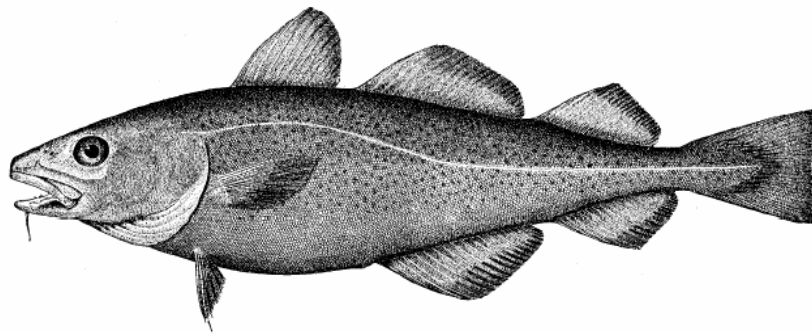


**Proposed Agency Action:
Approval of the Georges Bank Cod
Fixed Gear Sector & Operations Plan**

Type of statement: Draft Environmental Assessment



**Lead Authors:
Georges Bank Fixed Gear Sector
&
Cape Cod Commercial Hook Fishermen's Association**

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1.0 INTRODUCTION

The final rule implementing Amendment 13 to the Northeast Multispecies Fishery Management Plan (FMP) (69 CFR 22906, April 27, 2004) specified a process for the formation of sectors within the multispecies fishery and the allocation of total allowable catch (TAC) for a specific groundfish species (or Days-at-Sea), implemented restrictions that apply to all sectors, authorized and implemented the first Georges Bank cod Sector TAC in New England: the Georges Bank (GB) Cod Hook Sector (Hook Sector), and specified a formula for the allocation of GB cod TAC to future Sectors. In November 2006, Framework 42 to the Northeast Multispecies FMP authorized the second GB cod Sector TAC in New England: the GB Cod Fixed Gear Sector (Sector). As this Fixed Gear Sector is the Sector in question, for GB cod to be allocated to the Sector and the Sector authorized to fish, the Sector must submit an Operations Plan (Ops Plan) and Sector Contract to the Regional Administrator (RA) annually for approval. The Operations Plan and Sector Contract must contain certain elements, including a contract signed by all Sector participants and a plan containing the management rules that the Sector participants agree to abide by to avoid exceeding the allocated TAC. An analysis of the impacts of the Sector's proposed operation and harvesting rules is required to comply with the National Environmental Policy Act (NEPA).

1.1 GEORGES BANK COD FIXED GEAR SECTOR OPERATIONS PLAN REQUEST

The Georges Bank Cod Fixed Gear Sector requests approval and implementation of the Sector Allocation Operations Plan during the 2007-08 fishing year. The Sector Allocation has been submitted under Framework 42 to the Northeast Multispecies FMP and was implemented in November 2006. The New England Fishery Management Council (NEFMC) has authorized the formation of Sectors under Amendment 13 to the Northeast Multispecies FMP and has set forth criteria for establishing Sectors in that action. The Ops Plan provides the specific details for how the Sector would function and is required to finalize formation of the Sector.

The Sector is a group of self-selecting fishermen that have come together voluntarily and cooperatively for the purposes of efficiently harvesting an annual allocation of GB cod. The Sector would operate under a hard TAC of GB cod to meet the overfishing mandates of the Sustainable Fisheries Act (SFA) amendment to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson Act). Furthermore, the Sector would foster novel and highly adaptive means of local decision-making, self-monitoring, and enforcement that would serve as a model for the future of sustainable fisheries in New England. Implementation of the Sector Ops Plan would mitigate potentially adverse economic impacts that are being experienced as a result of Amendment 13 and adverse economic impacts that are expected as a result of Framework 42 to the Northeast Multispecies FMP by conveying environmental, social, and economic benefits directly to the Sector members.

Member Requirements

To qualify for participation in the Sector, members must possess a valid limited access Northeast multispecies permit and an allocation of days-at-sea (DAS) as promulgated in Amendment 13. Under Amendment 13, the NEFMC established the Sector qualifying period according to the baseline years 1996-2001 that were used to allocate DAS. Sector members must have documented landings of GB cod during the qualifying period in order to be eligible for participation in the Sector. The Sector's TAC is the cumulative sum of each Sector member's individual proportion of the landings taken during the qualifying period. Sector members would be required to declare their intention to join the Sector to the National Marine Fisheries Service (NMFS) RA on an annual basis. Once declared into the Sector, members would fish for groundfish solely within the Georges Bank Hook Sector area (Sector Area, defined later). Furthermore, Sector members must only utilize fixed gear (which includes both anchored sink gillnet and hook-and-line), and not mobile gear (trawl), to target groundfish. Sector members would

be legally bound by a Membership Contract that sets forth the requirements for each member as well as a schedule of penalties for violations of Sector rules.

Sector Rules

The Sector would operate under a hard TAC of GB cod, which will assure that the Sector would not contribute to overfishing of the GB cod stock. Real-time landings data would be employed to ensure compliance with the hard TAC. Sector members would retain all legal sized marketable GB cod in order to minimize bycatch of the target species. Sector members must fish with fixed gear and within the Sector Area. The Sector Manager (Manager) would oversee day-to-day operations of the Sector. A portion of the cod TAC would be set aside as a bycatch for traditional large mesh gillnet fisheries for skates and monkfish. The rolling closure during the month of May will be opened for use of bottom longline or jigging operations only. Regulations pertaining to number of nets would be maintained as would DAS and minimum mesh size requirements. Under these rules, the Sector would act as a model for the future of community- and quota- based management regimes in New England.

1.2 PURPOSE AND GOALS

The NEFMC has established a set of goals and objectives for the purposes of developing Amendment 13; the Sector is deliberate in meeting many of the goals and objectives set forth for the Amendment. Some of the most applicable goals and objectives for both the Amendment and Sector are listed below. Goals and objectives of Amendment 13 are excerpted from the Amendment 13 Final Supplemental Environmental Impact Statement (FSEIS) Section 2.3:

Amendment 13 Goals:

- Goal 1:** Consistent with the National Standards and other required provisions of the Magnuson Act and other applicable law, manage the northeast multispecies complex at sustainable levels.
- Goal 2:** Create a management system so that fleet capacity will be commensurate with resource status so as to achieve goals of economic efficiency and biological conservation and that encourages diversity within the fishery.
- Goal 3:** Maintain a directed commercial and recreational fishery for northeast multispecies.
- Goal 4:** Minimize, to the extent practicable, adverse impacts on fishing communities and shoreside infrastructure.
- Goal 6:** To promote stewardship within the fishery.

Amendment 13 Objectives:

- Objective 1:** Achieve, on a continuing basis, optimum yield (OY) for the U.S. fishing industry.
- Objective 3:** Adopt fishery management measures that constrain fishing mortality to levels that are compliant with the SFA.
- Objective 4:** Implement rebuilding schedules for overfished stocks, and prevent overfishing.
- Objective 7:** To the extent possible, maintain a diverse groundfish fishery, including different gear types, vessel sizes, geographic locations, and levels of participation.
- Objective 9:** Adopt measures consistent with the habitat provisions of the Magnuson Act, including identification of EFH and minimizing impacts on habitat to the extent practicable.

