during their trips. Captains and selected crew will be trained using the NEFOP observer protocols so that each tow can be sampled and river herring bycatch can be reported on a tow-by-tow basis. Communication will occur through BOATRACS (VMS), and the information will be correlated with port sampling at the end of the trip to check for consistency between the reported information and the portside observations from the same trip. SMAST will distribute maps of hotspots to captains when they are planning their fishing trips before they leave the dock. At sea, SMAST will send daily notices of hotspots compiled from the FVCOM model using the latest data reported by the fishing vessels. SMAST will work with the industry to establish a threshold for river herring bycatch, after which point vessels will be asked to move to areas of less bycatch.

According to the proposal, twelve vessels account for the majority of midwater trawl herring and mackerel landings, all of which belong to the Sustainable Fisheries Coalition and all of which have agreed to participate in the voluntary bycatch avoidance program. Because the project has not yet been funded, though, many of the details of the communication system and a fleet-adopted "move along" rule have not yet been developed. The SFC has developed an Industry Code of Conduct for its members, to ensure the sustainability of the Atlantic herring fishery and Atlantic herring resource. Each participating captain and crew member operating in the Atlantic herring fishery who signs the Code of Conduct agrees, as part of the Code, that:

When operating in areas and at times when significant levels of non-target fish or non-fish species may occur, a test tow or test set will be employed. If significant levels of non-target species are in the area, the vessel will move a minimum distance from the fishing area for a minimum period of time. With midwater trawling, if the captain determines that bycatch levels are within acceptable limits to remain to fish, the time of the first tow in the area would also be limited to ensure that reasonable bycatch rates can be sustained in the fishing area of concern.

The SFC Code of Conduct acknowledges that areas of concern, test tow times and set limits, area-avoidance times and distances, and initial area-of-concern tow times, still remain to be determined by the industry. A Captain's meeting is anticipated during late 2010 to discuss these details.

The SFC proposal has received funding, and the project is scheduled to begin as soon as possible, with the interactive communication program with the fishery working through the fall/winter 2010 and into spring 2011. A second round of work is anticipated during the fall/winter 2011, with a final report and program summary scheduled to be completed in April 2012. Individuals involved in the development of the project anticipate that members of the herring industry will meet during the fall of 2010 to agree on elements of the bycatch avoidance program. It is also acknowledged that the elements of the program are likely to change throughout the course of the project, as more information becomes available and the fleet adapts their fishing practices to the new program.

6.2.2.4 Options for Move-Along Rules

This option would implement a "move-along rule" in the quarter degree squares contained in the River Herring Monitoring/Avoidance Areas, with a requirement for observer coverage (NEFOP or other NMFS-approved observers) to monitor river herring catch.

Move-along rules are specific bycatch avoidance strategies. A trip-level threshold for river herring catch (kept and discarded) would be established (see options below). Following each fishing trip that occurs in a River Herring Monitoring/Avoidance Area, the observer would calculate river herring catch and would communicate that information to NMFS (quarter degree squares where the trip occurred and estimate of river herring catch on the trip). If NMFS determines that the trip-level threshold has been exceeded, NMFS would notify the herring vessels that the move-along rule has been triggered, and the quarter degree squares where the trip occurred would be closed for a period of time (see options below).

1. ***Sub-Option A – Require 100% Observer Coverage:*** Category XXX herring vessels would be required to carry a NMFS-approved observer on any trip where fishing may occur in the River Herring Monitoring/Avoidance Areas. Vessels would be required to indicate their intention to fish in the River Herring Monitoring/Avoidance Areas when scheduling an observer through the pre-trip notification system. To ensure 100% coverage, vessels would be prohibited from fishing in the River Herring Monitoring/Avoidance Areas without an observer on board.

Comment [lls25]: As currently structured, this approach does not appear to be feasible from an administrative, enforcement, and compliance perspective.

See additional discussion below.

Council staff recommendation: eliminate these options from further consideration at this time.

2. ***Sub-Option B – Less Than 100% Observer Coverage:*** Observer coverage would be distributed throughout the fishery based on the provisions in Amendment 5 (catch monitoring). Category XXX herring vessels would be required to indicate their intention to fish in the River Herring Monitoring/Avoidance Areas when scheduling an observer through the pre-trip notification system but would not be prohibited from fishing in the River Herring Monitoring/Avoidance Areas if an observer is not deployed.
3. If, on any observed trip in the River Herring Monitoring/Avoidance Areas, the bycatch of *river herring (blueback herring and alewife)* is equal to, or greater than XXX pounds (see options in Table 10), then all herring permit holders subject to this rule shall not fish in the "move-along area" for a period of at least XXX days (see options in Table 10). The "move-along area" to be closed will be defined by the quarter degree squares where the trigger was reached. All herring fishing operations must cease in the closed "move-along area" on the date/time established by NMFS.
4. Notification of a closure of a "move-along area" will be provided by NMFS through VMS and other mechanisms to all herring vessels subject to this rule. Enforcement will utilize VMS data to track herring vessel activity.

Table 10 Move-Along Options Under Consideration

Options for River Herring Trip-Level Thresholds	Options for Move-Along (Closure) Time Periods
50 pounds/trip	Seven days (one week)
500 pounds/trip	Fourteen days (two weeks)
2,000 pounds/trip	

Sub-Option C: This option applies to limited access herring vessels – Categories A, B, and C when on a declared herring trip.

Sub-Option D: This option applies to all herring vessels – Categories A, B, C, and D.

Move-Along Rules – Additional Discussion

Council and NMFS staff have discussed the options under consideration in Amendment 5 for move-along rules and have identified several major challenges/issues that the Committee/Council should consider. The primary challenges relate to timing and the ability for information to be transmitted and rulemaking to occur in a manner that can support a real-time move-along management approach.

NMFS NERO Comments:

Closure of a "move-along area" for a period of at least 7 or 14 days (the times proposed in the current options for move-along rules) must be implemented by publication of a notification in the *Federal Register*. There will likely be a significant delay (1-3 weeks) between when the vessel catches the river herring trigger amount and when NMFS can close the area where the trigger was located. Sources of delay may include:

- NMFS receiving preliminary report of observed river herring catch (7-14 days, based on the recent discussions related to implementing and monitoring the butterfish mortality cap);
- NMFS must determine whether the river herring catch for that trip exceed the move-along threshold (1 day);
- NMFS must publish a notification of the river herring "move-along area" closure in the *Federal Register* (~ 1 week);
- NMFS must give adequate notification to the fleet (~3 days). Notification of the Category A, B, and C vessels can occur via VMS, but as Category D vessels are not required to have VMS, NMFS must also notify the fleet by sending out a permit holder letter and via radio announcements.

Council Staff Additional Comments:

- The time-lag that is likely to be experienced from when river herring may be encountered on a trip in a River Herring Monitoring/Avoidance Area to when a rule may be implemented to close a "move-along area" could reduce the effectiveness of the move-along rule and create a significant administrative/regulatory burden.
- Based on NMFS NERO feedback, applying the proposed move-along strategy in seasonal River Herring Monitoring/Avoidance Areas (two months) would essentially require closing the quarter degree squares where the trigger was reached for the remainder of the two-month period; this can only be effective if the trigger is reached during the first month. If the trigger is reached during the second month, the time lag associated with implementing the closure would render the measure meaningless.
- Implementing multiple move-along rules within the same cluster of River Herring Monitoring/Avoidance Areas and the same two-month period will likely not be feasible. For example, the current measures require that a move-along area will be closed for 7 or 14 days when a trip-level trigger is reached (river herring catch) in the River Herring Monitoring/Avoidance Areas. The "move-along area" to be closed will be defined by the quarter degree squares where the trigger was reached, so the additional squares within the hotspot would remain open to fishing until the trigger is reached in one or more of these

areas. Given the administrative complexity and time lag associated with rulemaking, this does not appear to be a feasible approach.

- Council staff has some general concerns about implementing specific move-along strategies through regulatory action. Hard-wiring a move-along rule in the amendment and through regulatory action/rulemaking will be very challenging and may reduce any flexibility intended by the measure. In general, move-along rules should be based on a "bottom-up" approach, developed and supported by the fishing industry, with as few specific regulations as possible, to allow the fleet some flexibility to respond to real-time fishery conditions. Once specific regulations are established, it will likely take an additional regulatory action to modify them. Generally, regulations that relate to move-along rules should be focused more on providing incentives for the fishing fleet to organize, communicate, and manage its bycatch interactions in the most effective manner possible.
- The Committee/Council may want to streamline the current move-along options, consider alternative approaches to bycatch avoidance, and/or discuss ways to collaborate with the industry and work towards industry-based bycatch avoidance strategies that build on the measures established in Amendment 5.

6.3 ALTERNATIVE 3 – RIVER HERRING PROTECTION

The management goal associated with this alternative is to protect river herring. This alternative includes seasonal closures that are intended to minimize river herring encounters in the herring fishery based on times/areas where the largest encounters with the fishery were observed between 2005 and 2009.

