

7.0 Applicable Law

7.1 Magnuson-Stevens Act

The Magnuson-Stevens Act, implemented Oct 11, 1996, changed the standards for fisheries management. Perhaps the most significant of these changes is the establishment of strict criteria for determining the status of stocks based in large measures on maximum sustainable yield (MSY), and for rebuilding overfished stocks to biomass levels that can produce MSY on a continuing basis. This new requirement has taken several years to implement, primarily because the NEFMC has had to first revise all overfishing definitions to comply with the new standard, conduct assessments of all stocks to determine the status relative to the new overfishing definitions, and modify the management plans to achieve the stock rebuilding that is necessary.

7.1.1 Consistency with National Standards

Section 301 of the Magnuson-Stevens Act requires that regulations implementing any fishery management plan or amendment be consistent with the ten national standards listed below.

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.*

The proposed management measures are designed to end overfishing on the eight groundfish stocks that are currently subject to excessive fishing pressure. In addition, the proposed action implements formal rebuilding programs for all overfished stocks. For overfished fisheries, the Magnuson-Stevens Act defines optimum yield as the amount of fish which provides for rebuilding to a level consistent with producing the maximum sustainable yield from the fishery. The measures are designed to achieve the fishing mortality rates, and yields, necessary to rebuild the overfished stocks.

Because of the multispecies nature of this fishery, the measures necessary to rebuild overfished stocks also reduce fishing mortality on healthy stocks. This could prevent harvesting the optimum yield from those stocks while rebuilding programs are being followed for the overfished stocks. The proposed action includes measures that are designed to allow increased harvests of healthy stocks. These measures include the provision for special access programs to target healthy stocks, as well as the provision for additional fishing time, in the form of a different category of DAS, in order to target healthy stocks. While many of the details of these programs have yet to be developed, the proposed action establishes the structure that can be used to access healthy stocks in order that optimum yield can be harvested from them during the period that other stocks are being rebuilt.

2. *Conservation and management measures shall be based on the best scientific information available.*

The proposed action is based on the most recent estimates of stock status available. These estimates are in the form of unpublished information provided by the Northeast Fisheries Science Center. Stock size and fishing mortality in calendar year 2002 was estimated based on landings information for that period. In addition, the amendment used information from the most recent stock assessments: either the updated assessments in November 2002 for the groundfish complex as a whole, or assessments published during 2003 for five stocks (witch flounder, SNE/MA yellowtail flounder, CC/GOM yellowtail flounder, SNE/MA winter flounder, and GOM winter flounder).

Management targets for this action are based on NEFSC 2002a, a comprehensive review of fishing mortality thresholds and biomass targets for the groundfish complex.

With respect to bycatch information, the action uses bycatch information from the most recent assessments. Bycatch data from observer report, vessel logbooks, or other sources must be rigorously reviewed before conclusions can be drawn on the extent and amount of bycatch. While additional observer data has been collected since the most recent assessments were completed, it has not been analyzed or reviewed through the stock assessment process and thus cannot be used.

The Gear Effects Evaluation and Adverse Impacts Determinations for the Final Environmental Impact Statement for the Essential Fish Habitat Components of Amendment 13 satisfy these requirements. The SFA requires the NEFMC to minimize, to the extent practicable, the adverse impacts of fishing on the EFH associated with any federally regulated fishing activities in the Northeast region. To do this, this amendment must evaluate the effects of all fishing gears used in the region on groundfish EFH, following the guidelines indicated above. The potential impacts of groundfish fishing on the EFH of other species in the region must be evaluated as well.

Since the implementation of the Council's Omnibus EFH Amendment of 1998 (NEFMC 1998), NMFS, NEFMC and MAFMC conducted a Gear Effects Workshop that evaluated the effects of fishing gears used in the Northeast region on mud, sand, and gravel habitats (NEREFHSC 2002). Additional sources of information include work done by the NEFMC Essential Fish Habitat Technical Team, and a National Research Council report on the Effects of Trawling and Dredging on Seafloor Habitat (NRC 2002). Additional information is included in this document.

Gear Descriptions

Specifically, to describe gears, information from the NMFS VTR database and an ASMFC gear report was used. The primary source of information for gear descriptions was the EFH Omnibus Amendment (1998). Additionally, gear descriptions are provided using the Northeast Regional EFH Steering Committee's 2002 report from the Gear Effects Workshop in addition to several articles published in peer reviewed journals.

Distribution of Fishing Activity by Gear

The data used to perform this analysis were extracted from vessel trip report and clam logbook databases maintained at the U.S. National Marine Fisheries Service (NMFS) Northeast (NE) Regional Office in Gloucester, MA. Days absent calculations for trawl and dredge vessels are clearly preferable to simply summing the number of trips, but over-estimate actual fishing time since they include travel time and any other non-fishing-related activity while vessels are away from port. Thus, the GIS plots and analyses presented here do not represent fishing effort. They were only used to indicate the relative, not the absolute, distribution of fishing activity by geographical area and sediment type. Toward this end, all GIS input data were compiled and sorted into three categories: low, medium, and high degrees of activity that corresponded to cumulative percentages of 90, 75, and 50% of the total number of days at sea, or days spent fishing for each gear type during the seven-year time period. Data reported from ten minute squares (TMS) south of Cape Hatteras, North Carolina (35° N) and north of 45° N latitude in the Gulf of Maine were excluded from analysis, as were TMS-binned data from the low end (cumulative percentages >90%) of the frequency distribution. Exclusion of "low end" data (TMS with only a few trips or days) eliminated a large number of spatially misreported trips from analysis. Also included in this section are GIS plots of fishing activity for scallop dredge vessels operating in the limited access fishery during 1998, 1999, and 2000 which were derived from vessel monitoring systems (VMS) placed aboard each vessel. These plots provide a much more detailed depiction of fishing activity for dredge vessels during these three years than VTR data since they are collected at much higher spatial and temporal resolutions. Data were collected at 20-minute intervals during the time when vessel speed was less than 5 knots in order to differentiate between fishing activity and steaming time and then binned into one nautical mile squares. It is recognized that fishing activity includes other activities besides dredging, e.g., shucking time.

Types of Gear Effects

A number of authors have reviewed, to varying extents, existing scientific literature on the effects of fishing on habitat (e.g., Auster et al. 1996, Cappo et al. 1998, Collie 1998, Jennings and Kaiser 1998, Rogers et al. 1998, Auster and Langton 1999, Hall 1999, Collie et al. 2000, Lindeboom and de Groot 2000, Barnette 2001, National Research Council 2002). The conclusions reached by these authors are extracted from a recent NOAA report (Johnson 2002). A number of review papers have focused specifically on the physical effects of bottom trawls (e.g. ICES 1973). A working committee of the International Council for the Exploration of the Seas (ICES) issued, in November 2000, a report on the "Effects of Different Types of Fisheries on North Sea and Irish Sea Benthic Ecosystems." This report (ICES 2000) was a summary of findings based on a comprehensive report of the same title edited by Lindeboom and de Groot (1998). Alteration of physical structure, sediment suspension, changes in chemistry, and changes to benthic community are documented and described in the FEIS using peer reviewed literature and two reports (NRC and Gear Effects Workshop).

A Review of Fishing Gear Effects Literature Relevant to the U.S. Northeast Region was conducted and included in the FEIS that included the review of forty-four publications. They included all known studies (written in English) that examined the effects of the three principal mobile, bottom-tending fishing gears used in the Northeast U.S. on benthic marine habitats. Only publications that evaluated the direct habitat effects of fishing by these gears were reviewed (i.e., modifications to the physical structure of the seafloor or effects on benthic organisms that live in or on the seafloor). Effects of fishing on resource populations were not included, nor were studies that evaluated the indirect effects of fishing on marine ecosystems caused by the selective removal of species targeted by the gear or which are caught incidentally (as by-catch) during fishing. Both peer-reviewed and non-peer-reviewed publications were included, but most were peer-reviewed. To be included, accounts of research projects had to be complete and describe methods and results. Abstracts and poster presentations were not included. The summaries in this document are, in all cases, based on primary source documents. Two bottom-tending mobile gear types that are widely used in other parts of the world, but not in the Northeast U.S. – beam trawls and toothed scallop dredges – were not included even though considerable research has been conducted on their habitat effects. Also excluded were studies done on the effects of other gear types used strictly in inshore state waters in habitats where sea scallops are not found (e.g., escalator dredges in submerged aquatic vegetation) and any research relating to fixed and pelagic gear effects.

Vulnerability of Benthic EFH to Bottom-Tending Fishing Gears and Adverse Impacts Determinations

To evaluate the vulnerability of benthic EFH to bottom-tending fishing gears, information used included: 1) the EFH designations adopted by the NEFMC and MAFMC; 2) the results of a fishing gear effects workshop convened in Fall 2001 (NEREFHSC 2002); 3) an evaluation of the information provided in this gear effects evaluation section of this document, including the effects of fishing gear on habitat from existing scientific studies, and the geographic distribution of fishing gear use in the Northeast Region; and 4) the habitats utilized by each species and life stage as indicated in their EFH designation and supplemented by other references. A matrix (was developed for each benthic life stage for each species to determine the vulnerability of its EFH to effects from bottom tending mobile gear. Six criteria were qualitatively evaluated for each life stage based upon existing information. Each evaluation consisted of a score based upon a predefined threshold. The methods used to rank vulnerability were subject to a peer review by the NMFS Northeast Fisheries Science Center's review process for publications. The thresholds for adverse impact determinations were developed and reviewed by the Council's Essential Fish Habitat Technical Team. The adverse impact determinations are based on conclusions in the Gear Effects Evaluation in section 09.3.1.2 and is substantiated by two recent reports. The first of these (NEREFHSC 2002) is the report of a workshop held in October 2001 that examined the habitat effects of gears used in the Northeast region on three substrate types (gravel, sand, and mud). The second report (Morgan and Chuenpagdee 2003) evaluated the effects of ten different commercial fishing gears on marine ecosystems in U.S. waters.

Evaluation of the potential adverse effects of groundfish fishing on EFH

From the vulnerability analysis, it was determined that the EFH of some species in the region may be adversely impacted from groundfish fishing. Thus, alternatives were developed in Amendment 13 to minimize, to the extent practicable, the adverse impacts of groundfish fishing on EFH. Many of the alternatives designed to minimize the adverse impacts of fishing on EFH include closed areas for EFH protection. These alternatives were evaluated using a strategy developed by the Essential Fish Habitat Technical Team of the New England Fishery Management Council. Using the best available science for the entire region, the habitats within the management area were described. More specifically, the amount of various sediment types, the aerial extent of EFH designations, and biomass indices for various species were analyzed using several sources of data and methods (See Appendix XI for a detailed description of the methods used in the habitat evaluation). All of the data were analyzed using GIS, a mapping program that enables data to be analyzed geographically.

The sediments inside each alternative were evaluated based on a digitized US Geological Survey map (Poppe et al, published in 1986 and 1989), which is the only source of sediment data available that includes the entire management area. The amount and percent coverage of bedrock, gravel, gravelly sand, sand, muddy sand, and mud bottoms in each area was described. The amount and percent coverage of EFH area in square nautical miles was calculated for species with EFH vulnerable to bottom tending gear. EFH area was calculated as the number of square nautical miles included in designated ten-minute squares of longitude and latitude, as defined in the EFH Omnibus Amendment (1998) and other sources. Lastly, the Habitat Technical Team identified several trophic guilds, species assemblages, and individual benthic species that are indicators of the ecosystem characteristics of each proposed habitat closed area. Biomass data were obtained from the 1995-2001 NMFS bottom trawl survey data. As illustrated in the document, there are limitations to each of these data sets and methods, however the Council has used the best available science to describe the affected environment and evaluate the potential habitat impacts from the various alternatives under consideration.

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 proposed action manages each individual groundfish stock as a unit throughout its range. In general, management measures specifically designed for one stock are applied to the entire range of the stock. There are minor exceptions, such as when a trip limit is applied to an area slightly different than the stock area to facilitate management and enforcement concerns. In addition, the groundfish complex as a whole is managed in close coordination. Many of the management measures are applied to all groundfish stocks. They are designed and evaluated for their impact on the fishery as a whole.

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 a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.*

The proposed management measures do not discriminate between residents of different states. They are applied equally to all permit holders, regardless of homeport or location. While the measures do not discriminate between permit holders, they do have different impacts on different participants. This is because of the differences in the distribution of fish and the varying stock levels in the complex. For example, the measures designed to rebuild GB cod have more impacts on fishermen who target that stock. Some of these impacts may be localized, as often communities near the stock may have developed small boat fisheries that target it. These distributive impacts are difficult to avoid given the requirement to rebuild overfished stocks. Even if the measures are designed to treat all permit holders

the same, the fact that fish stocks are not distributed evenly, and that individual vessels may target specific stocks, means that distributive impacts cannot be avoided.

The proposed action does include some measures designed to mitigate these distributive impacts. The sector allocation and special access programs are specifically designed to foster ways to target healthy stocks to mitigate some of these distributional impacts. In addition, the use of Category B DAS may create similar opportunities in the future, though many of the details of this program have yet to be defined.

The proposed action does allocate fishing privileges under Amendment 13 based on a permit's fishing history during the period fishing years 1996 through 2001. Active groundfish fishermen during this period receive a higher percentage of their DAS that can be used when the amendment is implemented. The proposed action in effect reduces currently active groundfish effort while preventing inactive effort from re-entering the fishery until stocks rebuild. In the extreme, a vessel that did not actively fish for groundfish during this period will not be able to fish at all when the amendment is implemented, though as stocks rebuild there may be opportunities provided in the future. The impacts of this measure for each state are described in section 5.4.9.4.5. The impacts are roughly similar for vessels that are homeported in Maine, Massachusetts, Rhode Island, and New Hampshire. These impacts are greater for vessels homeported in Connecticut, New York, New Jersey, and other states. This proposal, however, is reasonably calculated to promote conservation. By reducing active fishing activity, fishing mortality on groundfish stocks will be reduced and stocks will rebuild more quickly. At the same time, by controlling the opportunity for effort that has not been used to target groundfish in recent years, the proposed action prevents the reintroduction of new fishing effort that could slow stock growth.

One specific allocation of resources contained in the proposed action will occur through the sector allocation proposal. Allocations to a voluntary self-selecting sector will be based on the recent fishing history of the sector participants. The proposed action includes a limit so that a voluntary sector cannot acquire an excessive share of the TAC for any stock.

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

The proposed management program relies primarily on restrictions in time fishing – days-at-sea (DAS) – to control fishing mortality. While there are measures included that tend to reduce economic efficiency of vessels, they are generally required for sound management reasons. For example, restrictions on minimum mesh size reduce catches, but benefit the resource by targeting larger fish that have had an opportunity to spawn. Closed areas also reduce efficiency by preventing fishermen from fishing in high catch areas, but provide benefits to both habitat protection and spawning aggregations of fish. Some of the measures in this amendment will improve economic efficiency. The increase in the GOM cod trip limit will make each day more profitable, and the reduction in the number of seasonal closures in the Gulf of Maine will enable fishermen more opportunities to fish in an economic manner. Specific proposals that address economic concerns include the DAS leasing and DAS transfer provisions of the amendment. These measures allow for fishermen to consolidate DAS on fewer vessels, making each active fishing vessel more economically viable.

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

The measures allow for the use of different gear, vessel size, and fishing practices. While there are many restrictions included with respect to minimum mesh size, quantity of gear, closed areas, and fishing time, there are no restrictions preventing the use of a specific gear in an open area, and few restrictions on the deployment of that gear. The proposed action includes programs designed to

encourage innovation in fishing practices in order to target healthy stocks. These programs include the special access programs, sector allocation, and the use of Category B DAS.