Objective 10: Identify and minimize bycatch, which include regulatory discards, to the extent practicable, and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

Sector Goals:

- Goal 1:** Sustain a viable fixed gear fishery on Georges Bank.
- Goal 2:** Sustain a viable commercial groundfish fleet in Chatham/Harwichport, Massachusetts.
- Goal 3:** Assure that the fixed gear fleet will not overfish the GB cod stock by implementing a hard TAC.
- Goal 4:** Create new opportunities for the GB fixed gear fleet, such as opportunities to pursue healthy or rebuilding Groundfish stocks instead of GB cod.
- Goal 5:** Retain access for small boat fishermen on GB.
- Goal 6:** Promote stewardship of GB cod resource.
- Goal 7:** Implement Community Based Fisheries Management in New England.
- Goal 8:** Create a working model for future development, submission, and implementation of other sectors in the New England groundfish fishery

The Sector is an example of fishermen that have come together to create a management regime that takes into account the needs of fixed gear fishermen on Georges Bank. Input control management measures have diminished other fleets in the Gulf of Maine and on Georges Bank. Low trip limits and a diminished GB cod stock status have severely undermined the ability of the GB fixed gear fleet to remain economically viable. The Sector would allow the GB fixed gear fleet to survive and prosper as stocks rebuild. In addition, the Sector would provide a model for other New England day boat fleets that seek alternative management options. Fishermen have traditionally fought against more restrictive management prescriptions. The Sector, on the other hand, is an example of responsible fishermen showing their commitment to sustainability in the fishery by voluntarily accepting a hard TAC and other intensive management measures. The Sector represents a heretofore unique opportunity for fishermen to lead the way in promoting conservation and stewardship of the resources on which they depend.

1.3 BACKGROUND

The following passages have been excerpted in part from Section 2.1 of the Amendment 13 FSEIS as prepared by the NEFMC:

Brief History of Prior Management Actions

The Northeast Multispecies FMP was adopted in 1986 to manage key groundfish stocks from Maine to Cape Hatteras. Management actions under this FMP were summarized in Amendment 5, adopted in 1994. The key actions leading to this action since Amendment 5 are summarized below.

Sustainable Fisheries Act

Despite the efforts taken in Amendment 5 and the cutbacks made by the industry during the following years, new legislation in 1996 set the standards for effective management even higher. The Magnuson Act was amended with the adoption of the SFA in 1996. The SFA placed new demands on fishery management plans to reduce bycatch, identify and protect EFH, and minimize adverse effects of fishing on EFH to the extent practicable. It also initiated new National Standards in the Magnuson Act that emphasized minimizing impacts to fishing communities, improving safety at sea, significantly reducing bycatch and improving the collection and use of fishery and biological data.

Amendment 7

Amendment 7, implemented in 1996, sought to address the requirements of the SFA and newly amended Magnuson Act. The amendment accelerated the DAS effort reduction program established in Amendment 5, eliminated significant exemptions from the current effort control program, provided incentives to fish exclusively with mesh larger than the minimum required, broadened the area closures to protect juvenile and spawning fish, and increased the haddock possession limit to 1,000 pounds. It established a rebuilding program for GB and Southern New England (SNE) yellowtail flounder, GB and GOM cod, and GB haddock based primarily on DAS controls, area closures, and minimum mesh size. Additionally, the amendment changed existing permit categories and initiated several new ones, including an open access multispecies permit for limited access sea scallop vessels. Amendment 7 also created a program for reviewing the management measures annually and making changes to the regulations through the framework adjustment process to insure that plan goals would be met. Of all the major changes to the Northeast Multispecies FMP, Amendments 5 and 7 had the greatest impact on the fishery, both for stock rebuilding and in shaping the socio-economic conditions of the industry and fishing communities.

Amendment 9 and Essential Fish Habitat

Amendment 9 (1999) also had a significant impact on the fishery, establishing new status determination criteria (overfishing definitions) and setting the OY for twelve groundfish species to bring the plan into complete compliance with the SFA. However, according to a 2000 ruling in *American Oceans Campaign et al. v. Daley et al.* [Civil Action No. 99-982(GK)], EFH considerations continued to be inadequate in fishery management plans. The prosecution contested the adequacy of evaluations of fishing gear impacts on EFH and challenged NMFS' approval of amendments and management plans which did not fully address the impacts of fishing on habitat. The U.S. District Court for the District of Columbia found that the agency's decisions on the subject EFH amendments were in accordance with the Magnuson Act but found that the Environmental Assessments (EAs) for the Councils' amendments were inadequate and in violation of NEPA. The court ordered NMFS to complete a new and thorough NEPA analysis for each EFH amendment named in the suit. Amendments 11 and 12 addressed the SFA requirements for designating EFH for all managed species and for managing whiting (silver hake), red hake and offshore hake through a separate small-mesh multispecies management plan implemented in 2000.

Framework Adjustments

The Northeast Multispecies FMP has been subject to many additional changes since its inception. Besides the 11 amendments implemented prior to development of Amendment 13, the multispecies plan has been altered through framework adjustments 30 times since 1994.

The Council has held four annual reviews and made eight adjustments to the FMP to address Amendment 7 rebuilding needs (Frameworks 20, 24, 25, 26, 27, 30 and 33). In 1999, the Council submitted Framework 27 as the primary annual adjustment framework. At the final framework meeting on January 27-28, the Council focused on finalizing the severe restrictions necessary to achieve the plan objectives for Gulf of Maine (GOM) cod and was unable to complete development of the measures needed for GB cod. It followed immediately with the development of Framework 30 to address GB cod, which was submitted to NMFS on April 30. Both Frameworks 27 and 30 contained trip limits for GOM and GB cod. In both cases, the Regional Administrator was authorized to reduce the trip limit when 75 percent of the target TAC for each stock was reached. On May 28,

1999, the Regional Administrator reduced the GOM cod limit implemented on May 1, 1999, of 200 pounds per day to 30 pounds per day, just three weeks into the fishing year. However, even before the trip limit was reduced, fishermen reported excessive discards of cod as seasonal closures ended.

On May 28, 1999, responding to widespread reports from the industry about the levels of cod discards in the western Gulf of Maine, the Council requested that the Secretary of Commerce increase the trip limit under the emergency action authority provided in §305 of the Magnuson Act. On August 3, NMFS published an interim rule that increased the trip limit from 30 pounds per day to 100 pounds per day, with a maximum possession limit of 500 pounds and modifications to the running clock. The interim rule expired on January 30, 2000. NMFS announced on July 29, 1999, that it disapproved the 30-day closure on Georges Bank proposed in Framework 30, but it approved the trip limit, which took effect on August 15. Framework 30 established a GB cod trip limit of 2,000 pounds per day/20,000 pounds maximum possession. To address potential discarding in the GOM cod fishery upon expiration of the interim rule and to prevent repeating on Georges Bank the discarding situation that occurred in the Gulf of Maine when the trip limit was reduced, the Council submitted Framework 31 on October 14, 1999. NMFS approved the increased GOM cod trip limit on January 5, 2000, but it disapproved the change to the GB cod trip limit program that would have eliminated the authority of the Regional Administrator to make mid-season adjustments to the trip limit when 75 percent of the target TAC is reached.

Framework 33 was implemented on June 1, 2000, to reduce or maintain fishing mortality rates for the five critical stocks below fishing mortality rebuilding targets established by Amendment 7. This framework continued the status quo seasonal closures for Gulf of Maine cod but incorporated a "trigger" for additional closures: if 50 percent of the target TAC was landed by July 31, the Cashes Ledge Closed Area would be closed in November and Blocks 124 and 125 would be closed in January. The western GOM (WGOM) closure was extended for an additional year, to April 30, 2002. GOM cod trip limits were held at 400 pounds per day with a maximum possession limit of ten times the daily limit. A GB cod trip limit of 2,000 pounds per day, not to exceed 20,000 pounds per trip, was also adopted. In addition, a closure of Blocks 109-114, 98, and 99 during May was implemented. The Multispecies Plan Development Team (PDT) reviewed stock status in November 2000 and concluded that Amendment 7 fishing mortality targets were likely being met for GB cod, GB haddock, GB yellowtail flounder, and SNE yellowtail flounder. The fishing mortality of GOM cod could not be determined with precision because of extensive discards that were believed to have occurred in 1999 because of the low trip limit. GB cod was assessed in June 2001, and fishing mortality was reported to be slightly above the Amendment 7 target; subsequent assessments have shown this report to be in error. GOM cod was assessed in June 2001, and fishing mortality was found to be significantly above the fishing mortality corresponding to maximum yield per recruit (FMAX) target for this stock. After receiving the information on GOM cod at the July 2001 Council meeting, the Council renewed efforts to develop Framework 36. Framework 36 was completed by December 2001, but the Council did not adopt the framework, and it was not submitted.