6.3.1 Identification of Protection Areas (Alternative 3)

The areas identified in this alternative will be considered River Herring Protection Areas. The Protection Areas will be identified bimonthly as the quarter degree squares with (Figure 11 – Figure 14):

- At least one tow of river herring catch greater than 1,233 pounds, using 2005-2009 Northeast Fisheries Observer Program data from trips with greater than 2,000 pounds of kept Atlantic herring.

Under this alternative, no River Herring Protection Areas would be established during May – August.

Figure 11 Alternative 3 – River Herring Protection Areas January – February

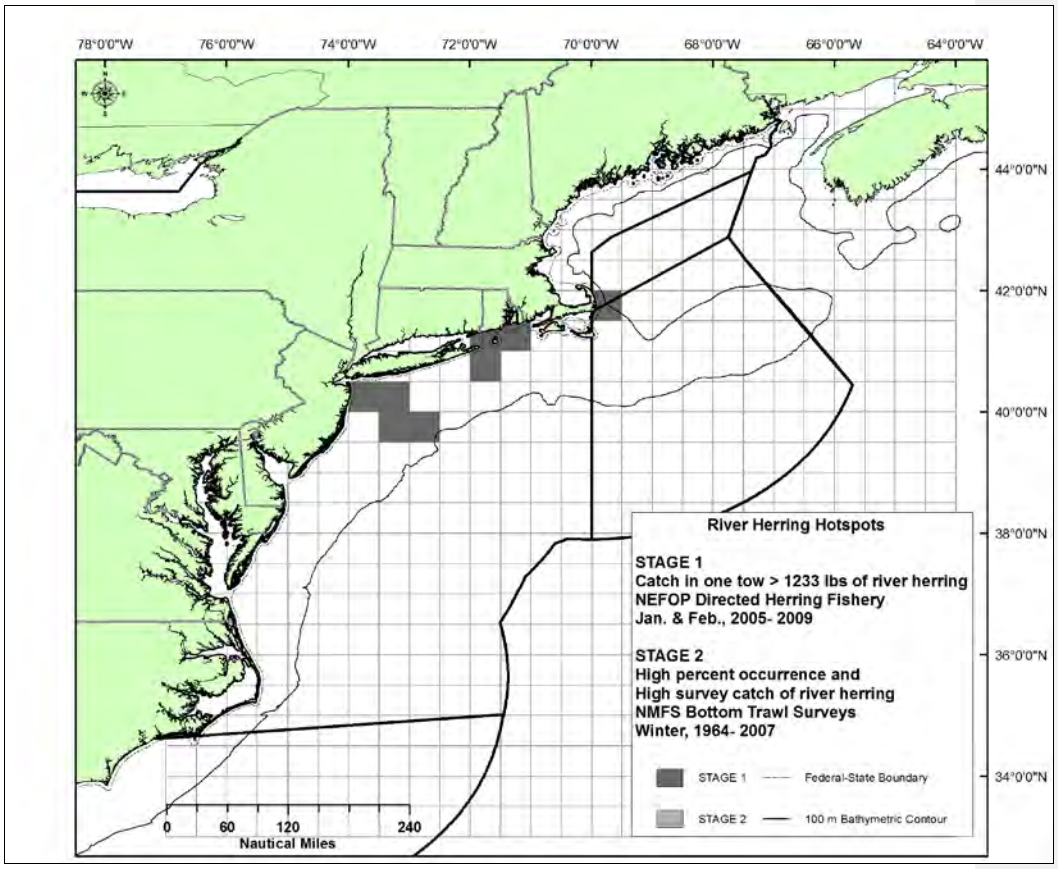


Figure 12 Alternative 3 – River Herring Protection Areas March – April

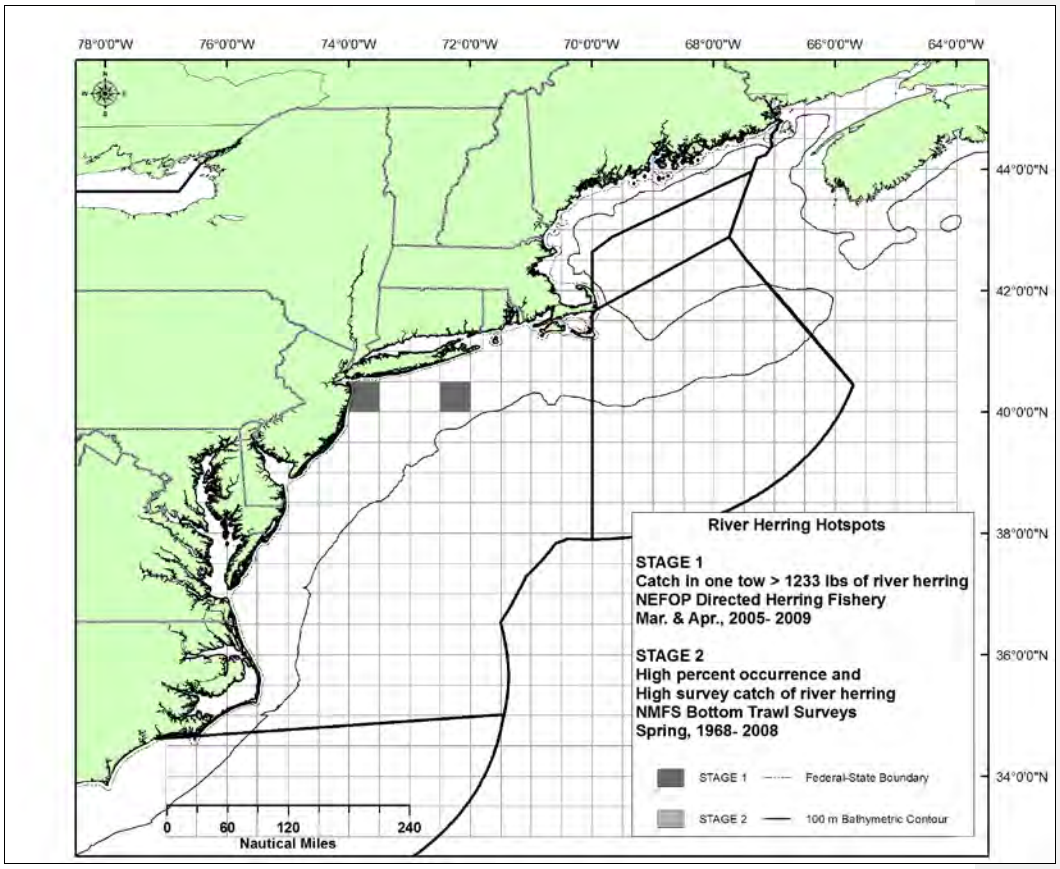


Figure 13 Alternative 3 – River Herring Protection Areas September – October

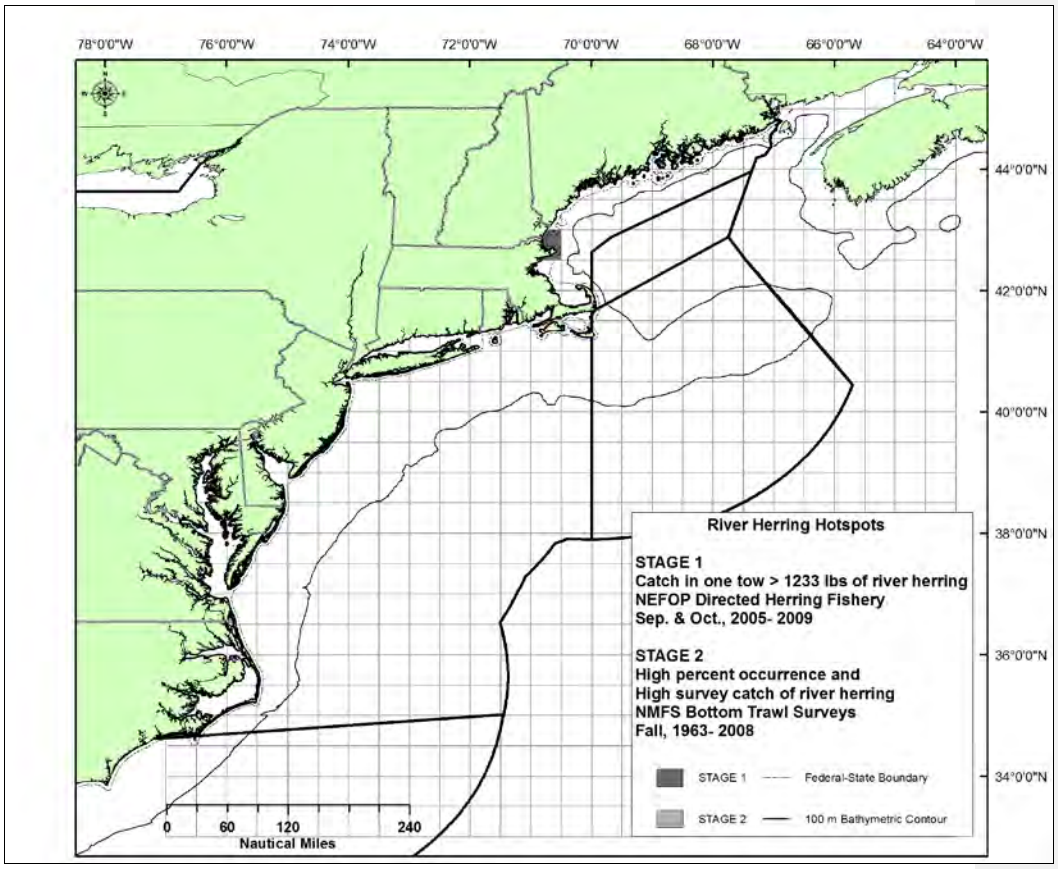
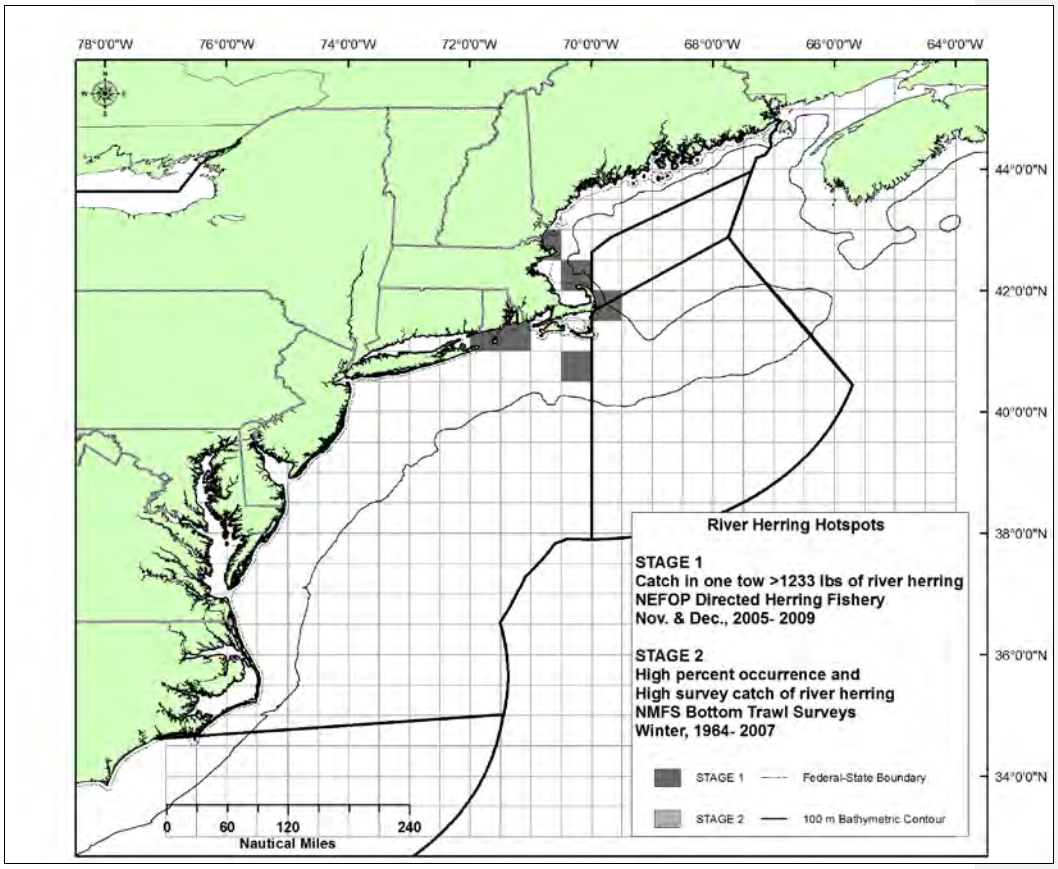


Figure 14 Alternative 3 – River Herring Protection Areas November – December



6.3.2 Alternative 3 Management Option – Closed Areas

This option would prohibit directed fishing for herring in the areas/times that are identified as River Herring Protection Areas. Under this option, all herring permit holders (Category A, B, C, and D) would be prohibited from fishing for, possessing, catching, transferring, or landing herring from the River Herring Protection Areas on all fishing trips. Vessels that possess A, B, C, or D herring permits and are fishing with mesh greater than 5.5 inches (and with no small mesh on board) would be exempt from the closed area provisions.

6.4 MECHANISM FOR ADJUSTING/UPDATING RIVER HERRING AREAS

River herring management areas (for monitoring, avoidance, and/or protection) can be modified/updated through an amendment or framework adjustment to the Herring FMP. The areas should be reviewed by the Plan Development Team every three years as part of the Atlantic herring fishery specifications process. Any modifications/adjustments, as deemed necessary by the Council, should accompany the specifications package (i.e., joint specifications/framework adjustment package). The MAFMC and ASMFC would be consulted during the adjustment process.

