Measures to Modify the Regulatory Definition of Midwater Trawl Gear (Section 4.11)

If approved, the proposed measure will affect vessels that do not meet the requirements of the new definition of a midwater trawl. Economic impacts of such a change could occur, but these should not translate into impacts on protected species, i.e. significantly affect effort. Few impacts have been associated with the status quo.

Additional Measures That Can Be Implemented Through a Framework Adjustment to the Herring FMP (Section 4.12)

This action simply identifies management measures that can be implemented through a framework adjustment to the Herring FMP in the future, or the fishery specification process in some cases, whichever is most expeditious. The action proposed in this amendment relative to the measures that can be implemented through a framework adjustment is not expected to produce any impacts. Impacts associated with specific measures that may be implemented in the future through this process will be analyzed in accordance with applicable law as part of the framework adjustment and/or specification process.

8.3 IMPACTS ON THE PHYSICAL ENVIRONMENT AND EFH

This section discusses the impacts of the Proposed Action and the management alternatives/independent management measures that were considered in the Amendment 1 DSEIS on the physical environment and particularly EFH. The physical environment and EFH are described in detail in Section 7.3 of this document.

The EFH components of the Atlantic Herring FMP were developed as part of an Omnibus Amendment prepared by the New England Fishery Management Council for all NEFMC managed species (NEFMC 1998). The EFH Omnibus Amendment was approved for Atlantic herring by the Secretary of Commerce on October 27, 1999. The final rule implementing the Atlantic Herring FMP to allow for the development of a sustainable Atlantic herring fishery was published on December 11, 2000 (65 FR 77450).

An assessment of the potential effects of the directed Atlantic herring commercial fishery on EFH for Atlantic herring and other federally-managed species in the Northeast region of the U.S. was conducted as part of an EIS that evaluated impacts of the Atlantic herring fishery on EFH (NMFS 2005). (This analysis is included in Appendix VI, Volume II of this FSEIS) and determined that midwater trawls and purse seines do occasionally contact the seafloor and may adversely impact benthic habitats utilized by a number of federally-managed species, including EFH for Atlantic herring eggs. However, after reviewing all the available information, *if* the quality of EFH is reduced as a result of this contact, the impacts are minimal and/or temporary and, pursuant to MSA, do not need to be minimized. This conclusion also applies to pelagic EFH for Atlantic herring larvae, juveniles, and adults and to pelagic EFH for any other federally-managed species in the region.

Based on the conclusions in the 2005 Atlantic herring EFH EIS, development or consideration of measures to minimize, mitigate or avoid impacts of the fishery to essential fish habitat in Amendment 1 to the Herring FMP was not necessary or warranted. This analysis therefore is limited to the possible habitat impacts of the non-habitat-related management measures included in the Proposed Action.

8.3.1 Impacts of Proposed Action on Physical Environment and EFH

In general, the Proposed Action will not have any additional impacts on essential fish habitat (EFH) beyond those analyzed in the Amendment 1 DSEIS. The Proposed Action includes Alternative 7 from the DSEIS (with modifications to the limited access program) and a suite of independent measures that were considered and analyzed in the DSEIS. Alternative 7 proposed to establish all of Area 1A as a seasonal purse seine and fixed gear-only area, a measure that was ultimately incorporated into the Proposed Action for Amendment 1 (see Section 4.0 for a complete description of the Proposed Action).

Limited Access Program

The limited access program that is included in the Proposed Action would not affect the amount of total removals from the resource or the amount or spatial distribution of fishing activity. Any increase or re-distribution of fishing effort that might occur would be influenced by other factors such as changes in the seasonal availability of herring on different fishing grounds or changes in fishing gear and practices by vessels that qualify for limited access permits. In the long term, limited access will limit the growth of the fishery in all three management areas. Any potential adverse impacts of the directed Atlantic herring fishery on EFH will continue to be minimal and/or temporary under the proposed limited access program.