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

The Council considered the costs and benefits of a range of alternatives to achieve the goals and objectives of this FMP. It considered the costs to the industry of taking no action relative to adopting a rebuilding program. The expected benefits are greater in the long-term if stocks are rebuilt, though it is clear there are significant short-term declines in revenue that can be expected.

Some management alternatives were not selected in part because of concerns over the costs and burdens of administering the program. The area management proposal, recreational fishing permits, periodic review of closed areas and certified bycatch/exempted fisheries, requirement for a vessel monitoring system on all vessels, flexible area action system – these are all examples of management measures whose costs were deemed to outweigh the benefits expected.

The management program does not duplicate other regulatory efforts. Management of multispecies in federal waters is not subject to coordinate regulation by any other management body. Absent Council action, a coordinated rebuilding effort would not occur to restore the health of the overfished stocks.

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 impacts on such communities.*

Consistent with the requirements of the Magnuson-Stevens Act to prevent overfishing and rebuild overfished stocks, the proposed action will restrict fishing activity through the imposition of additional restrictions on fishing time, possession limits, and other measures. In addition, it adopts additional measures intended to minimize, to the extent practicable, the adverse effects of fishing on essential fish habitat. Analyses of the impacts of these measures show that landings and revenues are likely to decline for many participants in the early years of the rebuilding program. These declines will probably have negative impacts on fishing communities throughout the region, but particularly on those ports that rely heavily on groundfish.

The action, however, includes measures that are intended to both provide for sustained participation and minimize the adverse impacts of the measures. The proposed action is based on a combination of a phased and adaptive rebuilding strategies. Economic analyses of this approach shows that in the short term the economic impacts are less than under other approaches that were considered. Over the long term, the economic benefits may not be as great. The reason for choosing this approach was concern that the other alternatives were so draconian that they would eliminate many ports from the fishery and as a result these ports would not be able to benefit when stocks rebuild. Both the strategy and the measures adopted are intended to provide for a higher level of sustained participation so that these ports will still be involved in the fishery when stocks rebuild.

Other measures are included that are designed to foster continued participation. As previously discussed, the sector allocation, special access program, and Category B DAS programs are designed to provide avenues for fishermen to continue to participate while stocks rebuild. The proposed action reduces the number of seasonal closed areas in the Gulf of Maine (compared to FY 2001), reducing the periods when small boat fishermen from some ports are excluded from access to the fisheries.

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 proposed action includes a number of measures that are designed to minimize bycatch. These are described in detail in section 5.2.8.

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

The primary control on fishing mortality use in this plan is limitations on the number of DAS that vessels can fish. These DAS can be used at any time, subject to limitations imposed by closed areas. Reductions in DAS could affect vessel safety if vessels are unable to remain economically viable. Comments received suggested that vessel maintenance and safety equipment are often two major costs that are trimmed when vessel revenues decline. In the early years of the rebuilding program, vessel revenues are expected to decline for many vessels under the proposed action. If operators are unable to afford maintenance or safety equipment, there could be an increased number of accidents. While reduced fishing time means that vessels are on the water for less time and subject to fewer hazards, it is not clear that this will compensate for the lack of spending on safety and maintenance equipment. Reduced time fishing could also lead to less experience for crew and vessel captains, which could adversely affect safety.

The proposed action, however, does include some measures that may help mitigate these problems. Both DAS leasing and the DAS transfer provision will help some vessels obtain more DAS so that they can remain profitable. Indeed, public comments received highlighted that some owners who currently operate two vessels will be able to combine DAS on one vessel, saving some maintenance costs and enabling them to operate more safely. While DAS are being reduced, for some areas the action includes some measures to make each DAS more profitable. The GOM cod trip limit is raised to 800 pounds, for example. The proposed action also reduces the number of seasonal closed areas in the Gulf of Maine by two months, creating more opportunities for fishermen to choose to fish.

7.1.2 Other M-SFCMA requirements

Section 303 (a) of FCMA contains 14 required provisions for FMPs. These are discussed below. Any fishery management plan that is 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;

Optimum yield from this fishery is harvested entirely by U.S. vessels. There is no opportunity and no provisions for foreign fishing in this management plan.

(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;

An updated description of the fishery is included in the Affected Human Environment section of the document, section 9.4.

(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;

Maximum sustainable yield is described in section 3.1.5, with a short explanation of the source of this estimate. Optimum yield continues to be defined as in Amendment 9 (see section 3.1.4). The condition of the fishery, including a summary of changes in stock status, is included in section 9.2.1.1, while information on landings and revenues from the fishery is in section 9.4. Probable future stock conditions are estimated in section 5.2.1.1. The future economic condition of the fishery is described in section 5.4.

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

Fishing vessels of the U.S. will harvest the optimum yield from the fishery and none will be available to foreign fishing.

(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;

Reporting requirements are defined in section 3.4.14.

(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 proposed action continues to allow the carry-over of a small number of DAS from one fishing year to the next. If a fisherman is unable to fish because of weather or other ocean conditions, this measure allows his available fishing time to be used in the next fishing year. This practice does not require a consultation with the Coast Guard.

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

Essential fish habitat was defined in an earlier action. This amendment does not change those definitions.

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

Additional research needs are specified in sections 6.0 and 9.3.4.

(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;

Fishery impacts are described in several sections. Economic impacts of the proposed measures to minimize the adverse impacts of fishing on essential fish habitat (to the extent practicable) are described in section 5.4.8. Other economic impacts, including the economic impacts of the measures to achieve rebuilding requirements, are described in section 5.4. These impacts are described based on numerous categories, including homeport state and major groundfish ports. Impacts of this action on other fisheries are described in section 5.4.13. Finally, section 5.6 analyzes the expected social impacts on a community/port level.

(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 proposed action revises the criteria for identifying when a fishery is overfished. These revised criteria are described in section 3.1. By reference, the analysis of the criteria and the relationship to reproductive potential of a stock is detailed in NEFSC 2002a. The proposed action includes management measures (section 3.6) to end overfishing and rebuild overfished stocks identified in sections 3.2.1 and 3.2.3.1.3.

(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;

Standardized reporting methodologies have been defined in previous actions for this management plan. They are modified by the proposed measures in section 3.4.14.2. In addition, the management plan includes guidance for an acceptable level of observer coverage (section 3.4.10) to supplement required vessel bycatch reporting. Conservation and management measures that, to the extent practicable, minimize bycatch and bycatch mortality are described in section 5.2.8.

(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;

This management plan does not include any catch and release recreational management measures.

(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; and

Descriptions of the commercial, recreational, and charter fishing sectors which participate in the fishery, including trends in landings by these sectors, are in section 9.4.

(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.

Proposed management measures restrict harvest levels for all sectors of the fishery. Recovery benefits have been allocated equitably, most notably with respect to haddock: commercial trip limits have been relaxed, and the proposed action removes the haddock bag limit for recreational vessels.

(15) The EFH Provisions of the SFA (50 CFR Part 600.815) require the inclusion of the following components of FMPs. The Council has fully met these obligations as detailed below each mandatory component.

(A) Identify and description of EFH

(B) Fishing activities that adversely affect EFH

(i) Evaluation of potential adverse effects

(ii) Minimizing adverse effects

(C) Identification of non-Magnuson-Stevens Act fishing activities that may adversely affect EFH

(D) Identification of non-fishing related activities that may adversely affect EFH.

(E) Cumulative impacts analysis

(F) Identification of conservation and enhancement actions.

(G) List the major prey species and discuss the location of the prey species' habitat

(H) Identification of habitat areas of particular concern

(I) Recommendations for research and information needs

(J) Review and revision of EFH components of FMPs.

(A) Identify and description of EFH

EFH for the management unit of the Northeast Multispecies FMP has been identified and described in Amendment 10. The Council plans to update these EFH designations through an omnibus amendment that will be initiated in early 2004 and will become Amendment 11 to the Northeast Multispecies FMP.

(B) Fishing activities that adversely affect EFH

(i) Evaluation of potential adverse effects

The EFH Final Rule (50 CFR Part 600) provides guidance to the Regional Fishery Management Councils for identifying fishing activities that adversely impact essential fish habitat (EFH). In addition to the EFH Final Rule, guidance provided by the Habitat Conservation Division (HCD) headquarters office in the form of a memo dated October 2002 was followed in the preparation of this section of Amendment 13. This evaluation should primarily include the impacts of activities associated with the fishery that is the subject of the management action, as well as other federally-managed and state-managed fishing activities. Based on the guidance provided by the EFH Final Rule and the HCD office, this determination focuses on the effects of fishing activities in the New England multi-species fishery on groundfish EFH. It also includes information on the effects of other federally-managed fishing activities on groundfish EFH, and identifies gears used in state-managed fisheries that could affect groundfish EFH. Most of the information needed to complete this determination is provided in more detail in previous sub-sections of Section 9.3.1.

Section 9.3.1.2 describes commercial fishing gears used in the Northeast region of the U.S. and the geographic distribution and use of the principal bottom-tending gears in three broadly-defined habitat types. It also evaluates the effects of bottom trawls and dredges on benthic marine habitats in the region. Most of this information is derived from the NMFS, NEFMC and MAFMC-sponsored Gear Effects Workshop that

evaluated the effects of fishing gears used in the Northeast region on mud, sand, and gravel habitats (NREFHSC 2002) and from an extensive review of relevant gear effects studies (Stevenson et al. 2003). Additional sources of information include work done by the NEFMC Habitat Technical Team and NEFMC and NMFS staff, and a National Research Council report on the Effects of Trawling and Dredging on Seafloor Habitat (NRC 2002). The information in this section serves as the basis for evaluating which gear types, if any, are most likely to have an adverse impact on essential fish habitat for federally-managed species in the NE region.

Section 9.3.1.3 evaluates the vulnerability of all 37 federally-managed species' to gear types found to have potential adverse impacts on EFH. Vulnerability was evaluated according to four broad categories: none (0); low (L); moderate (M); and high (H), based upon a matrix analysis of habitat function, habitat sensitivity and gear use. Results are summarized by species and life stage.

Specifically, species and life stages were ranked according to the vulnerability of their EFH to the effects of mobile, bottom-tending gear. EFH for those ranked as moderately or highly vulnerable were included in this adverse impacts evaluation. For this determination, fishing activities are interpreted to mean fishing gears, since there is not enough information available to support a more detailed determination based on different fishing practices used with each gear type. Adverse impacts associated with each gear type are assessed for specific habitat types that make up groundfish EFH. Only benthic habitats are considered, since the gears used to catch groundfish are bottom-tending gears. Habitat type is based on type of substrate, and, to some extent, depth and degree of exposure to natural disturbance. These simplifications were made in order to allow maximum use of the information available and to provide an evaluation that encompasses as broad a range of the relevant fisheries and affected habitats as possible.

EFH for those ranked as moderately or highly vulnerable were included in this adverse impacts evaluation. For the purposes of this action, EFH vulnerability that is ranked as low is considered to have a potential adverse effect to EFH that is minimal and temporary in nature. Therefore, the Council will eliminate from further consideration any EFH that has a low vulnerability to scallop dredges, otter trawls and clam dredges. Refer to 9.3.1.6 for a detailed look at the vulnerability rankings based on shelter, food, reproduction, habitat sensitivity, habitat rank, gear distribution and gear rank. Background on how vulnerability was determined in this exercise is useful for understanding how EFH could be adversely affected as a result of fishing with different gear types. Vulnerability was divided into four broad categories, including: none (0); low (L); moderate (M); and high (H), based upon a matrix analysis of habitat function, habitat sensitivity and gear use. Several criteria were qualitatively evaluated for each life stage based upon existing information. Each evaluation consisted of a score based upon a predefined threshold. The criteria used and the key describing what each ranking stands for is described in 9.3.1.6. Depth range and substrates that are included in the EFH designations for those species that have been determined to be adversely impacted indicate that, as a group, they occupy a wide range of depths and bottom types.

Section 9.3.1.8 summarizes the results and findings of this section, identifying the potential adverse impacts of the three principal mobile, bottom-tending gears on three principal bottom types in the region. These results serve as the basis for analyzing proposed alternatives to minimize the adverse impacts of these gears on EFH.

(ii) Minimizing adverse effects

The EFH Final Rule also stipulates that "each FMP must minimize to the extent practicable the adverse effects of fishing on EFH that is designated under other federal FMPs". Federally-managed species that could be affected by the New England groundfish fishery are listed in 9.3.1.7. In order to minimize and mitigate the adverse effects of the fishery on EFH the Council will implement Habitat Alternative 2 (Benefits of other Amendment 13 alternatives), Alternative 7 (Expand the list of gears prohibited in year-round closed areas to include clam dredges), and Alternative 10b (Compromise Habitat Closure Areas). Habitat Alternative 10b will prohibit bottom-tending mobile gear, with the exception of shrimp trawls from

the Western Gulf of Maine Closed Area, from fishing in vulnerable areas containing the above benthic habitat types. Alternative 7 will prohibit clam dredges from accessing groundfish closed. Additionally, Alternatives 2 will be implemented to further mitigate the adverse effects of the fishery on EFH. The proposed action is further described in Section 3.7 and the environmental consequences and practicability analysis of these alternatives can be found in Section 5.3.8, 5.3.9 and 5.3.10. The Council has determined that the combination of these gear restrictions, effort reductions and area closures minimizes, to the extent practicable, the adverse effects of fishing on EFH. This includes the adverse effects of the groundfish fishery on all federally-designated EFH as well as the adverse effects of other federally-managed fisheries on groundfish EFH.

(C) Identification of non-Magnuson-Stevens Act fishing activities that may adversely affect EFH

Section 9.3.1.9 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(D) Identification of non-fishing related activities that may adversely effect EFH.

Section 9.3.1.10 addresses the requirements of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(E) Cumulative impacts analysis

Section 5.7.7.4 addresses the requirement of this component.

(F) Identification of conservation and enhancement actions.

Section 9.3.2 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(G) List the major prey species and discussion the location of the prey species' habitat

Section 9.3.3 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(H) Identification of habitat areas of particular concern

Section 9.3.5 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(I) Recommendations for research and information needs

Section 9.3.4 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

(J) Review and revision of EFH components of FMPs.

Section 9.3.6 addresses the requirement of this component. This section will be thoroughly updated in the upcoming omnibus habitat amendment (to be Amendment 14 to the NE Multispecies FMP).

7.2 National Environmental Policy Act (NEPA)

7.2.1 Executive Summary

See page I-iii.

7.2.2 Background and Purpose

The background and purpose for this action, including a statement of the problem, purpose and need for action, and goals and objectives are in Section 2.0. The problem and need for action were initially defined

during the Council's scoping process. A summary of this process and the comments received during that time follows.

During the spring of 1999 the Council initiated a scoping process to solicit suggestions and information on the range of issues that should be addressed and alternatives that should be considered in Amendment 13. A list of issues were generated through scoping and additional meetings of the groundfish committee and advisory panel. These are summarized below.

Multispecies Stock Rebuilding

- The multispecies FMP must address the SFA requirement for maximum ten-year rebuilding schedules for all groundfish stocks.
- The fishery management cycle is not coordinated well with stock assessment cycle.
- Management measures to rebuild weaker stocks in a geographical region often preclude fishing for stronger stocks, resulting in more significant economic dislocation for the fleet as a whole.

Fishing Effort and Capacity

Latent effort

- With the current number of active vessels, allocated DAS cannot be increased without jeopardizing stock rebuilding.
- Only about 1/3 of the allocated multispecies DAS were used during the 1998 fishing year. Unused allocations could be re-activated, countering rebuilding efforts whenever catch rates increase. This demonstrates the challenge of matching groundfish fleet capacity to sustainable harvest capacity.