Comment [lls26]: Needs further discussion/development, consideration of how to incorporate new data

6.5 RIVER HERRING CATCH CAPS

TBD

Comment [lls27]: See December 2, 2010 Herring PDT Report and XXX

7.0 MEASURES TO ADDRESS ACCESS TO GROUNDFISH CLOSED AREAS

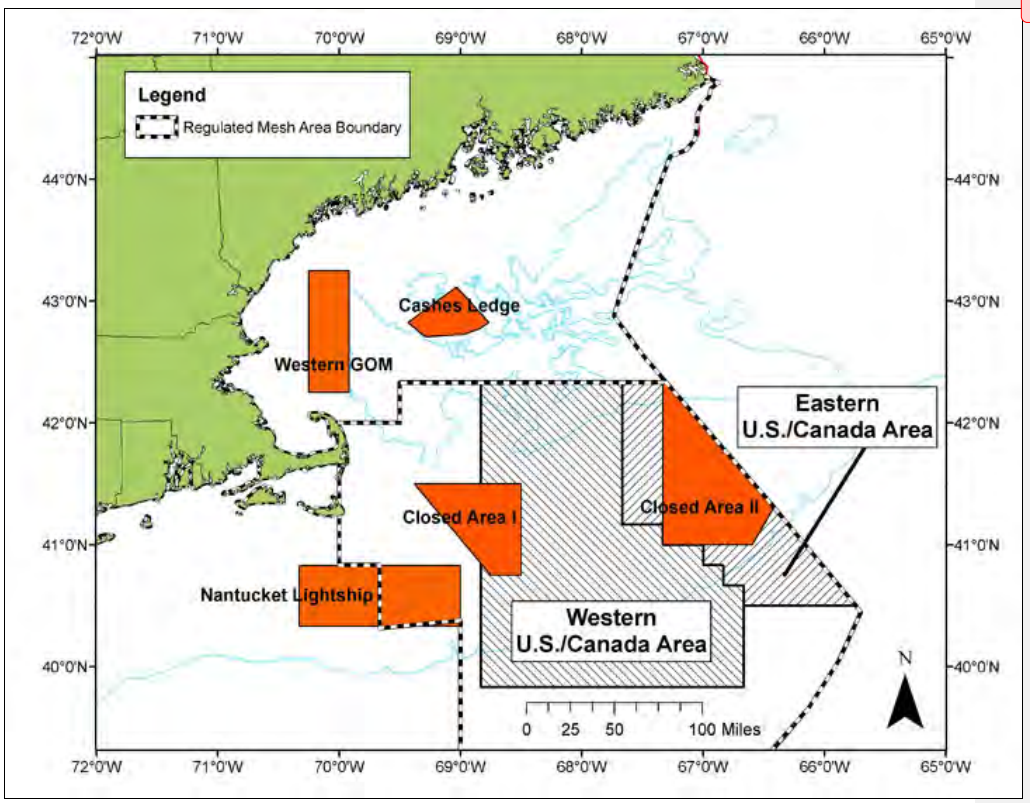
At the November 18-20, 2008 New England Fishery Management Council meeting, the Council approved the following motion:

> **"To include criteria for midwater trawler access to groundfish closed areas in the list of 2009 herring management actions."**

The Herring Committee and Council have developed some criteria to consider in this amendment for herring vessels to access the year-round groundfish closed areas. The alternatives under consideration are described in the following subsections.

Comment [lls28]:
--Need to clarify intent with respect to vessels – just vessels using midwater trawl gear?; midwater trawl and purse seine gear?; permit categories A/B? and C?
What is the objective of the measure?

Figure 15 Year-Round Multispecies Closed Areas (Solid Shading)



7.1 STATUS QUO ALTERNATIVES 1 AND 2

Groundfish Alternative 1 – No Action

Under the no action alternative, current criteria for midwater trawl vessel access to the groundfish closed areas would be maintained. This includes access to the groundfish closed areas, with additional provisions for observer coverage and increased sampling in Closed Area I (based on the Final Rule for the Closed Area I provisions, published on November 2, 2009).

Groundfish Alternative 2 – Pre-Closed Area I Provisions

Under this alternative, criteria for midwater trawl vessel access to the groundfish closed areas would be based on provisions prior to the implementation of the Closed Area I rule. Herring vessels would be allowed to access all of the year-round groundfish closed areas without further limitations (the haddock catch cap and 100-pound multispecies possession limit would still apply).