Conservation Law Foundation et al. v. Evans et al.

In December 2001, Conservation Law Foundation and other organizations successfully filed suit against NMFS alleging that the rebuilding plans the NMFS implemented were not consistent with Amendment 9 overfishing definitions (Conservation Law Foundation

et al. v. Evans et al.). Additionally, they charged that there had been a consistent failure in management plans to assess bycatch reporting and establish measures to minimize bycatch and bycatch mortality (when bycatch is unavoidable). After a long series of negotiations among various parties, interim measures were adopted by the court, and NMFS was instructed to submit a management plan to comply with the law. The response to this is Amendment 13, which addressed stock rebuilding issues, greatly reduced fishing effort and capacity in the multispecies fishery and implemented additional measures to specifically address habitat protection (NEFMC, Am. 13 FSEIS Section 2.1).

The principal mean for controlling mortality in the Groundfish FMP is the use of input controls designed to promote inefficiency. At a certain point, input controls have the potential to drive the cost of catching the target species beyond the expected economic return of selling the fish. For the gillnet and hook fishermen on Georges Bank, Amendment 13 and Framework Adjustment 42 (FW42) impose input controls, such as trip limits, that would make it unviable to continue using fixed gear on Georges Bank with an expectation of maintaining profitable businesses. Sector allocation was the only option in FW42 that delivered an expectation of maintaining a fixed gear fleet on Georges Bank.

Excerpts from the Amendment 13 FSEIS prepared by the NEFMC describe the benefits of a sector allocation to the GB hook fleet. It is expected that a Fixed Gear Sector would deliver similar opportunities to gillnet and hook fishermen proposing to create the GB Cod Fixed Gear Sector.

The creation of a voluntary sector for longline/hook and gillnet vessels on Georges Bank provides an opportunity for vessels to mitigate the impacts of the management alternatives. By organizing into a cooperative, vessels may be able to develop more efficient ways to harvest groundfish and minimize the inefficiencies that result from the regulations. While it is not possible to estimate the economic impacts of a sector until the actual members are known, the pool of members would probably be the vessels that have used longline or gillnet gear to fish on GB in the past. For fishing years 1996 through 2000, 182 vessels reported using longline gear to catch GB cod, and 294 vessels reported using gillnet gear. Some vessels used both gear – these two numbers represent 476 individual vessels. For fishing year 2001, there were 85 gillnet vessels in the GB cod fishery, and 32 vessels that used hook gear. Gillnet vessels landed 14 percent of the GB cod in fishing year 2001, and hook vessels landed 10 percent of the GB cod (see Appendix VI). Gillnet vessels harvested 19 percent of the GB cod landed in fishing year 2000, while hook vessels harvested 9 percent About 86 percent of the GB cod landed from 1996 through 2000 by these two gears was landed in Chatham/Harwichport, MA, suggesting that this community is the one most likely to benefit if vessels choose to participate in this sector. Another 10 percent of GB cod was landed in Gloucester, MA by these two gear types (NEFMC, Am 13 FSEIS Section 5.4.9.3.1).

Amendment 13 was developed over a four-year period to meet the Magnuson Act requirement to adopt rebuilding programs for stocks that are overfished and to end overfishing. Amendment 13 also brought the FMP into compliance with other provisions of the Magnuson Act. Subsequent to the implementation of Amendment 13, framework adjustment (FW) 40A provided opportunities to target healthy stocks, FW 40B improved the effectiveness of the effort control program, and FW 41 expended the vessels eligible to participate in a Special Access Program (SAP) that targets GB haddock (NEFMC, FW 42 DEA Section 3.3.1).

Framework Adjustment 42 was initiated following the 2005 assessment of groundfish stocks. Eight stocks were found to be experiencing overfishing, and as a result, the NEFMC has prepared a range of

alternatives to adjust fishing mortality downward on these stocks. Implemented measures include mandatory DAS cuts, reduced trip limits, and changes to how DAS are counted (2:1 in specific areas).

2.0 NEED FOR THE PROPOSED ACTION (SECTOR ALLOCATION)

Amendment 13 to the Northeast Multispecies FMP is the culmination of years of hard work and collaboration among fishermen, scientists, environmentalists, and policy makers to meet the mandates of the SFA amendment to the Magnuson Act. Amendment 13 will end overfishing and initiate rebuilding plans for stocks in the groundfish complex, as well as minimize bycatch and protect habitat. It will also bring about many positive environmental changes and increased revenue in the long-term but is likely to result in social and economic costs for the New England groundfish fleet in the short-term.

Authorization of the GB Cod Fixed Gear Sector would provide a vehicle to mitigate many of the Amendment 13 impacts. Likewise, full implementation of the GB Cod Fixed Gear Sector Ops Plan would establish additional means to generate social, economic, and environmental efficiencies. Authorization of the Sector would initiate a viable framework for GB fixed gear vessels to alleviate social and economic hardships while meeting the biological objectives of Amendment 13. Implementation of the Ops Plan would make it possible for the members to maximize the potential for the Sector to construct a sustainable GB cod fixed gear fishery.

As such, authorization of the Sector and subsequent implementation of the Ops Plan would be the difference between financial viability and business failure for GB fixed gear fishermen. Amendment 13 reduced the GB cod trip limit from 2,000 to 1,000 pounds per day, and fishermen will face additional reductions to be mandated under FW 42. GB fixed gear fishermen are highly reliant on GB cod for their economic survival. Therefore, the Amendment 13 economic analysis predicted disproportionate impacts falling on vessels with a homeport of Chatham/Harwich in particular. The Ops Plan presents a vehicle to alleviate Sector vessels from input control measures that would be made redundant when a hard TAC of GB cod is allocated to the Sector.

The following excerpt from the Amendment 13 FSEIS explains the need for the proposed action in terms of the potential economic ramifications for the Chatham /Harwichport fleets:

Impacts by Port Groups

Across all ports and port groups the largest reduction in annual fishing income would be in the port group of Chatham/Harwich with three-fourths of all vessels losing at least 29.7% of fishing revenue, and half of all vessels losing more than half of fishing income. The impacts on these ports are directly related to the reduction in the GB cod trip limit as this port group is a center for the Cape Cod hook and gillnet fleet that relies heavily on GB cod for fishing revenue. The Chatham/Harwich port group would still be the most impacted area under a TAC backstop with three-fourths of all vessels losing nearly 50% of annual fishing income. Among the most impacted vessels, the estimated revenue loss was at least 77%.

(NEFMC, Am. 13 FSEIS Section 5.4.4.3.1, 2003)

3.0 AFFECTED ENVIRONMENT

This section contains information on the biological, habitat, social, and economic environments affected by the proposed action.

3.1 BIOLOGICAL ENVIRONMENT

The proposed action would affect the Northeast Multispecies Fishery and would be restricted to the Georges Bank stocks for all those component species thereof for which distinctions are made.

3.1.1 TARGET SPECIES

The target species for the Sector is Atlantic cod. The following passages have been excerpted in part from Lough (2004):

The Atlantic cod (Figure 1) is distributed in the northwest Atlantic Ocean from Greenland to Cape Hatteras, North Carolina. In U.S. waters, densities are highest on Georges Bank and in the western Gulf of Maine. It occurs from nearshore areas to depths exceeding 400 m (rarely). The greatest concentrations off the northeast coast of the U.S. are on rough bottoms in waters between 10 and 150 m and at temperatures between 0 and 10 degrees C.

Atlantic cod attain ages of 20 years, although most enter fisheries at ages 2-5. They can grow to lengths of 130 cm and weights of 25-35 kg and average 26 cm by the end of their first year. Median age at sexual maturity is 1.7-2.3 years at lengths between 32 and 41 cm (NEFSC 2005). Fecundity is high and a large female may produce between 3 and 9 million eggs. Spawning occurs near bottom during winter and early spring, usually in water temperatures between 5 and 7 degrees C. Eggs are pelagic and drift for 2-3 weeks before hatching. The larvae are also pelagic until they reach 4-6 cm in about 3 months, whence they descend to the bottom. (Lough, 2004).