Days At Sea (DAS) effort reduction program

- DAS are not being used as the primary management tool to reduce fishing effort in the multispecies fishery because of very strong resistance to reducing DAS below current levels.

Inequities associated with DAS allocations and DAS usage

- Dayboats can make more than one trip per 24-hour DAS.
- "Catchability" (catch rates) of gear is difficult to coordinate with fishing effort/DAS allocations between gear sectors (For example, DAS are not counted for gillnet soak time.)

DAS "running clock"

- Both "frontloading" (beginning the DAS clock before leaving the dock) and running the clock after landing an overage decrease the ability to estimate true fishing effort through DAS usage.
- The "running clock" renders trip limits virtually unenforceable.

Allocation and Equity Issues

- Equal application of a regulation often results in unequal distribution of impacts on different fleet sectors.
- Conversely, application of different regulations to various fleet sectors is often perceived as an unfair allocation of fishing privileges.
- Management measures are often tied to specific gear sectors, yet there are no harvest allocations for any gear sectors.
- There is a significant perception of inequity due to exemptions/exceptions made for recreational vessels regarding trip limits and closed areas.

Closed Area Management

- It is very difficult to spread the conservation burden evenly across fleet sectors using area closures as a management tool.
- It is difficult to make closed areas less polarizing and less economically disruptive.
- Problems minimizing socio-economic impacts on communities are most directly affected by area closures

- Closed areas force vessels to concentrate their effort and fish less efficiently in remaining open areas, intensifying competition and increasing gear conflicts.
- Short-term area closures may not achieve intended results as areas open and effort re-enters the area.
- It is difficult to identify appropriate exemptions within the closed areas to minimize negative impacts on other fisheries.

Trip Limits

- When used as a primary mortality reduction tool (as they have been), they often result in significant discards and do not reduce fishing mortality as intended.
- Species-specific trip limits in a multispecies fishery often result in discarding of that species above the trip limit as vessels continue to fish for other multispecies.
- It is difficult to design a trip limit that adequately constrains both small and large vessels without inequitably affecting one or the other.
- “Backstops” often create incentive for derby-style fishing.
- In general, trip limits are very difficult to enforce.

Experimental and Exempted Fisheries

- Experimental and exempted fisheries are required to demonstrate that 5% or less of their catch is composed of non-target species. This five percent standard will become increasingly difficult to meet as groundfish stocks recover and may preclude several fisheries, offering few alternatives to fishing for multispecies even though regulated species bycatch may not be as important a concern as the stocks rebuild.
- The process for obtaining an exempted experimental fishing permit difficult and time-consuming.
- The challenges of this process provide no mechanism for encouraging conservation engineering.

Fishing Gear and Selectivity

- The multispecies FMP does not provide incentives for fishermen to use more selective, less destructive fishing gear (except for large-mesh exemptions).
- No mechanism exists in the multispecies plan for improving accountability for discarded bycatch.
- It is difficult to match minimum fish sizes with the appropriate minimum mesh size.
- There is a lack of adequate mesh/gear selectivity information for all multispecies stocks/fisheries.

7.2.3 Summary of the SEIS

Refer to Executive Summary, page I-iii.

7.2.4 Description of the Proposed Management Measures

The management measures under consideration are described in section 3.0. Descriptions of the measures not selected are in section 4.0.

7.2.5 Description of the Affected Environment

The Affected Environment is described in Volume II.

7.2.6 Impacts of the Management Measures Under Consideration

The impacts of the alternatives under consideration are described in section 5.0.

7.2.7 Cumulative Impacts of the Proposed Action

The National Environmental Policy Act (NEPA) requires that cumulative effects of “past, present, and reasonably foreseeable future actions” (40 CFR § 1508.7) be evaluated along with the direct effects and

indirect effects of each proposed alternative. Cumulative impacts result from the combined effect of the proposed action's impacts and the impacts of other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively significant actions taking place over a period of time. The Council on Environmental Quality (CEQ) directs federal agencies to determine the significance of cumulative effects by comparing likely changes to the environmental baseline. On a more practical note, the CEQ (1997) states that the range of alternatives considered must include the "no-action alternative as a baseline against which to evaluate cumulative effects." Therefore, the analyses in this document, referenced in the following cumulative impacts discussion, compare the likely effects of the proposed actions to the effects of the no-action alternative.

Cumulative effects are evaluated in section 5.7.

7.2.8 Determination of Significance

Section 6.02 of the NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, provides specific guidance on determining the significance of fishery management actions. The nine criteria to be addressed are as follows:

1. May the proposed action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?
2. May the proposed action be reasonably expected to jeopardize the sustainability of any non-target species?
3. May the proposed action be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?
4. May the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?
5. May the proposed action be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitats of these species?
6. May the proposed action be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?
7. May the proposed action be reasonably expected to have a substantial impact on biodiversity and ecosystem function within the affected area?
8. Are significant social or economic impacts interrelated with significant natural or physical environmental effects?
9. What is the degree to which the effects on the quality of the human environment are likely to be highly controversial?

The Council has reviewed the nine criteria relative to the action proposed in Amendment 13 to the Multispecies FMP. Based on these criteria the Council has determined that the proposed action represents a significant action and has prepared an EIS in accordance with the National Environmental Policy Act.

7.2.9 Response to Comments

Approximately 5,000 written comments were received during the comment period. Responses to comments are in Appendix XVII.

7.2.10 Rationale for the Proposed Action

Because of current stock status and the requirements of the Magnuson-Stevens Act, additional management measures are needed for the multispecies fishery to end overfishing and rebuild overfished stocks. These

measures must comply with the specific requirements of the M-S Act as well as other applicable law. The Council believes the proposed management action is the appropriate way to meet these requirements. In order end to overfishing and rebuild overfished stocks, this amendment proposes extensive restrictions on the commercial and recreational fishing industries. For the commercial industry, the measures rely almost entirely on the use of effort controls to reduce fishing mortality. Effort controls – restrictions on the number of days that can be fished, requirements to use specific gear, closed areas, etc. – have proven successful in managing this fishery in the recent past. Fishing mortality has been reduced on a number of stocks in the multispecies fishery, and overall stock status has improved (see section 9.2.1.1 for specific details). In 1996, seventeen stocks were overfished; in 2002, only ten stocks are overfished, and five of those are projected to leave that status in the near future. Clearly recent experience shows that the use of effort controls can achieve reductions in fishing mortality if correctly designed and applied. These accomplishments are even greater if measures against the standards that guided previous management decisions rather than the recently updated estimates of target stock size. At the same time, however, it is clear that the application of these effort controls has not succeeded in meeting the stringent requirements of the M-S Act to end overfishing and rebuild overfished stocks. While many groundfish stocks are growing, there are still eight stocks subject to overfishing and roughly half the stocks are in an overfished status (many are expected to grow out of the overfished status in short order). Rather than abandon the use of effort controls, the Council has chosen a management program which will make them more stringent in order to address these problematic stocks.

The Council did consider three management alternatives that were based, at least in part, on quota or "hard" total allowable catches (TACs). These alternatives were not selected for a variety of reasons. A common element, however, is a hesitancy to replace a successful management program – effort controls - with a system that was tried in the early 1980's and failed miserably by both biological and economic measures. The application of a hard TAC in the multispecies fishery, with stocks that have overlapping geographic ranges, proved impossible to administer and enforce. Preliminary attempts to craft a hard TAC program based on directed and incidental fisheries proved impossible given the mix of species, gear, and seasons used to prosecute the groundfish fishery in New England. Experience in other regions has been similar when there has been a "global" quota – that is, one that is not allocated to individual vessels. Market disruption often occurs, as vessels participate in a race to fish in order to harvest their share of the resource before the full quota is caught.

The use of effort controls, however, is not without problems. Effort controls tend to be blunt instruments, reducing mortality on both healthy and ailing stocks at the same time. Yield is sacrificed from healthy stocks in order to reduce mortality on stocks in poor condition. Reductions in days- at-sea, the primary control, reduce opportunities to fish on healthy stocks. For this reason, the proposed commercial fishery measures identify specific opportunities that can be used to target those healthy stocks. While some of the details of these programs remain to be specified, this proposal will both help mitigate the economic impacts of the proposed action and help realize the benefits of stocks that are rebuilding.

While over the long-term the expected benefits of the rebuilding program are positive, in the short-term harvesters are likely to experience reduced revenues. In addition to the opportunities that may be available to target healthy stocks, the proposed action includes measures to help the industry adapt to these short-term reductions and remain economically viable. By allowing vessels to lease fishing time, vessels that do not have enough time to fish can either lease their limited days to other vessels – earning revenues at reduced cost – or they can lease days from other vessels to make up for the shortfall. Either choice will help improve the profitability of the fishery. Another program allows a vessel leaving all fisheries to transfer fishing time to another permit, subject to a conservation "tax" on fishing time so that the overall pool of allocated time is reduced.

The use of effort controls has also been complicated by the allocation of excessive effort to the industry as a whole. In recent years, the amount of time spent fishing has increased, but still was only a fraction of the allocated days available. In this action the Council has chosen to reduce the pool of allocated days that can

be used by basing allocations on recent fishing history. This choice is controversial, but is intended to help current participants remain economically viable during rebuilding by limiting the amount of effort that can re-enter the fishery.

Other opportunities have been created to ensure a viable fishing industry. The proposed action will allow the formation of voluntary, self-selecting sectors. These sectors may be able to develop more efficient means to harvest their portion of the resource. Permit provisions for hand-gear permits have also been revised so that this small group of fishermen remain economically viable and continue to participate in the fishery.

While much of this discussion focuses on the need to end overfishing and rebuild overfished stocks, the proposed action also addresses other M-S Act requirements. The Council has selected alternatives that will minimize, to the extent practicable, the adverse effects of fishing on essential fish habitat. The selection of these alternatives is complicated by the nascent state of knowledge of the sea floor and the impacts fishing gear on habitat and fisheries production. The Council has carefully balanced these concerns and chosen alternatives that minimize the adverse effects of fishing while providing opportunities for the fishery to remain viable.

7.2.11 List of Preparers

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Dr. David Stevenson, NMFS NERO
Dr. Eric Thunberg, NMFS NEFSC
Dave Tomey, NMFS NERO
Dr. John Walden, NMFS NEFSC
Tom Warren, NMFS NERO

This Amendment and SEIS were prepared without any federal/state/local cooperating agencies as defined by 40 CFR 1501.6. Federal agencies represented on the New England Fishery Management Council include the U.S. Coast Guard and the U.S. Fish and Wildlife Service. State agencies represented on the Council include the fisheries management divisions of the states of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut.

7.2.12 List of Persons Receiving Copies of the DSEIS

The Council distributes the Draft FMP/DSEIS to members of the Groundfish PDT and the Groundfish Advisory Panel, and the Recreational Advisory Panel. These individuals include:

Tom Nies, Lori Steele, Leslie-Ann McGee, Anne Beaudreau, Deirdre Valentine, Chad Demarest, NEFMC Staff

Thomas Warren and Susan Murphy, NMFS Northeast Regional Office

Jon Brodziak, NEFSC (Population Dynamics)

Phil Logan, Eric Thunberg, John Walden, and Lisa Colburn, NEFSC Social Sciences

Steve Correia, Massachusetts Division of Marine Fisheries

Kevin Kelly, Maine Department of Marine Resources

Vincent Balzano, Saco, ME

Carl Bouchard; Exeter, NH

Joseph Branin, Highlands, NJ

Sima Freierman, Montauk, NY

Randy Gauron, Hampton, NH

Willam Gerencer, Bowdoin, ME

David Marciano, Beverly, MA

Frank Mirarchi, Scituate, MA

Paul Parker, No. Chatham, MA

Geoffrey Smith, South Portland, ME

Bud Brown, Georgetown, ME

Charles Cassels, Georgetown MA

Frederick Christian, Salem, MA

Bradley Cook, Hampton, NH

Philip Desfosses, Portsmouth, NH

Anthony Dilernia, Fresh Meadows, NY

Barry Gibson, Beverly, MA

Joseph Grady, Hampton Falls, NH

John Groff, Hartford, CT

Alan Hill, Manchester, MA

Bruce Munson, Beverly, MA

Edward Mowak, Needham, MA

Michael Sosik, Jr. Sturbridge, MA

Donald Swanson, Derry, NH

James Velleca, Cranston, RI

As part of the review process for consistency with applicable laws such as the CZMA and the ESA, the Council distributes this Draft FMP/DSEIS to the following individuals:

Ms. Kathleen Leydon, Maine Coastal Program

Mr. David Hartman, New Hampshire Coastal Program

Mr. Tom Skinner, Massachusetts Coastal Zone Management

Mr. Grover Fugate, Rhode Island Coastal Resources Council

Mr. Tom Oullette, Connecticut Office of Long Island Sound Programs

Mr. George Stafford, New York Division of Coastal Resources

Mr. Lawrence Torok, New Jersey Division of Coastal Resources

Mr. Nicholas Di Pasquale, Delaware DNREC
Ms. Gwynne Schultz, Maryland Coastal Zone Management Division
Ms. Laura McKay, Virginia Coastal Resources Management Program
Ms. Donna Moffitt, North Carolina Division of Coastal Management
Mr. E. James Tabor, Pennsylvania Department of Environmental Protection
Mr. Chris Brooks, South Carolina Ocean and Coastal Resources Management
Mr. Daniel Furlong, Mid-Atlantic Fishery Management Council
Mr. Robert Mahood, South Atlantic Fishery Management Council
Captain Vincent O'Shea, Atlantic States Marine Fisheries Commission

In addition, the Council prepares a notice to its "Interested Party" list for groundfish that announces the availability of the DSEIS and public hearing document and announces the schedule for public hearings. A Notice of Availability of the DSEIS is also published in the *Federal Register*. At that time, anyone on the "Interested Party" list or any other member of the public may call the Council office and request a copy of the DSEIS for their review. There are approximately 830 individuals on the "Interested Party" mailing list for groundfish. The Council also intends to make this Draft FMP/DSEIS available for downloading through its website (www.nefmc.org).

7.2.13 Index

The index can be found at the end of Volume I, section 8.5.

7.3 Other Existing Applicable Laws

7.3.1 Fishery Management Plans

There are many FMPs implemented in the U.S. EEZ within the same general geographic area as the management area for the Groundfish FMP. The following list identifies all known approved FMPs developed for the U.S. EEZ along the Atlantic Coast:

New England Council:	Atlantic Herring FMP; Atlantic Salmon FMP; Monkfish FMP; Northeast Multispecies FMP; Sea Scallop FMP; Red Crab FMP; Northeast Skate Complex FMP.
Mid-Atlantic Council:	Atlantic Mackerel, Squid and Butterfish FMP; Bluefish FMP; Dogfish FMP; Summer Flounder, Scup and Black Sea Bass FMP; Surfclam and Ocean Quahog FMP; Tilefish FMP.
South Atlantic Council:	Atlantic Coast Red Drum FMP; Coastal Migratory Pelagics FMP; Coral, Coral Reef and Live/Hard Bottom Habitats FMP; Golden Crab FMP; Shrimp FMP; Snapper Grouper FMP; Spiny Lobster FMP.
Secretarial Plans (NMFS):	American Lobster FMP; Atlantic Billfish FMP; Atlantic Tunas, Swordfish and Sharks FMP.

7.3.2 Treaties and International Agreements

Foreign fishing is prohibited within the U.S. EEZ for anadromous species and continental shelf fishery resources beyond the EEZ out to the limit of U.S. jurisdiction under the Convention of the Continental Shelf, unless authorized by an international agreement existing prior to passage of the Magnuson-Stevens Act and still in force or authorized by a Governing International Fishery Agreement issued subsequent to the Magnuson-Stevens Act. There are no pre- or post-Magnuson-Stevens Act agreements affecting the Northeast Multispecies Complex.