Purse Seine/Fixed Gear-Only Area

The Area 1A gear prohibition could cause a shift in midwater trawling effort from the inner Gulf of Maine on to Georges Bank during June-September. However, if this does occur, it is not expected to adversely impact EFH. This conclusion is based on information in the Gear Effects Evaluation (Appendix VI, Volume II) indicating that bottom contact by midwater trawls occurs only occasionally, and that the use of bottom trawls and dredges, which contact the bottom continuously, far exceeds the use of herring midwater trawls. Bottom habitats in open access areas where the use of midwater trawls could increase are already subjected to disturbance by bottom trawls and/or dredges, so any additional disturbance of bottom habitats caused by gears used in the directed herring fishery would be negligible. Bottom habitats in areas that are closed to bottom trawls and dredges are more susceptible to disturbance, but there is no reason to believe that closed areas on GB – where midwater trawling may increase – are any more vulnerable to bottom contact than closed areas in the GOM – where midwater trawling would decrease. In fact, bottom contact may be more likely to occur in the GB closed areas because the predominant sediment type on the bank is sand, which is less likely to damage the nets than hard bottom substrates in the western GOM. However, sandy bottom habitats on GB are naturally disturbed to a greater extent by bottom currents and are therefore less vulnerable to bottom disturbance than hard bottom habitats in the western GOM. Hard bottom substrates also support a greater diversity and biomass of epifaunal organisms which are highly vulnerable to contact by fishing gear.

8.3.2 Impacts of No Action Alternative on Physical Environment and EFH

The no action alternative equates to status quo conditions for the herring fishery and maintains the current regulatory environment if Amendment 1 to the Herring FMP is not completed by the Council and/or implemented by NMFS. The herring fishery would remain an open-access fishery in all management areas, managed by the current annual specification process, during which TACs for the various management areas are established to achieve optimum yield (OY) and minimize the risk of overfishing individual stock components. Other measures implemented through the Council's and ASMFC's FMPs for Atlantic Herring would remain effective, such as the seasonal split of the Area 1A TAC (Framework 1) as well as the days out program and spawning restrictions in Area 1A (ASMFC). OY would continue to be established through the annual specification process, based primarily on allowable biological catch (ABC); other specifications like DAH, DAP, USAP, TALFF, JVP, etc. would continue to be considered on an annual basis through the fishery specification process.

The no action alternative is required for consideration by the National Environmental Policy Act (NEPA) and provides a benchmark, enabling decision makers to compare the magnitude of environmental impacts of other alternatives under consideration. No net positive or negative impacts are expected to EFH, as the status quo condition would continue. Additionally, the Gear Effects Evaluation (Appendix VI, Volume II) found there to be no adverse impact that is more than minimal or temporary in nature of gear used in the directed herring fishery (purse seines and midwater trawls) on EFH in for Atlantic herring or for other species in federal waters. Therefore, the habitat impacts associated with this alternative are minimal.

8.3.3 Impacts of Alternatives 1-7 (Non-Preferred) on Physical Environment and EFH

Alternative 1

Under this alternative, no action would be taken relative to any of the primary management measures under consideration (i.e., the no action option would be implemented for each of the primary measures that compose the management alternatives). The herring fishery would remain an open-access fishery in all management areas, and no purse seine/fixed gear-only area would be established in Amendment 1.

No net positive or negative impacts are expected to EFH, as the status quo condition would continue. Additionally, the Gear Effects Evaluation (Appendix VI, Volume II) found there to be no adverse impact that is more than minimal or temporary in nature of gear used in the directed herring fishery (purse seines and midwater trawls) on EFH in for Atlantic herring or for other species in federal waters. No Action means the effects of the fishery remain the same – only minimal and/or temporary impacts.

Alternative 2

This alternative establishes limited access programs in Area 1 (1A+1B) and Areas 2/3 that do not utilize the September 1999 control date and proposes to take no action to establish a purse seine/fixed gear only area in Amendment 1.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program.

