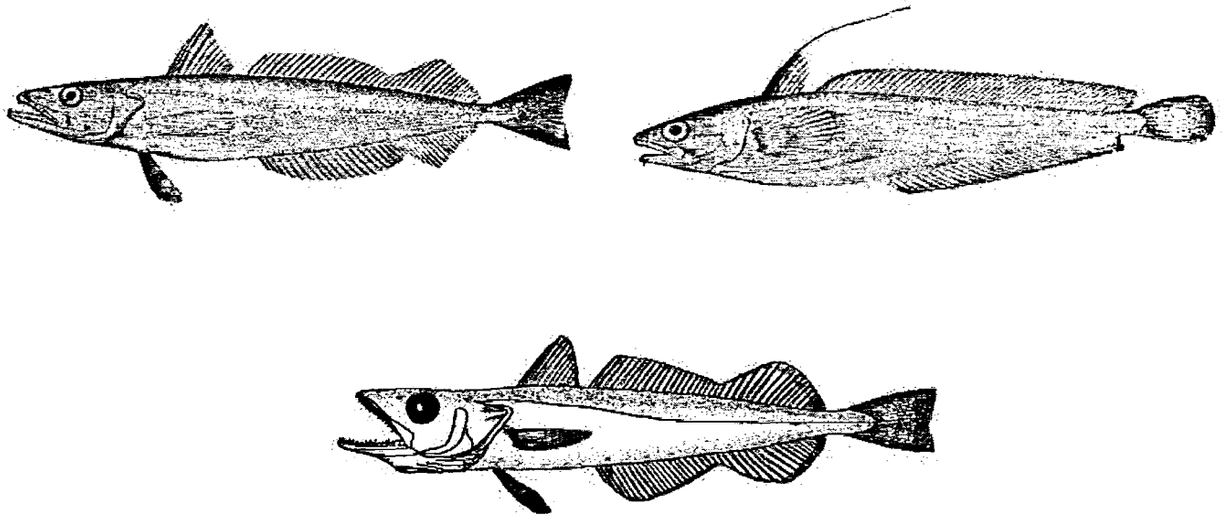
FRAMEWORK ADJUSTMENT 32

to the

NORTHEAST MULTISPECIES FISHERY MANAGEMENT PLAN

(for Whiting, Red Hake, & Offshore Hake)

To modify the whiting mesh size/possession limit enrollment program and to allow the use of a net strengthener with 2.5-inch mesh



Prepared by the New England Fishery Management Council

in consultation with

National Marine Fisheries Service
Mid-Atlantic Fishery Management Council

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Submitted by NEFMC:	December 20, 1999

EXECUTIVE SUMMARY

The New England Fishery Management Council is taking action to modify measures in the whiting, red hake, and offshore hake (small mesh multispecies) fishery management program, submitted in Amendment 12 to the Northeast Multispecies FMP.

The primary objective of this framework adjustment is to minimize regulatory discards resulting from whiting/offshore hake possession limits. The Council intends for alternatives considered in this framework adjustment to reduce the overall catch and discard of whiting in small mesh and mixed trawl fisheries, particularly in the southern New England and Mid-Atlantic regions. This objective will be achieved by:

(A) modifying the mesh size/possession limit enrollment program to allow vessels participating in small mesh and mixed trawl fisheries to change mesh sizes more readily as the mix of available target species changes

(B) providing vessels fishing for loligo squid with an incentive to switch from squid mesh (1-7/8-inch) to a larger mesh size (2.5-inch with a strengthener).

The action proposed in this framework adjustment specifically addresses National Standards 1 and 9 (optimum yield and bycatch reduction).

The Council is proposing the following two adjustments in this action:

(1) **Mesh Size/Possession Limit Enrollment**: The Council is proposing to eliminate the whiting mesh size/possession limit enrollment program implemented in Amendment 12 to the Multispecies FMP. Instead, the Council is proposing that a vessel's whiting/offshore hake possession limit will be determined by the smallest codend mesh the vessel has on board (either stowed or available for fishing) OR the smallest mesh on board not incorporated into the body of a fully-constructed net, whichever is smaller.

(2) **Net Strengtheners with 2.5-Inch Mesh**: The Council is proposing to allow the use of a net strengthener when fishing for small mesh multispecies with 2.5-inch mesh as long as the strengthener is consistent with the following specifications:

- The mesh of the outside bag must be at least six inches;
- The circumference of the inside bag must be equal to or smaller than the circumference of the outside bag;
- The inner bag shall not be more than 2 feet longer than the outside bag;
- The configurations of both the inside and outside bags must be the same (i.e. both must be either square or diamond).

The biological, economic, and social impacts of the measures proposed in this framework adjustment are analyzed in this framework document. For the most part, the above modifications to whiting management measures are likely to have an insignificant adverse impact on whiting stock recovery during Years 1-3. These modifications would not apply to the Year 4 default measure, which is still predicted to achieve the objectives of Amendment 12. The majority of the benefits resulting from the measures proposed in this framework are in the form of reduced administrative, compliance, and enforcement costs, and increased flexibility for the small mesh fishing fleet.

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1.0 INTRODUCTION AND BACKGROUND

1.1 AMENDMENT 12 TO THE NORTHEAST MULTISPECIES FMP

In February 1999, the New England Fishery Management Council submitted Amendment 12 to the Northeast Multispecies Fishery Management Plan (FMP) to eliminate overfishing of silver hake (whiting) and red hake (ling) and to rebuild the resources within a ten-year period in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). This amendment also incorporated offshore hake into the multispecies management unit to provide basic protection for the species, improve the information database, speed the recovery of silver hake stocks, and allow the development of a sustainable fishery. The whiting rebuilding program relies primarily on increases in mesh sizes combined with whiting/offshore hake possession limits.

Scheduled to become effective on or near January 1, 2000, Amendment 12 includes the following provisions:

- new overfishing definitions for two stocks of silver hake, two stocks of red hake, and offshore hake in accordance with the SFA;
- a specification of Optimum Yield (OY);
- a recommendation for whiting stock identification for management purposes, only if it becomes necessary to delineate whiting stocks for management purposes in the future;
- new measures for the Cultivator Shoal Whiting Fishery:
    (1) a modification to the Cultivator Shoal Whiting Fishery season,
    (2) adjustments to the participation requirements for the Cultivator Shoal Whiting Fishery, and
    (3) a whiting/offshore hake possession limit of 30,000 pounds;
- management measures for all areas excluding the Cultivator Shoal Whiting Fishery based on mesh size/possession limit categories;
- a codend specification for vessels participating in small mesh multispecies fisheries;
- restrictions on the use of net strengtheners in small mesh multispecies fisheries;
- restrictions on the transfer of small mesh multispecies at sea;
- the addition of measures to the list of measures that may be implemented by a framework adjustment to the Northeast Multispecies FMP, including a Whiting DAS program and a whiting Total Allowable Catch (TAC), as long as both are accompanied by a full set of public hearings (similar to those conducted in accordance with NEPA);
- designation of Essential Fish Habitat (EFH) for offshore hake;
- the establishment of a Whiting Monitoring Committee (WMC) to annually monitor the progress of the management program and recommend adjustments, as necessary, to ensure that the plan meets its objectives; and

- a default measure to be implemented at the beginning of Year 4 if the management measures (and annual adjustments) do not meet the fishing mortality objectives of the management plan.

The regulations pertaining to Amendment 12 should become effective in January 2000.

1.2 FRAMEWORK 32 BACKGROUND

In a letter dated June 3, 1999 (Attachment A), during the comment period for Amendment 12, the New England Fishery Management Council requested that the National Marine Fisheries Service (NMFS) implement a whiting mesh size/possession limit call-in enrollment program as well as a provision to allow the use of an outside net strengthener when fishing with 2.5-inch mesh. The Council did not believe that these recommendations were substantive changes to the management measures proposed in Amendment 12. Instead, the Council considered them to be technical and administrative adjustments to ensure that the management program for small mesh multispecies would be both consistent with the National Standards of the MSFCMA and effective in meeting its conservation objectives. To minimize the time and effort necessary to make these adjustments to the whiting management program, the Council requested that NMFS consider these recommendations and take appropriate action prior to publishing the final rule for Amendment 12.

NMFS responded to the Council's request in a letter dated August 2, 1999 (Attachment B). NMFS did not endorse the Council's suggestion to implement a call-in enrollment program as a technical adjustment to the measures proposed in Amendment 12 for several reasons. First, NMFS speculated that a call-in program without any time constraints could reduce the enforceability of whiting management measures and ultimately undermine the effectiveness of the measures themselves. Because of this, NMFS determined that a call-in enrollment program would be a substantive change requiring formal analysis rather than a technical plan adjustment. In addition, NMFS stated that a call-in enrollment program would initially be too difficult to implement and that the agency does not have the resources sufficient to support any additions to the current call-in system for multispecies.

NMFS also did not endorse the Council's request to allow the use of an outside strengthener with 2.5-inch mesh as a technical adjustment to the measures proposed in Amendment 12 because it could change the effectiveness of the minimum 2.5-inch mesh size. Therefore, this change was considered substantive, requiring Whiting Plan Development Team (PDT) analysis and formal Council action.

At its July 1999 meeting, the Council voted to initiate a framework adjustment to the Multispecies FMP to implement these whiting plan adjustments if NMFS did not agree to do so in the Amendment 12 final rule without formal Council action. Therefore, this framework adjustment includes measures to adjust the mesh size/possession limit enrollment program and to allow the use of a net strengthener when fishing for small mesh multispecies with 2.5-inch mesh.

2.0 PURPOSE

2.1 NEED FOR ADJUSTMENT

2.1.1 Mesh Size/Possession Limit Enrollment Program

The current mesh size/possession limit enrollment program (approved in Amendment 12) requires vessels to call NMFS and obtain a letter of authorization from the Regional Administrator to fish in either the 2.5-inch or 3-inch mesh category for a minimum of 30 consecutive days. A vessel may exit the chosen category after a minimum of seven days, but it is then restricted to the whiting/offshore hake possession limit associated with mesh smaller than 2.5-inches (3,500 pounds) for the remainder of the original 30 days. Any vessel that does not enroll in either the 2.5-inch or 3-inch mesh category is assumed to be fishing with mesh smaller than 2.5-inches and is limited to a 3,500-pound whiting/offshore hake possession limit.

This mesh size/possession limit enrollment program is structured similarly to the enrollment program for the Cultivator Shoal Whiting Fishery. The Council believes that it was structured this way for convenience purposes in developing and submitting Amendment 12 in a timely fashion and argues that a more flexible enrollment system could indirectly promote whiting stock recovery by decreasing discards.

The Amendment 12 enrollment system may be too restrictive on vessels' flexibility and could produce unintended, negative impacts on whiting stock recovery. In some instances, the proposed system could force vessels to remain fishing with an inappropriate mesh size as the mix of available species changes, which occurs often in southern New England and Mid-Atlantic mixed trawl fisheries. For example, if a vessel enrolls in the 2.5-inch mesh category for 30 days, it cannot switch to the 3-inch mesh category if it encounters increased concentrations of whiting during that 30-day period (the vessel can use 3-inch mesh while enrolled in the 2.5-inch category, but it still would be limited to a 7,500-pound possession limit and therefore would have no economic incentive to do so). If this vessel were to withdraw from the 2.5-inch mesh category, it would be limited to 3,500 pounds of whiting until its 30-day enrollment period expired. As another example, a vessel using squid mesh (1-7/8-inch) may want to increase its mesh size on its next trip due to increased concentrations of whiting in the area it fishes. This vessel would be required to wait until it receives a letter of authorization from the Regional Office in the mail, which could take up to several days or a week. In both examples described above, the lack of flexibility in changing mesh categories could result in an increased amount of discarding of whiting.

While many vessels are likely to remain in the same mesh size/possession limit category for most of the year, some vessels will switch mesh sizes to more effectively target the seasonally available species in the mixed trawl fishery. The Council wants to provide the incentive for these vessels to fish for whiting and other small mesh species with the most appropriate gear.

2.1.2 Net Strengtheners with 2.5-inch Mesh

The whiting/offshore hake possession limit for vessels fishing in the 2.5-inch mesh category is 7,500 pounds, and the whiting/offshore hake possession limit for vessels fishing with mesh smaller than 2.5-inches is 3,500 pounds (Amendment 12). Currently, according to Amendment

12 provisions, only vessels fishing for small mesh multispecies with mesh smaller than 2.5-inches are allowed to use net strengtheners, as long as the strengtheners are compliant with the provisions specific to the net in use (loligo squid nets, for example).

Squid is a much more profitable species than whiting. Testimony from the industry suggests that vessels may not catch enough squid with 2.5-inch mesh to make their trips profitable, and they will not forego squid profits in order to keep 7,500 pounds of whiting with 2.5-inch mesh. If this is the case, then the 7,500-pound possession limit may generate an excessive amount of regulatory discards as more vessels will opt to fish with squid mesh (less than 2.5-inches) and discard any whiting/offshore hake above 3,500 pounds. This counters one of the objectives of Amendment 12, which is to provide vessels with the incentive to fish for and retain whiting with larger mesh. Allowing the use of a net strengthener with 2.5-inch mesh is intended to provide the incentive for squid fishermen to use an effective mesh larger than 1-7/8-inches when fishing for whiting in combination with loligo squid.