7.2 GROUNDFISH ALTERNATIVE 3 – 100% OBSERVER COVERAGE

This option would require herring vessels to carry an observer on board on any trip in the groundfish year-round closed areas.

Herring vessels subject to this measure would be required to carry a NMFS-approved observer on any trip where fishing may occur in the year-round multispecies closed areas. Vessels would be required to indicate their intention to fish in the multispecies closed areas when scheduling an observer through the pre-trip notification system. To ensure 100% coverage, vessels would be prohibited from fishing in the closed areas without an observer on board.

7.3 GROUNDFISH ALTERNATIVE 4 – APPLY CLOSED AREA I PROVISIONS

This alternative would apply the current provisions for herring vessels in Closed Area I to all of the groundfish year-round closed areas, based on the Final Rule for the Closed Area I provisions, published on November 2, 2009. Under this alternative, the following provisions would apply to XXX herring vessels fishing in the groundfish year-round closed areas:

Comment [lls29]: Council – Revise to reflect changes to Closed Area I sampling provisions November 30, 2010? (If yes, this would eliminate the grey shaded bullet below)

- ***Option A – Require 100% Observer Coverage:*** XXX herring vessels would be required to carry a NMFS-approved observer on any trip where fishing may occur in the groundfish year-round closed areas. Vessels would be required to indicate their intention to fish in the groundfish year-round closed areas when scheduling an observer through the pre-trip notification system. To ensure 100% coverage, vessels would be prohibited from fishing in the groundfish year-round closed areas without an observer on board.
- ***Option B – Less Than 100% Observer Coverage:*** Observer coverage would be distributed throughout the fishery based on the provisions in Amendment 5 (catch monitoring). XXX herring vessels would be required to indicate their intention to fish in the groundfish year-

round closed areas when scheduling an observer through the pre-trip notification system but would not be prohibited from fishing in the groundfish year-round closed areas if an observer is not deployed (with the exception of Closed Area I).

- When fishing in a groundfish year-round closed areas with an observer on board, vessels would be required to pump aboard all fish from the net for inspection and sampling by the observer. Vessels that do not pump fish would be required to bring all fish aboard the vessel for inspection and sampling by the observer. Unless specific conditions are met (see below), vessels would be prohibited from releasing fish from the net, transferring fish to another vessel that is not carrying a NMFS-approved observer, or otherwise discarding fish at sea, unless the fish have first been brought aboard the vessel and made available for sampling and inspection by the observer.

Comment [lls30]: This provision is only necessary if this rule may apply to vessels that do not pump fish.

- Vessels may make short test tows in the area to check the abundance of target and bycatch species without pumping the fish on board if the net is reset without releasing the contents of the test tow. In this circumstance, catch from the test tow would remain in the net and would be available to the observer to sample when the subsequent tow is pumped out.
- The above prohibition on releasing fish/discarding would not extend to fish that cannot be pumped and that remain in the net at the end of pumping operations. Observer protocols include documenting fish that remain in the net before they are released, and existing regulations require vessel operators to assist the observer in this process. Additional measures are being considered in this amendment to improve this process (see Section 4.3 of this document).
- Fish that have not been pumped aboard may be released if the vessel operator finds that:
  1. pumping the catch could compromise the safety of the vessel;
  2. mechanical failure precludes bringing some or all of the catch aboard the vessel; or
  3. spiny dogfish have clogged the pump and consequently prevent pumping of the rest of the catch.
- If the net is released for any of the reasons stated above, the vessel operator would be required to complete and sign a Released Catch Affidavit providing information about where, when, and why the net was released, as well as a good-faith estimate of the total weight of fish caught on the tow and weight of fish released. The Released Catch Affidavit must be submitted within 48 hours of completion of the fishing trip.
- Following the release of the net for one of the three exemptions specified above, the vessel would be required to exit the groundfish year-round closed area. The vessel may continue to fish but may not fish in the groundfish year-round closed area for the remainder of the trip.

7.4 GROUNDFISH ALTERNATIVE 5 – CLOSED AREAS

Under this alternative, access to groundfish closed areas by midwater trawl vessels (single or paired) would be prohibited except with an experimental fishing permit (EFP).

The Council would strongly endorse experimental fisheries in the groundfish closed areas that include the following provisions:

- Full observer coverage (one or more observers per vessel, as necessary to ensure that every haul is observed)
- Electronic monitoring systems to augment observer data
  - Tow characteristics (i.e., total catch, GPS, height of foot-rope)
  - Video record of catch pre-sorted on deck for observer analysis
- Additional requirements and criteria for access to groundfish closed areas
  - Pair trawling in closed areas prohibited
  - No more than 20 midwater trawl trips per closed area per fishing year
  - Fishing with net foot-rope less than 20 feet off the bottom prohibited
  - Monitoring protocols including mandatory reporting of vessel electronics information and shoreside gear inspections to determine the depth fished by midwater trawl gear and whether contact with the bottom has occurred
  - Groundfish bycatch triggers exclude vessels from access to the closed areas
    - Groundfish bycatch is detected in an amount greater than 100 pounds for any vessel trip – all midwater trawling in such closed area suspended for a minimum of 48 hours
    - Overfished stock – Regional Administrator determines bycatch to be 0.1% of TAC for stock – one year exclusion
    - Other groundfish – Regional Administrator determines bycatch to be 0.5% of TAC for stock – one year exclusion

8.0 MEASURES TO PROTECT SPAWNING FISH

TBD

Comment [lls31]: See Draft Herring PDT Discussion Paper: *Summary of Available Information and Management Approaches to Address Spawning Atlantic Herring* (January 2011)

9.0 RESEARCH AND OUTREACH

9.1 DATA AND RESEARCH NEEDS

ADD

9.2 OUTREACH PROGRAM TO ENSURE CONSISTENCY IN REPORTING AND IMPROVE COMPLIANCE

The Council will work with NMFS to structure an outreach program for improving reporting compliance by vessels and dealers once Amendment 5 is implemented. The Atlantic herring fishery is discrete enough that NMFS could work with the majority of participants in the fishery to standardize and clarify reporting requirements and better ensure that landings/catch data are provided to NMFS in a consistent and complete format.

9.3 OUTREACH PROGRAM TO FOSTER COOPERATION WITH CATCH MONITORING PROGRAM

The Council will work with NMFS to structure an outreach program for enhancing communication and fostering cooperation between vessel operators, dealers, processors, and managers upon the implementation of the catch monitoring program proposed in this amendment.

9.4 RESEARCH OPTION 1: EXPLORE (AND POSSIBLY IMPLEMENT) NET SENSOR TECHNOLOGY THROUGH "STUDY FLEET"

Comment [lls32]: August 2010 – Herring AP recommends eliminating this section from further consideration in Amendment 5

This option would establish a top priority for cooperative research (including use of future RSA funds) – to investigate the feasibility of using the study fleet technology in the Atlantic herring fishery and test applications of passive monitoring systems for midwater, bottom trawl, and purse seine vessels. Requirements for using such systems would be added to the list of items that can be implemented through a framework adjustment to the Herring FMP so that new technologies can be incorporated into the fishery management program as quickly as possible once their applicability and usefulness is tested.

The technology developed by Northeast Fisheries Science Center for the study fleet has significant potential for providing greatly improved monitoring of the herring fishery, including the goal of near real-time TAC-monitoring. As the Council is likely aware from prior briefings by the Science Center, the Study Fleet technology includes a computer, sensors, and software that can be integrated into a ship's systems and VMS, creating a combination of computerized reporting and passive collection of a wide variety of data. This technology can help identify conditions leading to higher rates of bycatch, improve the quality and timeliness of reporting, and, potentially even help measure the extent of slippage.

The industry has suggested that through testing, the technology may be developed to measure incidences of slipped hauls on unobserved trips and provide fine-scale effort data. It may be feasible to tie the computer system (which currently is designed and tested to collect, among other variables, GPS data, vessel speed, and depth/temperature data) into the winch and pump systems. If feasible, this could provide a means by which incidents of slippage – i.e., hauls that are not pumped. This could also help detect whether there is an "observer effect" – i.e., a difference in the incidence of slippage between observed and unobserved trips. The industry has encouraged the Council to identify the testing of this technology as a research priority for funding under the research set-aside program. If it can be successfully adapted to the herring fishery, this monitoring system can provide high quality information in a very cost effective manner. Following research and development, the requirements for using the technology can be applied to the entire fishery through a framework action.

ADD GENERAL DESCRIPTION OF SENSORS

9.5 RESEARCH OPTION 2: EXPLORE (AND POSSIBLY IMPLEMENT) VIDEO MONITORING THROUGH A PILOT PROGRAM

This option would establish a top priority for cooperative research (including use of future RSA funds) – to investigate the feasibility of video monitoring in the Atlantic herring fishery through a video monitoring pilot program. Requirements for using a video monitoring system in the herring fishery would be added to the list of items that can be implemented through a framework adjustment to the Herring FMP so that new technologies can be incorporated into the fishery management program as quickly as possible once their applicability and usefulness is tested.