Alternative 3

Under Alternative 3, a limited access program would be established in Area 1 (1A+1B) upon the implementation of Amendment 1. A moratorium on permits would be implemented in Areas 2/3 in conjunction with a controlled access program. Once the trigger specified below is reached in Areas 2/3, the limited access program described below for Areas 2/3 would become effective at the start of the following fishing year. This alternative also proposes to establish a seasonal purse seine/fixed gear only area in Area 1A east of 69°.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program. However, a seasonal gear restriction could cause a shift in midwater trawling effort out of GOM on to GB during June-September. It is not certain that this would happen, and if it did, the only areas where increased midwater trawling could impact benthic EFH are areas that have been closed to mobile, bottom-tending gear. Open access areas that are affected by bottom trawls and dredges, which are used to a much greater degree than midwater trawls and are fished in continuous contact with the bottom, are not vulnerable to occasional contact by midwater trawls. There is also no reason to believe that closed areas on GB are any

more vulnerable to occasional bottom contact by midwater trawls than closed areas in the GOM. This alternative therefore would have no adverse habitat impact.

Alternative 4
Similar to Alternative 3, a limited access program would be established in Area 1 (1A+1B) upon the implementation of Amendment 1. A moratorium on permits (described below) would be implemented in Areas 2/3 in conjunction with a controlled access program. Once the trigger specified below is reached in Areas 2/3, the limited access program described below for Areas 2/3 would become effective at the start of the following fishing year. This alternative also proposes to establish a seasonal purse seine/fixed gear only area in Area 1A east of 69°.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program. However, a seasonal gear restriction could cause a shift in midwater trawling effort out of GOM on to GB during June-September. It is not certain that this would happen, and if it did, the only areas where increased midwater trawling could impact benthic EFH are areas that have been closed to mobile, bottom-tending gear. Open access areas that are affected by bottom trawls and dredges, which are used to a much greater degree than midwater trawls and are fished in continuous contact with the bottom, are not vulnerable to occasional contact by midwater trawls. There is also no reason to believe that closed areas on GB are any more vulnerable to occasional bottom contact by midwater trawls than closed areas in the GOM. This alternative therefore would have no adverse habitat impact.

Alternative 5
This alternative was developed based on a proposal submitted by the East Coast Pelagic Association. It proposes to establish limited access programs in Area 1 and Areas 2/3 as well as an Historic Inshore Priority Permit for Area 1A, which would further restrict access to Area 1A when 50% of the TAC is utilized in that area. The unique elements of this alternative include:
Limited Access Directed Fishery Permits for Area 1 (Category A) would grant qualifying vessels access to all herring management areas. Vessels that qualify to fish in Area 1 would not be required to qualify to fish in Areas 2/3, as their qualification into Area 1 would grant them access to all areas.
Qualification criteria are based on consecutive twelve-month periods instead of calendar years (This is also true for the Area 2/3 qualification criteria included in Alternative 2). Vessels that qualify for the proposed Historic Inshore Priority Permit would be the only vessels allowed to fish in Area 1A for the remainder of the fishing year once 50% of the Area 1A TAC is projected to be reached.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program.

Alternative 6
This alternative would implement a more restrictive limited access program in Area 1 (that utilizes the September 16, 1999 control date) and a less restrictive limited access program in Areas 2/3. It also proposes to establish a seasonal purse seine/fixed gear only area in Area 1A east of 69°.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program. However, a seasonal gear restriction could cause a shift in midwater trawling effort out of GOM on to GB during June-September. It is not certain that this would happen, and if it did, the only areas where increased midwater trawling could impact benthic EFH are areas that have been closed to mobile, bottom-tending

gear. Open access areas that are affected by bottom trawls and dredges, which are used to a much greater degree than midwater trawls and are fished in continuous contact with the bottom, are not vulnerable to occasional contact by midwater trawls. There is also no reason to believe that closed areas on GB are any more vulnerable to occasional bottom contact by midwater trawls than closed areas in the GOM. This alternative therefore would have no adverse habitat impact.