2.2 OBJECTIVES

The primary objective of this framework adjustment is to minimize regulatory discards resulting from the whiting/offshore hake possession limits implemented through Amendment 12. The Council intends for alternatives considered in this framework adjustment to reduce the overall catch and discard of whiting in small mesh and mixed trawl fisheries, particularly in the southern New England and Mid-Atlantic regions. This objective will be achieved by:

(1) modifying the mesh size/possession limit enrollment program to allow vessels participating in small mesh and mixed trawl fisheries to change mesh sizes more readily as the mix of available target species changes, and

(2) providing vessels fishing for loligo squid with an incentive to switch from squid mesh (1-7/8-inch) to a larger mesh size (2.5-inch with a strengthener).

The action proposed in this framework adjustment specifically addresses National Standards 1 and 9 (optimum yield and bycatch/discards).

This framework action also is intended to achieve secondary objectives, most of which relate to the primary objective, including:

- improving flexibility for the fishing fleet
- acquiring more timely and accurate fishing effort information, which is crucial to effective plan monitoring and adjusting
- other objectives consistent with all fishery management plans, such as maximizing the enforceability of regulations, minimizing administrative burdens, and minimizing impacts on habitat, marine mammals, and endangered and threatened species.

2.3 OPPORTUNITY FOR PUBLIC COMMENT

As previously indicated in Section 1.2, at its July 13-15, 1999 meeting, the Council voted to initiate a framework adjustment to the Multispecies FMP to address whiting management adjustments if NMFS did not endorse the Council's request to consider the adjustments as technical changes and publish the changes as part of the Amendment 12 final rule. Upon receiving NMFS' August 2, 1999 response, the Council began to develop Framework 32 to the Multispecies FMP.

The schedule for meetings for which public notice included discussion of specific alternatives for this framework adjustment is as follows:

DATE	MEETING	AGENDA/DISCUSSION
9/8/99	Whiting Committee	• Develop alternatives for analysis
9/21-23/99	Council	• Initial meeting for Framework 32: finalize alternatives for analysis
10/21/99	Whiting Advisory Panel	• Review framework alternatives and analyses and provide recommendations for Committee consideration
10/26/99	Enforcement Committee	• Review framework alternatives and provide recommendations for Committee consideration
10/28/99	Whiting Committee	• Review analyses and recommendations and develop preferred alternatives for Council consideration
11/16-18/99	Council	• Final meeting for Framework 32: finalize framework measures

The Council's mailing lists for meeting notices contain more than 150 and 1,600 interested parties for whiting and Council meetings, respectively. Notices are mailed at least two weeks in advance for Committee and Advisory Panel meetings and three weeks in advance for Council meetings. Council and Committee meeting notices are also published in the *Federal Register* three weeks prior to the meeting. Agendas and meeting summaries for the above meetings are available from the Council office.

3.0 PROPOSED ACTION AND ALTERNATIVES

The Council proposes the management adjustments described in Section 3.1 for implementation through this framework adjustment. Section 3.2 contains a description of the alternatives considered and rejected during the framework development process, including the No Action alternative, as well as a discussion of the reasons for rejection.

3.1 PROPOSED ACTION

The Council is proposing to modify the whiting mesh size/possession limit enrollment program and to allow the use of an outside net strengthener when fishing with 2.5-inch mesh. These two adjustments are intended to achieve the objectives described in Section 2.2 of this framework document.

3.1.1 Mesh Size/Possession Limit Enrollment Program

The Council is proposing to eliminate the whiting mesh size/possession limit enrollment program for vessels fishing in either the 2.5-inch or 3-inch mesh categories, submitted as part of Amendment 12. Instead, the Council proposes that:

> A vessel's whiting/offshore hake possession limit will be determined by the smallest codend mesh the vessel has on board (either stowed or available for fishing) OR the smallest mesh on board not incorporated into the body of a fully-constructed net, whichever is smaller. No enrollment program is necessary with this option.

Discussion and Rationale: The Council prefers this option because it is the simplest and the easiest to enforce of the alternatives under consideration, and it minimizes costs to both the administrative agency and participating fishermen more than the other alternatives because it eliminates the need for any type of mesh size/possession limit enrollment program. An analysis of the potential impacts of this action relative to the objectives of this framework is contained in Section 4.1 of this document. Additional economic and social impact analyses are contained in Sections 4.2 and 4.3 respectively.

This option is intended to allow vessels to use mesh smaller than their codend mesh within their net bodies and extensions. Only the size of the smallest codend mesh or other pieces of mesh on board would determine the vessel's whiting/offshore hake possession limit, not the size of the mesh forward of the codend in fully-constructed nets. In almost all traditional small mesh fisheries, the net extensions and bodies consist of mesh smaller than that of the codend, especially if the codend is 2.5- or 3-inches. The industry has noted on several occasions that mesh larger than 2-inches in the net extensions causes major "plugging" problems because whiting charge the net, which could leave fishermen with a whiting stuck in every mesh of the extension. It is extremely time-consuming and difficult to pick whiting out of the body of the net once it is plugged. As a result, most fishermen use mesh 2-inches or smaller in the body of their nets and attach a larger mesh codend, the size of which depends on the target species.

This option should allow enforcement agents to easily determine under which possession limit a vessel should be fishing. Small mesh codends are specifically defined in Amendment 12 as the first 50 meshes or 100 bars counted from the terminus of the net for vessels 60-feet or smaller and the first 100 meshes or 200 bars counted from the terminus of the net for vessels greater than 60-feet in length. Any other mesh on board, unless it is incorporated into the body of a fully constructed net, will "count" towards determining a vessel's whiting/offshore hake possession limit. For example, if the smallest codend a vessel has on board is 2.5-inches and the vessel has pieces of 2-inch net repair material on board (not as part of a complete net), then the vessel would be limited to the whiting/offshore hake possession limit associated with mesh smaller than 2.5-inches (3,500 pounds). In this same example, if the vessel's smallest codend mesh and net repair materials are both 2.5-inches, then the vessel would fish under the possession limit associated with 2.5-inch mesh (7,500 pounds).

A similar mesh provision already exists within the requirements for participation in the Cultivator Shoal Whiting Fishery. While Cultivator vessels must use a minimum mesh size of 3-inches in their codends, their net extensions and bodies can be constructed with smaller-sized mesh to avoid "plugging" problems. Because of clear specifications, enforcement agents are able to easily determine which part of the net is the codend and can measure the mesh size to ensure that the vessel is in compliance with the minimum mesh requirements for participating in the Cultivator Shoal Whiting Fishery. (While Cultivator codends are currently specified as the first 160 meshes counted from the terminus of the net, Amendment 12 regulations, when implemented, will modify the Cultivator codend specifications and make them consistent with those for all small mesh fisheries.)

3.1.2 Net Strengtheners with 2.5-inch Mesh

The Council proposes that when fishing with 2.5-inch mesh (inside bag) under a 7,500-pound whiting/offshore hake possession limit, vessels could use a net strengthener (outside bag) with the following specifications-

- The mesh of the outside bag must be at least six inches;
- The circumference of the inside bag must be equal to or smaller than the circumference of the outside bag;
- The inner bag shall not be more than 2 feet longer than the outside bag;
- The configurations of both the inside and outside bags must be the same (i.e. both must be either square or diamond).

Discussion and Rationale: This option was preferred by the Whiting Committee, the Enforcement Committee, and some of the members of the Whiting Advisory Panel. The Council selected this option over similar options because 6-inch mesh is more readily available to the fleet than is 5-inch or 10-inch mesh. In addition, enforcement agents indicated that familiarity with 6-inch mesh will improve the enforceability of this alternative. An analysis of the potential impacts of this action relative to the objectives of this framework is contained in Section 4.1 of this document. Additional economic and social impact analyses are contained in Sections 4.2 and 4.3 respectively.

Three options considered by the Council, including the proposed action, were identical except for the minimum mesh requirement on the net strengthener. The provisions for the circumference, length, and composition of the net ensure that strengtheners will not be used as a means to circumvent whiting regulations and/or compromise the effectiveness of whiting conservation measures. These provisions are based on the Mid-Atlantic Fishery Management Council's recently-clarified specifications for net strengtheners used in the loligo squid fishery. The specifications prohibit vessels from using smaller outside bags that could prevent the inside mesh from completely expanding or from modifying the net or the strengthener in a way that prohibits the inside mesh from fishing in the way it is intended to fish.

3.2 ALTERNATIVES CONSIDERED AND REJECTED

3.2.1 Mesh Size/Possession Limit Enrollment Program Options

During the framework development process, the Council considered five alternatives for modifying the mesh size/enrollment program, not including the no action alternative. The proposed action represents Enrollment Option 4. The enrollment options that the Council rejected are described below.

3.2.1.1 Qualitative Comparison of Enrollment Options

Table 1 summarizes the pro's and con's of each enrollment option that the Council considered during the development of this framework adjustment. This table helps to characterize the Council's rationale for selecting the proposed action. It also identifies reasons for rejecting the other alternatives under consideration. Additional discussion of each enrollment option that the Council rejected is included in the following subsections.

Table 1 Qualitative Comparison on Enrollment Options

PROS	CONS
ENROLLMENT OPTION 1: CALL-IN	
+ More flexible than the current enrollment program + Decreases compliance costs for affected vessels + Allows for ease of enforcement by using mesh category ID numbers + Could minimize discards by allowing vessels to switch mesh categories on a trip-by-trip basis + Allows for acquisition of timely information about small mesh fishing effort, which is crucial to effective plan monitoring + Preferred by the industry and the Whiting Committee (until other options were developed)	– Increased burden on administrative agency, particularly Office of Law Enforcement – Office of Law Enforcement has already indicated that it currently does not have the resources to administer such a program – Call-in and enrollment programs usually generate enforcement complications at-sea (due to human error or vessels that try to cheat the system) – Does not eliminate potential discard problem on multi-day trips as vessels could not call-in from sea
ENROLLMENT OPTION 2: STATE ENROLLMENT IN COMBINATION WITH CURRENT SYSTEM	
+ More flexible than the current enrollment program + Gives fishermen an alternative to the federal enrollment option + Could minimize discards if the state enrollment program proves to be more efficient than the current federal program for switching mesh categories + Allows for acquisition of timely information about small mesh fishing effort, which is crucial to effective plan monitoring	– shifts administrative burden from federal administrative agencies to state agencies – some states have indicated an un-willingness to participate because of the burden – could be inconsistent with National Standard 4 if vessels from participating states can more easily switch categories than vessels from non-participating states – does not eliminate potential discard problem on multi-day trips as vessels could not enroll from sea
ENROLLMENT OPTION 3: REDUCE THE MINIMUM REQUIRED TIME PERIODS IN THE CURRENT SYSTEM	
+ More flexible than the current enrollment program + Could minimize discards by allowing vessels more flexibility to switch mesh categories + Amendment 12 program has been approved and will be implemented shortly – the "groundwork" for this option has already been completed	– could be more administratively burdensome than the current program – may not be possible to switch mesh categories on a trip-by-trip basis, depending on administrative limitations – does not eliminate potential discard problem on multi-day trips as vessels could not enroll from sea
ENROLLMENT OPTION 4: POSSESSION LIMIT DETERMINED BY SMALLEST CODEND MESH ON BOARD OR THE SMALLEST MESH NOT INCORPORATED INTO A FULLY-CONSTRUCTED NET	
+ More flexible than the current enrollment program + Simple because NO enrollment program would be required + Easiest to enforce + Minimizes administrative and compliance costs more than Options 1-3 + Could minimize discards by allowing vessels to switch mesh categories on a trip-by-trip basis	– Codend stowage problems at the dock for transient vessels (out of state) and vessels that dock at some larger, more public docks – Added burden of requirement to remove nets from the vessel after one trip and before another – Costs associated with multi-day trips if vessels run into large concentrations of squid and do not have squid mesh on board

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ENROLLMENT OPTION 5: POSSESSION LIMIT DETERMINED BY SMALLEST MESH AVAILABLE FOR FISHING	
+ More flexible than the current enrollment program + Simple because NO enrollment program would be required + Minimizes administrative and compliance costs more than Options 1-3 + Could minimize regulatory discards more than any other option because, even though it would be prohibited, vessels could easily switch codends mid-trip and store those not in use – this would give the vessels the most flexibility to switch mesh according to the mix of available species	– even though it would be prohibited, vessels could easily switch mesh sizes mid-trip, which makes the possession limits "thresholds" and not possession limits – effective enforcement of possession limits at-sea is compromised – effective enforcement of possession limits at the dock is impossible – "fairness" a problem as a vessel could change codends on the last tow of a trip and land as much whiting as a vessel that fished with a larger codend for the entire trip

3.2.1.2 Enrollment Option 1: Call-In

This option proposed a call-in enrollment program for vessels fishing in either the 2.5-inch or 3-inch mesh categories. The call-in program could be incorporated into the current Groundfish DAS call-in, or a separate program could be developed (whichever is easiest for administration and enforcement). For example:

> A vessel could call-in to enroll in either the 2.5-inch or 3-inch mesh category, receive a mesh category ID number associated with the chosen category, and retain that ID number on all trips until the vessel chooses to call-in and either change categories or withdraw (withdrawing defaults the vessel to the possession limit associated with mesh smaller than 2.5-inches (3,500 pounds)). Enforcement officials could obtain the vessel's mesh category ID number and ensure that the vessel is fishing with the appropriate minimum mesh and that the vessel does not possess more whiting/offshore hake than the limit for that mesh size.

Discussion: This option was initially favored by the Whiting Committee, the Whiting Advisory Panel, and the Council. Given current technology, the Council believed that a telephone call-in enrollment system would be less burdensome to administer than the Amendment 12 enrollment program. It would remove the "paper trail" associated with letters of authorization and would establish an active and usable database to monitor vessel activity. It also would help track vessel activity on a real-time basis. A database of mesh size/possession limit call-ins could provide important information on how vessels are catching small mesh multispecies. The lack of current information about both whiting stocks and whiting fisheries, combined with the severity of the proposed Year 4 default measure, make it critical for the Whiting Monitoring Committee to receive as much useful information as possible in a timely manner.