Currently, a similar pilot program is underway in the northeast multispecies (groundfish) fishery, which could form the basis of a similar study in the herring fishery.

Background Information: NOAA Fisheries Groundfish Electronic Monitoring Pilot Study

During 2010, the Fisheries Sampling Brach (FSB) of the Northeast Fisheries Science Center is conducting a pilot program to investigate the applicability of electronic monitoring systems (EMS) to collect catch and fishing effort data aboard 10 groundfish vessels that use trawl gear, gillnets, and longlines. This is the largest-scale government-funded study of its kind and should generate a great deal of information about the potential applicability of EMS technology across all fisheries in the Northeast Region. The goal of the study is to evaluate the utility of EMS as a means to monitor catch on a real-time basis in the Northeast groundfish sector fleet. The main objective is to test the applicability of EMS technology to collect catch and effort data aboard vessels incorporating catch estimation methods based on length approximations, and species identification through video data.

Groundfish sector members are required to have acceptable monitoring coverage under Amendment 16 of the Northeast Multispecies Fishery Management Plan. It is anticipated that at-sea monitors will be federally funded for the 2010 and 2011 fishing years. By year 2012, at-sea monitoring becomes a requirement of the sectors and the fishing industry may be responsible for the financing. EMS technology may provide a more cost effective alternative to human observers, if it is found to be a suitable surrogate. Initial costs for EM equipment are significant, but the daily cost over the lifespan of the equipment is generally low.

EMS technology is comprised of a control box, user interface (monitor and keyboard), up to four closed circuit television cameras, a GPS receiver, a hydraulic pressure transducer, and a drum rotation sensor. The control box, mounted in the wheelhouse, receives input from the sensors and logs digital video imagery. Cameras begin recording when the pressure transducer and drum sensor register activity (setting gear, retrieval). Cameras record activity on deck with a focus on discarded groundfish species. Cameras will be mounted in various locations based on these factors: size of vessel, type of fishery, hauling areas, discard chutes/conveyors/scuppers, stern/aft ramp and catch sorting areas.

Video footage will solely be the property of the U.S. government and will be treated as confidential observer data under the Magnuson-Stevens Act. Archipelago Marine Research Ltd. has been contracted to conduct the pilot program in conjunction with FSB. Widely recognized as the pioneer in video-based technology, Archipelago has participated in numerous EMS programs throughout the world. Archipelago will be responsible for detailing EMS installation specifications (including placement) and determining vessel suitability. While Archipelago has extensive experience with EMS, this study requires collection of an expanded amount of data and should take EMS technology a step farther.

Sector fisheries are required to have monitoring coverage to estimate discards at sea and estimate total catch as part of monitoring the collective quota effectively. On each participating vessel, discard areas will be designated (per gear type and vessel), and catch sorting will be conducted by the crew. At least one camera should be aimed at the discard area and one camera should include an overall view of the deck to ensure the EMS viewer does not miss any discarding. Species that will count toward the sector's ACE will be the focus of the EMS viewer (Atlantic cod, pollock, haddock, redfish, winter flounder, witch flounder, American plaice flounder, yellowtail flounder, Atlantic halibut, white hake, Atlantic wolfish, ocean pout, sand dab flounder) although additional discard species will also be quantified (ex. sculpins, sea ravens etc.). Species identification will focus on groundfish species along with skate and monkfish. *It is important to note that redfish and blackbelly rosefish may not be identified to species due to limitations in viewing video imagery*. Redfish, nk will be used to lump these species and to mimic NEFOP and ASM observer protocols. White hake and red hake may not be discernable from one another, especially in the 30-40 cm size class. For consistency purposes hake, nk will be utilized to characterize those species in the 30-40 cm size class.

On trawl vessels, catch sorting is imperative. A discard chute/area will be designated, preferably with a conveyor system or discard chute that has a measurement grid on it (5-10 cm increments recommended). Conveyor systems are the preferred method for estimation and identification of discards and may predict vessel participant selection. *For maximum productivity, fish should be placed on the conveyor in a single layer at a moderate pace.* Crew may want to sort discards (ACE targets) to the side and retain them until they have the time to send them through the designated discard chute. Outreach and education is critical to ensure this kind of catch sorting is maintained. Catch sorting responsibilities will be clearly defined in the study guidelines to ensure industry participation.

EMS viewers will review 30% of the events from collected video from each trip. Data analyses consist of: examining vessel sensor data to assess quality and completeness of the data set, identifying fishing episodes, estimation of total fishing effort and catch, speciating catch by disposition and identifying anomalous events in the data set that may warrant further investigation. Data processing at FSB should take no longer than 7 days from the trip landing, depending upon the quantity of data and frequency of hard drive collection (versus up to 90 days for observer data review/entry).

Analyzing data from EMS, ASMs, observers, dealers, dockside monitors and VTRs will be undertaken by Archipelago. Specific statistical methods are yet to be determined but FSB anticipates correlations or regressions to be run in addition to graphical methods. Through these comparisons, FSB staff and Archipelago will evaluate the effectiveness of EMS in sector fisheries and develop a set of regulating criteria. FSB staff will work with Archipelago to explore how EMS data collected could be integrated into sector reporting requirements. A final report will be written by Archipelago including: methodology for EMS set up on fishing vessels, inventory of all data, methodology used for analysis of EMS data sets, technical assessment of the EMS in a variety of conditions, instances where EMS may not be conducive to meeting monitoring objectives and suggested alternatives to correct these deficiencies, feedback from captain and crew, and recommended improvements to the EMS, and program design and analysis procedures that would better address the fishery monitoring issues.

The pilot study is currently underway (summer 2010), and data collection is expected to occur through May 2011. Data analysis will be conducted June-August 2011, and a final report with findings will be released during this time once all of the data are thoroughly analyzed.

10.0 FUNDING OPTIONS

Comment [lls33]: Needs further discussion/development

10.1 OPTION 1: FEDERAL AND INDUSTRY FUNDS

Comment [lls34]: May 2009 – Herring AP encourages the Herring Committee/PDT to analyze the costs of monitoring programs ASAP so that these costs can be estimated for NMFS and Congress to consider

This option would require that the catch monitoring program established in Amendment 5 be funded by Federal funds, as they can be made available.

This option requires that the herring fishing industry must pay for the catch monitoring program established in this amendment to the extent that Federal funds are not available.

If Federal funds are not available, the industry would be responsible for covering costs associated with contracting service providers for either at-sea or portside sampling.

10.2 OPTION 2: FUND CATCH MONITORING FROM FEDERALLY-PERMITTED DEALERS

This option would require Federally-permitted dealers to fund the catch monitoring program established in Amendment 5.

Sub-Option: This option requires that Federally-permitted Atlantic herring dealers must pay for the catch monitoring program established in this amendment to the extent that Federal funds are not available.

If Federal funds are not available, Federally-permitted Atlantic herring dealers would be responsible for covering costs associated with contracting service providers for either at-sea or portside sampling.

Sub-Option: This option requires that Federally-permitted Atlantic herring dealers must pay for the portside element of the catch monitoring program and Federally-permitted Atlantic Herring vessels must pay for the at-sea element of the catch monitoring program established in this amendment to the extent that Federal funds are not available.

If Federal funds are not available, Federally-permitted Atlantic herring dealers would be responsible for covering costs associated with contracting service providers for portside sampling. Federally-permitted Atlantic herring vessels would be responsible for covering costs associated with contracting service providers for sea sampling (observer coverage).

Comment [lls35]: Draft – work in progress

11.0 AMENDMENT 5 – MEASURES CONSIDERED BUT REJECTED

The management alternatives under consideration in Amendment 5 have been developed by the Council, Herring Committee, Herring Advisory Panel, and Herring PDT from June 2008 (after scoping) until January 2011, when the Council approved the management alternatives for inclusion in the Draft EIS. Many different approaches were considered during this process, and the Council reviewed ideas and proposals developed by the AP, herring industry participants, and other interested members of the public. Development of the management alternatives proposed in this amendment was an iterative public process, during which several measures were eliminated from further consideration at this time. Those that were eliminated from further consideration are discussed below, along with the Council's rationale for eliminating them at this time.

It is important to note that although the measures described in this section have been eliminated from further consideration in Amendment 5, the Council may reconsider any of them in a future action for Atlantic herring. In some cases, details and preliminary analyses have already been conducted, making reconsideration of these measures in the future less burdensome prospect.

11.1 MEASURES TO ADDRESS QUOTA MONITORING AND REPORTING

During development of Amendment 5 the Council considered two measures to address VMS reporting; the first being a measure that would have required VMS reporting for every offload and transfer that occurred for limited access herring vessels possessing Category A, B, and C permits. The measure was considered to be unnecessarily burdensome and/or complicated, and at this time, options remain under consideration in the document for either daily reporting or trip-level reporting. The second measure considered would have required VMS on all carrier vessels greater than a certain size in length, for declaration purposes when they may be engaged in herring carrying activities. Information presented by the PDT, however, as well as the other options under consideration, suggests that this measure may not be necessary. A "dual option" was created to address this issue; the dual option would allow carriers to operate under status quo requirements (LOA) or use VMS to declare their activities and exempt themselves from the restrictions in the LOA.