Alternative 7
This is the most restrictive alternative under consideration and bounds the range of alternatives. Similar to Alternative 6, this alternative would implement a more restrictive limited access program in Area 1 (that utilizes the September 16, 1999 control date) and a less restrictive limited access program in Areas 2/3. However, this alternative also proposes to establish all of Area 1A as a seasonal purse seine and fixed gear-only area.

None of the limited access measures under consideration in this amendment would affect the amount of total removals from the fishery or the total amount and spatial distribution of fishing activity, so there would be no direct or indirect adverse habitat impacts of any limited access program. However, a seasonal gear restriction could cause a shift in midwater trawling effort out of GOM on to GB during June-September. It is not certain that this would happen, and if it did, the only areas where increased midwater trawling could impact benthic EFH are areas that have been closed to mobile, bottom-tending gear. Open access areas that are affected by bottom trawls and dredges, which are used to a much greater degree than midwater trawls and are fished in continuous contact with the bottom, are not vulnerable to occasional contact by midwater trawls. There is also no reason to believe that closed areas on GB are any more vulnerable to occasional bottom contact by midwater trawls than closed areas in the GOM. This alternative therefore would have no adverse habitat impact.

8.3.4 Impacts of Other Proposed Management Measures on Physical Environment and EFH

This section discusses the impacts of other proposed management measures on the physical environment and EFH. The management measures discussed in this section were identified in the Amendment 1 DSEIS as independent management measures, which have little to no interaction effects and could be combined with the final management alternative in any way. Unless otherwise specified below, the "no action" alternative for each of these measures maintains status quo conditions in the fishery and would not be expected to have any additional impact on protected resources. The no action alternative for these measures is discussed in Section 5.1 of this document.

With regards to other measures proposed in Amendment 1 (in addition to the limited access program), none are expected to impact habitat and EFH in a manner that is more than minimal or more than temporary in nature. Additional discussion is provided below.

VMS Requirements and Vessel Upgrade Restrictions (Sections 4.1.4.3 and 4.1.4.2 respectively)

VMS Requirements – Proposed measures to modify VMS requirements are administrative in nature and would not have any habitat impacts.

Vessel Upgrade Restrictions – Vessel upgrade measures would limit the size and horsepower of limited access vessels in the fishery and would not have any habitat impacts.

Open-Access Incidental Catch Permit and Possession Limit (Section 4.2)

This proposed management measure is not expected to affect habitat because it will not affect the amount of fishing by vessels that are already allowed to land up to 2,000 lbs of herring per week as an incidental catch. Additional catch incurred under a 3 mt possession limit is assumed to be part of normal fishing operations and is intended to reduce regulatory discarding. Although many of these vessels use bottom trawls and, therefore, the incidental catch of herring does affect benthic EFH for other species, this amendment has no authority to regulate use of bottom trawls to catch herring. Further, the effects of bottom trawling on EFH have already been minimized by the HCAs, reductions in DAS, etc. established in Amendment 13 and subsequent FW adjustments.

Adjustments to Management Area Boundaries (Section 4.3)

This measure could affect area-specific TAC allocations and cause some minor shifts in fishing effort in the herring fishery, but any adverse habitat effects associated with the fishery will continue to be minimal and/or temporary. TAC allocations and their associated impacts will continue to be assessed through the fishery specification process.

Proposed MSY Proxy (Section 4.5)

This measure would limit removals from the resource relative to a proxy MSY estimate of 220,000 mt, versus 317,000 mt under the No Action alternative. By limiting total harvest relative to the lower MSY, the amount of fishing activity and bottom contact caused by midwater trawls and purse seines will remain about the same as it is currently, thus any adverse habitat impacts relating to the use of these two gears will continue to be minimal and/or temporary in nature. Even if harvest increases above its current level, however, the amount of bottom contact resulting from the use of gear used in the directed herring fishery would still be negligible compared to bottom contact by bottom trawls and dredges used in other fisheries.