However, much of the administrative burden for a call-in enrollment program falls on the Office of Law Enforcement within the Regional Office of the National Marine Fisheries Service. During the framework development process, NMFS and the Office of Law Enforcement expressed concerns about the start-up costs of implementing a call-in enrollment program and predicted that it would not have either the funds or the manpower to implement such a program at this time. In addition, the Whiting PDT reviewed the alternatives under consideration and

concluded that the administrative and compliance costs associated with this option would likely outweigh the benefits. For these reasons, the Council rejected this option for modifying the mesh size/possession limit enrollment program.

3.2.1.3 Enrollment Option 2: State Enrollment Program

This option proposed an enrollment program administered by the states in combination with the Amendment 12 enrollment program. If they choose to do so, vessels could obtain their authorizations to fish in either the 2.5-inch or 3-inch mesh categories from a participating state office. State offices would issue a written authorization to be carried on-board, which would also be faxed to NMFS Regional Office. If enrolling through a state office is not as efficient or effective, then vessels would still have the option to enroll through the Regional Office according to the Amendment 12 program.

Discussion: The state component of this program was intended to work similarly to the current fluke exemption certification program, administered by Rhode Island and New York. In the fluke Small Mesh Exemption Program, exemption forms are available through the two state offices, or from a NMFS port agent. Once the vessel's form is filled out, it must be signed by an authorized state agent. Fishermen can either mail their forms to the state office and wait to receive the signed form in the mail, or they can visit a state office and have the form authorized the same day. The original exemption form with an authorized signature must be carried on-board the vessel. The state office faxes a copy of the form to NMFS. Rhode Island and New York enroll vessels from any state in this exemption program. For example, if a fisherman from Massachusetts wanted to enroll his vessel and felt that the state offices would be faster than the Regional Office, he could do so through either the state of Rhode Island or New York. Fishermen can enroll and withdraw their vessels from the exemption program as often as they desire.

To avoid inconsistencies with National Standard 4 of the MSFCMA, participating state offices would be required to enroll fishermen from any state. This would prevent a situation in which a fisherman from a participating state could more easily switch mesh categories than a fisherman from a non-participating state. However, this significantly increases the burden on state offices and essentially shifts the enrollment burden from the federal government to state governments. During the framework development process, some state offices indicated that they would not have the manpower or the resources to participate in such a program. It became clear that this option may not provide the fleet with the flexibility they need to switch mesh sizes and avoid discarding. In addition, the Whiting PDT concluded that the administrative and compliance costs associated with this option would likely outweigh the benefits. For these reasons, the Council rejected this option for modifying the mesh size/possession limit enrollment program.

3.2.1.4 Enrollment Option 3: Modification of the Amendment 12 Program

This option proposed a modification to the minimum enrollment time period for the Amendment 12 program. Vessels would still be required to obtain a letter of authorization from the Regional Administrator to fish in either the 2.5-inch or 3-inch mesh categories. However, the minimum enrollment time period and the minimum required time to remain in the chosen category would be decreased from 30 and 7 consecutive days respectively, depending on administrative constraints. For example, vessels could be required to enroll in either the 2.5-inch or 3-inch

mesh category for a minimum of seven consecutive days, but could exit the chosen category after a minimum of three days.

Discussion: This option was most similar to the current (Amendment 12) enrollment program. However, NMFS indicated that this option could substantially increase the administrative burden of the enrollment program. A thirty-day enrollment time period seemed to be the most feasible way to administer the Amendment 12 enrollment program. When reviewing this option relative to the other enrollment options, the Whiting PDT concluded that even though NMFS already approved the Amendment 12 program, the administrative and compliance costs associated with modifying that program according to this option would likely outweigh the benefits, especially when the Council was considering options that would not require the administration of an enrollment program at all. For these reasons, the Council rejected this option for modifying the mesh size/possession limit enrollment program.

3.2.1.5 Enrollment Option 5: Smallest Mesh Available for Fishing

This option proposed that a vessel's whiting/offshore hake possession limit would be determined by the smallest mesh the vessel has available for fishing. No enrollment program would be necessary with this option. The codend stowage requirements would be the same as those currently in the groundfish regulations.

Discussion: This option is identical to proposed action except that meshes stowed according to groundfish regulations are not considered "available for fishing" and would not count in terms of determining the vessels' whiting/offshore hake possession limit for that trip. For example, if the vessel is fishing with three-inch mesh but has smaller mesh stowed properly, then the vessel's whiting/offshore hake possession limit for that trip would be 30,000-pounds.

This option presents obvious enforcement problems. It compromises the ability to enforce whiting/offshore hake possession limits and mesh size categories at-sea and makes dockside enforcement impossible. Dockside enforcement agents would never be able to determine which mesh size a vessel used while fishing for whiting. In addition, this option essentially converts the whiting/offshore hake possession limits to "thresholds." A vessel could fish with mesh smaller than 2.5-inches until it catches 3,500 pounds, and then it could switch to 2.5-inch mesh and catch up to 7,500 pounds of whiting as long as the smaller mesh is stored according to groundfish provisions. The PDT recommended that the Council consider implementing much stricter mesh stowage provisions with this option to discourage vessels from switching mesh sizes mid-trip. Because of the enforcement problems, the Council rejected this option for modifying the mesh size/possession limit enrollment program.

3.2.2 Net Strengthener Options

During the framework development process, the Council considered four alternatives for allowing the use of a net strengthener with 2.5-inch mesh, not including the no action alternative. The proposed action represents Strengthener Option 3. The strengthener options that the Council rejected are described below.

3.2.2.1 Qualitative Comparison of Net Strengthener Options

Table 2 summarizes the pro's and con's of each net strengthener option that the Council considered during the development of this framework adjustment. This table helps to characterize the Council's rationale for selecting the proposed action. It also identifies reasons for rejecting the other alternatives under consideration. Additional discussion of each strengthener option that the Council rejected is included in the following subsections.

Table 2 Qualitative Comparison of Net Strengthener Options

PROS	CONS
STRENGTHENER OPTION 1 – AT LEAST 5-INCHES	
+ Provides incentive for squid fishermen to use an effective mesh size larger than 1-7/8-inches + May reduce regulatory discards depending on how many vessels choose the 2.5-inch mesh category over the smaller mesh category + Many vessels already have nets with a mesh size of 5-inches or more + Strengthener specifications (circumference, length, etc.) improve enforceability and reduce the incentive for vessels to compromise whiting management measures	– Outside mesh of 5-inches very likely to mask the effectiveness of 2.5-inch inside mesh – May increase economic discards if more vessels begin to use net strengtheners and catch larger quantities of smaller fish for which there is a limited market – Conservation benefits of Amendment 12 (Years 1-3) are estimated to be reduced by up to 3.6% in the northern area and 1.9% in the southern area – any compromise in Years 1-3 makes the default measure more likely
STRENGTHENER OPTION 2 – AT LEAST 10-INCHES	
+ Provides incentive for squid fishermen to use an effective mesh size larger than 1-7/8-inches + May reduce regulatory discards depending on how many vessels choose the 2.5-inch mesh category over the smaller mesh category + Outside mesh of 10-inches is less likely to mask the effectiveness of 2.5-inch inside mesh than Options 1 or 3 + Strengthener specifications (circumference, length, etc.) improve enforceability and reduce the incentive for vessels to compromise whiting management measures	– May increase economic discards if more vessels begin to use net strengtheners and catch larger quantities of smaller fish for which there is a limited market – Conservation benefits of Amendment 12 (Years 1-3) are estimated to be reduced by up to 2.3% in the northern area and 1.1% in the southern area – any compromise in Years 1-3 makes the default measure more likely – Fewer vessels, unless they fish for monkfish, will already have a net with a mesh size of 10-inches or more
STRENGTHENER OPTION 3 – AT LEAST 6-INCHES	
+ Provides incentive for squid fishermen to use an effective mesh size larger than 1-7/8-inches + May reduce regulatory discards depending on how many vessels choose the 2.5-inch mesh category over the smaller mesh category + Most vessels already have nets with a mesh size of 6-inches or more + Enforcement agents very familiar with 6-inch mesh (easy to identify and measure) + Strengthener specifications (circumference, length, etc.) improve enforceability and reduce the incentive for vessels to compromise whiting management measures	– Outside mesh of 6-inches very likely to mask the effectiveness of 2.5-inch inside mesh – May increase economic discards if more vessels begin to use net strengtheners and catch larger quantities of smaller fish for which there is a limited market – Conservation benefits of Amendment 12 (Years 1-3) are estimated to be reduced by an amount similar to that of Option 1

Continued on next page…

STRENGTHENER OPTION 4 – ROPE STRENGTHENERS	
+ Increases the strength of the bag while having little to no impact on the effectiveness of 2.5-inch mesh + "True" net strengthener + Eliminates opportunity for vessels to compromise whiting management measures + Used successfully to strengthen nets in other (Canadian) fisheries	– Does not provide incentive for squid fishermen to use an effective mesh larger than 1-7/8-inches – Does not address objective to reduce regulatory discards – Impacts cannot be formally analyzed due to lack of information (although they are predicted to be insignificant)

3.2.2.2 Strengthener Option 1: Two-Times

This option proposed that when fishing with 2.5-inch mesh (inside bag) under a 7,500-pound whiting/offshore hake possession limit, vessels could use a net strengthener (outside bag) with the following specifications-

- The mesh of the outside bag must be at least *two times* the size of the mesh of the inside bag (at least 5-inches);
- The circumference of the inside bag must be equal to or smaller than the circumference of the outside bag;
- The inner bag shall not be more than 2 feet longer than the outside bag;
- The configurations of both the inside and outside bags must be the same (i.e. both must be either square or diamond).

Discussion: This option is similar to the proposed action except that the minimum mesh requirement for the outside bag is five-inches with this option (versus six-inches with the proposed action). The Council rejected this option and selected the proposed action because vessels are more likely to already possess 6-inch mesh (or larger) and because enforcement agents indicated that familiarity with 6-inch mesh may increase the enforceability of the net strengthener specifications.

3.2.2.3 Strengthener Option 2: Four-Times

This option proposed that when fishing with 2.5-inch mesh (inside bag) under a 7,500-pound whiting/offshore hake possession limit, vessels could use a net strengthener (outside bag) with the following specifications-

- The mesh of the outside bag must be at least *four times* the size of the mesh of the inside bag (at least 10-inches);
- The circumference of the inside bag must be equal to or smaller than the circumference of the outside bag;
- The inner bag shall not be more than 2 feet longer than the outside bag;
- The configurations of both the inside and outside bags must be the same (i.e. both must be either square or diamond).

Discussion: This option is similar to the proposed action except that the minimum mesh requirement for the outside bag is ten-inches with this option (versus six-inches with the proposed action). The Council rejected this option and selected the proposed action because vessels are more likely to already possess 6-inch mesh (or larger) and because enforcement

agents indicated that familiarity with 6-inch mesh may increase the enforceability of the net strengthener specifications.

3.2.2.4 Strengthener Option 4: Rope Strengtheners

This option proposed that when fishing with 2.5-inch mesh (inside bag) under a 7,500-pound whiting/offshore hake possession limit, vessels could use rope strengtheners, but no double bags. Strengthening ropes could be attached along the bars at spacing equivalent to at least four times the mesh size (i.e. a strengthening rope every fourth mesh).

Discussion: While this option addresses the need to strengthen bags used in high-volume fisheries, it does not provide the incentive for squid vessels to use an effective mesh larger than 1-7/8-inches. The Council rejected this option because it does not address the objectives of this framework adjustment and is unlikely to reduce regulatory discards resulting from the whiting/offshore hake possession limits.

3.2.3 No Action Alternatives

Under the No Action alternative for the mesh size/possession limit enrollment program, no changes would be made to the Amendment 12 mesh size/possession limit enrollment program.

Under the No Action alternative for net strengtheners, vessels fishing with 2.5-inch mesh would not be allowed to use a net strengthener of any kind. According to the Amendment 12 provisions, only vessels fishing with mesh smaller than 2.5-inches could use a net strengthener as long as it is in compliance with the strengthener specifications for the appropriate small mesh fishery (loligo squid, for example).

The impacts of taking no action in this framework adjustment are consistent with the analyses presented in the Amendment 12 FSEIS (and the Amendment 12 supplement provided by NMFS) and are summarized in Table 4.

4.0 ANALYSIS OF IMPACTS

The following discussion incorporates the analysis of impacts of the various options considered by the Council at the final framework meeting, November 16-18, 1999. Enrollment Option 4 and Strengthener Option 3 represent the proposed action.

4.1 BIOLOGICAL IMPACTS

4.1.1 Mesh Size/Possession Limit Enrollment Program: Qualitative Analysis

It is not possible to quantify the differential effects of the various enrollment program options on whiting stock rebuilding since the outcome depends significantly on the behavior of fishermen when facing changes in the availability of their target species. When compared with each other, the enrollment options are probably not significantly different in their potential conservation benefits (i.e. reductions in fishing mortality). The Whiting PDT reviewed the enrollment options and discussed the pro's and con's of each enrollment option relative to the objectives of Framework 32. The following statements serve as a general, qualitative analysis of the whiting mesh size/possession limit enrollment options proposed in this framework adjustment:

- In general, all of the options provide additional flexibility to the fleet over the Amendment 12 enrollment program. However, it is difficult to predict whether this added flexibility will reduce discards. Under any of the options, fishermen will need to decide what they want to target (or how much whiting they want to keep) before their trip begins.
- Within the context of the objectives of Framework 32, modifying the enrollment system may help to reduce discards if it provides more flexibility to fishermen. The more flexibility the fishermen have, the more likely they may be to *want* to reduce their discards. On the other hand, the more flexibility fishermen have, the more likely they may be to fish as they have traditionally, which could reduce any conservation benefits resulting from changes in traditional small mesh fishing behavior. It is difficult to predict whether or not these options will reduce the potential for regulatory discards.
- The majority of the conservation benefits of the whiting plan comes from exploitation reductions in the directed whiting fishery. These framework measures are targeted towards other fisheries (i.e., squid) and are therefore likely to have little impact on whiting stock recovery. The enrollment options alone will not have a significant impact.
- Historically, a majority of whiting discarding has occurred through the normal prosecution of the fishery, primarily due to market limitations. Modifications to the enrollment system will not change this aspect of the fishery.
- None of the enrollment program options resolve potential discarding problems on multi-day fishing trips because none specifically allow vessels to switch mesh size/possession limit categories mid-trip.