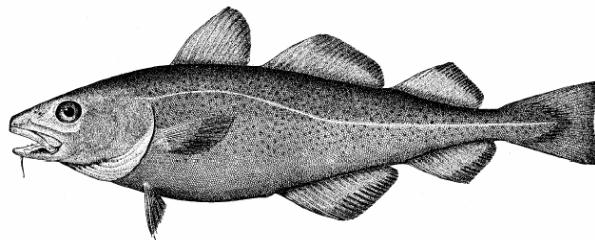


Figure 1 - The Atlantic Cod (*Gadus morhua*).
(Goode, 1884)

The Atlantic Cod (*Gadus morhua*) population is split into two distinct management units under the Northeast Multispecies FMP: Gulf of Maine Cod and Georges Bank Cod. Little interchange occurs between the two (Lough, 2004). As such, no changes are proposed in the management regime for Gulf of Maine Cod nor would this stock be accessible to participants in the proposed action: the target species is Georges Bank Cod.

3.1.1.1 DESCRIPTION OF MULTISPECIES STOCK ANALYSIS

Groundfish assessments are conducted on individual stocks and are usually prepared by the Stock Assessment Workshop (SAW) and reviewed by the Stock Assessment Review Committee (SARC). The NEFMC Multispecies Plan Development Team compiles assessment data, conducts projections if necessary, and reports their findings to the Council.

The most recent groundfish stock assessments were performed in August 2005 with the report of the Groundfish Assessment Review Meeting (GARM). Of nineteen managed groundfish stocks, the

assessments found that fishing mortality for eight stocks exceeded Amendment 13 thresholds. As a result, the NEFMC implemented FW 42.

3.1.1.2 STATUS OF THE TARGET SPECIES

The following passages have been excerpted in part from the 2005 GARM:

Georges Bank Atlantic cod are overfished, and overfishing is occurring (Figure 2). Fishing mortality has been steadily declining since 1997, except for a slight increase in 2001, and is currently at the lowest exploitation in the time series. Spawning stock biomass reached a record low in 1995 and slowly increased, primarily due to growth, until 2001. Since 2001, however, spawning stock biomass (SSB) has been declining. The 2002-2004 F trajectory is less than that projected for A13, and the SSB is slightly higher than the A13 projection (Figure A10). Catch during 2002-2004 was also less than the A13 projection. The 1999 and 1998 year classes account for the majority of the US catch, and the 1998 year class accounts for the majority of the Canadian catch in 2004. The 1998 (12.8 million age 1 fish) year class, while below the long term average (14.7 million age 1 fish), represents the strongest year class since the last above-average year class that occurred in 1990 (17.8 million age1 fish). The 2000, 2001, and 2002 year classes are among the lowest in the time series. The 2003 (21.2 million age 1 fish) year class is the first above average year class since 1990 and will enter the fishery during 2005.

The Northeast Fisheries Science Center (NEFSC) and Department of Fisheries and Oceans (DFO) survey biomass and abundance indices fluctuated during 2002 to 2005; however, all the indices continue to remain below the long term average. The most recent NEFSC surveys indicate that the 2003 year class may be similar in size to the 1998 year class, and the DFO spring survey indicates that the year class is above average.

The lack of strong recruitment in the last decade suggests that recovery of this stock would be largely dependent on reducing fishing mortality in the near term and husbanding the strong 2003 year class, and potentially the 2004 year class, to increase SSB (NEFSC 2005).

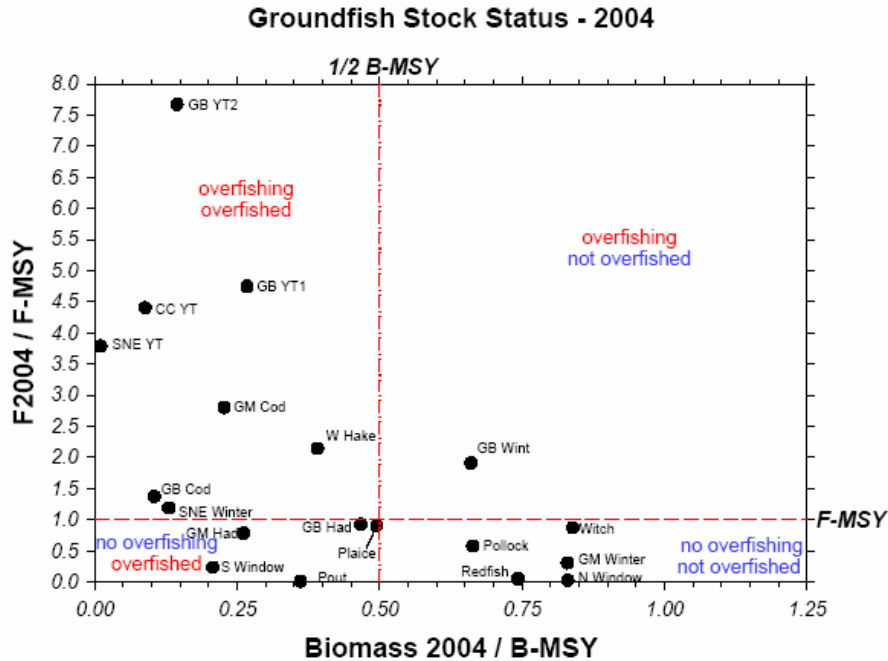


Figure 2 - Groundfish Stocks Status 2004.
(NEFSC 2005)

3.1.2 NON-TARGET SPECIES

Sink gillnets interact with many species. For a listing of these species, please see Table 11 in Section 5.1.1.

3.1.2.1 OTHER NORTHEAST MULTISPECIES

The Northeast Multispecies FMP manages 15 species and 24 stocks of finfish. These species are generally separated into “large-mesh species” and “small-mesh species” (Figure 3). The various components of the complex can be found throughout the affected area and except for those stocks managed according to regulations specific to the Gulf of Maine, together represent the Groundfish species subject to fishing effort described in the proposed action

3.1.2.2 STATUS OF OTHER NORTHEAST MULTISPECIES

The following excerpts from the Amendment 13 FSEIS, coupled with Figure 2, describe the current biological environment as related to stocks in the Northeast Multispecies Groundfish Complex other than GB cod:

Since implementation of Amendment 5 in 1994, the management program has succeeded in increasing the biomass of most groundfish stocks and, in general, reduced fishing mortality on most stocks. Estimated biomass tripled from 1995 to 2001.

While overall biomass has increased rapidly, some stocks— such as GB cod, SNE/MA yellowtail flounder, and CC/GOM yellowtail flounder – have only shown gradual improvement. Progress has also been made in controlling fishing mortality for many stocks.

More dramatic success is obvious on Georges Bank, where the mortality of all key stocks has declined significantly since 1990.