7.3.3 Federal Laws and Policies

All applicable Federal laws and policies, including the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) are identified and discussed in this section. The National Environmental Policy Act (NEPA) is discussed in Section 7.2.

7.3.3.1 Administrative Procedures Act

Sections 551-553 of the Federal Administrative Procedures Act establish procedural requirements applicable to informal rulemaking by federal agencies. The purpose is to ensure public access to the federal rulemaking process, and to give the public notice and an opportunity to comment before the agency promulgates new regulations.

The APA requires solicitation and review of public comments on actions taken in the development of a fishery management plan and subsequent amendments and framework adjustments. Development of this amendment provided many opportunities for public review, input, and access to the rulemaking process. During its scoping period the Council requested suggestions and information from the public on the range of issues that should be addressed and alternatives that should be considered in Amendment 13. Comments received during scoping are summarized in Section 7.2.2. Public comments were also received during the public comment period, in both written form and at a series of public hearings. See Section 8.4 for a list of public meetings at which proposed measures in Amendment 13 to the Northeast Multispecies FMP were discussed.

7.3.3.2 Coastal Zone Management Act

The Council has reviewed the coastal zone management 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 York, New Jersey, Pennsylvania, Delaware and Maryland. It has determined that the proposed action is consistent with the CZM programs of those states and will send a notification of this determination, along with a copy of the amendment document, for their concurrence. Copies of the correspondence are on file at the Council office.

State Contacts

For a list of individuals contacted regarding the CZMA consistency determination for Amendment 13 to the Northeast Multispecies FMP, see Section 7.2.12.

7.3.3.3 Endangered Species Act

Section 7 of the Endangered Species Act requires federal agencies conducting, authorizing, or funding activities that may affect threatened or endangered species to ensure that those impacts do not jeopardize the continued existence of listed species. A discussion of the potential impacts of Amendment 13 is found in Section 5.2.11 of this document. The discussion concludes that the Amendment 13 measures will result in significant reductions in effort largely through a DAS reduction plan, that will not change the basis for the previous no jeopardy determinations for threatened or endangered species found in the FMP's management area. In addition, it is reasonable to assume that Amendment 13 is not likely to increase sink gillnet effort in the Northeast Region so that the current assessment of jeopardy to right whales could be reevaluated.

For information on the ESA-listed species that will potentially be affected and a discussion of the potential impacts of the existing fishery and new Amendment 13 measures, see sections 5.2.9 (Volume I) and section 9.2.2 (Volume II).

7.3.3.4 Executive Order 12612 (Federalism)

The Executive Order on Federalism was established to restore the division of governmental responsibilities between the national government and the States and to ensure that the principles of federalism established in the E.O. guide federal departments and agencies in the formulation and implementation of policies. Nine fundamental federalism principles were established in the E.O. to guide federal legislation and policy development. The primary of these principles states that "federalism is rooted in the knowledge that political liberties are best assured by limiting the size and scope national government." In addition, federal departments and agencies that are developing policies that will affect the States must adhere to four policy-making criteria established in the E.O. which promote the authority and autonomy of the States.

While the policies established in Amendment 13 will affect certain States, they do not imply federalism implications sufficient to warrant preparation of an assessment under E.O. 12612. The affected states have been closely involved in the development of the proposed management measures through their involvement in the Regional Fishery Management Council process (i.e., all affected states are represented as voting members on at least one Council). This amendment was developed with the full participation and cooperation of the state representatives of the New England Council, and the Draft Amendment 13 will be provided to the Mid-Atlantic Council for their review and consideration. No comments were received from any state officials relative to any federalism implications of the proposed Amendment 13 to the multispecies FMP.

7.3.3.5 Executive Order 12630 (Property Rights)

The Executive Order on Property Rights was established to assist Federal departments and agencies in proposing, planning and implementing actions with due regard for the Fifth Amendment which provides that private property shall not be taken for public use without just compensation. Because this amendment

addresses management of a public resource, it does not contain policies that have takings implications, as defined in the E.O.

7.3.3.6 Executive Order 12898 (Environmental Justice)

Executive Order (E.O.) 12898 requires that, “to the greatest extent practicable and permitted by law... each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions...” Due to data constraints and other concerns the means for conducting this analysis are not yet available at this stage of the public hearing process. Nonetheless, many of the participants in the groundfish industry may come from lower income and/or ethnic minority populations. These populations may be more vulnerable to more restrictive management measures. For example, in many ports crew may be comprised of ethnic minorities, and many regions in which fishing is an important livelihood can also be economically impoverished.

7.3.3.7 Regulatory Impact Review

This section provides the information necessary for the Secretary of Commerce to address the requirements of Executive Order 12866 and the Regulatory Flexibility Act. The amendment document contains all the elements of the RIR/RFA, and the relevant sections are identified by reference to the document.

The purpose and need for management (statement of the problem) is described in section 2.2 of this document. The proposed action is described in section 3.0 of the amendment document. The economic impacts are described in section 5.4 and summarized below under the discussion of how the proposed action is characterized under Executive order 12866 and the Regulatory Flexibility Act.

7.3.3.7.1 Executive Order 12866 (Regulatory Planning and Review)

The Executive Order on Regulatory Planning and Review was established to make the process of federal regulation more accessible and open to the public. In accordance with this E.O., the Council has:

- identified and assessed the issues requiring regulatory action and available alternatives to address these issues in Amendment 13;
- considered the degree and nature of risks posed by activities within its jurisdiction as well as the costs and benefits associated with the intended regulations;
- designed these regulations with consideration for flexibility, enforcement costs, distributive impacts and equity;
- based its decisions on the best reasonably obtainable scientific, technical, economic and other information;
- identified and assessed alternative forms of regulation;
- sought the views of State and local governmental entities to harmonize Federal regulations with relevant State regulations;
- avoided duplicative regulations with those of other Federal agencies;
- taken into account the costs of regulations on society;
- and drafted these regulations in a comprehensive and comprehensible manner.

E.O. 12866 requires a review of proposed regulations to determine whether or not the expected effects would be significant, where a significant action is any regulatory action that may

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

- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, of the principles set forth in the Executive Order.

Of these four criteria, the discussion to follow focuses only on the expected magnitude and duration of the economic impacts of the Proposed Action.

The Proposed Action would implement a management program that would achieve rebuilding of all groundfish stocks within 10 years for most stocks and within a longer time period for three stocks. The Proposed Action would be implemented in 2004 and would reach all rebuilding objectives by 2026 (with the exception of redfish). The Proposed Action would produce net benefits (the sum of consumer surplus, income payments, and profit) of \$2.6 billion at a 7% discount rate. Compared to returning to regulatory measures that were in place in fishing year 2001 the Proposed Action produces higher net present value by \$51 million and produces net present value \$93 million higher than what current regulations would produce over the same time period. However, returning to fishing year 2001 regulations or retaining current regulatory measures would result in fishing mortality rates that would be inconsistent with statutory obligations under the Sustainable Fisheries Act.

Economic analysis of the Proposed Action and all non-selected alternatives is reported in 5.4. These analyses include assessment of both long term economic benefits of different rebuilding strategies and short term impacts of the specific regulatory measures needed to achieve rebuilding targets in fishing year 2004. Based on these analyses, the Proposed Action would produce lower present value of net benefit than alternative rebuilding strategies but would implement a suite of management measures that would result in lower short term impacts on fishing and fishing related businesses, communities, and on the New England economy as a whole. Specifically, the Proposed Action would yield net present value of economic benefit \$50 million lower than other rebuilding alternatives but would reduce overall gross sales impacts on the New England economy by between \$18 and \$82 million as compared to other non-selected alternatives with larger DAS reductions or hard TAC's.

Even though the Proposed Action would have generally lower short-term impacts, the estimated impact on the New England economy would still be substantial. Relative to 1998-2001 average conditions, gross sales for the New England economy as a whole were estimated to be reduced by \$135 million. Note that this estimate of economic impact is likely to be overestimated for several reasons. First, the impact assessment did not take into account all possible adaptations or regulatory measures that would tend to offset predicted losses in sales. Second, changes in productivity associated with 1998-2001 average stock conditions as compared to the projected higher 2004 stock levels were not taken into account. Such changes in productivity would mean that at least some portion of DAS reductions would be offset by increases in catches by commercial fishing vessels and would make higher supplies of seafood available to dealers, processors, and consumers. Last, the \$135 million reduction in gross sales represents a cumulative loss compared to 2001 and is not necessarily equal to an annual loss. These considerations make it difficult to determine whether or not realized economic impacts will exceed the \$100 million level in 2004. Further, as long as access to stocks that may be fished at higher levels is realized, projected landings and revenues may actually increase under the Proposed Action compared to 2002 and 2003 levels. Even if possible landings are not realized in 2004, projected changes in resource conditions indicate that recovery to current levels will be relatively rapid and would be much higher over the longer term. This means that while the Proposed Action could have a \$100 million or greater impact on the economy, it would not have a sustained adverse annual \$100 million impact as landings hence gross fishing revenues and their attendant benefits to fishing related industries and communities are expected to recover quickly. Nevertheless, available economic impact estimates indicate that the Proposed Action will have an adverse economic impact on the New

England economy and the fishing and fishing related sectors in particular that may be cumulative for at least 2004 and for some years thereafter. Therefore, the Proposed Action is determined to be significant for purposes of the Executive Order. The following provides additional summary information on long term and short term impacts.

Long Term Economic Benefits

The choice of long term strategy to achieve rebuilding involves selection of a time frame and an overall approach to rebuilding. Economic analysis of a 2009 as compared to a 2014 rebuilding time frame for most stocks shows a net gain of between \$12 and \$40 million depending on the selected rebuilding strategy (see 5.4.3, Comparison of Economic Benefit of Alternative Rebuilding Times). Therefore, the Proposed Action implements a 2014 rebuilding time frame.

Economic analysis of alternative rebuilding strategies shows that the net present value of the Proposed Action would be \$2,624 million (See 5.4.1) while net present value of the Constant fishing mortality rate approach (section 5.4.2.6), the Phased approach (section 5.4.2.7) and the Adaptive approach (section 5.4.2.8) would be \$2,671 million, \$2,625 million, and \$2,680 million respectively. Thus, the Proposed Action would not produce the highest net benefit among all rebuilding alternatives. However, the Proposed Action does provide nearly equivalent net benefits to any other alternative from 2004 to 2008 and from 2015 to 2026. From 2009 to 2014 fishing mortality rates need to be comparatively lower than that of other rebuilding approaches for some stocks because of higher mortality rates that would result from 2004 to 2008.

The Proposed Action landings were estimated to be 146 million pounds in 2004 and rise to nearly 300 million pounds in 2014 (Table 368). Landings would continue to increase before reaching an equilibrium level of approximately 320 million pounds in 2026. Over the entire time frame the present value of accumulated revenues would be \$2.8 billion. Adding \$421 million in consumer's surplus to total revenues results in a gross benefit of \$3.2 billion. The estimated present value of total costs was \$607 million consisting of \$374 million in fixed cost and \$233 million in operating costs. Deducting these estimates of fishing cost from fishing revenues leaves \$2.2 billion in present value of payments to fishing crew and captains and vessel owner profits. Adding consumer surplus to fishing returns in excess of costs results in a total net benefit of \$2.6 billion.

The present value of each rebuilding alternative was evaluated using a discount rate of 7%. Sensitivity analysis using a range of discount rates indicates that all rebuilding alternatives would still yield superior net benefits compared to either maintaining current regulations or reverting back to the 2001 regulatory environment at all interest rates up to and including 10%. Further, the relative ranking of rebuilding alternatives was robust at interest rates below 7% but that the ranking of the Proposed Action in terms of net present value would fall below the Phased Alternative for interest rates above 7%.

Economic benefits were only measured for commercial fishing but the rebuilding program would also provide increased fishing opportunities to recreational anglers. Of the groundfish species targeted by recreational anglers cod and haddock are the most important. Economic effects on anglers are manifested in a change in the value or satisfaction that they derive from taking a recreational fishing trip. If the primary motivation for fishing is based on merely catching fish, then changes in measures that affect keep rates without change catch may have relatively little impact on recreational values. By contrast, if the primary motivation for fishing is keeping fish then measures that affect keep rates would result in a change in recreational values. Research indicates that recreational anglers are motivated by a variety of factors but neither cod nor haddock are noted "game" fish so it may be assumed that recreational values will be affected predominantly by increasing keep opportunities.

The Proposed Action would liberalize recreational regulations for GOM cod by changing the bag limit and by reducing the size limit for haddock. This means that anglers would benefit from greater keep

opportunities upon implementation and would gain additional value over time as groundfish resources are restored.

Year	Landings	Total Revenue	Consumer Surplus	Gross Benefit	Fixed Costs	Variable Costs	Total Cost	Producer Surplus	Net Benefit
2003	130	128	11	139	31	29	59	68	79
2004	146	129	15	145	29	23	51	78	93
2005	163	135	17	152	27	17	44	91	108
2006	178	139	18	157	25	16	41	98	116
2007	194	141	20	161	23	14	37	104	124
2008	206	140	21	161	22	13	35	105	126
2009	195	128	18	146	20	11	31	97	115
2010	208	128	18	147	19	10	29	100	118
2011	221	128	19	147	18	9	27	101	120
2012	234	128	19	147	17	8	25	103	122
2013	246	126	19	145	16	8	23	103	122
2014	257	124	19	143	14	7	22	102	121
2015	299	129	24	154	14	8	21	108	132
2016	300	124	22	146	13	7	20	104	126
2017	301	119	21	139	12	7	19	100	121
2018	304	114	19	134	11	7	18	96	116
2019	306	109	18	128	10	6	16	93	111
2020	308	105	17	122	10	6	15	89	107
2021	311	100	16	116	9	5	14	86	102
2022	312	95	15	111	8	5	13	82	97
2023	314	91	14	106	8	5	13	79	93
2024	316	87	13	101	7	4	12	75	89
2025	319	83	13	96	7	4	11	72	85
2026	319	79	12	91	6	4	10	69	81
Total	6,084	\$2,810	\$421	\$3,231	\$374	\$233	\$607	\$2,203	\$2,624

Table 368 - Summary of Projected Landings (millions of pounds) and Discounted Economic Benefits (Benefits and Costs measured in millions of dollars discounted at 7%)

Short Term Impacts

Economic analysis of short term impacts included evaluation of comparative changes in gross fishing revenues (section 5.4.4), DAS needed in order to break-even (section 5.4.5), and total impacts on the New England economy (section 5.4.6). Additionally, analysis of potential business failure rates and relative change in profitability were examined for the Proposed Action (see section 7.3.3.7.2).

The Proposed Action would result in lowest impact in terms of relative change in total fishing revenues regardless of vessel size, gear, level of dependence on groundfish, home state, or port. However, the Proposed Action would still have significant impacts and may not appreciably change some of the distributive effects that may be expected to occur under one or more of the non-selected alternatives. For example, the Proposed Action would still have disproportional impacts on vessels with high dependence on groundfish. Across gear categories the Proposed Action would have similar impacts for 10% of the most impacted vessels regardless of gear but would still have an overall disproportionate impact on trawl vessels than either gillnet or hook vessels. With respect to vessel size (LOA), the Proposed Action would not have disproportionate impacts on vessels that are more than 70 feet as compared to vessels that are between 50 and 70 feet. However, vessels that were less than 50 feet in length were less impacted than either of the larger length categories. Vessel impacts among gear group and size categories indicate that small hook

vessels will be disproportionately impacted compared to large hook vessels but would not be significantly more disadvantaged relative to other segments of the groundfish fleet. Unlike small hook vessels, small gillnet vessels would be less disadvantaged in terms of revenue loss compared to larger gillnet vessels. The same may be said for small as compared to medium and large trawl vessels. Revenue impacts among vessels from different home port states were largest for states that border the Gulf of Maine. Among these states, revenue impacts on Massachusetts vessels disproportionately affected compared to either Maine or New Hampshire vessels. Impacts on Maine vessels were similar to that of New Hampshire.