The Council considered two measures that would have addressed vessel to vessel transfers of Atlantic herring. In combination with measures still being considered in this amendment, the first measure that was rejected would have addressed transfer at sea provisions for Category D (Open Access) vessels by allowing vessels with open access Category D permits to transfer herring at sea, with provisions. The measure was rejected because the intent was not clear, nor was it clear how possession limits could be enforced. It was also considered to be status quo for the vessels under consideration. The other measure would have restricted transfers at sea (as defined in this amendment) to only be allowed on trips with an at-sea observer or other fisheries monitor on board. This measure was initially proposed by the NERO staff and was not supported by the Herring Committee.

There was also an option considered that would have created two open access permits for herring, one for all management areas, and another for Areas 2/3 only. The first permit would have adapted the current provisions for a Category D permit; the second would have been a new open access incidental catch permit that would have restricted fishing to Areas 2/3 only and allowed a 25 mt possession limit for herring for one landing per calendar day. This measure was rejected for consistency with corresponding mackerel measures with the MAFMC and to avoid complications with the many vessels that may be involved.

11.2 MEASURES TO ADDRESS MAXIMIZED RETENTION

The Committee/Council considered several different approaches to developing a maximized retention program for the herring fishery during the development of Amendment 5. After encountering many challenges with the options considered underneath it, however, the main alternative was eliminated from consideration. The alternative would have applied maximized retention for the limited access herring fishery (Categories A, B, and C).

Many of the challenges with the options included addressing the species to which the maximized retention program would apply, how non-permitted/unmarketable landings would be handled, how compliance with MR provisions would be verified, and whether or not the MR program would be phased-in to the fishery. More specifically, the options which were considered but rejected include:

- Two options that addressed the species to which maximized retention applies, one of which would have maximized the retention of all species, and another which considered species-based maximized retention. Under the first option, the vast majority of catch of all species on vessels would have been subject to MR provisions would be landed with two exceptions, and discarding at-sea would have been prohibited. Under the second option the Council would have selected the species to which MR provisions would apply from a list.
- Three options that addressed the likely requirement of landing certain species for which herring vessels have landing limits or are not currently permitted to land at all, along with fish that may not have been be marketable. Non-permitted landings would have included species for which a vessel is not permitted or authorized to land, landings for species that exceed trip limits or quotas and/or landings for species that are bigger/smaller than current size restrictions. All three options were determined to be too difficult to implement due to challenging species such as river herring, which are not allowed to be landed in some states. The options included:
    - An option which would have amended other FMPs and regulations to allow landings, in which a number of other Fishery Management Plans would be amended to modify limits or prohibitions which might affect herring vessels attempting to participate in a maximized retention program. For instance, the Multispecies FMP would have needed to be amended to change landings limits for all other groundfish species except haddock, which has a separate, fishery-wide cap. The complications associated with the measure, such as jurisdictional overlap which may occur for species managed by the Mid-Atlantic Fishery Management Council and Atlantic

States Marine Fisheries Commission (ASMFC), and MAFMC and ASMFC, made this option too difficult to be considered feasible.

- An option that would have required non-permitted/unmarketable catch to be treated in the same manner as haddock that is landed under the catch cap for the herring fishery, established in Framework 43 to the Multispecies FMP. The provisions for landing haddock under the cap include a prohibition for herring vessels from discarding haddock that has been brought on deck or pumped into the fish hold, a prohibition on herring vessels from selling haddock for human consumption, a prohibition for herring dealers from purchasing haddock from herring vessels for human consumption, and a requirement for herring processors to cull and report all haddock and to retain such haddock for 12 hours for inspection by enforcement officials. The option did not address regulatory issues associated with landing species above trip limits, quotas, and/or species for which the vessel is not permitted, and was therefore rejected from consideration.
- An option that would have required that vessels landing non-permitted catch under a maximized retention program be responsible for disposing of that catch once it is landed and documented (through reporting, portside sampling, etc.). Herring dealers and processors would have been required to separate, report, retain, and make available for inspection for 12 hours, all prohibited/non-marketable species in order to facilitate monitoring and enforcement of the maximized retention provisions, and it would have required that law enforcement officials be given access to inspect the culled/sorted catch. The option did not address regulatory issues associated with landing species above trip limits, quotas, and/or species for which the vessel is not permitted and was therefore rejected from consideration.

- Three options that would have verified compliance with the maximized retention provisions, including the option to require video-based electronic monitoring (VBEM), a VBEM/Observer hybrid option, and a <100% verification coverage option. The option to require VBEM would have required video-based electronic monitoring equipment to ensure compliance with MR provisions if such provisions are established in Amendment 5. Portside samplers would have certified and reported the weight and species composition of each landing which would have been compiled, audited, and summarized, and VBEM data would have been checked subsequently to reconcile landings against fishing activity to verify compliance with maximized retention requirements. Under the VBEM/Observer hybrid option a combination of VBEM and monitoring by at-sea observers would have been used to verify maximized retention. Potential sub-options could have included allowing industry to choose which verification vector to employ. Under the <100% verification coverage option verification of maximized retention would not occur 100% of the time, and self-reporting would be relied upon for assurances that landed weight is equal to catch. These options were considered to be under-developed and infeasible due to difficulties in implementation.
- Three options that would have phased-in the implementation of maximized retention. The first would have been a temporal phase-in of MR provisions over two to four years, which would have included a gradual but steady reduction in the amount of at-sea discarding that is permitted. The second would have implemented a spatial phase-in of MR provisions, in which bycatch "hotspots" (for example, areas with river herring bycatch or groundfish closed

areas) would have required maximized retention. Areas could be added/modified as additional data become available. The third option would have implemented a gradual phase-in of VBEM as the verification system for MR through pilot programs. These options were considered to be under-developed and infeasible due to difficulties in implementation.

- Two options that would have addressed non-permitted catch under maximized retention.
    - The first option would have required modified maximized retention, in which VBEM would be used to monitor minimal at-sea discards. Modifications to the at-sea components of a CMCP would have specified that any at-sea discards must be disposed of through a designated discard chute with monitoring through an additional camera close enough in range to distinguish species, and wide-angle deck-wide and rail-area cameras would have monitored pre-sorting, and imagery analysis would have been conducted. The option could have been applied for specific species for which no regulatory relief is possible and certain prohibited species, for instance marine mammals or birds. Two concerns were raised with this measure. The first concern was that current technology may not be able to accomplish the objectives of the measure, as it has not been tested in the fishery. The second was vessels would discard the non-permitted species if the electronic monitoring technology was on board. It was therefore considered not feasible at the time of the amendment.
    - The second option would have implemented landings caps by allowing the landing of non-permitted catch (for species to which maximized retention applies), including in excess of current trip limits, with such landings subject to the appropriate landings caps. Landings caps for each species subject to maximized retention provisions would have been set annually by the Council based on either available observer and portside sampling data which would have documented bycatch of the species in question by herring vessels subject to maximized retention and would have been expanded upwards to account for expected effort in the fishery during the upcoming fishing year, or another option that was TBD. Once landed, the fish would have been counted against the landings cap and either haddock catch cap provisions would have applied to the sale of the catch that counts towards a landings cap, or the vessel would have been able to sell the fish to any dealer with a federal permit for the species in question. When the first species-based landings cap is reached, the directed fishery for Atlantic herring would have closed, and all vessels would have been limited to a possession limit of 2,000 pounds in all management areas. Both NERO and NEFMC staff expressed concerns that the measures above do not address regulatory issues associated with landing non-permitted species. The capping of landings and closing the fishery when the cap is reached also seemed somewhat inconsistent with the intent of a maximized retention program.
- Two options that would have verified compliance with maximized retention. The first would have utilized 100% Verification by At-Sea Observers; under the option, at-sea observers would have certified compliance with maximized retention requirements and sampled any at-sea discards that did take place, but the vast majority of catch sampling would have been done dockside, as would the certified weighing or certified volumetric estimation of landed weight. This option was considered infeasible. Under the second, the Council would have developed standards and management measures to ensure compliance with maximized

retention provisions. These standards would have been implemented in Amendment 5 and would have applied to all Category A and B vessels. This measure was carried over from one of the stakeholder proposals and is redundant, given the other options under consideration in the document.

Placeholder for summary paragraph providing a rationale for elimination of MR across the fishery

11.3 MEASURES TO ADDRESS PORTSIDE SAMPLING

The Committee/Council considered several different approaches to developing a portside sampling program for the herring fishery during the development of Amendment 5. The first option would have achieved Council-identified priority target levels of precision using a combination of at-sea and dockside sampling, however the option remained unclear. Different approaches should be used to determine coverage levels for at-sea monitoring and portside sampling based on the objectives of both programs. Further analysis by the Herring PDT, however, indicated that the two programs could not be combined at this time and that the data generated by the two programs are not additive. Different approaches should be used to determine coverage levels for at-sea monitoring and portside sampling based on the objectives of both programs.