In terms of stock determinations – whether a stock is overfished or overfishing is occurring – there have also been improvements since 1996. In 1996, only one groundfish stock was not overfished, and overfishing was not occurring on only six stocks. Based on projected estimates of mortality and biomass provided by the Northeast Fisheries Science Center, in 2002 eight stocks were not overfished, and overfishing was not occurring on ten stocks. The number of stocks that were both overfished and on which overfishing was occurring dropped from eleven in 1996 to six in 2002. In 1996, fishing mortality on eight stocks was more than twice the level of mortality (F) required to produce the maximum sustainable yield (MSY), or FMSY, while by 2002 only three stocks were subject to fishing mortality rates that were twice this threshold. The overall complex has not only seen an increase in biomass, but has experienced a decline in fishing mortality. (NEFMC, Am 13 FSEIS, Section 9.2.1.1)

“Large-Mesh Species” = 12 Species, 19 Stocks	
Atlantic Cod:	two stocks; GOM cod and GB cod
Haddock:	two stocks; GOM haddock and GB haddock
Yellowtail Flounder:	three stocks; GB YT, CC YT, and SNE YT
Winter Flounder:	three stocks; GOM winter, GB winter, and SNE/MA winter
Windowpane Flounder:	two stocks; GOM/GB windowpane and SNE/MA windowpane
Witch Flounder:	one stock; distributed primarily in the GOM and on GB
American Plaice:	one stock; distributed primarily in the GOM
Redfish:	one stock; distributed primarily in the GOM and southern GB
Pollock:	one stock; distributed in the GOM, GB, and SNE
White Hake:	one stock; distributed primarily in the GOM and southern GB
Atlantic Halibut:	one stock; distributed primarily in the GOM and on GB
Ocean Pout:	one stock; distributed throughout region
“Small-Mesh Species” = 3 Species, 5 Stocks	
Silver Hake (Whiting):	two stocks; GOM/northern GB whiting, and southern GB/SNE whiting
Red Hake:	two stocks; GOM/northern GB red hake, and southern GB/SNE red hake
Offshore Hake:	one stock; distributed primarily offshore in SNE and MA

Figure 3 – The Northeast Multispecies Groundfish Complex.
(NEFMC Groundfish FAQ)

3.1.3 PROTECTED SPECIES

For the purposes of this EA, protected species are assumed to be those species outside the Northeast Multispecies Groundfish Complex that are endangered, threatened, or candidate species under the Endangered Species Act (ESA), or protected under the Marine Mammal Protection Act (MMPA), or both, and that are known to exist in the area affected by the proposed action. Furthermore, this section includes certain Marine Mammal Critical Habitat Designations and bird species protected under the Migratory Bird Act of 1918 (NEFMC, Am 13 FSEIS, Section 9.2.2). Finally, it includes those skate species with prohibitions on possession in place under the Northeast Skate Complex FMP. Table 1 lists the protected species known to exist in the affected area.

Table 1 (below) excerpts the protected species that are known to likely interacted with longline and/or gillnet fisheries in the proposed area. Further information on these species and the others in Table 1 can be found in Section 9.2.2 of the NEFMC Amendment 13 FSEIS.

<i>Cetaceans</i>	<i>Status</i>
Northern right whale (<i>Eubalaena glacialis</i>)	Endangered
Humpback whale (<i>Megaptera novaeangliae</i>)	Endangered
Fin whale (<i>Balaenoptera physalus</i>)	Endangered
Minke whale (<i>Balaenoptera acutorostrata</i>)	Protected
Harbor porpoise (<i>Phocoena phocoena</i>)	Protected
Risso's dolphin (<i>Grampus griseus</i>)	Protected
Pilot whale (<i>Globicephala</i> spp.)	Protected
White-sided dolphin (<i>Lagenorhynchus acutus</i>)	Protected
Common dolphin (<i>Delphinus delphis</i>)	Protected
Bottlenose dolphin (<i>Tursiops truncatus</i>)	Protected
<i>Seals</i>	
Harbor seal (<i>Phoca vitulina</i>)	Protected
Gray seal (<i>Halichoerus grypus</i>)	Protected
Harp seal (<i>Phoca groenlandica</i>)	Protected
Hooded seal (<i>Cystophora cristata</i>)	Protected
<i>Sea Turtles</i>	
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Endangered
Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)	Endangered
Green sea turtle (<i>Chelonia mydas</i>)	Endangered
Loggerhead sea turtle (<i>Caretta caretta</i>)	Threatened
<i>Fish</i>	
Barndoor skate (<i>Dipturus laevis</i>)	Candidate Species/Possession Prohibition
Thorny skate (<i>Amblyraja radiata</i>)	Possession Prohibition
<i>Critical Habitat Designations</i>	
Right whale	Cape Cod Bay
	Great South Channel

Table 1- Protected species known to exist in the area affected by the proposed action.
(NEFMC, Am 13 FSEIS, Section 9.2.2)

Although all of the protected species listed above may be found in the general geographical area covered by the Multispecies FMP, not all are affected by the fishery for several reasons. Some protected species may inhabit more inshore or offshore areas than those utilized by the groundfish species, prefer a different depth or temperature zone than multispecies, or may migrate through the area at different times than the species regulated by the FMP. In addition, certain protected species may not be vulnerable to capture or entanglement in certain fishing gear used in the multispecies fishery.

It has been determined that that multispecies fishing operations, as managed by Amendment 13 to the Multispecies FMP, are not expected to affect the shortnose sturgeon (*Acipenser brevirostrum*), the Gulf of Maine distinct population segment (DPS) of Atlantic salmon (*Salmo salar*), the roseate tern (*Sterna dougallii dougallii*), the piping plover (*Charadrius melodus*) or the hawksbill sea turtle (*Eretmochelys imbricata*), all of which are listed species under the ESA of 1973.

There are several cetaceans protected under the MMPA that are found in the waters fished by the multispecies fishery, namely the Risso's dolphin (*Grampus griseus*), spotted and striped dolphins (*Stenella* spp.), and coastal forms of Atlantic bottlenose dolphin (*Tursiops truncatus*). Although these species may occasionally become entangled or otherwise entrapped in certain fishing gear such as pelagic

longline and mid-water trawls, these gear types are not used in the multispecies fishery (or allowed to operate within the Sector) (NEFMC, Am 13 FSEIS, Section 9.2.2).

Species in Table 1 (and more) that are known to have interacted with the longline and/or gillnet fisheries on Georges Bank are as follows: Bottlenose, Common, Risso's, and White-Sided dolphin; Fin, Humpback, Canadian East Coast Minke, Pilot, and North Atlantic Right whale; Harbor Porpoise; Gray, Hooded, Harbor, and Harp seal; Leatherback, Kemp's Ridley, Green, and Loggerhead turtle. Interactions most frequently include getting caught on hooks (longline gear), entanglement in mesh (gillnet fishery), entanglement in float line (gillnet fishery), entanglement in groundline (gillnet and longline fisheries), entanglement in anchor line (gillnet and longline fisheries), or entanglement in vertical lines that connect the gear to the surface (gillnet and longline fisheries).

3.1.3.1 STATUS OF PROTECTED SPECIES

With the exception of the Thorny Skate (*Amblyraja radiata*) and the Barndoor Skate (*Dipturus laevis*), information on the biological status of the species listed in Table 1 can be found in Section 9.2.2 of the NEFMC Amendment 13 FSEIS.

3.1.3.2 STATUS OF THORNY SKATE (*AMBLYRAJA RADIATA*)

Thorny skates, also known as mud skate, starry skate or Spanish skate, inhabit areas along the 100 fm edge of Georges Bank, with very few found in Massachusetts (NEFMC- Northeast Skate Complex Final FMP). In fact, though frequently captured on Georges Bank, they are more likely to be encountered in the Gulf of Maine, as its most common skate (Collette and Klein-MacPhee, 2002). Thorny skates are classified as a large skate (>100 cm TL) under the FMP and are distinguished by the presence of 11-19 thorns arranged in a row along the center of the disc and tail.

Thorny skates are found on a wide variety of bottom types from 10 to 600 fathoms and feed on a variety of benthic invertebrates and fishes. They are not highly migratory (Collette and Klein-MacPhee, 2002). At one point, thorny skates were commercially important; however, now they are classified as overfished (NEFMC- Northeast Skate Complex Final FMP) and bound to a formal rebuilding program by the FMP.

3.1.3.3 STATUS OF BARNDOOR SKATE (*DIPTURUS LAEVIS*)

Barndoor skates are classified as a "large skate" under the Northeast Skate Complex FMP and are one of the largest skate species in New England waters. They are found throughout the affected area and are considered abundant on Georges Bank and Nantucket Shoals (Collette and Klein-MacPhee, 2002). Barndoor skates have been considered for listing under the ESA, and although the petition for listing was determined to be not warranted as of September 2002, they were left on the candidate list at that time because of concerns about status and population structure (NEFMC, 2003). There is currently a possession prohibition on barndoor skates under the Northeast Skate Complex FMP.