Since the Proposed Action would result in lower DAS reductions and in lower gross sales losses vessels would be more likely to have sufficient DAS allocations to remain above break-even and would result in lower overall impacts on the New England economy than any of the non-selected alternatives. As noted above, while the Proposed Action does reduce overall impacts, the potential DAS reductions are still likely to result in some vessels without enough DAS to break-even. Based on analysis of potential business failure rates (see IRFA) between 200 and 260 vessels may not be able to remain in business depending on levels of debt. Note that the analysis also indicated that the potential failure rate was highest for large trawl vessel than any other gear or size class.

The short term impacts were evaluated based on empirical models and data that made it impossible to develop a comprehensive quantitative treatment of all management measures contemplated in the Proposed Action. Therefore, there are several measures that would be implemented under the Proposed Action that would offer the opportunity to mitigate the estimated short-term impacts.

The Proposed Action would implement a DAS leasing and a DAS transfer program. These programs both provide vessels with the opportunity to acquire additional DAS that may be used to offset DAS reductions. Economic analysis of DAS leasing (see section 7.3.3.7.2) indicates that profitability for both lessor and lessee would be improved. The analysis also indicates that leased DAS may flow from larger to smaller vessels and from Maine vessels to Massachusetts vessels. The former effect may be due to two factors. First, upgrade restrictions means that it is much easier to move DAS from larger to smaller vessels while large vessels may find it difficult to find trading partners. Second, the profitability analysis indicates that larger vessels may be less profitable than smaller vessels due to higher fixed cost payments, crew size requirements, and higher debt levels. This finding that leased DAS may flow from large to smaller vessels may be a reflection of differences in relative profitability indicating that leasing of DAS may be more driven by profit levels and will not necessarily go to vessels that land the most fish. The finding that leased DAS may flow out of Maine may not be surprising since the Gulf of Maine has more species of concern as compared to Georges Bank. However, as discussed below, the opportunity for using anything other than Category A DAS may be limited in the Gulf of Maine. This means that either DAS transfer or DAS leasing may be the most important programs available to Maine vessels to offset the Proposed Action DAS reduction. Thus, the demand for leasing may be greater in Maine than elsewhere so the net flow away from Maine may not be as large as predicted.

In addition to leasing, the Proposed Action would partition DAS into Category A, B, and C DAS, where the latter would not be available for use at least until all stocks have been rebuilt. Category A DAS would be available for general use upon implementation of the Proposed Action. The short-term impacts were estimated based only on the expected use of these Category A DAS. However, Category B DAS would also be allocated to fishing vessels that would be available for use in Special Access Programs (Reserve B days) or under specific circumstances (Regular B days) where stocks that may be fished at higher levels with low incidental catches of stocks of concern. The availability of these additional DAS will provide vessels an opportunity to increase total fishing time and income. At this time, identified Special Access Programs are limited to Georges Bank meaning that until other programs have been developed, the opportunity to use either Reserve or Regular B DAS will be limited to vessels that operate on Georges Bank. Generally, these programs may realistically be limited to larger vessels that have sufficient range and seaworthiness to take advantage of these programs (U.S./Canada resource sharing area and the Closed Area II Georges Bank Yellowtail Access program). A Special Access Program for hook gear in Closed Area I may provide an

opportunity for some smaller vessels to use B DAS. As noted above, given the fact that the Gulf of Maine has a larger number of stocks of concern, the opportunity to use B DAS may be limited for vessels that fish in this area.

The Proposed Action would implement a process whereby groups of vessels owners may obtain a sector allocation. It also proposes a specific Georges Bank cod hook sector for implementation. While not implemented by the proposed action, a Georges Bank cod gillnet sector was considered and may be implemented in the future. The number of sector participants is not known at this time, nor are the specific details of how these sectors will operate. However, sector allocation may be used to design fishing rules that allow member vessels to land the same amount of fish, but do so in the least costly manner possible.

Compared to other non-selected alternatives, the Proposed Action would eliminate the raised footrope trawl proposed under Alternative 1. The Proposed Action would also delay use of differential DAS counting in the Southern New England yellowtail flounder stock area. The Proposed Action would provide for credit from steaming time to specific Special Access Programs, and would allow vessels to turn off VMS systems under certain circumstances.

7.3.3.7.2 Regulatory Flexibility Act (RFA)

The purpose of the Regulatory Flexibility Analysis (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 RFA applies to any rule or regulation that must undergo “notice and comment” under the Administrative Procedures Act (APA), specifically those rules published as proposed rules. When RFA applies, the Council must assess the impacts of the regulations to determine if they will have a “significant economic impact on a substantial number of small entities.” See Sections 3.0, the description of the proposed action and section 5.4 impacts on the proposed action on vessels of different sizes and gear types. The Council also considered a large amount of input from the regulated entities and will evaluate the effectiveness and impacts of the proposed action on a continuing basis.

The Regulatory Flexibility Act (RFA) recognizes and defines three kinds of small entities: small businesses, small organizations, and small governmental jurisdictions. The established standards are:

- Any fish harvesting or hatchery business is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has annual receipts of not in excess of \$3.0 million.
- For related industries involved in canned and cured fish and seafood or prepared fish or frozen fish and seafoods, a small business is one that employs 500 employees or fewer.
- For the wholesale industry, a small business is one that employs 100 or fewer.
- For marinas and charter/party boats, a small business is one with annual receipts not in excess of \$5.0 million.
- A small organization is any not-for-profit enterprise that is independently owned and operated and not dominant in its field.

- A small governmental jurisdiction is any government or district with a population of less than 50,000.

In practice, although some firms own more than one vessel, the number of vessels is a reasonable proxy for the number of small business entities. The groundfish industry directly affected by the proposed action is composed primarily of small business entities. In 2001, about 549 otter trawls, 187 gillnet and 176 longline vessels participated in the Northeast fishery, including the Gulf of Maine and Georges Bank areas. The average annual revenues of these vessels were less than \$3 million for the period 1994-2001. The tuna purse seine industry consists of five vessels with average annual revenues of less than \$3 million in 1998 and 1999.

The RFA requires government agencies to evaluate the financial impacts of regulations on small entities. If NMFS can certify if a proposed or final rule will not have a "significant economic impact on a substantial number of small entities," it is not required to conduct a full RFAA or a periodic review of the resulting rules. Any certification statement should include the following:

- A statement of basis and purpose of the rule.
- A description and estimate of the number of small entities to which the rule applies.
- An estimate of economic impacts on small entities, by entity size and industry.
- An explanation of the criteria used to evaluate whether the rule would impose "significant economic impacts." Two criteria are considered for determining significance:
 - Disproportionality. Do the regulations place a substantial number of small entities at a significant competitive advantage to large entities?
 - Profitability: Does the regulations significantly reduce profit for a substantial number of small entities?
 - An explanation of the criteria used to evaluate whether the rule would impose impacts on a "substantial number of small entities." The term "substantial number" has no specific statutory definition and the criterion does not lend itself to objective standards.
- A description of, and an explanation of the basis for, assumptions used.

The purposed and basis for the proposed action are described in Section 2.0.

The Proposed Action would implement changes affecting any vessel holding a limited access groundfish permit, an open access hand gear-only permit, and vessels that hold an open access party/charter permit. Based on fishing year 2002 (FY2002) data the total number of small entities that may be affected would be 1,442 limited access permit holders, 1,994 hand gear permits, and 685 party/charter permits. However, since an open access permit holder may hold more than one permit, the total number of unique entities holding either a hand gear or a party/charter permit was 2,250 of which 1,565 held only a hand gear permit, 306 held only a party/charter permit, and 379 held both a hand gear and a party/charter permit.

The SBA size standard for small commercial fishing entities is \$3.5 million in gross sales while the size standard for small party/charter operators is 100 employees. The commercial fishing size standard would apply to limited access permit holders as well as open access hand-gear only permits. Available data based on 1998-2001 average gross sales show that the maximum gross for any single commercial fishing vessel was \$1.3 million. While an entity may own multiple vessels, available data make it difficult to determine

which vessels may be controlled by a single entity. For this reason, each vessel is treated as a single entity for purposes of size determination and impact assessment. This means that all commercial fishing entities would fall under the SBA size standard.

Available vessel trip report data for party/charter operators indicate that vessels typically employ two or three crew per trip. While some operators are likely to have additional employees to arrange bookings and other business related activities the known scale of operations in the Northeast region make it very unlikely that any one entity would have more than 100 employees. Therefore, all party/charter businesses would fall under the SBA size standard. Note that vessels that may engage in both party/charter and commercial fishing activity are also considered small since neither gross sales or number of employees would be above the size standard for either type of activity.

Impacts on Limited Access Permit Holders

The Proposed Action would implement both a change in baseline DAS allocations and a number of management measures that would affect the manner in which available DAS allocations may be used. The latter would principally affect vessels that participate in the groundfish fishery while the former would affect all vessels whether they are current participants or not.

Impact of DAS Allocation Baseline

The Settlement Agreement assigned baseline DAS allocations based solely on DAS that had been called-in during fishing years 1996 to 2000 and granted a minimum allocation of 10 DAS to all limited access permit holders. The Proposed Action would change this baseline by adding FY2001 to the qualification period but would also require that only years in which at least 5,000 pounds of regulated groundfish would count toward qualification. Vessels that either called in no DAS at all or never landed more than 5,000 pounds in a single year would receive a baseline allocation of zero although their full pre-settlement agreement allocation would be placed in Category C DAS.

Preliminary analysis of the Proposed Action indicates that the majority (599) of vessels would see no change in their effective effort baseline while 272 vessels would receive a higher allocation than their Settlement Agreement baseline. However, 52 vessels would have a lower baseline and 519 vessels would receive a zero baseline allocation. Of the vessels with a zero baseline, 394 were vessels that had received a minimum allocation and 125 were vessels whose baseline allocation was more than 10 DAS under the Settlement Agreement.

In effect, the Proposed Action places greater weight on providing for continued participation in the groundfish fishery to those vessels that may be comparatively more active and that may be more dependent on the groundfish fishery for business income. That is, reducing the potential pool of qualifying DAS makes it possible to achieve the same conservation objective with a lower DAS reduction to all remaining vessels that will receive a baseline allocation.

Vessels that receive no baseline allocation in FY2004 would not be able to fish for regulated groundfish until all stocks have been rebuilt and all Category B DAS have been converted to Category A DAS. While this prohibition may not have an immediate impact on fishing income (i.e. vessels that received no allocation have either not participated in the groundfish fishery over a five-year period or did participate but at a very low level), a loss of DAS does mean that the equity value of the business would be reduced. A loss in equity would affect the resale value of the vessel and may affect the ability to obtain business loans.

A total of 923 vessels would receive a non-zero baseline allocation; approximately the annual average number of vessels that have participated in the groundfish fishery since 1996. For these qualifying vessels the Proposed Action would have no effect on economic opportunities for the 519 vessels with no change in baseline DAS. It would increase economic opportunity for 272 vessels, while 57 boats with DAS allocations receive lower allocations. Approximately 500 vessels will receive zero DAS.

Economic Impact of Management Measures

In making a determination of whether any regulatory action will have a significant impact on a substantial number of small entities NMFS guidelines requires consideration of whether or not the proposed measure will have a disproportionate impact on small as compared to large entities and/or whether the action would have a significant impact on profitability for a substantial number of small entities.

Disproportionality

Since all entities were deemed to fall under the SBA size standard for small commercial fishing entities disproportionality does not apply as a standard against which small entity impacts would be compared to large entity impacts. Nevertheless, in section 5.4.4 of the FSEIS revenue impacts were estimated for several different vessel categories including total value of groundfish sales where groundfish sales classes were broken into four intervals based on quartiles of the distribution of 1998-2001 average groundfish sales for participating vessels. The findings in section 5.4.4 indicate that relative changes in total fishing income would have lower impact on vessels with total groundfish sales of less than \$35,000 but would be similar for the most impacted vessels at all other sales intervals. Overall, vessels with the highest groundfish sales may be expected to be more affected by Amendment 13 management measures but that the Proposed Action would have lower revenue impact than any of the non-selected alternatives. To examine whether the Proposed Action would have disproportionate impacts based on total sales the revenue impacts were summarized by gross sales intervals where intervals were established as the quartiles of the distribution of 1998-2001 average gross sales.

Relative changes in total fishing revenues was not markedly different across all sales intervals at least among the 55 most impacted vessels in each sales interval, although the estimated impact at the 10th percentile was greatest (-44.7%) for vessels with sales less than \$65,000 (Table 369). However, revenue impacts on remaining 150 or so vessels in this sales category were generally lower and were even positive for some vessels as compared to vessels with higher gross sales. In fact, the overall impact was generally most burdensome on vessels with highest gross sales (\$300,000 or more). Note that these estimated impacts would be higher for all sales intervals for any of the non-selected alternatives. Based on the estimated changes in gross fishing revenue the Proposed Action would have higher impact on vessels with highest total sales and would not, therefore, have a disproportionate impact on vessels with smallest total sales.

Gross Groundfish Sales Intervals	Number of Vessels	Proposed Action	
		Lower	Upper
\$65,000 or less (n = 205)			
10th Percentile and Below	21	Minimum	-44.7%
10th to 25th Percentile	31	-44.7%	-28.8%
25th to 50th Percentile	51	-28.8%	-11.4%
50th to 75th Percentile	51	-11.4%	-0.3%
75th to 90th Percentile	31	-0.3%	12.7%
Above 90th Percentile	21	12.7%	Maximum
\$65,001 to \$150,000 (n = 218)			
10th Percentile and Below	22	Minimum	-38.0%
10th to 25th Percentile	33	-38.0%	-30.9%
25th to 50th Percentile	55	-30.9%	-17.7%
50th to 75th Percentile	55	-17.7%	-2.3%
75th to 90th Percentile	33	-2.3%	2.0%
Above 90th Percentile	22	2.0%	Maximum
\$150,001 to \$300,000 (n = 211)			
10th Percentile and Below	21	Minimum	-40.2%
10th to 25th Percentile	32	-40.2%	-33.8%
25th to 50th Percentile	53	-33.8%	-20.7%
50th to 75th Percentile	53	-20.7%	-8.9%
75th to 90th Percentile	32	-8.9%	-0.4%
Above 90th Percentile	21	-0.4%	Maximum
\$300,001 or more (n = 214)			
10th Percentile and Below	21	Minimum	-41.5%
10th to 25th Percentile	32	-41.5%	-37.4%
25th to 50th Percentile	54	-37.4%	-26.0%
50th to 75th Percentile	54	-26.0%	-11.1%
75th to 90th Percentile	32	-11.1%	-3.9%
Above 90th Percentile	21	-3.9%	Maximum

Table 369 - Revenue Impacts by Fishing Vessel Gross Sales Size Classes

Profitability

Change in gross revenues provides an incomplete picture of the impact of the Proposed Action on vessel profitability making it difficult to determine whether any given vessel may cease business operations. Unfortunately, while available data permit tracking landings and revenues by vessel no comparable data collection system exists to collect a comprehensive set of operating, fixed, and debt service costs for the groundfish fleet. This means that it is not possible to directly provide a reliable numerical estimate of current profit levels or how many vessels may not be able to remain profitable once the Proposed Action is implemented. However, a relative measure of profitability change and percent of possible business failures was estimated by simulating vessel costs and returns by using a combination of the cost data developed for the break-even DAS analysis (see section 5.4.5), available data, and the estimated reduction in effective effort. Specifically, empirical data were used to fit theoretical probability distributions for fixed costs, costs per day, annual revenue on groundfish trips, annual revenue on trips where groundfish were not landed, days absent on groundfish trips, and days absent on trips where groundfish were not landed. A Monte Carlo simulation was then run using 1,000 iterations to produce 1,000 different possible financial profiles or equivalently profit levels for each gear and size class developed for the break-even analysis. By simultaneously simulating a baseline scenario and the Proposed Action (the baseline groundfish days absent

reduced by 45%) each realization produces a paired estimate of profit for the baseline and the Proposed Action. In this manner, groundfish revenue is directly linked to the DAS reduction but so too are the operating cost savings associated with a reduction in groundfish effort.