Measures to Determine the Distribution of TACs (Section 4.6)

This measure affects the process used to allocate total allowable catches among management areas and seasons, subject to MSY. It therefore could affect the spatial and temporal distribution of fishing activity, but any adverse impacts to habitat continue to be minimal and/or temporary due to the low frequency and intensity of the contact with the bottom and because the disturbance of benthic habitats caused by mobile, bottom-tending gears (bottom trawls and dredges) is much greater.

Adjustments to the Timing of the Specification Process (Section 4.7)

This measure is administrative in nature. Therefore, there are no habitat impacts associated with this measure.

Research Set-Aside Process (Section 4.8)

Implementation of TAC set-asides for research is largely administrative and will not affect fishing activity in any measurable way. Any adverse habitat effects associated with the fishery will continue to be minimal and/or temporary.

Measures to Address Fixed Gear Fisheries (Section 4.9)

These measures would set aside a small portion of the Area 1A TAC for fixed gear in inshore waters of eastern Maine and exclude catches from this sector of the fishery from the calculation of the Area 1A TAC. It would not have any habitat impacts in federal waters of the Northeast region.

Measures to Address Bycatch (Section 4.10)

Measures to address bycatch were separated from Amendment 1 and submitted in February 2006 as Framework 43 to the Northeast Multispecies FMP. The Framework 43 document should be referenced for additional information and analyses of impacts.

Measures to Modify the Regulatory Definition of Midwater Trawl Gear (Section 4.11)

One of the independent management measures included in the Proposed Action that could have a positive habitat impact is a change in the regulatory definition of a midwater trawl. Language added to the existing definition is intended to increase its enforceability and effectiveness in preventing bottom contact by this gear.

Midwater trawl gear means trawl gear that is designed to fish for, is capable of fishing for, or is being used to fish for pelagic species, no portion of which is designed to be or is operated in contact with the bottom at any time. *The gear may not include discs, bobbins, or rollers on its footrope or chafing gear as part of the net.* (The proposed change is in italics).

While the overall impact to benthic EFH for Atlantic herring or for other species would be positive if a significant amount of bottom contact occurred as a result of herring fishing by midwater trawl vessels, it has been determined that the habitat impacts of this gear do not need to be minimized, based upon the Gear Effects Evaluation (see Appendix VI, Volume II). Moreover, EFH for herring larvae, juvenile and adults is pelagic, and would experience no impacts, positive or negative, if the definition of midwater trawl gear were modified. Bottom habitats occupied by benthic life stages of other managed species in the Habitat Closed Areas (HCAs), which are closed to all mobile, bottom-tending gears, but open to herring midwater trawlers, may benefit if bottom contact by midwater trawls is reduced, but the benefits would probably be insignificant, given the very limited bottom contact made by the gear.

Additional Measures That Can Be Implemented Through a Framework Adjustment to the Herring FMP (Section 4.12)

This action simply identifies management measures that can be implemented through a framework adjustment to the Herring FMP in the future, or the fishery specification process in some cases, whichever is most expeditious. The action proposed in this amendment relative to the measures that can be implemented through a framework adjustment is not expected to produce any impacts on the physical environment and/or EFH. Impacts associated with specific measures that may be implemented in the future through this process will be analyzed in accordance with applicable law as part of the framework adjustment and/or specification process.

Summary

In summary, the Proposed Action does not adversely impact EFH. The Gear Effects Evaluation (Appendix VI, Volume II) concluded that there are potential adverse habitat impacts associated with the use of midwater trawls and purse seines, but that they are minimal and/or temporary in nature. Under the Proposed Action, they would continue to be minimal and/or temporary and therefore not require minimization.

8.3.5 EFH Assessment

This essential fish habitat (EFH) assessment is provided pursuant to 50 CFR 600.920(e) of the EFH Final Rule to initiate EFH consultation with the National Marine Fisheries Service.