It is important to note, however, that the proposed action (Enrollment Option 4) is most likely to achieve the objectives of this framework adjustment with the least cost to both the administrative agency and the affected fishing vessels. Reductions in administrative and compliance costs are discussed in Section 4.2.

4.1.2 Net Strengthener Options

4.1.2.1 Background Information on "Squid" Trips in southern New England and the Mid-Atlantic

The Council predicts that regulatory discards resulting from whiting management measures could become a problem predominantly in the "southern area:" the southern New England and Mid-Atlantic regions. This is the region in which a majority of both the loligo squid fishery and the small mesh mixed trawl fishery occur. The following information illustrates current (1995-1997) small mesh fishing practices in the southern area. The information attempts to characterize the potential magnitude of regulatory discards based on historical levels of small mesh multispecies landings on loligo squid "trips."

Based on logbook records, there were a total of 18,639 trips where one or more pounds of small mesh multispecies were landed during calendar years 1995 – 1997 (Table 3). When defining a "squid trip" as one in which total trip revenues from squid exceeded those of combined small mesh multispecies (silver hake, red hake, offshore hake, and ocean pout), there were a total of 5,309 such trips between 1995 and 1997. Of these "squid trips," 4,844 (91%) landed less than 3,500 pounds of combined small mesh multispecies, and no trips landed more than 30,000

pounds of combined small mesh multispecies. Of the remaining 465 trips (9%), 329 landed between 3,500 and 7,500 pounds of small mesh multispecies, and 136 trips landed between 7,500 and 30,000 pounds of combined small mesh multispecies.

Table 3 Summary of 1995 – 1997 Trip Data for the Southern Area (Numbers of Trips)

Landings of Small Mesh Multispecies	Squid $ <= Small Mesh Multispecies $	Squid $ > Small Mesh Multispecies $	Row Totals
< 3,500 lbs.	9,410	4,844	14,254
3,500 - 7,500 lbs.	1,359	329	1,688
7,500 - 30,000 lbs.	2,110	136	2,246
> 30,000 lbs.	451	0	451
Column Totals	**13,330**	**5,309**	**18,639**

According to Table 3, only 9% of "squid trips" landed more than 3,500 pounds of small mesh multispecies between 1995 and 1997. Therefore, most squid trips are likely to remain unaffected by the 3,500-pound possession limit for vessels fishing with mesh smaller than 2.5-inches. The net strengthener options proposed in this framework adjustment are intended to address potential discard problems occurring in the 9% of observed trips that landed more than 3,500-pounds of small mesh multispecies on "squid trips."

4.1.2.2 Quantitative Analysis of Net Strengthener Options

Framework 32 proposed four options (not including the no action alternative) to accommodate concerns that individuals involved in the squid fishery would not be willing to sacrifice the more valuable squid catch that would result from the use of 2.5-inch mesh. The purpose of this framework adjustment is to reduce regulatory discards that would result from discards in the traditional prosecution of the squid fishery. With this action, the Council intends to provide squid fishermen with an incentive to use mesh larger than the traditional size (1-7/8-inches) to fish for squid (and other small mesh species).

For this framework adjustment, Strengthener Options 1 and 2 were formally analyzed using the trip limit model developed for evaluating the conservation benefits of Amendment 12. The potential impacts of the proposed action (Strengthener Option 3) are assumed to fall within the range of expected impacts for Options 1 and 2. Since the proposed action requires a minimum of 6-inch mesh in the outside bag, the results are likely to resemble the results for Strengthener Option 1 (minimum 5-inches) much more so than Option 2 (minimum 10-inches).

The methodology for the trip limit analysis, as described in Amendment 12, is included in Attachment C. Adjustments that were made to the trip limit model to more accurately predict the impacts of the net strengthener options in this framework are described below.

4.1.2.2.1 Trip Limit Model: Special Considerations for this Framework Analysis

Attachment C describes the trip limit model used to analyze the potential impacts of both the Amendment 12 options and the options included in this framework adjustment. The adjustments that were made to the model to account for changes in small mesh selectivity with a net strengthener are described below.

As previously discussed, strengthener Options 1 and 2 were formally analyzed in this framework document using the trip limit model developed for evaluating the conservation benefits of Amendment 12. Within the context of this framework analysis, all participants are treated as "limited access qualifiers" (because the limited access portion of Amendment 12 was dis-approved). Further, two additional fishing strategies were added to account for the additional choice between fishing 2.5-inch mesh with and without a net strengthener.

The trip limit model provides the ability to evaluate alternative mesh selectivity assumptions. During the development of Amendment 12, the Whiting PDT determined that for each ½-inch increase in mesh size, there would be a corresponding 15% decrease in the quantity of small mesh species retained in the cod end of the net. This assumption, however, cannot be used to evaluate the impacts of using a net strengthener with 2.5-inch mesh because at least some portion of the regulated (2.5-inch) meshes will be affected by a strengthener, reducing the overall selectivity of 2.5-inch mesh. The Whiting PDT relied on some limited experiments conducted by PDT member Arne Carr to develop new mesh selectivity assumptions based on the potential masking effect of a net strengthener. The results of Arne's experiments are summarized below.

Potential Masking Effect of Net Strengtheners

Net strengtheners have been considered or used in a small number of fisheries around the world. The application is to provide added strength in hauling up a large catch in the codend of a trawl. One design uses an outside bag of webbing that fits about the codend.
The mesh size of the bag can be equal to or larger than the regular mesh size of the codend.

The potential use of a larger mesh net strengthener over a codend in the squid-whiting fishery off the mid-Atlantic brought an interest in the possible masking effect of the overlying strengthener to the mesh of the codend. In this particular case, the codend mesh size is 2.5-inch stretch mesh. The Conservation Engineering Program investigated the masking effect, and the results are discussed below.

Two separate test series were undertaken. All mesh measurements are given as stretch mesh. The first series made a limited number of random comparisons of 5-inch diamond mesh placed over 2.5-inch mesh. Also tested was 10-inch diamond mesh placed over 2.5 inch mesh. All netting was placed similar to the configuration of towed netting within the forward area of the codend. A second series of tests used different mesh sizes; this was new webbing. The first of the series involved placing 10-inch mesh over 3-inch mesh in ten random sets. The second series of tests placed 4.75-inch mesh over 3-inch mesh.

Masking is meant as any twine from the strengthener that covers or obscures a particular mesh of the regular codend. In the tests, a given area of about two square feet was used as the area to derive a count of masked meshes vs. unmasked meshes. All webbing used was single, not double.

Results

The first series of tests were the less rigorous. They suggested that that 5-inch mesh placed over 2.5-inch mesh masked the 2.5-inch mesh 75 percent. Ten-inch mesh placed over 2.5-inch mesh masked the latter 50 percent.

The second series of tests resulted in the following, which confirms the findings from the first series of tests:

a) Ten-inch mesh overlaying three-inch mesh produced an average masking of 58% of the three-inch meshes. The number of three-inch meshes counted were 1,193. The range in the ten trials was 53 – 63%.
b) The 4.75-inch mesh over the three-inch mesh had an average masking effect of 82%. The number of three-inch meshes counted was 1,385. The range in the ten trails was 81 – 84%.

Based on these results, the masking effect of the net strengtheners was assumed to reduce the selectivity by 75% for Option 1 and 50% for Option 2. (Note that the proposed action (Option 3) establishes a 6-inch minimum standard for the outer bag and would, therefore, have conservation effects quite similar to that of Option 1.) Given these parameters, for the purpose of analysis using the trip limit model, the estimated change in selectivity was reduced from 15% to 3.25% for Strengthener Option 1, and the estimated selectivity change for Strengthener Option 2 was reduced from 15% to 7.5%.

For the Framework 32 trip limit analysis, the status quo scenario was defined as implementation of the Amendment 12 management measures without the limited access program. The estimated conservation effects of this status quo scenario were provided in a supplemental analysis of Amendment 12 (NMFS) and appear in Table 4.

Given the fact that this framework adjustment was developed to accommodate bycatch concerns primarily in the loligo squid fishery, the analysis was conducted under two scenarios: (1) all vessels were assumed to choose between fishing with or without a net strengthener whenever the "best" strategy was to use 2.5" mesh and (2) a net strengthener was assumed to be used only on trips where loligo squid was the target species. In the latter case, squid was assumed to be the target species (as compared to combined red hake, silver hake, and offshore hake) whenever total trip revenue from squid exceeded that of red hake, silver hake and offshore hake (see Section 4.1.2.1). It is important to note that trips assigned to the northern area (northern Georges Bank and the Gulf of Maine) reported virtually no loligo squid landings, so the northern area impacts predicted under the assumption that net strengtheners would only be used on squid trips is equivalent to that of the status quo scenario.

4.1.2.2.2 Trip Limit Model: Results

The results for the status quo scenario are reproduced in Table 4 from the Amendment 12 supplemental analysis provided by the National Marine Fisheries Service. The results of the trip limit analysis based on Strengthener Options 1 and 2 are presented in Table 5.

Under the first scenario, assuming that all vessels may choose to use a net strengthener whenever the best strategy is to use 2.5-inch mesh, the conservation benefits of Amendment 12 are

estimated to be reduced by 3.6% in the northern area and 1.9% in the southern area. Under the alternative assumption that the net strengthener would be employed only on observed trips where squid revenues exceeded small mesh multispecies revenues, the conservation benefits are estimated to remain unchanged vis á vis the status quo in the northern area and are estimated to be reduced by 0.9% in the southern area.

Table 4 Status Quo Results: Estimated Reduction in Total Small Mesh Multispecies Landings With and Without Limited Access Program

	1995-1997 Baseline (Pounds)	1995-1997 Buyout Landings (% of Base)	1995-1997 October Landings (% of Base)	Reduction With Limited Access Year 1-3 (% of Base)	Reduction Without Limited Access Year 1-3 (% of Base)	Reduction With Limited Access Year 4 Default (% of Base)	Reduction Without Limited Access Year 4 Default (% of Base)
Northern Area	16,914,257	3.60%	N/A	21.00%	16.40%	59.20%	56.30%
Cultivator Shoal	6,891,917	5.20%	9.10%	34.80%	31.20%	69.00%	67.70%
Southern Area	72,559,114	0.20%	N/A	28.70%	25.70%	46.50%	45.40%

*from Amendment 12 supplemental analysis, provided by the National Marine Fisheries Service
**Reduction without Limited Access Years 1-3 represents the "status quo" scenario.

Table 5 Summary of Estimated Landings, Discards, and Exploitation Rate Reductions Under Framework 32 Net Strengthener Options 1 and 2

	STATUS QUO	Option 1: All Trips use Strengthener	Option 2: All Trips use Strengthener	Option 1: Only Squid Trips use Strengthener	Option 2: Only Squid Trips use Strengthener
Landings (million lbs.)					
Northern Area	14.1	14.7	14.5	14.1	14.1
Southern Area	51.8	53.3	52.8	52.3	52.1
Discards (thousand lbs.)					
Northern Area	33.7	34.9	32.5	33.7	33.7
Southern Area	2,139.3	2,009.1	1,917.9	1,669.4	1,829.7
Reduction (percent)					
Northern Area	16.4	12.8	14.1	16.4	16.4
Southern Area	25.7	23.8	24.6	25.6	25.7

***The impacts of the proposed action (Option 3) are expected to fall between the impacts predicted for Options 1 and 2, but closer to those predicted for Option 1.*

4.1.2.2.3 Year 4 Default Measure

Net strengtheners would not be allowed under the Year 4 default measure (3-inch mesh for all fishing activities and a 10,000-pound whiting/offshore hake possession limit), so the predicted conservation benefits of the Year 4 management strategy remain unchanged. These results are summarized in Table 4.

It is clear that the Amendment 12 management measures, as approved, will contribute toward achievement of the whiting rebuilding objectives. As stated in the supplemental analysis provided by the National Marine Fisheries Service, "the goal of reducing exploitation by 63% would not be achieved in Years 1-3 with or without a limited access program." The same statement can be made regarding the use of net strengtheners with 2.5-inch mesh during Years 1-3. The Year 4 default measure is projected to achieve the goal of ending overfishing in combination with other, non-quantifiable measures, and allowing the use of a net strengthener with 2.5-inch mesh does not change this conclusion.

4.1.2.2.4 Other Considerations

The following discussion summarizes other issues and concerns that the Council considered during the framework development process. These concerns emphasize the importance of monitoring the use of net strengtheners in small mesh fisheries. The Council believes that allowing the use of a net strengthener when fishing with 2.5-inch mesh will reduce regulatory discards and should not compromise the objectives of Amendment 12. However, because of the considerations identified below, the Council intends for the Whiting Monitoring Committee to review the effects of allowing a net strengthener with 2.5-inch mesh and recommend changes to the proposed net strengthener specifications if it becomes necessary in the future.