Calculations

The calculations used to estimate profitability for each iteration of the Monte Carlo simulation are reported in Table 370 where a single random draw from the probability distributions shown in row 2 (variable costs per day), row 3 (annual fixed costs), row 10 (annual trip revenue when groundfish are landed), row 11 (annual trip revenue when not landing groundfish), row 14 (total days absent), and row 15 (the proportion of groundfish days absent to total days absent). Data used to estimate these probability distributions came from several sources. Cost data come from the cost surveys described in Section 4.4.5. Since the break-even data were developed in FY2000 constant dollars, revenue data came from dealer reports for FY2000 while days absent data come from vessel trip reports. Note that, where appropriate, probability distributions were truncated at zero to assure that random draws would come only from the positive portion of the probability distribution. Also, annual groundfish trip revenue (row 10) was forced to be positively correlated with the proportion of groundfish days absent (row 15) while annual non-groundfish trip revenue (row 11) was forced to be negatively correlated with groundfish days absent. In this manner, random draws of groundfish revenue are sampled from the higher portion of groundfish revenue distribution when the proportion of groundfish days absent to total days absent is high. Conversely, random draws of non-groundfish revenues are sampled from the lower portion of the non-groundfish revenue distribution when the proportion of groundfish days absent to total days absent is high.

Rows 5 – 8 show differences among different gear-size groupings in terms of total gross sales but are not used in any calculations. Rows 18 – 21 show annual principal and interest payments to debt service. These values were determined by using the cost survey data. The cost survey data show that many vessels have no debt while others have high levels of debt payments. However, since there were so few observations with reported debt payments a probability distribution could not be estimated. Instead, four classes of debt (zero, low, medium, and high) were developed using quartiles for observations that did reported debt payments.

Rows 25 and 26 are the crux of the analysis of profitability analysis. Row 25 calculates total revenue per day on groundfish trips based on realized groundfish revenue (row 10) and groundfish days absent (row 12). Row 26 adjusts the realized groundfish days absent from row 12 by an adjustment factor reflecting the effective groundfish effort change (row 23). A value of 1.0 in row 23 would return the realized groundfish days absent in row 12 whereas a value of 0.55 (i.e. a 45% reduction from the baseline) would return 55% of the row 12 realization. Whereas total revenue and trip costs for trips that do not land any regulated groundfish are unaffected by a reduction in groundfish effort (see calculations in rows 34 and 35), total groundfish revenue and trip costs are dependent on groundfish days. This makes it possible to estimate changes in trip costs as groundfish effort changes and assures that a simulated reduction in groundfish revenue is derived from the same average revenue per day. In concept this is equivalent to simulating the impact on a single hypothetical vessel by assuring any change in realized profit is based on the same cost structure and the same average groundfish productivity.

Rows 37 and 38 sums total trip revenue from all sources (row 31 plus row 34), total trip costs (row 32 plus row 35) while row 39 is set equal to the realized fixed costs from the fixed cost distribution (row 3). These cost and returns are subdivided between crew (rows 42 to 46) and the boat (rows 49 to 52) based on the lay system identified in row 41. For all but medium and large otter trawl vessels the lay system is assumed to be what is known as a “clear” lay where revenues are split between the crew and the boat according in a fixed proportion and all trip costs are paid by the crew. For example, a 60/40 clear lay means that crew are paid 60% of total revenue received on the trip and trip costs are deducted from this amount. The remaining 40% share goes to the boat from to cover fixed costs, debt service, and owner profit. Medium and large trawls are assumed to use a “broken” lay in which crew receive a fixed proportion of trip revenue but trip costs are not deducted from crew share. In a broken lay system trip costs are paid by the boat as are all other costs.

Returns to debt service and owner profit (row 54) is determined as the difference between the gross revenue to the boat (row 50) and the sum of trip costs paid by the boat (row 51) and fixed costs (row 52). Owner profit depends on the magnitude of debt payments. Profit levels for vessels with no debt, low, medium, and high debt are calculated in rows 57 to 60 by deducting the corresponding debt values in rows 17 to 21 from row 54.

The Monte Carlo simulation results in 1,000 different paired profit levels with and without a 45% reduction in effective groundfish effort. As a combination of possible revenue and cost realizations the resulting profit estimates may be positive while others are negative. To construct a baseline, it was assumed that only realizations that resulted in positive profit (greater than or equal to zero) would be operating in the without effort reduction condition. Estimates of business failure rates and relative change in profit levels were then based on the paired comparisons where baseline profit was at or above zero.

Results

The potential business failure rate ranged from 25 to 35% for small vessels using long-line gear depending on debt levels (Table 371). For vessels that may remain above break-even, median reduction in profit level ranged from 47% to 56% for vessels with no debt and high debt respectively. Across all vessels, reductions in profit levels could exceed 80% while some vessels may experience more modest changes in profitability (between 8.0 and 25% depending on debt level). Available data does not make it possible to determine the mix of small long-line vessels by debt level. However, assuming a medium debt level represents a fleet average, 17 out of a total of 51 small long-line vessels (see Table 187 for total vessels by size-gear groupings) may be expected to cease business operations.

Larger long-line vessels had higher overall fishing revenues in FY2000 than small long-line vessels but also had higher estimated costs but these costs represented a small overall proportion of total fishing revenues which also means that business failure rates are also likely to be lower. Failure rates were estimated to range from a low of 9% for vessels with no debt and a high of 15% for vessels with high annual debt payments (Table 372). Median estimated reduction in profit level was also lower than small long-line vessels but still exceeded 37% regardless of debt level. At the medium debt failure rate, a total of 3 of 24 large long-line vessels may cease business operations under the Proposed Action.

Business failure rates for small gillnet vessels may range from 19 to 24% depending on debt level (Table 373). Median reduction in profit would be about 35% but may be much higher (more than 80%) for some vessels or may be less than 1% for others. Assuming a medium debt failure rate, 14 of 63 small gillnet vessels may be expected to cease business operations.

As was the case for larger hook vessels, larger gillnet vessels had higher overall fishing revenues but costs were not higher by the same proportion. For this reason, failure rates for large gillnet vessels were somewhat lower (from 15 to 21%) than for small gillnet vessels (Table 374). However, potential reductions in profit levels for vessels that would still be above break-even may be higher for large as compared to small gillnet vessels. Specifically, median profit reduction may be at least 50%; about 15 percentage points greater than estimated median impacts on small gillnet vessels. Using the medium debt level failure rate, a total of 23 of 118 large gillnet vessels may be expected to cease business operations.

Small trawl vessels (less than 50 feet in length) may have business failure rates between 27 and 33% depending on level of debt payments (Table 375). Median losses in profit levels for vessels that may still be able to break-even may be between 50 and 60% with some vessels experiencing much larger reduction in profitability (90% or greater for vessels with high debt) while others may experience much lower reductions in profit. Assuming that medium debt is consistent with a fleet average, about 55 of 187 small trawl vessels may go out of business under the Proposed Action.

The business failure rate for medium trawl vessels was estimated to range between 18 and 27% (Table 376). This failure rate was lower than that of small trawl vessels suggesting that these vessels may be able to take

advantage of economies of scale that make them somewhat more resilient to adverse economic conditions. Median reduction in profit level ranged within a narrow interval of from 45 to 48%. Based on the medium debt failure rate, 48 of 218 trawl vessels would not be able to remain in business after Amendment 13 is implemented.

Large trawl vessels had the highest debt levels and generally had higher trip and fixed costs than any other vessel size or gear category. These higher costs were not offset by proportionally higher revenue that tends to produce lower profit margins than other vessel gear/size classes. For this reason the estimated business failure rate (between 31 and 43%) was the highest for large trawl vessels (Table 377). Similarly, median reductions in profit were also generally higher (53 to 61%) as were reductions in profitability for both the most affected and least affected vessels. Applying the medium debt failure rate to the 187 large trawl vessels included in the economic analysis in Section 4.4.4 results in a potential for 68 business failures.

Discussion

Based on the above analysis a total of 228 vessels of varying sizes and gear groups may not be able to remain in business under the Proposed Action. This estimate was based on the assumption that all vessels had a medium level of debt and may range from 190 to 260 depending upon which debt level best represent a fleet-wide average. These estimates are also contingent on the extent to which the simulated cost and returns reflect actual financial conditions in the groundfish fleet. Unfortunately, not enough cost data particularly on fixed costs and debt payments has been collected to evaluate the veracity of these results. This difficulty aside, the profitability analysis did not take into account differences in potential revenue generation that may exist for vessels that fish predominately in the Gulf of Maine as compared to elsewhere. The analysis also does not account for differences in how area closures may affect vessels particularly small as compared to large vessels. Finally, the analysis only took into account the potential effort reduction associated with the expected use of Category A DAS.

The Proposed Action contains a number of measures that would provide small entities with some degree of flexibility to be able to offset at least some portion of the estimated losses in profit. The major offsetting measures include the opportunity to use additional "B" DAS, leasing of DAS, DAS transfer, and sector allocation. As designed the Proposed Action would achieve target fishing mortality rates for most stocks but would achieve higher than necessary reduction for others. Category B DAS would be subdivided into two categories one which would be used in Special Access Programs (reserve B DAS) while the use of the remaining B days or Regular B DAS will be determined in a Framework Action. The primary purpose of B DAS is to provide access to and increased yield from stocks that may be fished at higher levels. These opportunities would enhance profitability for vessels that may be able to participate in any one or more of these special fisheries.

Particularly for vessels with few alternative fisheries, reductions in profit may be offset by the ability to acquire more DAS either through leasing or DAS transfer. The former would make DAS available to a vessel for a single fishing season whereas the latter would be a permanent transfer of DAS from one vessel to another. Transferred DAS would be subject to a 40% conservation tax on the transfer but vessels would be able to acquire both Category A and Category B DAS. By contrast, a DAS lease would not be subject to a conservation tax but vessels would be only allowed to acquire Category A DAS. Which option any given vessels may choose to pursue is not known but analysis clearly suggests that making DAS available in some form of exchange can improve overall profitability for both buyer and seller. The following discussion describes this analysis.

	A	B	C	D	E	F	G	H
1		Long-line < 40 feet	Long-line >= 40 feet	Gillnet < 40 feet:	Gillnet >= 40 feet	Trawl < 50 feet	Trawl 50 to 70 feet	Trawl >= 70 feet
2	Variable costs per day	Normal	Lognormal	Lognormal	Lognormal	Pearson6	Pearson5	Logistic
3	Yearly fixed costs	Triangular	Pearson5	Triangular	Pearson5	Beta	Pearson6	Beta
4	Gross Revenue Classes							
5	First Quartile	0 to 8,000	0 to 15,000	0 to 18,000	0 to 79,000	0 to 22,000	0 to 86,000	0 to 278,000
6	Second Quartile	8001 to 37,000	15,001 to 138,000	18,001 to 75,000	79,001 to 150,000	22,001 to 56,000	86,001 to 182,000	278,001 to 440,000
7	Third Quartile	37,001 to 78,000	138,000 to 366,000	75,000 to 150,000	150,001 to 225,000	56,000 to 100,000	182,001 to 310,000	440,000 to 670,000
8	Fourth Quartile	78,001+	360,000 +	150,000 +	250,000 +	100,000 +	310,000 +	670,000 +
9								
10	Trip revenue when landing groundfish	Pearson6	Beta	Beta	Beta	Beta	Exponential	Beta
11	Trip revenue when not landing groundfish	Extreme Value	RiskPearson6	Pearson6	Loglogistic	Beta	Beta	Pearson6
12	Days absent on trips where groundfish are landed	B14*B15	C14*C15	D14*D15	E14*E15	F14*F15	G14*G15	H14*H15
13	Days absent on trips where groundfish are not landed	B14-B12	C14-C12	D14-D12	E14-E12	F14-F12	G14-G12	H14-H12
14	Total Days Absent	Beta	Inverse Gaussian	Normal	Logistic	Normal	Normal	Normal
15	Proportion of Groundfish Days Absent to Total	Empirical	Empirical	Empirical	Empirical	Empirical	Empirical	Empirical
16								
17	Debt							
18	None	0	0	0	0	0	0	0
19	Low	1,931	3,242	1,931	3,242	2,853	4,094	26,582
20	Medium	4,458	4,674	4,458	4,674	4,708	16,128	34,870
21	High	7,922	15,613	7,922	15,613	8,876	24,943	54,964
22								
23	DAS Reduction	1.00	1.00	1.00	1.00	1.00	1.00	1.00
24								
25	Revenue per Day on trips landing groundfish	B10/B12	C10/C12	D10/D12	E10/E12	F10/F12	G10/G12	H10/H12
26	Days absent on trips where groundfish are landed	B12*B23	C12*C23	D12*D23	E12*E23	F12*F23	G12*G23	H12*H23
27								
28	Revenue per day on trips not landing groundfish	B11/B13	C11/C13	D11/D13	E11/E13	F11/F13	G11/G13	H11/H13
29	Days absent on trips where groundfish are not landed	B13	C13	D13	E13	F13	G13	H13

Table 370 – Explanation of profitability calculations

	A	B	C	D	E	F	G	H
1		Long-line < 40 feet	Long-line ≥ 40 feet	Gillnet < 40 feet:	Gillnet ≥ 40 feet	Trawl < 50 feet	Trawl 50 to 70 feet	Trawl ≥ 70 feet
30								
31	Total Groundfish Revenue	B26*B25	C26*C25	D26*D25	E26*E25	F26*F25	G26*G25	H26*H25
32	Total Groundfish Trip Costs	B2*B26	C2*C26	D2*D26	E2*E26	F2*F26	G2*G26	H2*H26
33								
34	Total Non-Groundfish Revenue	B11	C11	D11	E11	F11	G11	H11
35	Total Non-Groundfish Trip Costs	B2*B13	C2*C13	D2*D13	E2*E13	F2*F13	G2*G13	H2*H13
36								
37	Total Revenue	B31+B34	C31+C34	D31+D34	E31+E34	F31+F3 4	G31+G34	H31+H3 4
38	Total Trip Costs	B32+B35	C32+C35	D32+D35	E32+E35	F32+F3 5	G32+G35	H32+H3 5
39	Total Fixed Cost	B3	C3	D3	E3	F3	G3	H3
40								
41	Lay System (Crew/Boat)	Clear 60/40	Clear 50/50	Clear 60/40	Clear 50/50	Clear 50/50	Broken 50/50	Broken 50/50
42	Payments to Crew	0.6*B37	0.5*C37	0.6*D37	0.5*E37	0.5*F37	(G37- G38)*0.5	(H37- H38)*0.5
43	Trip Costs Paid by Crew	B38	C38	D38	E38	F38	0	0
44	Net Crew Income	B42-B43	C42-C43	D42-D43	E42-E43	F42-F43	G42-G43	H42-H43
45	Average Crew	2	3	3	3	2	3	5
46	Average Crew Income	B44/B45	C44/C45	D44/D45	E44/E45	F44/F45	G44/G45	H44/H45
47								
48								
49	Returns to Boat							
50	Revenue To Boat	B37*0.4	C37*0.5	D37*0.4	E37*0.5	F37*0.5	G37*0.5	H37*0.5
51	Trip Costs Paid by Boat	B38-B43	C38-C43	D38-D43	E38-E43	F38-F43	G38-G43	H38-H43
52	Fixed Costs	B3	C3	D3	E3	F3	G3	H3
53								
54	Return to Debt Service and Profit	B50-B51- B52	C50-C51- C52	D50-D51- D52	E50-E51- E52	F50- F51-F52	G50-G51- G52	H50- H51-H52
55								
56	Owner Profit	Small Hook	Large Hook	Small Gillnet	Large Gillnet	Small Trawl	Medium Trawl	Large Trawl
57	No Debt	B54	C54	D54	E54	F54	G54	H54
58	Low Debt	B54-B19	C54-C19	D54-D19	E54-E19	F54-F19	G54-G19	H54-H19
59	Medium Debt	B54-B20	C54-C20	D54-D20	E54-E20	F54-F20	G54-G20	H54-H20
60	High Debt	B54-B21	C54-C21	D54-D21	E54-E21	F54-F21	G54-G21	H54-H21