3.2 HABITAT ENVIRONMENT

3.2.1 PHYSICAL ENVIRONMENT AND HABITAT

The geographic area that the Sector would operate in is consistent with the GB Hook Sector area. The GB Cod Hook Sector area is defined by straight lines connecting the following waypoints: (1) 70°00' N latitude and the east facing shoreline of Cape Cod, MA; (2) 70°00' N latitude and 42°20' W longitude; (3) 67°18.4' N latitude [the U.S. Canada Maritime Boundary] and 42°20' W longitude; (4) follow the U.S. EEZ boundary south to 66°45.5' N latitude and 39°00' W longitude; (5) 71°40' N latitude and 39°00' W longitude; and (6) 71°40' N latitude and the south-facing shoreline of Rhode Island:

Georges Bank Cod Hook Sector Area		
Point	N. lat.	W. long.
HS1	70°00'	(1)
HS2	70°00'	42°20'
HS3	67°18.4'	42°20' ³
Follow the U.S. EEZ boundary south to HS3.		
HS3	66°45.5'	39°00'
HS4	71°40'	39°00'
HS5	71°40'	(2)

¹ The east facing shoreline of Cape Cod, MA.
² The south facing shoreline of Rhode Island.
³ (the U.S. Canada Maritime Boundary).

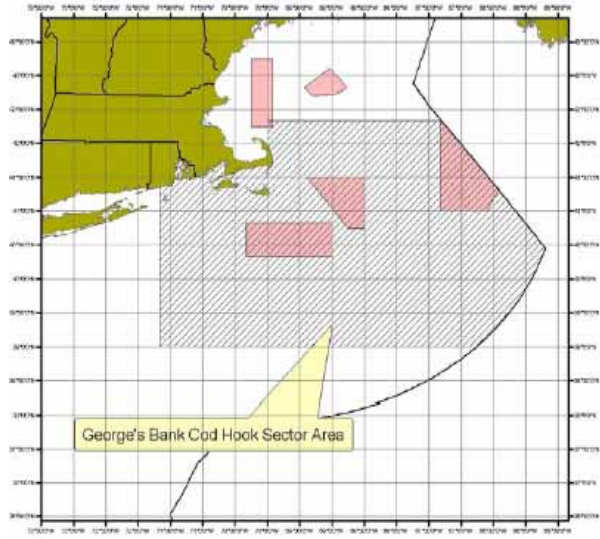


Figure 4 – GB Cod Hook Sector Area (outlined)

Figure 5 (below) depicts the closed areas on Georges Bank,

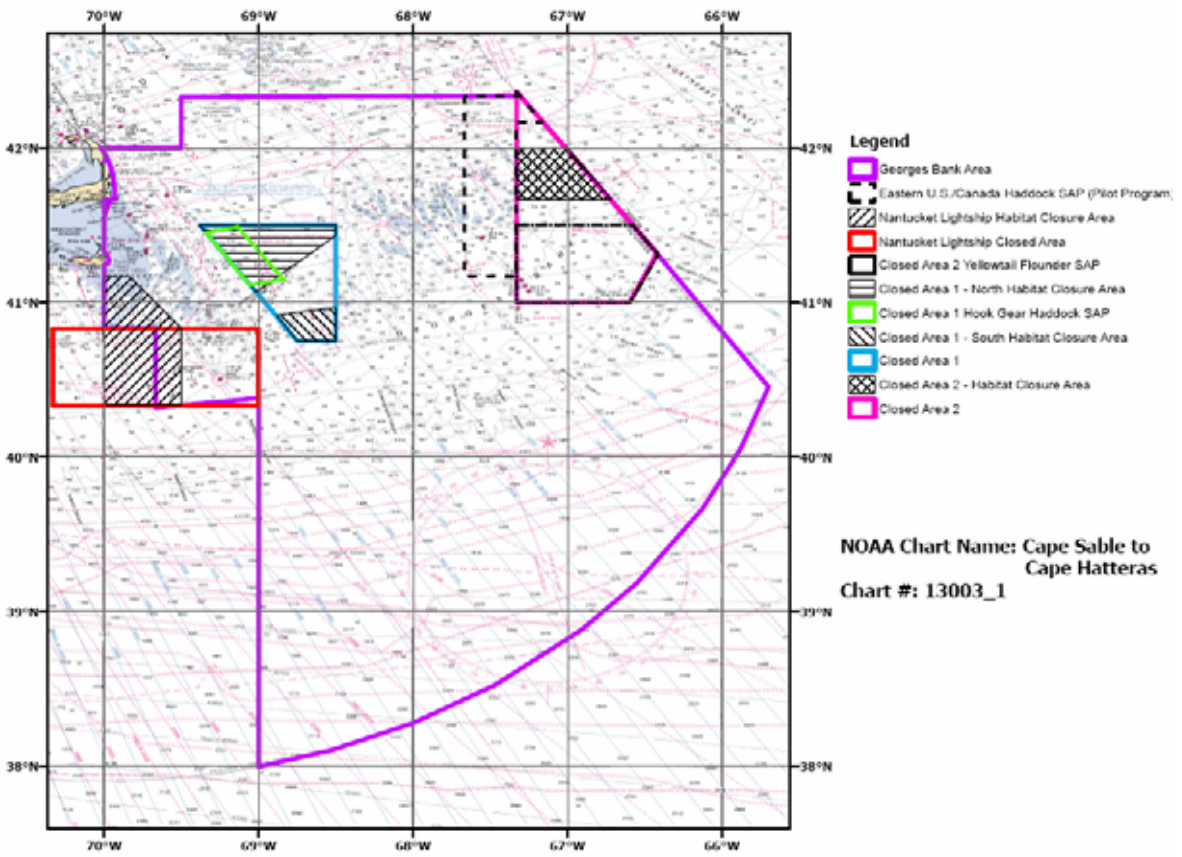


Figure 5 – Georges Bank Closed Areas

The Sector restricts itself to operating only within the Georges Bank Cod Hook Sector area (Sector Area). In addition to GB cod, many of the Sector vessels target monkfish within this area, as they have done for decades. Sector vessels are highly reliant on monkfish for their economic survival. Monkfish commonly inhabit nearshore and offshore waters from Newfoundland to North Carolina. The Sector vessels that rely on monkfish use gear (10" mesh anchored sink gillnets) occasionally catch GB cod. As this cod "bycatch" exists, the Sector must account for it and does so by including traditional monkfish fishing areas in its Operating Area. If excluded from these areas, these vessels would almost certainly go under. Prosecuting the monkfish fishery means the difference between financial viability and business failure for nearly every Sector vessel.

3.2.2 NORTHEAST SHELF ECOSYSTEM

The Northeast Shelf Ecosystem (Figure 6) has been described as including the area from the Gulf of Maine south to North Carolina, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream (Sherman et al. 1996). A number of distinct sub-systems comprise the region, including the Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. Georges Bank is a relatively shallow coastal plateau that slopes gently from north to south and has steep submarine canyons on its eastern and southeastern edge. It is characterized by highly productive, well-mixed waters and strong currents. The Mid-Atlantic Bight includes the shelf and slope waters from Georges Bank south to Cape Hatteras, and east to the Gulf Stream. The shelf slopes gently from shore out to between 100 and 200 km offshore where it transforms to the slope (100 – 200 m water depth) at the shelf break. In both the Mid-Atlantic and on Georges Bank, numerous canyons incise the slope, and some cut up onto the shelf itself (see section on *Continental Slope*). The primary morphological features of the shelf include shelf valleys and channels, shoal massifs, scarps, and sand ridges and swales. (NEFMC, Am. 13 FSEIS, Section 9.1.1)



Figure 6- The Affected Ecosystem
(NEFMC, Am. 13 FSEIS, Section 9.1.1)

3.2.2.1 GEORGES BANK

Georges Bank is of primary concern as its physical boundaries contain and correlate to the management units affected by the proposed action.