The Whiting PDT felt that the results of the trip limit analysis should be considered minimum estimations of the potential impacts of allowing a net strengthener with 2.5-inch mesh. While the results indicate that allowing a net strengthener does convert some amount of potential discards into landings, it does not account for the potential for increased discarding resulting from more vessels using a net strengthener than have historically used them. Even though net strengtheners have traditionally not been used in northern small mesh fisheries, fishermen may start to use them once they are fishing under a possession limit and they realize that they can decrease their effective mesh size (and therefore catch more fish) without sacrificing any of their whiting/offshore hake possession limit. Whiting that are retained with a net strengthener are generally smaller fish that would have escaped through a straight 2.5-inch mesh. Whiting market limitations may force fishermen to discard these smaller whiting that they would not have caught had they not been using a strengthener.

Furthermore, estimated discards appear to be reduced under the various scenarios in which a net strengthener was evaluated, but this may be an artifact of how discards are treated in the trip limit model. Discards are treated as regulatory discards that occur whenever the preferred fishing strategy (i.e., that strategy with the highest net return) results in discarding of small mesh multispecies over the trip limit. Thus, economic discards (i.e., discards for which there is no market) are not counted in the model. The Whiting PDT assumed that the retention of marketable fish would be reduced by 15% for 2.5-inch mesh and 30% for 3-inch mesh. Presumably, these increased mesh sizes would also result in lower levels of economic discards of not only small mesh multispecies, but also of several other species that are discarded in small mesh mixed trawl fisheries. When an outside net strengthener is used, the selectivity effect of the larger mesh is reduced. This means that retention of marketable small mesh species would be higher, but so too would be quantities of unmarketable species that would otherwise not be caught. Thus, while the net strengthener tends to reduce discards (principally by converting regulatory discards into landings), the total amount of discards (i.e., regulatory plus economic discards) may increase relative to the Amendment 12 measures without the net strengthener.

4.1.3 Impacts on Other Species

Section E.6.4.3 of the Amendment 12 document identifies other commercial fish stocks in the Northeast and the Mid-Atlantic that tend to interact, either directly or indirectly, with whiting and red hake. The results reported in Table E.67 of the Amendment 12 document indicate that the management measures proposed for Years 1 – 3 should not have a significant effect on the landings and value of other species. The projected reduction in squid landings (loligo and illex) ranges from one to 1.8 percent, and the reduction in revenues from squid range from 1.5% to 2.7% on a coast-wide basis. Landings of other “small mesh species” are expected to decrease less than one percent, and revenues are expected to decrease less than 2.5 percent. Projected losses in landings and value in the shrimp fishery are inconsequential.

Under the Year 1-3 measures, however, vessels participating in the southern New England mixed trawl fishery are expected to change mesh size categories according to whiting market conditions and resource availability. To the extent that vessels increase the mesh size they use (on average) to target a “mixed bag” of species, the Amendment 12 regulations may have a positive effect on those stocks. Increased mesh allows for escapement of smaller-sized fish, which may contribute to increased spawning stock biomass.

The action proposed in this framework adjustment consists of relatively minor modifications to the whiting management program implemented through Amendment 12 to the Multispecies FMP. None of the actions contained in this framework adjustment are likely to have a significant impact on the recovery and long-term viability of whiting stocks or any other stocks directly or indirectly affected. Most of the benefits of this plan are positive, resulting in increased yield and subsequent returns. For example, according to Section 4.2.2.2 (Economic Effects of the Net Strengthener Options), relative to the status quo, average net returns ranged between an increase of 0.87% and 0.54% for Net Strengthener Options 1 and 2 respectively. Change in net return was highest (22.13% to 15.92%) at the 5th percentile of the distribution of net returns, indicating that the net strengthener has the greatest proportional benefit to those vessels that are least profitable.

The majority of the benefits of this framework action come in the form of reduced administrative, compliance, and enforcement costs and increased flexibility for the small mesh fishing fleet. The proposed action is not likely to jeopardize the long-term productive capability of any stocks affected by the action, including whiting, red hake, offshore hake, squid, and other small mesh fish stocks. Rather, to the extent that the proposed action reduces regulatory discards, whiting stock recovery may be expedited. Furthermore, to the extent that squid fishermen use mesh larger than traditional squid mesh (1-7/8-inches), the proposed action could benefit the long-term productive capability of the loligo squid stock. However, because this result depends on the behavior of fishermen when facing a choice between using squid mesh and 2.5-inch mesh with a strengthener, it is not possible to predict the extent to which the measures will indirectly benefit stocks like loligo squid.

4.1.4 Impacts on Endangered and Threatened Species and Other Marine Mammals

The operation of the whiting fishery poses potential impacts to endangered and threatened species and other marine mammals. These impacts, as well as the likely results of implementation of the Atlantic Large Whale and Harbor Porpoise Take Reduction Plans, were thoroughly discussed in Amendment 12 to the FMP, Section E.7.2.4.

That document concluded that the potential for interaction with small mesh bottom trawl gear (the predominant gear type in the whiting fishery) exists, given the overlap between the range of a number of protected species and the prosecution of the fishery. Based on the historic low level of documented takes, however, NMFS concluded that the action was not likely to jeopardize the continued existence of any endangered and threatened species, or affect right whale critical habitat.

The management measures proposed in Framework Adjustment 32 do not alter this conclusion and fall under the scope of the Amendment 12 consultation and other previous Northeast Multispecies FMP actions.

4.1.5 Impacts on Habitat – EFH Assessment

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

4.1.5.1 Description of the Proposed Action

See Section 3.1 of this document for a description of the proposed action. The activity described by this proposed action, fishing for whiting, red hake and offshore hake, occurs throughout the U.S. Exclusive Economic Zone (EEZ). Thus, the range of this activity occurs across the designated EFH of all Council-managed species (see Amendments 11 and 12 to the Northeast Multispecies FMP).

4.1.5.2 Analysis of the Effects of the Proposed Action

Although bottom tending mobile fishing gear, such as that used in the whiting and hake fishery, has been shown to be associated with adverse impacts to some types of bottom habitat (see Section 4.0 of Amendment 11 to the Northeast Multispecies FMP), this action does not propose to increase or decrease current levels of fishing activity in the U.S. EEZ. This action simply modifies the mesh size and possession limit enrollment program for the whiting fishery and sets requirements for the use of a net strengthener. Neither of these proposed actions will have any adverse impacts on the EFH of any managed species relative to the baseline conditions established under Amendments 11 and 12.

4.1.5.3 Conclusions

The actions proposed under this framework have no potential adverse effects on the EFH of any species managed by the New England, Mid-Atlantic or South Atlantic Fishery Management Councils. Because there are no potential adverse impacts associated with this action, an EFH consultation and a proposed mitigation plan are not required.

4.1.6 Impacts of Taking No Action

The impacts of taking no action in this framework adjustment are consistent with the analyses presented in the Amendment 12 FSEIS (and the Amendment 12 supplement provided by NMFS) and are summarized in Table 4.

4.2 ECONOMIC IMPACTS

This section predicts the economic impacts likely to result from both the proposed action and the alternatives that the Council rejected. It also is pertinent to meeting the requirements of the Regulatory Flexibility Act and contains information specific to Section 5.3 of this document.

Framework 32 proposes modifications to two regulatory features that may affect commercial fishing entities engaged in small mesh multispecies fisheries. The following provides a description of the "regulated universe" to which these features may apply and an estimate of the expected economic impact on small commercial fishing entities. In each instance, the basis for comparison is to the no action alternative or the status quo (i.e. the option to not implement any modification).

4.2.1 Regulated Universe

Framework 32 seeks to modify the Amendment 12 requirements for the mesh size/possession limit enrollment program and to permit the use of a net strengthener when vessels are fishing with 2.5-inch mesh. These measures would apply to any vessel in possession of a valid federal open access or limited access multispecies permit while engaged in a small mesh multispecies fishery. The enrollment program would apply whenever a vessel is fishing with either 2.5- or 3-

inch mesh, while the net strengthener provision would apply only to vessels fishing with 2.5-inch mesh.

As of January 1, 1999, at least one multispecies permit had been issued to a total of 3,401 different vessels in the Northeast region. Of these vessels, 1,619 were issued a limited access permit. However, not all permitted vessels report fishing activity during any given time period, and even those that do report having fished may have not participated in any small mesh multispecies fisheries. During the three-year period from 1995 – 1997, a total of 1,210 vessels reported landing one or more pounds of small mesh multispecies. These participating vessels are most likely to be impacted by the proposed Framework 32 measures and form the basis for the following impact analysis.

4.2.1.1 Mesh Size/Possession Limit Enrollment Program

Under current (Amendment 12) regulations, only vessels that anticipate using 2.5- or 3-inch mesh to harvest small mesh multispecies would be required to enroll into a mesh size/possession limit category. Whether any given vessel would do so depends upon the expected net value of the tradeoff in gains from a higher possession limit and possible losses associated with lower landings of other species due to the requirement to use larger mesh. Output data from the trip limit model described in the EIS for Amendment 12, used to assess the conservation effects of Amendment 12, indicates that of the 1,210 participating vessels, a total of 155 vessels in the southern area and 99 vessels in the northern area may choose to enroll in at least one mesh category. In other words, for at least these 254 vessels, use of 2.5-inch or 3-inch mesh was a superior fishing strategy to using smaller mesh on one or more trips during the 1995 – 1997 baseline period. Therefore, the current enrollment requirements and any proposed changes to these requirements are estimated to affect approximately 20% of the small mesh multispecies fishery participants.

4.2.1.2 Net Strengtheners

The proposed net strengthener provisions would apply to any vessel fishing with 2.5-inch mesh. Output data from the trip limit model suggests that at least 26 vessels in the southern area and 19 vessels in the northern area would benefit from the use of a net strengthener. These data are reflective of observed trips from 1995-1997 landing small mesh multispecies after the trips have been taken. Based on these observed trips, the majority of vessels (80%) do not land sufficient quantities of small mesh multispecies to make using larger mesh a rational choice (i.e. they can earn more revenue by using smaller mesh and discarding any small mesh multispecies over the trip limit).

However, given the masking effect of the net strengthener, there may be little difference in selectivity between the 2.5-inch mesh with a net strengthener and smaller mesh without the strengthener. Thus, many vessels may choose to fish with a net strengthener as an “insurance policy” in the event that they do encounter sufficient quantities of small mesh multispecies. For example, a total of 317 vessels reported using mesh 2.5-inches or less on at least one or more occasions during calendar year 1997 (VTR data). Any one or all of these vessels may find it advantageous to use a net strengthener.

4.2.1.3 Summary of Regulated Universe

The combination of enrollment requirements and net strengthener provisions will apply to all vessels holding a limited access and/or open access multispecies permit. Of these vessels, 1,210 reported having landed some quantity of small mesh multispecies during calendar years 1995 – 1997. Available data indicate that at least 254 participating vessels would be affected by any changes to the enrollment program requirements (see above).

Because the net strengthener may reduce the selectivity of 2.5-inch mesh, any small mesh multispecies vessel fishing with less than 2.5-inch mesh may choose to switch to 2.5-inch mesh with a net strengthener. Should these vessels do so, they would also be subject to the enrollment program requirements. Using 1997 as a representative year, there were a total of 561 vessels that reported landing small mesh multispecies. Of these vessels, 190 did not use mesh smaller than 3-inches on any trips where small mesh multispecies were retained. Similarly, 162 vessels did not use mesh larger than 2.5-inches, and 209 vessels recorded having used both 2.5 and 3-inch mesh on trips where small mesh multispecies were retained. It is important to note, however, that the majority of vessels (406) did not report landings of small mesh multispecies in excess of 3,500 pounds on any given trip in 1997. Therefore, the total number of vessels that may be affected by both the enrollment program and net strengthener measures is likely to range between 155 and 561 vessels in any given year.

4.2.1.4 Definition of "Small"

As established by the Small Business Administration (SBA), the small business size standard for commercial fishing entities is annual gross sales of $3 million or less. For purposes of analysis, each participating vessel is considered a separate entity. During the 1995 – 1997 period of analysis, none of the participating vessels exceeded the $3 million threshold in terms of either sales of small mesh multispecies or in combined sales of all species. Therefore, for purposes of the RFA and the analysis to follow, all participating entities are defined as being small.

4.2.2 Analysis of Economic Impacts

Each of the features under consideration for Framework 32 are intended to rectify measures implemented under Amendment 12 that have been deemed burdensome to small entities. The following analysis describes the manner in which each of the alternatives reduce or change this burden. Each measure is treated separately, followed by a summary of the likely joint effects of changing the enrollment requirements and permitting the use of net strengtheners. Wherever possible, quantitative analyses are conducted. Where appropriate, these quantitative estimates are supplemented with available qualitative information.

4.2.2.1 Economic Effects of Mesh Size/Possession Limit Enrollment Program

The current enrollment program requires vessels to call the NMFS and obtain a letter of authorization to fish in either the 2.5-inch or 3-inch mesh category. The period of enrollment is for a minimum of 30 consecutive days. A vessel may choose to exit the program after a minimum of 7 consecutive days but is then restricted to the trip limit associated with the mesh size below 2.5-inches for the remainder of the original 30 days. The alternatives to this enrollment program have been developed to reduce the administrative and enforcement burden imposed by the need to have a specific enrollment program as well as to reduce the burden to vessel owners that are associated with the inflexibility of having to enroll in a mesh category for

a specified period of time. The economic effects of each of the alternatives are discussed below in reference to these two aspects.