Table 370 – Explanation of profitability calculations (cont)

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	24.7%	24.5%	32.1%	35.5%
10th Percentile	-80.1%	-84.8%	-85.8%	-86.2%
25th Percentil	-63.3%	-67.4%	-69.7%	-70.6%
50th Percentile	-47.0%	-50.8%	-52.7%	-56.1%
75th Percentile	-28.0%	-31.7%	-35.3%	-41.9%
90th Percentile	-8.0%	-8.1%	-16.2%	-24.8%

Table 371 - Simulation results for Long-line vessels less than 40 feet

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	9.3%	10.3%	11.3%	14.8%
10th Percentile	-68.5%	-70.0%	-69.3%	-73.8%
25th Percentil	-54.4%	-55.7%	-56.1%	-59.7%
50th Percentile	-37.6%	-38.1%	-37.9%	-38.9%
75th Percentile	-12.7%	-13.1%	-13.0%	-12.7%
90th Percentile	-1.8%	-1.8%	-1.8%	-2.0%

Table 372 - Simulation results for Long-line vessels 40 feet and above

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	18.8%	21.1%	22.7%	24.0%
10th Percentile	-76.0%	-79.3%	-80.2%	-79.3%
25th Percentil	-59.6%	-61.1%	-61.2%	-63.2%
50th Percentile	-35.3%	-35.3%	-35.6%	-31.9%
75th Percentile	-8.7%	-7.6%	-7.4%	-6.0%
90th Percentile	-0.5%	-0.6%	-0.7%	-0.5%

Table 373 - Simulation results for Gillnet vessels less than 40 feet

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	15.1%	18.7%	19.1%	20.6%
10th Percentile	-74%	-71%	-72%	-84%
25th Percentil	-59%	-60%	-61%	-69%
50th Percentile	-49%	-50%	-51%	-57%
75th Percentile	-38%	-40%	-40%	-46%
90th Percentile	-22%	-23%	-24%	-27%

Table 374 - Simulation results for Gillnet vessels 40 feet and above

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	27.1%	28.7%	29.5%	33.4%
10th Percentile	-81.7%	-85.1%	-84.5%	-90.2%
25th Percentil	-68.9%	-69.6%	-71.6%	-74.2%
50th Percentile	-53.0%	-54.5%	-55.6%	-59.0%
75th Percentile	-31.5%	-33.6%	-34.1%	-36.4%
90th Percentile	-13.0%	-13.2%	-13.1%	-15.0%

Table 375 - Simulation results for Trawl vessels less than 50 feet

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	17.7%	18.4%	22.2%	26.8%
10th Percentile	-76.8%	-78.0%	-83.3%	-83.3%
25th Percentil	-59.4%	-60.6%	-65.2%	-64.8%
50th Percentile	-44.8%	-44.7%	-47.1%	-48.2%
75th Percentile	-21.8%	-21.3%	-22.4%	-23.8%
90th Percentile	-8.5%	-8.6%	-11.9%	-12.7%

Table 376 - Simulation results for Trawl vessels less than 50 to 70 feet

	No Debt	Low Debt	Medium Debt	High Debt
Percent Below Break-Even	31.0%	34.7%	36.4%	42.6%
10th Percentile	-81.7%	-87.5%	-86.7%	-90.9%
25th Percentil	-71.3%	-74.7%	-74.9%	-76.1%
50th Percentile	-53.1%	-57.5%	-59.5%	-61.3%
75th Percentile	-31.7%	-36.5%	-37.4%	-37.7%
90th Percentile	-17.3%	-18.0%	-19.5%	-19.9%

Table 377 - Simulation results for Trawl vessels above 70 feet

Economic Analysis of Days at Sea Leasing Program

The economic impact of a DAS leasing program was estimated by simulating a quota market using a mathematical programming model. The model maximized industry profits by choosing the days each vessel will fish (if any) of their own allocation, days they will lease from other vessels, and the number of their days they will lease to other vessels. Each vessel can only fish a maximum number of days at sea, which is the sum of their Category A DAS and their FY 2001 allocation. Days fished above their allocation of Category A DAS must be leased from other vessels. Vessels were also not allowed to be both a lessee and lessor, although in reality this could happen. Restrictions were placed on the model that did not allow days to be leased by larger vessels from smaller vessels, which were consistent with the restrictions passed by the Council. Results from the model yielded a very efficient outcome in terms of maximizing industry profit with as few vessels as possible. In reality, the actual leasing of quota among industry participants may not be as profitable as projected by the model. An individual vessel's activity level chosen by the model is determined by its productivity, the maximum allowable days it can fish, the lease price for days at sea, daily fishing costs, and the prices of each species, and a restriction which prohibit leasing of days from smaller vessels by bigger vessels. The model does not differentiate between areas fished, where vessels land their fish, and a variety of other factors that will influence the amount of quota leased, including other fisheries in which the vessel can participate, and it assumes perfect information among participants.

Vessels were grouped together regardless of gear type, and then stratified into fleets of 100 vessels⁸. Each fleet was then paired with itself, and then with every other fleet to simulate trades between all 1,345 vessels that could potentially lease quota. For each sector pair, the model was run fifty times in order to incorporate a stochastic lease price, which was generated based on results from a previous linear programming model. Lease prices used in the model ranged from \$218 to \$2,093, with a mean of \$1,029. Results from the simulations were used to examine changes in profitability that would occur from allowing days at sea leasing.

Results

Results from the simulation runs were stratified by gear type and length of vessel. Class 1 vessels were less than 50 feet; class 2 vessels were between 50 and 69 feet, and class 3 vessels were 70 feet and greater. The

⁸ The size of the non-linear programming model limited the maximum fleet size which could be analyzed, while incorporating a stochastic lease price.

three gear types examined were hook (50 vessels), trawl (1,126 vessels) and gillnet (169 vessels). There were more vessels in the model than had Category A DAS in the proposed action. Because vessels can fish up to the total of their Category A DAS and their FY 2001 allocation, vessels with zero Category A DAS can still lease days at sea, and therefore need to be included in the model. Because the model is attempting to maximize industry profit, under a DAS sea leasing scheme, fewer vessels will fish (Table 378). However, mean profits for all vessels will be higher than if days at sea trading were not allowed, and all vessels fished their allocation (Table 379). Mean profits are also higher than the mean profit levels generated during calendar year 2002 by vessels actually fishing.

Vessels which choose to lease all their quota can greatly enhance their profit since the owner is getting all the revenue from the lease without incurring any costs, and in particular not having to pay labor costs. The decision from a vessel perspective on whether to lease quota *to* other vessels is based on whether they can lease their quota for more than they would earn after paying crew share and covering other expenses⁹. If a vessel decides to lease quota *from* other vessels, it is based on whether they can earn more from a leased day at sea than what they will pay for the lease plus what they will pay to the crew, and to cover other expenses.

Model results generally showed the flow of lease days going from larger vessels to smaller vessels. Trawl and Gillnet vessels less than 50 feet in length were projected to use more days at sea than in 2002 under a DAS leasing scheme (Table 380). Trawl and Gillnet Vessels greater than 50 feet saw their days at sea usage decline from 2002 levels. Hook vessels were also projected to see their days at sea increase. Restrictions on DAS trading make it difficult for larger vessels to lease from smaller vessels, but the opposite does not hold. Small vessels have a large potential number of vessels that they can lease from, which is what model results show. Examination of both tables 2 and 3 show that larger vessels can profit by leasing their days to smaller vessels. For example, length class 2 trawl vessels average profit was \$68,387 using an average of 36.92 days of effort under a DAS leasing scheme, while their average profit was \$31,428 using 46.13 days of effort in 2002. Small trawl vessels average profit was \$41,111 using 31.9 days of effort under days at sea leasing, while their 2002 average profit was \$12,271, and their average days at sea was 25.13. This demonstrates that both sectors would be better off with a DAS leasing program than fishing at their calendar year 2002 effort levels.

Additionally, the average profit levels were projected to be higher under days at sea leasing than if the vessels fished at their allocated 2004 levels. This demonstrates days at sea leasing provides substantial regulatory relief to vessels compared with no leasing.

⁹ The particular costs faced by each vessel depend on the particular lay system they employ. For the purposes of this model, it was assumed the vessel paid the variable operating costs such as fuel and ice, and then paid the crew. This simplified the model slightly, but may underestimate the profit that each vessel owner would earn under a days at sea leasing program if they decide to fish.

		Vessels	Fishing
		with	Under
	Length	2004	DAS
Gear Sector	Class	Days	Leasing
Hook	ALL	41	30
Trawl	1	300	141
	2	211	97
	3	203	100
Gillnet	1	127	110
	2	18	10
Total		900	488

Table 378 - Number of Vessel Fishing in 2002 and Number Fishing with Days at Sea Leasing

			Profit (Mean Per Vessel)		
	Length			2004	2002
Gear Sector	Class	Vessels	Leasing	Allocation	Effort
Hook	ALL	50	78,700	39,806	24,247
Trawl	1	603	41,111	16,383	12,271
	2	266	68,387	30,102	31,428
	3	257	97,050	56,700	74,890
Gillnet	1	148	82,320	54,047	38,514
	2	21	74,644	46,945	53,465

Table 379 - Mean Profit per Vessel under Days at Sea Leasing

			Days Fished			
	Length					2002
Gear Sector	Class	Vessels	Leasing	Total	Sell	Effort
Hook	ALL	50	37.0	59.0	15.0	28.0
Trawl	1	603	19.28	31.91	19.30	25.13
	2	266	22.09	36.92	30.48	46.13
	3	257	21.52	46.26	34.92	70.00
Gillnet	1	148	42.79	70.89	18.44	33.07
	2	21	32.98	54.25	34.09	61.63

Table 380 - Average Days Fished and Leased by Gear Type and Length Class

Impact on Party/Charter Operators

The Proposed Action would relax current restrictions on the bag limit for Gulf of Maine party/charter passengers and would permit passengers to retain a two-day equivalent of the daily bag limit on trips that take place over two calendar days and that are at least 15-hours in duration. These measures would affect any vessel that chose to take passengers for-hire in the Gulf of Maine where cod were caught. While there are a large number of vessels that hold a party/charter groundfish permit there have only been about 120 vessels that have actually reported landing Gulf of Maine cod when taking passengers for hire. Of these vessels, the majority earn at least 75% of fishing income from passenger fees. Although the impact of a relaxation of the Proposed Action recreational measures cannot be estimated using available data there is little doubt that the higher bag limit will be more attractive to party/charter customers which should result in higher passenger loads and an overall improvement in party/charter business profits.

Impact on Hand-Gear Only Permit Holders

The Proposed Action would convert the existing open access hand-gear permit into a limited access category and an open access category. Vessels that qualify for a limited access permit would benefit from a relaxation on the cod trip limit and would not be subject to trip limits on any other species. Vessels that do not qualify for limited access would still be able to obtain an open access permit but the cod trip limit would be much lower than current hand-gear only permit holders may retain. Available data show that even though a large number of open access hand-gear permits have been issued in the past not much more than 10% of these permits actually report landings of any amount of either cod or haddock. A preliminary assessment of qualification indicates that approximately 150 vessels would qualify for a limited access hand-gear only permit which is just about as many vessels with documented landings in any given year since 1997. Thus, the conversion to a limited access permit with the potential to achieve higher landings and higher incomes overall also may permit the majority of small entities currently participating in the fishery to continue operating.

7.3.3.8 Executive Order 13158 (Marine Protected Areas)

The Executive Order on Marine Protected Areas requires each federal agency whose actions affect the natural or cultural resources that are protected by an MPA to identify such actions, and, to the extent permitted by law and to the extent practicable, avoid harm to the natural and cultural resources that are protected by an MPA. The E.O. defines a Marine Protected Area as “any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein.”

The Departments of Commerce and the Interior are jointly developing a list of MPAs that meet the definition of MPA for the purposes of this E.O. As of the date of submission of the FSEIS, the list of MPA sites has not been developed by the departments. However, it is likely that when the list is available the Stellwagen Bank National Marine Sanctuary and the Council’s year-round groundfish closed areas (Closed Area I, Closed Area II, Nantucket Lightship Closed Area, and Western Gulf of Maine Closed Area), at a minimum, will meet criteria for an MPA and will likely be listed.

The E.O. promotes the development of MPAs by enhancing or expanding the protection of existing MPAs and establishing or recommending new MPAs. Amendment 13 proposes modifying and expanding existing year-round groundfish closures to afford more protection to sensitive benthic habitat as well as establishing new area closures for habitat protection. This is consistent with the goals of E.O. 13158, which support the use of closed areas as management tools for habitat protection.

7.3.3.9 Marine Mammal Protection Act

The NEFMC has reviewed the impacts of Amendment 13 on marine mammal species and has concluded that the management actions contained in Amendment 13 are consistent with the provisions of the MMPA. The take of harbor porpoise under the existing FMP have been reduced to the point that would allow the

stocks to achieve optimum levels. The level of take for the remaining odontocetes and seals that are affected by this fishery are low enough, in relation to the size of their populations, that it has been determined that the stocks would be allowed to achieve optimum levels. Therefore, since the mortality and serious injury that is likely to occur under the existing FMP has been assessed relative to the PBR allowed for each species under the MMPA and found to be below those levels, the NEFMC concludes that Amendment 13 will further reduce effort providing additional protection to these species.

7.3.3.10 Paperwork Reduction Act

Materials and analysis required under the PRA will be submitted under separate cover after the final SEIS is prepared.

7.3.3.11 Data Quality Act (P.L. 106-554)

The Data Quality Act directed the Office of Management and Budget to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by federal agencies." NOAA guidelines are available at <http://www.noaanews.noaa.gov/stories/iq.htm> and are not repeated here. Amendment 13 falls under the category of a Natural Resource Plan. It is a composite of several different types of information, including scientific, management, and stakeholder input, from a variety of sources. Compliance of this document with NOAA standards is evaluated below.

Utility: The information disseminated by this Amendment is intended to describe proposed management actions and the impacts of those actions. As such, it is intended to be useful to:

- Industry participants so they can provide informed comment on their preferred alternatives
- Managers/policy makers so they can choose alternatives

Section 9.0 provides background information so that the impacts described in section 5.0 can be more fully understood.

Integrity: Confidential information is not reported in this amendment as provided by 50 CFR Subpart E. Sources of data are clearly described and referenced.

Objectivity: Information is provided in an unbiased manner. Where necessary, descriptions of analytic techniques are provided so the limitations of the analyses can be understood. Where possible, variation in scientific information is reported so the uncertainty of estimates can be evaluated. Data sources are clearly described, and citations to referenced documents are included.