8.3.5.1 Description of Action

The primary purpose of this amendment is to modify the management program for the Atlantic herring fishery by:

1. Implementing limited access in the herring fishery, as the Council committed to do shortly after developing the Herring FMP in 1999;
2. Implementing management measures to address growing concerns about localized depletion of the inshore Gulf of Maine stock as well as the importance of herring as a forage species; and
3. Incorporating new stock assessment information as appropriate.

Overall, Amendment 1 to the Atlantic Herring FMP is needed to improve resource conservation, address new scientific information to the extent possible, minimize the potential for excess harvesting capacity in the fishery, and provide a platform to promote long-term economic stability for harvesters, processors, and fishing communities. This amendment is designed to meet all the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (M-S Act), as well as other applicable laws, for the Atlantic herring fishery.

In general, the activity described by this Proposed Action – fishing for Atlantic herring – occurs off the New England and Mid-Atlantic coasts within the U.S. EEZ. Thus, the range of this activity occurs across the designated EFH of all species managed by the New England and Mid-Atlantic Fishery Management Councils. EFH designated for species managed under the Secretarial Highly Migratory Species FMPs are not affected by this action, nor is any EFH designated for species managed by the South Atlantic Council, since all of the relevant species are pelagic and not affected by benthic habitat impacts.

The Proposed Action is described in Section 4.0 and includes the following management measures:

- Limited access program for all management areas in the Atlantic herring fishery; limited access permit provisions; open access incidental catch permit and 3 mt possession limit for vessels that do not qualify for any limited access permits;
- Adjustments to herring management area boundaries;
- Establishment of a seasonal purse seine/fixed gear-only area – all of Area 1A from June – September of each fishing year;
- Specification of a proxy for maximum sustainable yield (220,000 mt);
- Adjustments to the herring fishery specification process, including a more flexible process for determining the distribution of TACs, a process for multi-year specifications (three fishing years); and a process for establishing TAC set-asides for research;
- Measures to address fixed gear fisheries;
- Changes to the regulatory definition of midwater trawl gear; and
- Addition of measures that can be implemented in the future through a framework adjustment to the Herring FMP.

Analysis of the impacts of the Proposed Action on the Physical Environment and EFH is provided in Section 8.3 of this document.

8.3.5.2 Assessing Potential Adverse Impacts

The Gear Effects Analysis (Appendix VI, Volume II) of the FSEIS concludes that the two gear types used in the directed Atlantic herring fishery – midwater trawls and purse seines – do occasionally contact the seafloor and therefore have the potential to adversely impact benthic habitats which serve as substrate for Atlantic herring eggs and as EFH for benthic life stages of a number of other federally-managed species in the Northeast region. However, after reviewing all the available information, if there are adverse impacts on EFH, they are minimal and/or temporary and, pursuant to MSA, do not need to be minimized. This conclusion was based primarily on two facts: 1) bottom contact by these two gears only happens occasionally, and 2) most areas where these two gears are used are subject to much more intensive bottom disturbance by mobile, bottom-tending gears used in other fisheries (bottom trawls and dredges). The only areas of potential concern would be the Habitat Closed Areas that were established in 2005 since they are closed to mobile, bottom-tending gears, but not to midwater trawls and purse seines.

The habitat impacts analysis (Section 8.3) concluded that none of the management measures included in the Proposed Action would have any adverse impact on EFH for Atlantic herring, or on EFH for any other federally-managed species in the Northeast region. The only two measures that could have any impact on EFH are the seasonal prohibition on midwater trawling in Area 1A, and the change in the regulatory definition of a midwater trawl.

The Area 1A gear prohibition could cause a shift in midwater trawling effort from the inner Gulf of Maine on to Georges Bank during June-September. However, if this does occur, it is not expected to adversely impact EFH in more than a minimal and/or temporary manner. This conclusion is based on information in the Gear Effects Evaluation (Appendix VI, Volume II) indicating that bottom contact by midwater trawls occurs only occasionally, and that the use of bottom trawls and dredges, which contact the bottom continuously, far exceeds the use of herring midwater trawls. Bottom habitats in open access areas where the use of midwater trawls could increase are already subjected to disturbance by bottom trawls and/or dredges, so any additional disturbance of bottom habitats caused by gears used in the directed herring fishery would be negligible. Bottom habitats in areas that are closed to bottom trawls and dredges are more susceptible to disturbance, but there is no reason to believe that closed areas on GB – where midwater trawling may increase – are any more vulnerable to bottom contact than closed areas in the GOM – where midwater trawling would decrease.