One set of options addressed coverage levels for the portside sampling program. One option would have required <100% portside monitoring coverage without extrapolation, which would have meant that the coverage rate and coverage design would not have allowed for the extrapolation of observed landings across the entire fleet such that unobserved landings had a bycatch rate applied. Another option would have required a coverage level equal to the SBRM coverage. Yet another option would have required a coverage level to meet council priorities which would have entailed a 30% CV on catch/bycatch estimates for Atlantic herring and haddock, and a 20% CV on catch/bycatch estimates for river herring. In that option NMFS would have determined levels of coverage for portside sampling based on the level of observer coverage and the expected CVs that would result from the observer estimates, and portside sampling data would supplement the observer data. This option was considered in the context of developing a combination portside/at-sea sampling program. Further analysis by the Herring PDT indicated that the two programs could not be combined at this time and that the data generated by the two programs are not additive. Different approaches should be used to determine coverage levels for at-sea monitoring and portside sampling based on the objectives of both programs. Options were also considered to set portside sampling coverage less than 100% with extrapolation of bycatch estimates to the entire fishery. When the PDT expressed concern about requiring extrapolation, given the current variability associated with the data, the Herring Committee agreed that alternate approaches should be considered for portside sampling coverage levels, such as the options that are currently proposed in the document.

Another set of options would have addressed the determination of qualified service providers for the portside sampling program. One of the options would have standardized the existing state portside sampling programs and incorporate them into the proposed action by certifying them as approved portside sampling program (PSP) vendors. Another would have implemented immediate or phased-in use of NEFOP observers as portside samplers for the proposed action, which would have essentially certified the NEFOP as a PSP vendor. A different option was to implement a single-service provider plan for PSP operations which could not be covered by shore-based observers employed by state or federal agencies. The final option addressing service providers would have implemented a multi-service provider plan for PSP operations which cannot be covered by shore-based observers employed by state or federal agencies. These four options were rejected when the decision was made to have this amendment be consistent with other FMPs, such as Scallops and Groundfish, by allowing multiple service providers.

As part of the portside sampling program, the Council considered several alternatives to verify catch estimates through a third party. The alternatives to confirm the accuracy of self-reported catch that were considered but rejected are described below.

The Committee/Council considered a set of alternatives that would have addressed the accuracy of self-reporting in the fishery using scales. A few of the options would have required the weighing of dealer trucks and/or transport vehicles as a condition of possessing a Federal dealer permit for Atlantic herring. The trucks would have been weighed either annually or before being loaded with herring as a baseline weight, and again after being loaded. The total weight of herring would have been calculated as the difference of the two weights and reported to the NMFS. The option would have required that all weights be taken by a Licensed Weighmaster, that the scale be inspected regularly, that any trucks utilizing containers on flatbed trucks have the containers present at the initial weighing, and that the required paperwork be present when needed at the weighing.

The options differed in the location and ownership of the scales that would have weighed the trucks and/or transport vehicles. The first option would have required the installation and use of the truck scales in all ports. This measure was considered infeasible due to the need for land, manipulation of lands, and structures needed to install the truck scale, as well as the financial implications. The second measure, which would have installed truck scales in specified ports, was also considered infeasible for the same reasons. The third option would have required the use of pre-existing scales owned by various parties in locations close to the ports of landing. This option was rejected for several reasons, including objections from the RO regarding the feasibility of the measure at that level and similar objections from the Advisory Panel regarding the cost and complications to the herring offloading and transport process. The measure also appeared to fail in support the goals of the catch monitoring program as it is established in this amendment.

Another option to address the accuracy of self-reporting option would have required flow scales and their use on herring vessels as a condition of possessing the limited access permit for limited access Category A, B, and C vessels, as well as herring carrier vessels. Flow scales are used in conveyor systems where there is a continuous flow of material, such as herring. Flow scales determine an accurate weight of total landings using a weight sensor that the fish pass over as

they move down the conveyor belt. The option would have required accordance with a NMFS list of approved scale models, initial and annual inspections for all scales, daily at-sea scale tests, scale maintenance, retention of daily printed reports from the scales, and scale location on each vessel. This measure was rejected primarily due to the initial cost of the scales combined with the difficulty and cost in maintaining the scales thereafter. Although the scales have been used in the Fisheries of the Exclusive Economic Zone of Alaska, the Committee/Council considered that those fisheries operated differently and were subject to 100% observer coverage. Similar to the weighing of trucks and/or transport vehicles, the measure also appeared to fail in support the goals of the catch monitoring program as it is established in this amendment. For additional detailed information on the difficulties faced in implementing the use of flow scales and truck scales in the fishery, see the Council Staff discussion document entitled "Potential Applicability of Flow Scales, Hopper Scales, Truck Scales and Volumetric Measurement in the Atlantic Herring Fishery."

11.4 OPTIONS TO MAXIMIZE SAMPLING AND ADDRESS NET SLIPPAGE

During the development of the Amendment 5 catch monitoring program, several additional options were considered to maximize sampling by at-sea observers and address net slippage. Three options were eliminated from further consideration for maximizing sampling and three for addressing net slippage.

One of the options to maximize sampling would have been an interruption prohibition, in which the removal of the pump from the codend once pumping has been initiated would have been prohibited unless the vessel was able to lift the net from the water and demonstrate in a visible way that the codend was either empty or was re-pursed before being placed back in the water. This measure was deemed to be infeasible for many operations. The second option would have required vessels to lift the codend from the water to visibly demonstrate that it was empty prior to re-setting the net, but was also deemed to be infeasible for many operations. The third option would have been to determine (and apply) minimum portion of a slipped catch that would be required to be pumped on board a vessel to ensure complete sampling. If a minimum portion/threshold could have been determined, then the measure would have required sampling at that level for any slipped tows. The Herring PDT did not think this measure feasible because it was not clear how a percentage could be determined to ensure complete sampling from a slipped catch without further research and investigation, and the measure was not clear in its intentions. The PDT advised that fish may stratify in the net if it sits for any length of time, and that a study was needed to determine the appropriate percentages.

As for measures to address net slippage, the first option would have set slippage caps, and Committee/Council considered and rejected a series of sub-options under that option, with the intent to better account for and minimize slippage events. Slippage caps would have been set annually by the Council for the entire fishery, and deductions would have been made based on slippage events documented by either a NMFS-approved observer or an adequate monitoring mechanism (VBEM, for example) in recent years. When the slippage cap was reached, the directed herring fishery in all management areas would have closed, and all vessels would have been limited to 2,000 pounds of herring. A series of sub-options could have been applied to this measure:

- Available information about slippage from observer data could have been expanded upwards to account for expected effort in the fishery during the upcoming fishing year.
- Available information about slippage from observer data could have been expanded upwards to account for expected effort in the fishery during the upcoming fishing year. The cap would have then been adjusted downwards based on the expected level of observer coverage for the upcoming fishing year (similar to the Framework 43 approach for setting the haddock catch cap).
- Available information about slippage could have been used to estimate the number of slippage events that may have been expected to occur across the fishery in the upcoming fishing year. An average estimate of slipped catch (based on observations in recent years) would have been applied to the number of slippage events to generate a total slippage cap.
- A sub-option that could have gradually reduced the slippage cap over time under any of the approaches described above for setting the cap (would have applied to all sub-options above).
- A deduction from the slippage cap that would have occurred every time a slippage event was documented by either a NMFS-approved observer or an adequate monitoring mechanism (VBEM, for example). When the slippage cap was reached, the directed herring fishery in all management areas would have closed, and all vessels would have been limited to 2,000 pounds of herring.
- An assumed tonnage for each slippage event would have been applied against an overall cap on slippage in the fishery under this sub-option. The assumed amount deducted for each slippage event would have been set at the current best estimate for the average tow in the fishery (approximately 65 mt). When the slippage cap was reached, the directed herring fishery in all management areas would have closed, and all vessels would have been limited to 2,000 pounds of herring.
- An estimated tonnage for each detected slippage event would be applied against an overall tonnage cap on slippage in the fishery under this sub-option. The estimated amount would have been based on an independent measure of the total weight of the slipped discards. Captain's estimates would not have been accepted. Therefore, this option have been only be practical in cases in which the VBEM dataset provided a clear and acceptable estimate of weight, or in which the vessel had additional EM technology such as catch-weight sensors in the CMCP, or in which an at-sea observer happened to be aboard. Under this option, slippage events for which additional information to estimate slipped catch was not available from a third party would have been subject to the assumed tonnage application described in the option above. When the slippage cap was reached, the directed herring fishery in all management areas would have been closed, and all vessels would have been limited to 2,000 pounds of herring.