4.2.2.1.1 Enrollment Option 1: Call-In

By incorporating the enrollment system into the multispecies DAS call-in, the need for obtaining a physical letter of authorization would be eliminated. This would also remove some impediments to obtaining authorization to fish due to limitations imposed by need to conduct such transactions during normal business hours. The call-in would expand capability of the enrollment system to 24-hours a day, but it would not eliminate the need to enroll into a mesh category.

4.2.2.1.2 Enrollment Option 2: State Enrollment Program

This alternative would work similar to that of the current summer flounder exemption certification program. Individuals that request such an exemption do so by filing a request with a participating state for a duration of seven consecutive days. Participating states would then be required to notify the NMFS Regional Office that a certification had been issued. This option does not eliminate the need for an enrollment program and may pose an increased administrative burden due to the redundant notification requirements and problems associated with tracking authorizations. Further, not all states would be willing or able to participate in the certification program and the requirement to file for an authorization only during normal business hours would not be eliminated. The seven day enrollment period, however, would increase trip planning flexibility.

4.2.2.1.3 Enrollment Option 3: Modification of the Amendment 12 Program

This option was not fully specified but may operate in a manner similar to that of Enrollment Option 2 except that the authorization process would be administered solely by the NMFS Regional Office. As discussed above, Enrollment Option 3 still requires a physical letter of authorization and the attendant administrative burden and can only be administered during normal business hours. However, as compared to the current requirement, Option 3 does offer greater trip planning flexibility.

4.2.2.1.4 Enrollment Option 4: Proposed Action

This option eliminates any administrative and burden hour costs associated with an enrollment program. Further, the vessel would not be required to use a specific mesh size for any particular duration of time. Enforcement would not be required to determine the stowage status of gear to make a decision as whether or not a violation has occurred (versus Enrollment Option 5).

4.2.2.1.5 Enrollment Option 5: Smallest Mesh Available for Fishing

Similar to the proposed action, this option eliminates the need for an enrollment system and would mitigate the associated administrative and burden hour costs. Enrollment Option 5 differs from the proposed action in that the possession limit would only be constrained by mesh that is available for fishing. Smaller mesh stowed in accordance with the current groundfish regulations would not constrain the possession limit. Of all the alternatives, Enrollment Option 5 minimizes the regulatory costs imposed on small entities and preserves maximum flexibility for vessels to change fisheries as conditions warrant.

4.2.2.2 Economic Effects of Net Strengthener Options

Strengthener Options 1, 2 and 3 were formally analyzed using the trip limit model developed for evaluating the conservation benefits of Amendment 12. Strengthener Option 4 was not analyzed due to a determination by the Whiting PDT that the strengthening ropes would not affect the selectivity of the gear. Thus, relative to the status quo, small entity impacts would be virtually unchanged under Strengthener Option 4. Within the context of the present analysis, all 1,210 fishery participants were treated as limited access qualifiers. Further, two additional fishing strategies were added to account for the additional choice between fishing 2.5-inch mesh with and without a net strengthener.

The trip limit model provided the ability to evaluate alternative selectivity assumptions. During the development of Amendment 12, the Whiting PDT determined that for each ½-inch increase in mesh, there would be a corresponding 15% decrease in the quantity of small mesh species retained in the cod end of the net. The masking effect of the net strengtheners was estimated to reduce the selectivity by 75% for Option 1 and 50% for Option 2. Given these parameters, the estimated change in selectivity was reduced from 15% to 3.25% for Option 1, and the selectivity change for Option 2 was reduced from 15% to 7.5% (see Section 4.1.2.2.1). Given that the outer mesh under Strengthener Option 1 must be at least 5-inch mesh and the outer mesh of Option 2 must be at least 10-inch mesh, the relationship between the outside mesh and change in selectivity was determined to be equivalent 5% for each 1-inch increase in outer mesh. Using this relationship, the selectivity for Strengthener Option 3 (the proposed action) was estimated to be reduced by 55%. Therefore the selectivity change for Option 3 was reduced from 15% to 6.75%.

Of the 1,210 participating vessels, only 233 were projected to be affected by any one of the net strengthener options. This is due to the fact that the majority of fishery participants do not land sufficient quantities of small mesh multispecies to exceed the lowest possession limit (i.e. 977 vessels landed less than 3,500 pounds of small mesh multispecies on any trip). For example, the 233 affected vessels landed 97% of the total value of small mesh multispecies during 1995-1997. The affected vessels are summarized by length category, home state, and degree of dependence on small mesh multispecies in Table 6, Table 7, and Table 8 respectively.

Table 6 Summary of Impacted Vessels by Vessel Length

Vessel Length Category	Number of Vessels
< 50 feet	38
>= 50 and <= 70 feet	104
Over 70 feet	91

Table 7 Summary of Impacted Vessels by Home Port State

Home State	Number of Vessels
Connecticut	3
Delaware	3
Massachusetts	66
Maine	20
New Hampshire	5
New Jersey	20
New York	64
Rhode Island	44
Other States	8

Table 8 Summary of Impacted Vessels by Small Mesh Multispecies Dependence

Share of Gross Revenue	Number of Vessels
< 10%	109
10% to < 20%	47
20% to < 30%	23
30% to < 40%	17
40% to < 50%	9
>= 50%	28

A net strengthener reduces the selectivity of the net. Therefore, Strengthener Options 1, 2 and 3 all result in positive increases in gross and net returns relative to the status quo. Average net return above operating costs was estimated to be $527,059 (note that all data are for a three-year period) (Table 9). Relative to the status quo, average net return ranged between an increase of 0.87% and 0.54% for Strengthener Options 1 and 2 respectively. Change in net return was highest (22.13% to 15.92%) at the 5th percentile of the distribution of net returns, indicating that the net strengthener has the greatest proportional benefit to those vessels that are least profitable.

Table 9 Summary of Changes in Gross Revenues, Operating Costs, and Net Returns by Net Strengthener Option

	Status Quo	Option 1	Option 2	Option 3
Gross Revenues	($)	(%)	(%)	(%)
Mean	760,469	0.62	0.39	0.57
5th Percentile	98,834	1.43	0.98	1.36
25th Percentile	317,498	0.90	0.53	0.83
Median	643,280	0.36	0.25	0.34
75th Percentile	1,047,764	0.52	0.47	0.51
95th Percentile	1,897,921	0.04	0.03	0.04
Operating Cost				
Mean	233,409	0.06	0.06	0.06
5th Percentile	53,616	0.00	0.00	0.00
25th Percentile	138,204	-0.63	-0.43	-0.59
Median	205,458	0.07	0.07	0.09
75th Percentile	299,640	0.05	0.05	0.05
95th Percentile	533,312	0.24	0.30	0.25
Net Return				
Mean	527,059	0.87	0.54	0.80
5th Percentile	1,960	22.13	15.92	20.97
25th Percentile	160,378	2.02	1.27	1.86
Median	417,395	0.82	0.47	0.81
75th Percentile	771,648	0.01	0.00	0.00
95th Percentile	1,467,035	1.57	0.99	1.46

Overall, Strengthener Option 1 has the most positive economic impact, followed by Option 3 (proposed action) and Option 2. These economic effects are based on the assumption that conforming outside mesh is readily available at no additional cost. Specifically, many vessels are likely to already possess either 5-inch or 6-inch mesh and would incur no additional procurement expense. Vessels may be less likely to already possess 10-inch mesh (as specified in Strengthener Option 2), but such mesh is used in other fisheries so it should be relatively easy to obtain.

4.3 SOCIAL IMPACTS

The social impact analysis contained in Amendment 12 builds on information provided in Section E.6.5 of the amendment document, the Affected Human Environment. Social factors specific to fishing communities are described throughout Sections E.6.5.5.1, E.6.5.5.2, E.6.5.5.3, and E.6.5.5.4 of the Amendment 12 document. The Amendment 12 social impact assessment also contains information collected through interviews with industry participants, notes from public meetings, and NMFS databases: permit files, the commercial fisheries “weigh-out” data, logbook data, and sea sampling data.

The social consequences of the management actions proposed in Amendment 12 were assessed with respect to the following:

1. Decreases in income
2. Changes in the structure of the fishery
3. Displacement from the fishery
4. Negative impacts on job satisfaction levels resulting from 1, 2, and 3 above
5. Perceptions of the rules as "bad" or "unfair" in terms of their potential impacts (Pollnac and Littlefield, 1983).

Based on the above, the action proposed in this framework adjustment is likely to result in *positive* social impacts; in other words, the proposed action is likely to decrease the short-term negative social impacts resulting from the management measures implemented through Amendment 12. The biological and economic impact analyses in this document (Sections 4.1 and 4.2 respectively) indicate that the proposed action is likely to result in:

(a) increased landings of small mesh multispecies from the conversion of some portion of regulatory discards into landings;
(b) positive increases in gross revenues; and
(c) positive increases in gross and net returns relative to the status quo (Amendment 12).

Since fishermen are not likely to experience decreased income or displacement from the fishery as a result of the proposed action, they are also not likely to experience negative feelings about job satisfaction or to perceive the rules as "bad" or "unfair."

Fishermen's views on mesh regulations are generally based on what they perceive the regulation will do to their income, not that the measure itself holds some socially or culturally undesirable characteristic. Gear changes often do require capital outlays which may be difficult for fishermen to afford, especially if their revenues have already been decreased by cutbacks in other fisheries as well as the decrease in small mesh multispecies resources. The mesh regulations proposed in this framework adjustment, however, are completely optional. Fishermen may use a strengthener with 2.5-inch mesh if they desire, but nothing forces them to do so. Only the fishermen who *want* to purchase an additional net to use as a small mesh strengthener will do so.

The mesh size/possession limit categories proposed for Years 1 – 3 are intended to maximize fishermen's flexibility and allow for most fishermen to maintain their current fishing practices in other fisheries. Often, fishermen identify regulatory discarding as something quite undesirable that can, by itself, produce negative social impacts. The measures proposed in this framework adjustment increase fishermen's flexibility and are likely to decrease regulatory discards. This should further minimize the adverse social impacts of the Year 1 – 3 measures.

5.0 RELATIONSHIP TO APPLICABLE LAW

5.1 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (MSFCMA)

5.1.1 Consistency with the National Standards

Section 301 of the Magnuson-Stevens Fishery Conservation and Management Act requires that FMPs contain conservation and management measures that are consistent with the ten National Standards. The following section summarizes, in the context of the National Standards, the analyses and discussion of the proposed action that appear in various sections of this framework adjustment document.

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

Whiting/offshore hake possession limits, implemented through Amendment 12, are significant components of the Council's strategy to end overfishing and rebuild the northern and southern stocks of whiting. The proposed action is intended to ensure the effectiveness of the possession limits by decreasing regulatory discards of whiting and providing small mesh fishermen with an incentive to fish with larger mesh. Larger mesh sizes allow for greater escapement of smaller whiting. To the extent that fishermen switch to larger mesh sizes to fish for whiting, stock rebuilding may occur more quickly and more successfully.

It is clear that the Amendment 12 management measures, as approved, will contribute toward achievement of the whiting rebuilding objectives. The Year 4 default measure is projected to achieve the goal of ending overfishing in combination with other, non-quantifiable measures. No changes are proposed to the Year 4 default measure in this framework adjustment. Net strengtheners still would not be allowed under the Year 4 default measure (3-inch mesh for all fishing activities and a 10,000-pound whiting/offshore hake possession limit), so the predicted conservation benefits of the Year 4 management strategy remain unchanged. These benefits are summarized in Table 4 of this document.

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

The analyses of measures proposed in this framework adjustment are based on the scientific information and trip limit model used to develop Amendment 12. Section E.6.2 of the Amendment 12 document identifies the data the Council used to describe small mesh multispecies fisheries and to evaluate the potential impacts of management measures on these fisheries. It is important to recognize the lack of up-to-date information about whiting and red hake stock status as well as other data and research needs critical to meeting the objectives specified in the whiting management plan. The data considerations specific to Amendment 12 are discussed in Section E.6.2.5 of the amendment document.

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

The management adjustments proposed in this framework are not specific to either the northern or southern stock of whiting. To avoid whiting stock uncertainty issues, and because the target reductions in exploitation are approximately equal across both identified whiting stock areas, the Council chose to apply the same management measures across the range of the species in Amendment 12. The proposed action is consistent with this approach.

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

The proposed action does not discriminate between residents of different states, nor does it allocate fishing privileges among various sectors of the fishery.

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

The primary objective of this framework adjustment is to minimize regulatory discards resulting from the whiting/offshore hake possession limits implemented through Amendment 12. With this objective, the proposed action will likely enhance efficiency in the utilization of fishery resources by minimizing waste and improving yield from the fishery.

In addition, the proposed action significantly decreases the administrative and compliance costs of the measures implemented through Amendment 12. Elimination of the mesh size/possession limit enrollment program decreases the amount of time vessels must invest in complying with regulations and increases their flexibility for planning and making fishing trips. To the extent that compliance costs are reduced, affected vessels may operate more efficiently.

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

The Council first accounted for variations in fisheries, fishery resources, and catches by developing three mesh size/possession limit categories for vessels to choose from in Amendment 12. This approach maximizes opportunities in the fishery and flexibility for the fleet while reducing fishing mortality and whiting exploitation. Changes in fisheries occur continuously, both as the result of human activity (for example, new technologies or shifting market demand) and natural variation (for example, oceanographic perturbations). In Amendment 12, the Council established a process to annual review and adjust the whiting management measures according to such variations.

The proposed action is also intended to allow for variations among, and contingencies in, numerous small mesh fisheries. The Council developed the modifications proposed in this

framework adjustment in response to potential conditions in other fisheries in which whiting is a significant bycatch. With this action, the Council acknowledges the variable nature of small mesh fisheries, particularly the southern New England "mixed trawl" fishery. The proposed action represents the Council's attempt to ensure whiting stock recovery while allowing for variations among fisheries of which whiting is a component.