The existing regulatory definition of a midwater trawl prohibits the use of this gear in contact with the bottom. The proposed change in the definition adds language that would make it illegal to have discs, bobbins, or rollers on the footrope of the net, or chafing gear anywhere on the net. These changes make the definition more enforceable and could reduce the amount of bottom contact by the gear. If this measure has any impact on benthic EFH, it would therefore be positive.

8.3.5.3 Minimizing or Mitigating Adverse Impacts

Section 8.3 (Impacts on the Physical Environment and EFH) demonstrates that the Proposed Action would not have any adverse impact on EFH. Therefore, no measures to mitigate or minimize adverse effects of the Proposed Action on EFH are necessary.

8.3.5.4 Conclusions

The only component of the Proposed Action that has the potential to adversely impact EFH is the seasonal prohibition on the use of midwater trawls in Management Area 1A (inner portion of the GOM). This measure may shift midwater trawling effort out of the GOM on to Georges Bank during June-September. However, it is not clear that an increase in effort will occur as a result of this shift or that the areas on Georges Bank where effort would increase are any more vulnerable to the impacts of midwater trawl gear than the areas in the GOM where effort would be reduced. Therefore no adverse impacts on EFH are expected from this action and no EFH consultation is required.

8.4 IMPACTS ON FISHERY-RELATED BUSINESSES AND COMMUNITIES (FISHERY IMPACTS)

This section discusses the impacts of the Proposed Action and management alternatives/independent measures that were considered in Amendment 1 on fishery-related businesses and communities. "Fishery-related businesses and communities" is one of the valued ecosystem components (VECs) that was identified specifically for Amendment 1. **Analysis of the impacts of the proposed measures on this VEC represents the economic and social impact analyses for Amendment 1.** To the extent possible, the analyses in the following subsections discuss the short-term and long-term impacts of the Amendment 1 measures on fishery-related businesses and communities in the context of revenues from herring and other fishery resources, opportunities in the fishery, allocation of the resource, impacts related to regulatory discarding, market conditions, effects on the lobster and mackerel fisheries, and the importance of Atlantic herring to fishery-dependent communities.

The management action proposed in this amendment includes: a limited access program, open access incidental catch permit, and limited access permit provisions; a seasonal purse seine/fixed gear-only area in the inshore Gulf of Maine; establishment of an MSY proxy; a TAC set-aside process for research; adjustments to the herring fishery specification process; adjustments to herring management area boundaries; measures to address fixed gear fisheries; and changes to the regulatory definition of midwater trawl gear. While the impacts of all proposed management measures are addressed in this section, the limited access program and purse seine/fixed gear-only area are the primary focus of the following analysis. Management measures that are more administrative in nature and/or relate to the fishery specification process are expected to have less significant and less direct impacts on fishery-related businesses and communities, but these impacts are still discussed in the following subsections.

The fishery-related businesses and communities background section of this document characterizes what is usually referred to as the "Affected Human Environment" (AHE) and provides a detailed description of the different participants and other stakeholders associated with this fishery; this background information should be referenced to provide perspective for understanding the impacts described below (Section 7.4). While the AHE specifically describes many of the different players (plants, dealers, vessels, communities) considered in this assessment, due to confidentiality issues, this assessment addresses issues in more general terms, focusing on impacts on states, regions, gear types, etc.

Social impacts are the "consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs and generally cope as members of society. The term includes cultural impacts involving changes to the norms, values, and beliefs that guide and rationalize their cognition of themselves and their society" (Buck 1995).