In general the Herring PDT did not support the establishment of slippage caps at the time of development and recommended that the measures be implemented through a framework adjustment in the future, as no statistically valid approach was in existence for estimating slippage or a slippage cap at that time. Some concerns from the PDT include the worry that a slippage cap would only address a small proportion of "released catch" events and may be relatively ineffectual at motivating the herring fishery to take greater care to avoid non-target species; that developing a statistically valid method that addresses these issues may require months or years and involve resources beyond those immediately available to the Herring PDT; that due to the expansion of the estimate of total slippage in the herring fishery from sampled slippage events collected by observers to the entire fishery, the resulting estimates will have some amount of error associated with them, the extent of which is unknown; and that the population level effects of slippage events are currently unknown, and the measure would therefore have an unknown relationship to total mortality for the herring complex.

Two other options that the Council/Committee considered for addressing net slippage would have implemented species specific landing caps. The first option would have applied *assumed* slippage event tonnage against species-specific slippage caps, and the second option would have applied *estimated* slippage event tonnage against species-specific slippage caps**.** Under both options, individual species-specific slippage caps would be set annually by the Council for each species identified for maximized retention, and the individual species slippage caps would be set at biologically-appropriate levels with consideration of economic and other concerns of all other fisheries targeting those species.

An assumed tonnage would have been applied against the herring sub-ACL for the management area in which the event occurs, *and* against each species-specific slippage cap for the first option, but an estimated tonnage would have applied for the second option. Under the first option, the assumed amount would have been set based on the current best estimate for the average tow in the fishery. Under the second option, the estimated amount would be based on some independent measure of the total weight of the slipped catch by species. Captain's estimates would not have been accepted. Therefore, this option would have only been practical in cases in which the VBEM dataset provided a clear and acceptable estimate of weight, or in which the vessel had additional EM technology such as catch-weight sensors in the CMCP, or in which an at-sea observer happened to be aboard. In both options, when the first species-specific slippage cap was reached, the directed herring fishery in all management areas would have closed, and all vessels would have been limited to 2,000 pounds of herring.

After further consideration the first option was considered unrealistic based on time and resource restraints, and it was recommended that this option be eliminated. The second option was moved to the considered but rejected section because suspected or inferred slippage or discard events would still be subject to the assumed tonnage application because by definition, no actual data would exist for these events.

The Council/Committee also considered two potential consequences for quota or bycatch cap overages. Under the first option, if an at-sea discard caused an overage, or an at-sea discard event was suspected/inferred based on VBEM data or absence of data, and the event was known or suspected to have caused resulted in a quota or bycatch cap overage, then the offending vessel would have been suspended from the herring fishery for the following fishing year, and all other vessels would be forced to pay back the overage. The offending vessel also would have been forced to carry an at-sea observer at its own expense, in addition to participating in the maximized retention and dockside monitoring program under the proposed action, for an additional probationary year. This option was deemed problematic from a legal perspective. Under the second option, vessels would have been required to terminate their trips and return to port in the event that slippage event occurs due to the potential to compromise vessel safety and/or a mechanical failure. This option would have been applied on trips where slippage events can be documented with certainty (i.e., trips with either a NMFS-approved observer on board or other adequate monitoring mechanism like video technology). The Committee considered this measure to be punitive, and it was not expected to provide incentive to minimize slippage. The Committee was also concerned about the measure's potential to compromise safety when catch is brought on board in unsafe conditions in order to avoid trip termination.

11.5 MEASURES TO REQUIRE ELECTRONIC MONITORING

The one option that was considered but rejected by the Council/Committee for requiring electronic monitoring was a measure that would have required a height or bottom contact sensors on Category A, B, and C trawl vessels to determine the amount of bottom contact of trawls during each tow. Under this option members of the midwater and pair trawl and purse seine sectors would have been responsible for working with NMFS to develop and test systems that can monitor bottom contact and report this data, via VMS or otherwise. The NERO office expressed concern about this measure, noting that it was not clear how the data would be collected or analyzed. Concerns were also raised by the Committee regarding the cost of the equipment and potential contact with the bottom, which could damage or remove it.

11.6 MEASURES TO REQUIRE CATCH MONITORING AND CONTROL PLANS

During the development of the Amendment 5 catch monitoring alternatives, the Council considered measures that would require the industry to design and submit catch monitoring and control plans (CMCPs) to NMFS. CMCPs would have had the standards specified in the amendment which would have outline requirements for each CMCP and may have included the following: sorting and weighing all landings under the oversight of a portside sampler, notification requirements in advance of a landing, use of approved scales or other weighing techniques, provision of safe and convenient access points and sampling locations for observers/monitors/samplers, and procedures to ensure that no unobserved pre-sorting occurs, possibly including details regarding the installation and operation of a video-based electronic monitoring (VBEM) system if one is required. CMCPs would have covered all possible offload scenarios, and may have included cooperative arrangements with dealers and/or carriers and/or receivers of at-sea transfers (including USAP vessels if necessary and appropriate) or

management measures to address river herring bycatch could also have been specified in the CMCP.

Options for CMCP provisions that were considered by the Council during the development of Amendment 5 include an option that would have determined which sectors of the fishery to which CMCP requirements could have applied. The other option would have defined the required elements of the CMCPs, such as an outline of fish handling procedures in detail, an explanation of how independently verifiable weight or volumetric conversion would have been attained for all species, an outline of the VBEM system to be operated and its installation specifications (if VBEM is a component of the catch monitoring program), an outline of the procedures for the portside component, or mandatory verification of compliance with maximized retention requirements.

It was intended that individual vessels/entities or groups of vessels/entities could develop/submit CMCPs. NMFS would review/approve CMCPs with input from the Council on an annual or semi-annual basis as part of the fishery permit renewal procedures. CMCP options were ultimately rejected from further consideration because of concerns expressed by the NMFS Regional Office about lack of clarity/detail in the proposed CMCP standards and the possibility of generating numerous different monitoring plans, which could cause significant enforcement/compliance problems. The proposed CMCP provisions appeared to be too open-ended and would allow for the potential for many different approaches to addressing some issues to be submitted by the industry.

11.7 OPTIONS FOR FUNDING

One alternative for funding the measures in Amendment 5 was to implement a set-aside, which would have been administered by mirroring the set-asides operated in other fisheries. One option under the alternative would have been to eliminate the research set-aside and replace it with the catch monitoring set-aside, with the sub-option of utilizing the set-aside specifically to fund a portside sampling program. Another option was to establish a catch monitoring set-aside in addition to the RSA, with the sub-option of utilizing the set-aside specifically to fund a portside sampling program PSP. A third option was to identify catch monitoring as a top priority for the RSA.

The first two options, which would have established a catch monitoring set-aside was rejected because NERO had expressed significant concerns about establishing an RSA-type process for funding a catch monitoring program. The NERO concerns were communicated to the Committee:

- The alternatives proposed in the document to fund catch monitoring through a set-aside are similar to the current research set-asides (RSAs). The RSA process is a competitive grants process administered by the Northeast Fisheries Science Center. Proposals are requested for research, and incoming proposals are reviewed and ranked by a technical body. With competitive grants awarded through this process, different entities will apply. For catch monitoring, it is important to ensure that only qualified entities apply, and it would be

difficult to ensure a consistent monitoring program with multiple entities potentially competing for the available funds in any given year.

- Available funds to utilize under a catch monitoring set-aside would be limited and uncertain. Not all of the herring quotas are fully utilized. Set-asides have potential to be utilized only in areas where the quota is fully utilized and the fishery closes. The set-aside, therefore, would be limited to only the areas that close regularly (1A and possibly 1B) and could vary in amount from year to year depending on the total quota and the percentage selected for the set-aside. Overall, funds generated from the set-aside may not be significant.
- Timing is an important consideration. For a set-aside process to become effective, there is a one-year lag time to generate the funds. Timing is important for the fishery as well; there have been instances with past set-asides where fish were awarded but circumstances prevented those fish from being harvested and funds being generated. There are also substantial vessel costs associated with harvesting a set-aside; these costs must be factored into consideration of how much funding a set-aside could generate.
- Herring is a relatively low value fish. The costs of administering a set-aside program and harvesting fish under the set-aside may preclude the ability to generate a significant amount of funds.

The third option was sent to the considered but rejected section, but still could be implemented when the priorities for the RSA are set; there is no need to specify priorities for the RSA in this amendment. In addition, there are still two options in this amendment which would address the issue in part by prioritizing VBEM.

11.8 OTHER MEASURES CONSIDERED BUT REJECTED

The Committee/Council considered several different approaches to developing measures to establish criteria for midwater trawl vessel access to groundfish closed areas during the development of Amendment 5. One of the measures would have required 100% observer coverage for one year as a condition to gain further access to the closed areas when a vessel targeting herring in a groundfish closed area has regulated groundfish exceeding 1% of the catch of herring. The vessel would have been denied access for one year if the 1% bycatch allowance had been exceeded again. This measure was rejected because of due diligence issues raised by the NMFS Regional Office; if a vessel is able to show that it used reasonable care to prevent the offence from occurring, then access cannot be denied.