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

The Council considered the potential costs and benefits of a range of alternatives to achieve the objectives of this framework adjustment. It considered costs to the National Marine Fisheries Service in administering the whiting management measures, particularly the mesh size/possession limit enrollment program. It considered costs to the industry in terms of compliance costs (requirement to enroll in both the 2.5- and 3-inch mesh categories) and in terms of loss of trip planning flexibility.

The action proposed in this framework adjustment should significantly minimize the administrative and compliance costs (and possibly enforcement costs) of the Amendment 12 management program. It proposes the elimination of the mesh size/possession limit enrollment program, which removes an administrative burden and potentially allows for easier enforcement of the possession limits both at-sea and dockside. In addition to eliminating the compliance cost for the industry to enroll in mesh categories, the proposed action allows for greater trip planning flexibility.

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

During the development of this framework adjustment, the Council considered the importance of fishery resources to affected fishing communities and wanted to provide those communities with continuing access to small mesh multispecies fishery resources and other fishery resources to the extent possible, but not at the expense of compromising the conservation objectives of management measures. The proposed action is intended to allow for continuing access to both whiting and other small mesh resources (squid, for example).

The proposed action is not likely to result in any additional adverse impacts on affected fishing communities. In fact, to the extent that discards are decreased, yield improves, and whiting stocks begin to recover, the impacts of the proposed action are likely to be positive for the affected communities.

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

The primary objective of this framework adjustment is to minimize regulatory discards resulting from the whiting/offshore hake possession limits implemented through Amendment 12. The

Council intends for alternatives considered in this framework adjustment to reduce the overall catch and discard of whiting in small mesh and mixed trawl fisheries, particularly in the southern New England and Mid-Atlantic regions. This objective will be achieved by:

(1) modifying the mesh size/possession limit enrollment program to allow vessels participating in small mesh and mixed trawl fisheries to change mesh sizes more readily as the mix of available target species changes, and

(2) providing vessels fishing for loligo squid with an incentive to switch from squid mesh (1-7/8-inch) to a larger mesh size (2.5-inch with a strengthener).

The action proposed in this framework adjustment specifically addresses National Standard 9.

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

The Council is aware of the safety implications of its management decisions, both through extensive public comment and the practical experience of many of its members. The management measures implemented through Amendment 12 promote safety at sea by maximizing the flexibility of fishermen to choose where and how they want to fish. The proposed action increases flexibility for the fishing fleet and should therefore have no adverse impacts on safety at sea.

5.1.2 Other Required Provisions of the MSFCMA

Section 303 of the MSFCMA contains 14 additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, shall:

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

Section 3.1 of this document contains a description of the action proposed in this framework adjustment. Section 5.1.1 discusses the framework adjustment's consistency with the National Standards of the MSFCMA.

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

The Amendment 12 document and Supplemental EIS contains a comprehensive description of the fishery, including, but not limited to, a brief history of the fishery, historical and recent

landings and revenue information, fishing vessel information, descriptions of the marketing and processing sectors, description of the recreational fishery, and projections of the costs likely to be incurred in management. Much of this information is contained in Sections E.6.4 and E.6.5 of the amendment document.

The Environmental Assessment contained in this framework document supplements the information submitted with Amendment 12 to the Multispecies FMP in forming the description of the fishery. Since this framework adjustment is being submitted so closely to the submission of Amendment 12, no new descriptive information about whiting fisheries is available at this time.

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

Sections 4.2 and 4.3 of the Amendment 12 document contain new definitions of overfishing and a description of optimum yield. New overfishing definitions are based on maximum fishing mortality and minimum biomass thresholds. This framework adjustment represents a timely adjustment to the Amendment 12 management measures to rebuild overfished whiting stocks to levels that will produce maximum sustainable yield over the long-term based on the most recent and best scientific information available.

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

Optimum yield is specified in Section 4.3 of the Amendment 12 document. No portion of the allowable catch is available for foreign fishing. The measures proposed in this framework adjustment to do change the Council's specification for optimum yield in this fishery.

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

Section E.6.2 of the Amendment 12 document describes the amendment's data considerations and the Council's participation in stock assessments and the Atlantic Coastal Cooperative Statistics Program (ACCSP). These data considerations are still applicable to the measures proposed in this framework adjustment. The Council has initiated efforts to organize and compile all of the data requirements for managing the stocks in a manner consistent with the Sustainable Fisheries Act. These efforts include calling on NMFS to prepare an annual publication of a Stock Assessment and Fishery Evaluation (SAFE) Report, activation of the

Council's Scientific and Statistical Committee, Experimental Fisheries and Research Program Steering Committee, and Social Sciences Advisory Committee.

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

The framework adjustment process allows for temporary and/or real-time adjustments to management measures to address these issues as they arise. The Council is taking advantage of the framework adjustment process to modify whiting management measures to ensure that these issues are addressed while not affecting conservation efforts in other fisheries or discriminating among participants in small mesh multispecies fisheries.

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

Amendment 10 to the Northeast Multispecies FMP addresses the essential fish habitat requirements for silver hake and red hake. The Amendment 12 document and supplement describe and identify EFH for offshore hake. The Council conducted an EFH consultation for the measures proposed in this framework adjustment pursuant to 50 CFR 600.920 of the EFH Interim Final Rule. The results of that consultation are presented in Section 4.1.5 of this document.

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

Obtaining updated stock assessment information for all three small mesh multispecies is critical to achieving the objectives of the whiting management plan. The data considerations specific to Amendment 12 are applicable to this framework adjustment and are identified in Section E.6.2.5 of the Amendment 12 document.

The Council is working closely with the National Marine Fisheries Service to coordinate the reporting of scientific information in a timely manner so that it coincides with the annual plan review and adjustment process. Since small mesh multispecies are part of the multispecies complex, annual plan review and adjustments will occur along the same timeline as other multispecies stocks.

(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on-- (A) participants in the fisheries and fishing communities affected

by the plan or amendment; and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;

This document includes and Environmental Assessment and contains analyses and discussion of the impacts of the proposed action on the affected human environment, including fishing communities. The majority of the impacts on the human environment of this proposed action are likely to be *positive*. The Council developed the measures proposed in this framework adjustment in consultation with the Mid-Atlantic Fishery Management Council through their participation on the Whiting Committee and attendance at Council meetings.

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

The revised overfishing definitions for both stocks of whiting and red hake and for offshore hake specify objective and measurable criteria for identifying when these stocks are overfished or when overfishing is occurring on these stocks. Where possible, the reference points in the new overfishing definitions are based on maximum fishing mortality and minimum biomass criteria. If these reference points could not be estimated, the Council developed risk averse overfishing definitions based on rates of change in survey levels that may be indicative of overfishing. For more information, see Section 4.2 and Appendix I of the Amendment 12 document. Nothing proposed in this framework adjustment changes these criteria.

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

Vessels fishing for small mesh multispecies with an open access multispecies permit are required to submit Vessel Trip Reports (VTRs, logbooks). NMFS uses VTR information in conducting stock assessments. In addition, the Council and the National Marine Fisheries Service are both participating in the ACCSP (Section E.6.2.4 of the Amendment 12 document), which is a long term effort to improve the collection and utility of fisheries data, including bycatch information. The measures proposed in this framework adjustment are intended to minimize regulatory discards resulting from the whiting/offshore hake possession limit. They are also intended to provide fishermen with an incentive to use a larger mesh size to fish for whiting. To the extent that these measures promote a larger mesh, they should also reduce the bycatch of smaller, juvenile whiting.

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

Similar to Amendment 12, this framework adjustment proposes no recreational fishery management measures. Information suggests that participation in recreational whiting and red hake fisheries has decreased to very small levels. The Council intends to promote the re-emergence of recreational whiting and ling fisheries, particularly in the southern New England and Mid-Atlantic areas, by ending overfishing and rebuilding whiting stocks. If it becomes necessary in the future, the Council may implement management measures for the recreational fishery and a catch and release program to assess the type and amount of fish caught and released alive during recreational fishing.

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

The Amendment 12 document, recently submitted, contains an extensive description of the commercial and recreational fishing sectors and quantifies the trends in landings by these sectors of the fishery. The history of small mesh multispecies fisheries is described in Section E.6.5.1. Commercial landings information by state and by port is provided in Section E.6.5.2. Information specific to small mesh multispecies fisheries throughout New England and the Mid-Atlantic is provided in Section E.6.5.3. The sociocultural characteristics of the fishery as well as port-specific fishery information is provided in Section E.6.5.5. The recreational whiting and red hake fisheries are described in Section E.6.5.6.

The Environmental Assessment contained in this framework document supplements the information submitted with Amendment 12 to the Multispecies FMP in forming the description of the fishery. Since this framework adjustment is being submitted so closely to the submission of Amendment 12, no new descriptive information about whiting fisheries is available at this time.

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

The Council adopted whiting management measures that apply equally to all sectors of the commercial fishery in Amendment 12. The measures proposed in this framework adjustment also apply equally to all sectors of the commercial fishery. If it becomes necessary in the future, the Council may develop management measures to address sectors of the commercial fishery differently or to address the recreational sector of the fishery.

5.2 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The Council conducted a complete analysis of the environmental impacts of the whiting stock rebuilding program in Amendment 12 to the Northeast Multispecies FMP. The Final Supplemental Environmental Impact Statement (FSEIS), incorporated into the final Amendment 12 document, predicted that the impacts of Amendment 12 would be significant, especially both the negative socioeconomic impacts resulting from the Years 1-3 and Year 4 measures and the positive (long-term) biological and socioeconomic impacts resulting from rebuilding the small mesh resources. The proposed action is intended to modify management measures implemented to achieve the objectives of Amendment 12. The impacts predicted in this document are

consistent with those that were expected under Amendment 12 and are therefore likely to be insignificant with respect to achieving the objectives of Amendment 12.

5.2.1 Environmental Assessment

Section 2.0 of this document contains a discussion of the purpose and need for the proposed action. Section 3.0 contains a description of the proposed action and the alternatives that the Council rejected, including the No Action alternative. Section 4.0 contains an analysis of the potential impacts of the action proposed in this framework document.

In developing the proposed action and in reviewing the analysis of impacts contained in this document, the Council consulted with NMFS, the Mid-Atlantic Fishery Management Council, the Atlantic States Marine Fisheries Commission, and the state marine fisheries agencies (New England and the Mid-Atlantic) through their participation at PDT, Whiting Committee, and Council meetings. The Council also informed the interested public of the proposed action and review of environmental documents thought notice in the *Federal Register* and by mailings of meeting notices and agendas for Committee and Council meetings two to three weeks in advance. Approximately 150 and 1,650 persons receive mail notification of Whiting Committee and Council meetings, respectively.

5.2.2 Finding of No Significant Impact (FONSI)

NOAA Administrative Order 216-6 provides guidance for the determination of significance of the impacts resulting from the management measures contained in fishery management plans, their amendments, and framework adjustments. The five criteria to be considered are addressed below:

1. *Can the proposed action be reasonably expected to jeopardize the long-term productive capability of any stocks that may be affected by the action?*

The proposed action consists of relatively minor adjustments to the whiting management program implemented through Amendment 12 to the Multispecies FMP. None of the actions contained in this framework adjustment are likely to have a significant impact on the recovery and long-term viability of the whiting stocks.

The majority of the benefits of this framework action comes in the form of reduced administrative, compliance, and enforcement costs and increased flexibility for the small mesh fishing fleet. The proposed action is not likely to jeopardize the long-term productive capability of any stocks affected by the action, including whiting, red hake, offshore hake, squid, and other small mesh fish stocks. Rather, to the extent that the proposed action reduces regulatory discards, whiting stock recovery may be expedited. Furthermore, to the extent that squid fishermen use mesh larger than traditional squid mesh (1-7/8-inches), the proposed action could benefit the long-term productive capability of the loligo squid stock.

2. *Can the proposed action be reasonably expected to allow substantial damage to the ocean and coastal habitats?*

Although bottom tending mobile fishing gear, such as that used in the whiting and hake fishery, has been shown to be associated with adverse impacts to some types of bottom habitat (see

Section 4.0 of Amendment 11 to the Northeast Multispecies FMP), this action does not propose to increase or decrease current levels of fishing activity in the U.S. EEZ. This action simply modifies the mesh size and possession limit enrollment program for the whiting fishery and sets requirements for the use of a net strengthener. Neither of these proposed actions will have any adverse impacts on the EFH of any managed species relative to the baseline conditions established under Amendments 11 and 12.

According to the EFH assessment (see Section 4.1.5), the actions proposed under this framework have no potential adverse effects on the EFH of any species managed by the New England, Mid-Atlantic or South Atlantic Fishery Management Councils. Because there are no potential adverse impacts associated with this action, an EFH consultation and a proposed mitigation plan are not required.

3. *Can the proposed action be reasonably expected to have an adverse impact on public health or safety?*

The action proposed in this framework adjustment is not likely to have an adverse impact on either public health or safety. The actions have been found to be consistent with National Standard 10 of the MSFCMA, which requires management measures to promote the safety of human life at sea. In developing management measures, the Council usually receives extensive comments from affected members of the public regarding the safety implications of various alternatives under consideration. No safety or public health issues were identified during the development of the management measures proposed in this framework adjustment.

4. *Can the proposed action be reasonably expected to have an adverse impact on endangered or threatened species or a marine mammal population?*

The management measures proposed in this framework adjustment are not expected to have an adverse impact on any endangered or threatened species or marine mammals. See Section 4.1.4 of this framework document for a discussion of the impacts of the proposed framework action on threatened and endangered species and marine mammals.