Georges Bank is a shallow (3-150 m depth), elongate (161 km wide by 322 km long) extension of the continental shelf. It was formed by the Wisconsinian glacial episode and is characterized by a steep slope on its northern edge and a broad, flat, gently sloping southern flank; the Great South Channel lies to the west and the Northeast Channel lies to the northeast. The nature of the seabed sediments varies widely and ranges from clay to gravel. Natural processes continue to erode and rework the sediments on Georges Bank while strong, erosive currents affect the character of the biological community. These currents (greater than 4 km per hour and as high as 7 km per hour) occur predominantly near the shallow, central region of the bank where shoals and troughs characterize the bottom and sand dunes are superimposed upon them. The two most prominent elevations in this area are Cultivator and Georges Shoals. The area west of the Great South Channel, known as Nantucket shoals, is similar in nature to the central region of the bank. Currents in these areas are strongest where water depth is shallower than 50 m. (NEFMC, Am 13 FSEIS, Section 9.1.1.2)

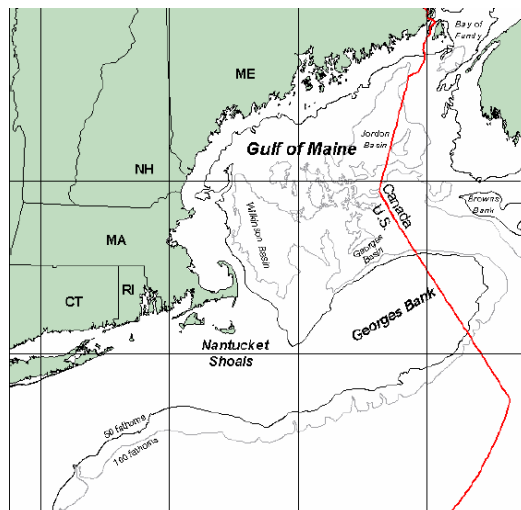


Figure 7- The New England region, including Gulf of Maine, Georges Bank, and Nantucket Shoals. (NEFMC, 1998)

3.2.2.1.1 GEORGES BANK WATER COLUMN HABITAT

Oceanographic frontal systems occur between water masses from the Gulf of Maine and Georges Bank. These water masses differ in temperature, salinity, nutrient concentration, and planktonic communities, which influence productivity and may influence fish abundance and distribution. Currents on Georges Bank include a weak, persistent clockwise gyre around the bank, a strong semidiurnal tidal flow predominantly northwest and southeast, and very strong, intermittent storm-induced currents, which can all occur simultaneously. Tidal currents over the shallow top of Georges Bank can be very strong, and keep the waters over the bank well mixed vertically. This results in a tidal front that separates the cool waters of the well-mixed shallows of the central bank from the warmer, seasonally stratified shelf waters on the seaward and shoreward sides of the bank. The clockwise gyre is instrumental in distribution of the planktonic community, including larval fish.

Currents and tides may also generate fronts, eddies, and divergence and convergence zones that may provide suitable habitat conditions to a suite of organisms. Fronts, eddies, and other convergence zones may function as a congregation area for complexes of organisms and influence the population dynamics of a region. Planktonic organisms may be especially influenced by the circulation of water masses (e.g. transport mechanism). Congregation zones may include areas of high primary productivity, high plankton concentrations, and efficient foraging habitats for larval fishes and other planktonic organisms. Larger organisms may also target fronts and eddies to prey upon the high density of planktonic organisms. Convergence zones (e.g. two currents coming together) may also act as transport mechanisms, supplying

food-rich surface waters to the seafloor. Divergence zones (e.g. currents moving away from each other), including upwelling events, have been associated with phytoplankton blooms. Divergence zones transport nutrient-rich bottom waters to the sea surface and promote primary production. These oceanographic features may provide necessary habitat conditions for the survivability, development, and growth of a variety of organisms at particular ontogenetic stages. Other physical oceanographic properties may contribute to pelagic habitat conditions, such as stratified water layers (e.g. thermoclines, haloclines, and pycnoclines), internal waves, plumes (e.g. riverine discharge). Physical oceanography constitutes several roles that influence several aspects of fishery resources and habitat conditions, including the transporting planktonic organisms and water masses throughout New England waters. Population dynamics and habitat conditions in New England are greatly influenced by oceanographic processes. (NEFMC, 1998).

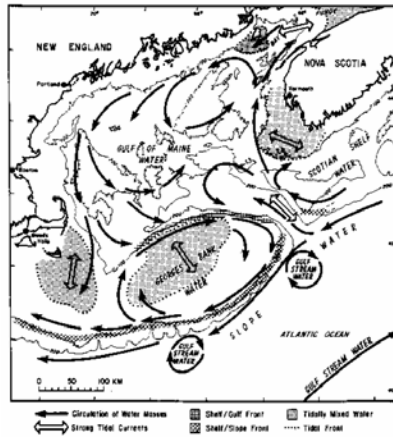


Figure 8- Map showing water mass circulation patterns in the Georges Bank – Gulf of Maine region. (Figure reproduced from Valentine and Lough 1991, in NEFMC- EFH Omnibus Amendment, 1998)

3.2.2.1.2 GEORGES BANK BENTHIC HABITAT

Sedimentary composition of the ocean floor is highly variable in the Gulf of Maine, Georges Bank, and southern New England (Figure 9). Sediments differ in origin, texture, size, transport mechanism, and distribution. Bottom habitats in New England waters are heterogeneous, characterized by patchy surficial sediment composition and irregular topographic peaks.

The interaction of several environmental factors, including availability and type of sediment, current speed and direction, and bottom topography, has formed seven sedimentary provinces on eastern Georges Bank (Valentine and Lough 1991) which are described in “Characterization of the Fishing Practices and Marine Benthic Ecosystems of the Northeast U.S. Shelf, and an Evaluation of the Potential Effects of Fishing on Essential Fish Habitat” and appear below:

Table 2.4. Sedimentary provinces and associated benthic landscapes of Georges Bank. (Provinces as defined by Valentine *et al.* (1993) and Valentine and Lough (1991) with additional information from Page C. Valentine (pers. comm., U.S. Geological Survey, Woods Hole, MA). Benthic assemblages as assigned by Theroux and Grosslein (1987). See text for further discussion on benthic assemblages.)

Sedimentary Province (province no.)	Depth Range (m)	Description	Benthic Assemblage
Northern Edge / Northeast Peak (1)	40-200	Dominated by gravel with portions of sand, common boulder areas, and tightly packed pebbles; bryozoa, hydrozoa, anemones, and calcareous worm tubes are abundant in areas of boulders; strong tidal and storm currents	Northeast Peak
Northern Slope and Northeast Channel (2)	200-240	Variable sediment type (gravel, gravel-sand, and sand) and scattered bedforms; this is a transition zone between the northern edge and southern slope; strong tidal and storm currents	Northeast Peak
North /Central Shelf (3)	60-120	Highly variable sediment types (ranging from gravel to sand) with rippled sand, large bedforms, and patchy gravel lag deposits; minimal epifauna on gravel due to sand movement; epifauna in sand areas includes amphipods, sand dollars, and burrowing anemones	Central Georges
Central and Southwestern Shelf - shoal ridges (4)	10-80	Dominated by sand (fine and medium grain) with large sand ridges, dunes, waves, and ripples; small bedforms in southern part; minimal epifauna on gravel due to sand movement; epifauna in sand areas includes amphipods, sand dollars, and burrowing anemones	Central Georges
Central and Southwestern Shelf - shoal troughs (5)	40-60	Gravel (including gravel lag) and gravel-sand between large sand ridges; patchy large bedforms, strong currents; minimal epifauna on gravel due to sand movement; epifauna in sand areas includes amphipods, sand dollars, and burrowing anemones	Central Georges
Southeastern Shelf (6)	80-200	Rippled gravel-sand (medium- and fine-grained sand) with patchy large bedforms and gravel lag; weaker currents; ripples are formed by intermittent storm currents; epifauna includes sponges attached to shell fragments and amphipods	Southern Georges
Southeastern Slope (7)	400-2000	Dominated by silt and clay with portions of sand (medium and fine), with rippled sand on shallow slopes and smooth silt-sand deeper	None

Table 2: Sedimentary providence and associated benthic landscapes of Georges Bank. (Stevenson et. al., 2004)

Emergent epifauna often contribute to the survivorship of marine organisms because of the increased cover and habitat complexity they provide (NEFMC, 1998). Bottom topography, along with sediment type, may also influence the distribution and abundance of benthic, demersal, and pelagic organisms. Geologic features such as submarine canyons, rock ledges, and topographic peaks are potential habitat components that are potentially important to a variety of marine organisms. Bottom topography is often associated with particular sediment types (e.g. deep-water canyons and fine sediments), and may contribute to suitable environmental conditions for the survivorship, growth, and reproduction of fishery resources. (NEFMC, 1998).