This Amendment is developed in accordance with NMFS Operational Guidelines for Fishery Management Plans. A wide range of information has been incorporated. The information is presented in such a way that clear policy choices can be made for the major issues. Information included has been reviewed prior to incorporation through a wide range of processes, including formal peer reviews, informal reviews by the Groundfish Plan Development Team, and public review through participation in Council meetings. In addition, before this plan is final, additional public and private reviewers will be afforded an opportunity to comment, and the comments will be considered in the preparation of the final SEIS.

7.3.4 State and Local Laws and Policies

Federal fisheries permit holders fishing in state waters must adhere to federal fisheries regulations unless they are specifically exempted or the state regulations are more restrictive. The following is a summary of state regulations relevant to groundfish.. Most states are in the process of adjusting their groundfish

regulations to reflect changes made by NMFS to federal groundfish regulations in July, 2003. These changes are not shown below.

MAINE

Licensing and Reporting Requirements

- Non-resident commercial fishermen in the groundfish fishery must report time and location of fishing, gear used, and species and catch information by phone or written report to the Bureau of Marine Patrol.

Seasonal/Area Closures

- No fishing, taking or possession of federally regulated groundfish species in Sheepscot Bay and Boothbay from May 1-June 30.

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
Atlantic cod	22"	23"
haddock	19"	23"
pollock	19"	19"
witch flounder	14"	14"
yellowtail flounder	13"	13"
American plaice	14"	14"
Atlantic halibut	36"	36"
winter flounder	12"	12"
redfish	9"	9"

Gear Restrictions

Recreational—

- Charter, party and recreational vessels are prohibited from fishing for groundfish with more than 2 hooks per line and more than 1 line per angler, and must stow all other fishing gear on board the vessel.

Commercial—

Gear type	Mesh size	Net Limit	Hook type	Hook Limit
trawl net, sink gillnet, Scottish seine, mid-water trawl	≥ 6" diamond/square in body and wings; ≥ 6.5" diamond/square in cod end	not specified	N/A	N/A
stand-up gillnet	≥ 6.5"	max. 50 nets	N/A	N/A
tie-down gillnet	≥ 7"	max. 100 nets; for mesh ≥ 10", max. 150 nets	N/A	N/A
tub trawl, longline	N/A	N/A	size 12/0 or greater circle hooks only	2000

- Use of crucifiers with less than 6" spacing between fairlead rollers is prohibited.

Possession Limits

Atlantic cod

Commercial- maximum 500 lbs. landed/possessed daily

Atlantic halibut

See “Species-specific Regulations” section, below.

Species-specific Regulations

Atlantic halibut

Open seasons—

- Sunrise May 1-Sunset July 31 east of line from Schoodic point due south (magnetic) in territorial waters; Sunrise April 1-Sunset June 30 west of above line.

Minimum size— 36”

Possession limit—

- Possession of other species is prohibited while fishing for Atlantic halibut.
- Commercial- 4 fish/day
- Recreational/Party/Charter- 1 fish/day

Quota—

- Commercial/Recreational- No more than 50 fish/season

Gear restrictions—

- Size “1400” or greater circle hooks up to a maximum of 450 circle hooks/day

License—

- Licensed commercial fishermen must receive an Atlantic halibut endorsement on a fishing license issued by the ME Department of Marine Resources. To receive this endorsement, a fisherman must contact the DMR before March 1 and participate in a tagging and release training program.

Additional requirements—

- Those fishing for halibut are required to maintain a log of halibut catches with specific information about each fish and may also be asked to take observers on board and preserve certain halibut organs for laboratory examination.

NEW HAMPSHIRE

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
Atlantic cod	22”	23”
haddock	19”	23”
pollock	19”	none
yellowtail flounder	13”	13”
American plaice	14”	14”
winter flounder	12”	12”
redfish	9”	9”

- Cod/haddock must have head and tail intact or as fillets with skin intact, no less than 14” long.

Gear Restrictions

Hook Gear—

- Cod, haddock, pollock, white hake, redfish, American plaice, windowpane flounder, witch flounder, winter flounder, and yellowtail flounder may not be taken during the months of April, May and June.
- Only circle hooks size 12/0 when using bait
- No more than 800 circle hooks
- Fairlead rollers must have 6” spaces between each

Gillnets—

- Cod, haddock, pollock, white hake, redfish, American plaice, windowpane flounder, witch flounder, winter flounder, and yellowtail flounder may not be taken during the months of April, May and June.
- No more than 25 nets, each no greater than 300 feet long
- Gillnets used to take the above species from the Great Bay estuarine system inland of Memorial Bridge in Portsmouth, Little Harbor and tributaries inland of its most seaward jetty, Rye Harbor and tributaries inland of its most seaward jetty, and inland of Hampton Harbor Bridge may be used April 16-October 31 only, 2 hours before sunrise until 2 hours after sunset. Gillnets must be within eyesight (unaided by binoculars and other such magnification instruments) of the fishing vessel at all times and must adhere to the following specific ations:
 - = 3” mesh
 - = 100 feet long, = 7 feet wide

Possession Limits

- Cod and haddock may only be taken recreationally during the months of April, May and June.
- Recreational daily limit
 - 10 cod/haddock combined, April 1-Nov 30
 - 5 cod/haddock combined Dec 1-March 31
- Commercial daily limit
 - 500 lbs. cod by gillnet
 - 200 lbs. cod, haddock or yellowtail flounder combined by hook gear

MASSACHUSETTS

Licensing and Reporting Requirements

- Special permit required for at-sea processing
- Permit required for participation in gillnet fishery

Seasonal/Area Closures

- Month of May— upper Cape Cod Bay and Massachusetts Bay north of 42°, south of 42°30’
- Month of June— north of 42°30’ from Marblehead to the New Hampshire border
- April-May and Oct.-Nov.— Cape Cod Bay and Massachusetts Bay from Plymouth north to Marblehead
- April-June— upper Massachusetts Bay and Ipswich Bay from Marblehead to the New Hampshire border
- From May 1 to May 31 it is illegal to possess groundfish species east of Cape Cod south of 42°N and east of 70°W

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
Atlantic cod	22”	23”
haddock	19”	none
pollock	19”	none
yellowtail flounder	13”	13”

Gear Restrictions

Gear type	Mesh size	Net Limit
trawls	≥ 6½” throughout entire net north and east of Cape Cod, Jan. 1-Dec. 31; ≥ 6½” throughout entire net south of Cape Cod, Nov. 1-April 22; ≥ 4½” throughout entire net in area defined in state regs, June 1-Oct. 31	not specified
sink and flatfish gillnets	≥ 6½” throughout entire net	not specified

- Line-trawling for cod permitted during certain time and area closures with certain hook restrictions, as specified in state regs.
- No disks rollers, or rockhopper gear greater than 18” in diameter
- Vessels over 90 feet in length are prohibited from fishing in MA state waters
- Rod-and-reel, handlines, and longlines may be used in January with written permission of the MA Department of Marine Fisheries director

Gillnets—

- North of Cape Cod— Bottom/sink gillnets prohibited Nov. 1-Nov. 30 and March 1-March 31 in certain designated areas
- South and west of Cape Cod— Gillnets (all types) prohibited April 1-November 15, with few exceptions
- Massachusetts Bay— Bottom gillnets prohibited May 15-November 1 within designated management area

Possession Limits

- Recreational daily limit
 - 10 fish/person/day, April-November
 - 5 fish/person/day December-March
- Commercial daily limit
 - 500 lbs./24-hour day North of Cape Cod
 - 2,000 lbs./24-hour day South of Cape Cod

Atlantic cod

- Gonads may not weigh more than 10% of the total weight of cod aboard vessel
- No removal of gonads from fish smaller than the minimum size
- Small-mesh fishermen in upper Cape Cod Bay Whiting Area may not possess cod, haddock, pollock, redfish, white hake, yellowtail flounder, winter flounder, windowpane flounder, American plaice, witch flounder and ocean pout

Species-specific Regulations

Winter Flounder

Possession limit—

- No possession of winter flounder in Mount Hope Bay and tributaries May 20-Sept. 27 and Oct. 29-April 12
- Daily limit of 4 winter flounder (24-hour period) April 13-May 19 and Sept. 28-Oct. 28
- Commercial- No taking winter flounder from Mount Hope Bay and tributaries
- Recreational- 8 winter flounder/person at one time; reduced during March 1-April 30 to 3 winter flounder/person at one time

RHODE ISLAND

Licensing and Reporting Requirements

- Upon request of the RI Dept. of Environmental Management, every owner/operator and dealer must make either or both a telephone report or written report of activities

Seasonal/Area Closures

- Recreational closed season for winter flounder— April 20-May 27 and Sept. 28-Oct. 28
- Commercial closed season for winter flounder— March 1-Sept. 30 and Oct. 1-Nov. 15

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
Atlantic cod	19"	20"
haddock	19"	19"
pollock	19"	19"
American plaice	14"	14"
winter flounder	12"	12"
yellowtail flounder	13"	13"
witch flounder	none	14"

Gear Restrictions

- No mechanical trawling device, beam, pair or otter trawl allowed in Narragansett Bay and various associated rivers and ponds in Narragansett Bay watershed except in some designated areas (these areas are described in detail in the state regulations)
- No setting, hauling or maintaining a trawling device in any listed channels, ponds, or rivers (refer to state regs)
- Beam, pair and otter trawls or other mechanical trawling devices are allowed in the upper Narragansett Bay Trawling Area between July 1 and Nov. 1, except on weekends and legal state holidays
- No setting, hauling or maintaining a seine along the shoreline within a half mile in both directions of the seaward entrance of various specified ponds and rivers open to the sea, extending seaward for 300 yards
- Except for menhaden, it is illegal to set, maintain, or haul a gillnet for any species in the Pawcatuck River or Little Narragansett Bay and within 1.5 miles south and west of Napatree Point
- Traps, pots and stationary gear must be marked with the license number, name of owner and a buoy
- Use of explosives as a fishing device prohibited
- Additional gear restrictions apply to certain ponds, described in the state regs.

Gillnets—

- A license is required to fish using a gillnet. Any RI resident is eligible for a license. Cost: \$200.
- Near- and off-shore ends of all gillnets must be marked with orange/fluorescent orange bullet shaped buoys with minimum dimensions 9"x16"; buoys must be marked with name/license number of owner and "GN" in letters at least 3" tall
- Each gillnet must be hauled once per day (24 hr. period, midnight to midnight)
- Gillnets may not be set, hauled or maintained within 3,000 ft. of a fish trap licensed by the RI Department of Environmental Management
- Floating gillnets must be constantly tended (operator must remain within 100 ft. of the net at all times)
- Mesh for bottom tending gillnets must be less than 5"

- State regulations specify some additional setting and spacing restrictions and seasonal closures for gillnet use

Species-specific Regulations

Winter Flounder

- Permit required for fishing for winter flounder
- Minimum mesh size of 6” required throughout state waters and across all gear types while fishing for winter flounder
- Harvesting or possession of winter flounder prohibited in Narragansett Bay north of lines from So. Ferry Road in Narragansett to Ft. Getty; Ft. Wetherill to Ft. Adams; Sandy Pt. to High Hill Pt.
- A winter flounder Coastal Marine Life Management Area (CMLMA) is established in all state waters north of a line from Sakonnet Point Light to Pt. Judith Light; no possession of winter flounder while fishing in CMLMA
- Fishing for winter flounder in CMLMA prohibited from 1 hour after sunset until 1 hour before sunrise (except with gill and fyke nets)
- CMLMA annual commercial winter flounder quota, for all gear types, is divided into two seasons:
 - 1st season—March 1 until half of the annual quota is landed
 - 2nd season—October 1-November 15, unless the entire quota is reached before Nov. 15
- Quota overages are subtracted from the next year’s allocation
- Recreational possession limit for winter flounder: 4 fish/person/day
- Commercial trip limit for winter flounder: 100 lbs/day in coastal ponds within the CMLMA, 300 lbs/day in other areas (south end of CMLMA). While fishing in the entire CMLMA, 300 lb. possession limit applies.

CONNECTICUT

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
winter flounder	12”	12”
Atlantic cod	19”	none
yellowtail flounder	13”	none
haddock	19”	none
pollock	19”	none
witch flounder	14”	none
American plaice	14”	none
redfish	9”	none

NEW YORK

The State of NY is in the process of amending its current groundfish regulations. Current regulations and proposed changes are described separately below. Changes to the current regs will most likely be implemented by the end of September, 2002.

Current

Licensing and Reporting Requirements

- A fishing license must be carried at all times while fishing

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size
Atlantic cod	19"	21"
haddock	19"	21"
pollock	19"	19"
yellowtail flounder	13"	13"
winter flounder	12"	11"

Species-specific Regulations

Winter Flounder

- Recreational open season— 3rd Saturday in March-June 30 and Sept. 15-Nov. 30
- Recreational trip limit— 15 fish/vessel during fishing time (not less than 24 hours)
- Commercial open season, by gear-type—
 - pound and trap nets: July 26-June 14
 - fyke nets: Oct. 1-March 22
 - all other gear: Dec. 1-June 13

Proposed Additions

- At-sea transfer of any species with a possession limit is prohibited
- Some new reporting requirements are proposed
- Possession of winter flounder is prohibited in recreational and commercial fisheries.
- Fish pots/traps must be tagged (color coded) indicating year issued by the NY Dept. of Environmental Conservation

<i>Fish Trap Specifications</i>	Circular Vents	Rectangular Vents
Max. Number Vents	1	1
Max. Size of Opening	diameter: 23/8"	dimensions: 11/8" x 5¾"

NEW JERSEY

Licensing and Reporting Requirements

- An individual applying for a gillnet license must have possessed a gillnet license for at least one of the two previous years. Otherwise, the applicant must file an application in person for two consecutive years.

Open Recreational Seasons

Species	Season
winter flounder	March 1-May 31; Sept. 15-Dec. 31
Atlantic cod	Jan. 1-Dec. 31
haddock	Jan. 1-Dec. 31
pollock	Jan. 1-Dec. 31

Size Limits

Species	Commercial Minimum Size	Recreational Minimum Size	Minimum Fillet Size
Atlantic cod	21"	21"	14"
haddock	21"	21"	14"
pollock	19"	19"	13"
winter flounder	12"	11"	none

Gear Restrictions

- All gear must be legibly, indelibly marked with the gear ID number of the owner
- Stakes to mark various nets must stand at least 2 feet above mean high water, and must be visible from all sides:
 - reflectors may not be less than 2" in diameter
 - reflective tape may not be less than 2" wide
 - light colored squares may not be less than 2' square
 - light colored jugs/buoys may not be less than 12" in diameter
- No unattended overnight staked/anchored gillnets June 15-Oct. 31 (operator must be less than 1500 ft. from the nearest portion of the net)
- Gillnet mesh must be =2.75" stretched in tributaries of Delaware Bay or =3.25" stretched Jan. 1-Feb. 29

Species-specific Regulations

Winter Flounder

- Use of fyke net for capturing winter flounder prohibited Feb. 20-Oct. 31
- Use of other commercial gear for capturing winter flounder prohibited June 1-Nov. 30

Other

- Removal of head, tail, skin or mutilation which prevents accurate identification of the species is prohibited.
- A party boat owner may apply for a Special Fillet Permit for a specific vessel, subject to the following restrictions:
 - Once fishing commences, no parts or carcasses of Atlantic cod, haddock, pollock, winter flounder and other flatfish (as well as some species not managed under the Northeast Multispecies FMP) may be discarded overboard; only whole or live fish may be returned to the water.
 - No fillet of any flounder or other flatfish shall be less than 8 inches in length between May 1 and Oct. 31 or less than 5 inches in length from Nov. 1 to April 30.
 - See minimum fillet sizes in "Size Limits" section, above.