5. *Can the proposed action be reasonably expected to result in cumulative adverse effects that could have a substantial effect of the target resource species or any related stocks that may be affected?*

As previously mentioned, the proposed action consists of relatively minor adjustments to the whiting management program implemented through Amendment 12 to the Multispecies FMP. None of the actions contained in this framework adjustment are likely to have a significant impact on the recovery and long-term viability of the whiting stocks. Furthermore, none of the actions proposed in this framework adjustment are likely to affect fishing mortality rates on whiting or other small mesh multispecies.

Based the preceding criteria and analyses, the Council proposes *a finding of no significant impact* for the management adjustments contained in this framework adjustment to the Northeast Multispecies FMP.

FONSI STATEMENT: In view of the analyses presented in this framework adjustment document and in the FSEIS for Amendment #12 to the Northeast Multispecies FMP, the proposed action will not significantly affect the quality of the human environment with specific reference to the criteria contained in NOAA Administrative Order 216-6 implementing the National Environmental Policy Act. Accordingly, the preparation of a Supplemental Environmental Impact Statement for this proposed action is not necessary.

Assistant Administrator for Fisheries, NOAA **Date**

5.3 REGULATORY IMPACT REVIEW

This section provides the information necessary to address the requirements of Executive Order 12866 and the Regulatory Flexibility Act.

The Regulatory Impact Review (RIR) provides an assessment of the costs and benefits of proposed action and other alternatives in accordance with the guidelines established by Executive Order (E.O.) 12866. The regulatory philosophy of Executive Order 12866 stresses that, in deciding whether and how to regulate, agencies should assess all costs and benefits of all regulatory alternatives and choose those approaches that maximize net benefits to the society.

The RIR also serves as a basis for determining whether any proposed regulations are a "significant regulatory action" under the criteria provided in Executive Order 12866 and whether the proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act of 1980 (RFA), as amended in 1996. This RIR summarizes the effects of the proposed action and other alternatives considered in this framework adjustment. This framework document contains all of the elements of the RIR/RFA, and the relevant sections are referenced.

The statement of the problem/need for management action is presented in Section 2.0 of this document. The objectives of this framework adjustment are specified in Section 2.2. The proposed action is described in Section 3.1, and alternatives to the proposed action are described in Section 3.2. The economic analysis (relative to the status quo) of both the proposed action and the alternatives that were rejected is contained in Section 4.2 of this document. Subsections of the economic analysis that are pertinent to the RIR are as follows:

Section 4.2.1	Regulated Universe
Section 4.2.2.1	Economic Effects of Mesh Size/Possession Limit Enrollment Program
Section 4.2.2.2	Economic Effects of Net Strengthener Options

All relevant sections for the RIR are identified by reference in this framework document. The impacts of the proposed action specific to E.O. 12866 are also summarized in the section below.

5.3.1 Executive Order 12866

Executive Order 12866 defines a "significant regulatory action" as one that is likely to result in:

(1) an annual effect on the economy of $100 million or more or one which adversely affects in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;

(2) a serious inconsistency or interference with an action taken or planned by another agency; or

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

The proposed action does not meet the above criteria to constitute a significant regulatory action under E.O. 12866.

According to information presented in Section 4.2.1 of this document, the proposed action, consisting of a modification to the mesh size/possession limit enrollment program and specifications for allowing the use of a net strengthener with 2.5-inch mesh, is likely to affect between 155 and 561 vessels in any given year. The economic effects of the modification to the mesh size/possession limit enrollment program are expected to be positive, resulting in more trip-planning flexibility for the fleet. The proposed action eliminates any administrative and compliance burden costs associated with the Amendment 12 enrollment program. It minimizes the regulatory costs imposed on all small entities and preserves more flexibility for the fleet to change fisheries as conditions warrant.

Only 233 vessels are projected to be affected by any of the net strengthener options that the Council considered. This is because most fishery participants do not land sufficient quantities of small mesh multispecies to exceed the lowest possession limit. The analysis presented in Section 4.2.2.2 indicates that all of the net strengthener options under consideration are expected to result in positive increases in gross and net returns relative to the status quo. Strengthener Option 1 is likely to have the most positive impact, followed by Option 3 (the proposed action), then Strengthener Option 2. Relative to the status quo, expected average net returns ranged between an increase of 0.87% and 0.54% for Strengthener Options 1 and 2 respectively (the impacts of the proposed action are likely to resemble those of Strengthener Option 1). Change in net returns was highest at the 5^{th} percentile of the distribution of net returns, indicating that the net strengthener is likely to have the greatest proportional benefit to those vessels that are least profitable.

Other Considerations

It is important to note that allowing the use of a net strengthener with 2.5-inch mesh may compromise the conservation impacts of the Year 1-3 management measures for small mesh multispecies. While this compromise has been shown to be small and very unlikely to affect whiting stock recovery (Section 4.1.2.2), it still represents a departure from the management program that was analyzed in Amendment 12. Allowing a net strengthener with 2.5-inch mesh, when combined with the disapproval of a limited access program and subsequent implementation of the management measures in an open access situation, creates a divergence from the stream of benefits predicted to result from the whiting management program. Essentially, these changes to

the program analyzed in Amendment 12 delay the expected recovery period and economic benefits resulting from a recovered stock. The present value of the whiting management program is therefore likely to be less than that predicted in Amendment 12.

While these adjustments may produce impacts somewhat different than those predicted in Amendment 12, the difference is unlikely to invalidate the benefit-cost analysis that was presented in Amendment 12. This is because no adjustments have been made to the Year 4 default measure. The default measure is expected to achieve the biological objectives of Amendment 12, so the predicted social and economic impacts of Amendment 12 should still be realized in the long-term. The presence of the Year 4 default measure provides a reasonable assurance that the projected net present value of Amendment 12 will still be positive even though the modifications to the Amendment 12 measures may modify the time stream of expected benefits and costs.

5.3.2 Regulatory Flexibility Act (RFA)

The purpose of the RFA is to reduce the impacts of burdensome regulations and record-keeping requirements on small businesses. To achieve this goal, the RFA requires government agencies to describe and analyze the effects of regulations and possible alternatives on small business entities. On the basis of this information, the Regulatory Flexibility Analysis determines whether the proposed action would have a "significant economic impact on a substantial number of small entities."

The statement of the problem/need for management action is presented in Section 2.0 of this document. The objectives of this framework adjustment are specified in Section 2.2. The proposed action is described in Section 3.1, and alternatives to the proposed action are described in Section 3.2. The economic analysis (relative to the status quo) of both the proposed action and the alternatives that were rejected is contained in Section 4.2 of this document. Relevant subsections of the economic analysis are as follows:

Section 4.2.1	Regulated Universe
Section 4.2.1.4	Definition of "Small"
Section 4.2.2.1	Economic Effects of Mesh Size/Possession Limit Enrollment Program
Section 4.2.2.2	Economic Effects of Net Strengthener Options

NMFS considers a "substantial number" of small entities to be more than 20% of those entities in the class. If the effects of the management action fall primarily on a distinct segment of the industry or portion thereof (user group, gear type, geographical area, for example), that segment is considered the class for the purposes of this criterion.

NMFS has determined that economic impacts are significant for the purposes of the RFA if any of the following criteria are met:

(a) the regulations are likely to result in more than a five percent decrease in annual gross revenues,

(b) annual compliance costs (i.e. annualized capital, operating, reporting) increase total costs of production by more than five percent,

(c) compliance costs as a percent of sales are ten or more percent higher for small entities than compliance costs for large entities,

(d) capital costs of compliance represent a significant portion of capital available to small entities, considering internal cash flow and external financing capabilities, or

(e) the requirements of the regulations are likely to result in two or more percent of the small entities affected being forced to cease business operations.

The economic impact analysis presented in Section 4.2 of this document serves as the basis for determining whether one or more of these criteria would be exceeded. Based on this analysis, none of the alternatives under consideration, including the proposed action, are expected to result in any negative economic impacts on small entities. Relative to the status quo, expected average net returns ranged between an increase of 0.87% and 0.54% for Net Strengthener Options 1 and 2 respectively (the impacts of the proposed action are likely to resemble those of Net Strengthener Option 1). Change in net returns was highest at the 5th percentile of the distribution of net returns, indicating that the net strengthener is likely to have the greatest proportional benefit to those vessels that are least profitable.

Other Alternatives Considered and Rejected by the Council

The Council selected the proposed action for modifying the mesh size/possession limit enrollment program (Enrollment Option 4) because it is the simplest and the easiest to enforce of the alternatives under consideration. It also minimizes costs to both the administrative agency and participating fishermen more than the other alternatives by eliminating the need for any type of mesh size/possession limit enrollment program. The Council selected the proposed action for allowing the use of a net strengthener with 2.5-inch mesh (Strengthener Option 3) because it was recommended by the Whiting Committee, the Enforcement Committee, and some of the members of the Whiting Advisory Panel. While Strengthener Option 1 is predicted to result in the most positive economic impact, the Council was uncomfortable recommending a minimum 5-inch mesh for a net strengthener because it is known to mask the effectiveness (and decrease the conservation benefits) of 2.5-inch mesh more so than the other alternatives. In addition, 6-inch mesh is more readily available to the fleet than is 5-inch or 10-inch mesh, and enforcement agents indicated that familiarity with 6-inch mesh may improve the enforceability of this alternative.

Options for consideration in this framework adjustment were developed over time through a series of public, Advisory Panel, Committee, and Council meetings, beginning in September 1999. The schedule for meetings for which public notice included discussion of specific alternatives for this framework adjustment is as follows:

DATE	MEETING	AGENDA/DISCUSSION
9/8/99	Whiting Committee	• Develop alternatives for analysis
9/21-23/99	Council	• Initial meeting for Framework 32: finalize alternatives for analysis
10/21/99	Whiting Advisory Panel	• Review framework alternatives and analyses and provide recommendations for Committee consideration
10/26/99	Enforcement Committee	• Review framework alternatives and provide recommendations for Committee consideration
10/28/99	Whiting Committee	• Review analyses and recommendations and develop preferred alternatives for Council consideration
11/16-18/99	Council	• Final meeting for Framework 32: finalize framework measures

The Council's mailing lists for meeting notices contain more than 150 and 1,600 interested parties for whiting and Council meetings, respectively. Notices are mailed at least two weeks in advance for Committee and Advisory Panel meetings and three weeks in advance for Council meetings. Council and Committee meeting notices are also published in the *Federal Register* three weeks prior to the meeting. Agendas and meeting summaries for the above meetings are available from the Council office.

A complete summary of each of the alternatives considered during the framework development process as well as the rationale for why each alternative was rejected is provided in Section 3.2 of this document. Sections 3.2.1.1 and 3.2.2.1 include qualitative comparisons of all options considered by the Council, helping to characterize the Council's rationale for selecting the proposed action. These comparisons also highlight the primary reasons for rejecting the other alternatives under consideration.

5.4 ENDANGERED SPECIES ACT (ESA)

Section 7 of the Endangered Species Act requires federal agencies conducting, authorizing, or funding activities that may affect threatened or endangered marine species to ensure that those effects do not jeopardize the continued existence of listed species. The Council has concluded that small mesh multispecies fisheries, as described in Amendment 12 to the Northeast Multispecies FMP, may affect several listed species, but are not likely to jeopardize their continued existence. See Section E.7.2.4 of the Amendment 12 document for a discussion of the impacts on ESA-listed species. See Section 4.1.4 of this framework document for a discussion of the impacts of the proposed framework action.

5.5 MARINE MAMMAL PROTECTION ACT (MMPA)

The New England Fishery Management Council has reviewed the impacts of the Framework 32 measures on marine mammals and concludes that this proposed action is consistent with the provisions of the MMPA and will not alter existing measures to protect the species likely to inhabit the management unit. For further discussion, see Section 4.1.4 of this document and Section E.7.2.4 of Amendment 12 to the Northeast Multispecies FMP.

5.6 COASTAL ZONE MANAGEMENT ACT (CZMA)

The Council has reviewed the coastal zone management (CZM) programs for states whose coastal waters are within the range of areas affected by the proposed actions, including: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, New York, Delaware, Maryland, Virginia, and North Carolina. The Council has determined that the proposed action is consistent with the CZM programs of those states and has sent notification of this determination, along with a copy of the framework document, for their concurrence. Copies of the correspondence are on file at the Council office.

5.7 PAPERWORK REDUCTION ACT (PRA)

The Paperwork Reduction Act analysis completed for Amendment 12 included an estimate of the added burden of the mesh size/possession limit enrollment program. This analysis concluded that:

> Reporting by 200 permit holders, each enrolling an average of two times a year, yields an additional cost burden of 13.3 hours. The estimated annualized cost to respondents for the hour burden of these collections assumes a respondent wage of $15.00/hour. The total burden for calling and enrolling in mesh size/possession limit categories is estimated at $199.50 for 13.3 hours.

The action proposed in this framework adjustment eliminates the need for a mesh size/possession limit enrollment program and therefore eliminates the 13.3 burden hours ($199.50) predicted in the Amendment 12 PRA.

The action proposed in this framework adjustment contains no new or additional collection-of-information requirements.

6.0 REFERENCES

Amendments 5, 7, 9, and 10 to the Northeast Multispecies Fishery Management Plan (NEFMC).

Amendment 12 to the Northeast Multispecies FMP (NEFMC).

Pollnac, Richard B. and Littlefield, S.J. 1983. Sociocultural Aspects of Fisheries Management. *Ocean Development and International Law Journal*, 12:3-4, p. 209-246.

Additional references are contained in the Amendment 12 document and appendices.