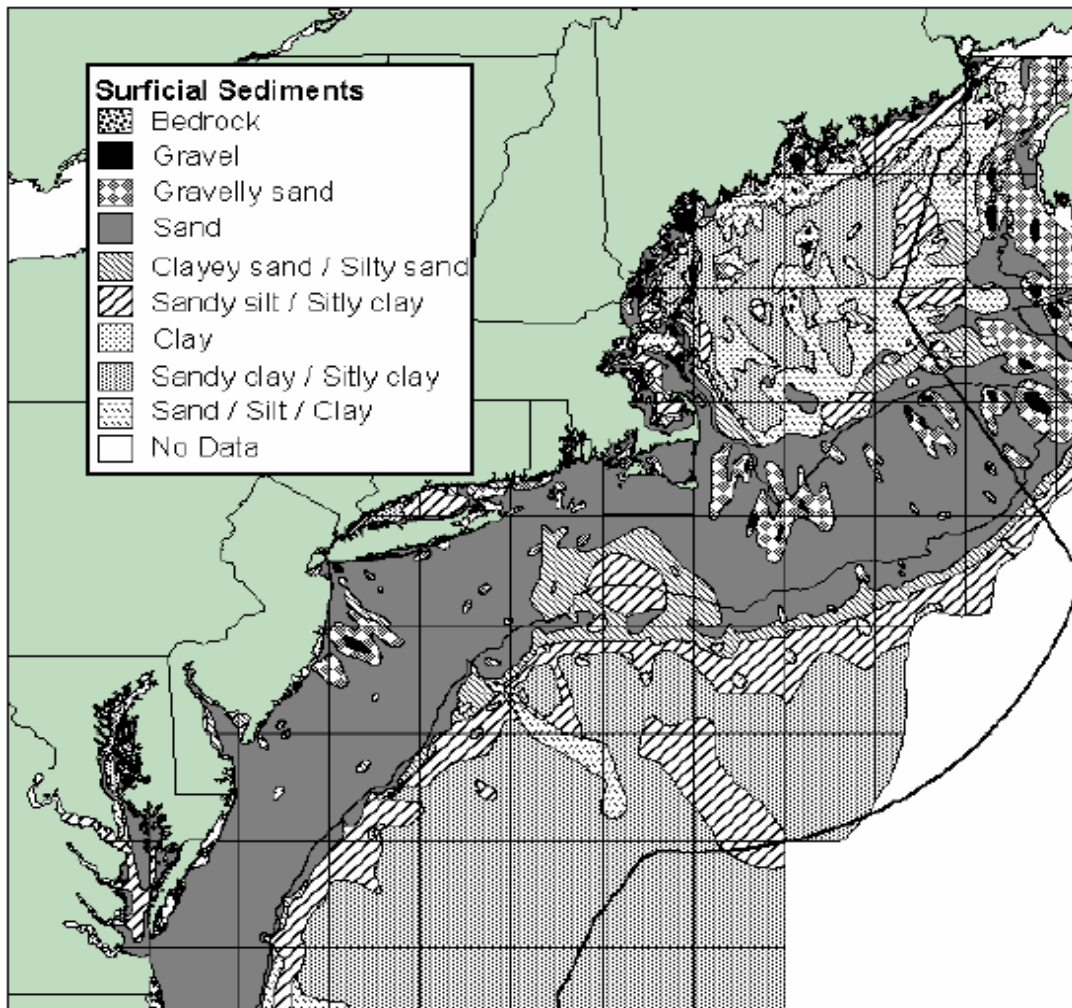


Figure 9- Map showing distribution of surficial sediments, Gulf of Maine, Georges Bank, and southern New England. (NEFMC, 1998).

SEDIMENT TYPE	REGION
bedrock	GOM
gravel ¹	GOM, GB ² , SNE ³
gravel-sand	GOM, GB, SNE
sand	GOM, GB, SNE
clayey sand/silty sand	GOM, GB, SNE
sandy silt/clayey silt	GOM, SNE
clay	GOM, GB
sandy clay/silty clay	GOM, SNE
sand/silt/clay	GOM, SNE

KEY
1 gravel includes cobble and boulders
2 boulders common on the northern edge and northeast Peak of GB (Valentine and Lough 1991)
3 SNE (southern New England) is geologically similar to the middle Atlantic bight
* sediment classifications from Poppe <i>et al.</i> (1989)

Table 3: Type of surficial sediment* observed on the seafloor of the New England region. (NEFMC, 1998).

3.2.3 ESSENTIAL FISH HABITAT

According to the 1996 SFA Amendments to the Magnuson Act, EFH “means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” (Department of Commerce, 1996) The EFH Final Rule identifies adverse impacts as “any impact that reduces quality and/or quantity

of EFH. Adverse effects may include direct (e.g. contamination or physical disruption), indirect, (e.g. loss of prey, or reduction of species' fecundity), site-specific or habitat-wide impacts including individual, cumulative, or synergistic consequences of actions. Adverse effects from fishing may include physical, chemical, or biological alterations of the substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other components of the ecosystem. (NEFMC, 2002) Furthermore, the EFH final rule states that adverse effects “that justify the implementation of management measures should be identifiable” and that the intent of EHF, “is to regulate fishing gears that reduce an essential habitat's capacity to support marine resources, not practices that produce inconsequential changes in the habitat.” (NEFMC, 2002)

Species	Life Stage	Depth	Substrate
American Plaice	A	45-150	Fine-grained sediments or substrate of sand or gravel
American Plaice	J	45-175	Fine-grained sediments or substrate of sand or gravel
Atlantic Cod	A	10-150	Rocks, pebbles, or gravel
Atlantic Cod	J	25-75	Cobble or gravel
Atlantic Halibut	A	20-60	Sand, gravel, or clay
Atlantic Halibut	J	100-700	Sand, gravel, or clay
Haddock	A	35-100	Pebble gravel
Haddock	J	40-150	<i>Broken ground, pebbles, smooth hard sand, smooth</i>
Ocean Pout	A	<110	Dig depressions in soft sediments
Ocean Pout	J	<80	<i>Smooth bottom near rocks or algae</i>
Ocean Pout	L	<50	<i>Close to nesting areas</i>
Ocean Pout	E	<50	<i>Sheltered nests in holes or crevices on hard bottom</i>
Offshore Hake	A	150-380	<i>Bottom habitats</i>
Offshore Hake	J	170-350	<i>Bottom habitats</i>
Pollock	A	15-365	Hard bottom including artificial reefs
Pollock	J	0-250	Aquatic vegetation or a substrate of sand, mud, or
Red Hake	A	10-130	Depressions with a substrate of sand and mud
Red Hake	J	<100	Shell fragments and live scallops
Redfish	A	50-350	Silt, mud, or hard bottom
Redfish	J	25-400	Silt, mud, or hard bottom
White Hake	A	5-325	Mud or fine-grained sand
White Hake	J	5-225	Seagrass beds or substrate of mud or fine-grained
Whiting	A	30-325	All substrate types
Whiting	J	20-270	All substrate types
Windowpane	A	1-75	Mud or fine-grained sand
Windowpane	J	1-100	Mud or fine-grained sand
Winter Flounder	A	1-100	Mud, sand, or gravel
Winter Flounder	J	1-50	Mud or fine-grained sand
Witch Flounder	A	25-300	Fine-grained substrate
Witch Flounder	J	50-450	Fine-grained substrate
Yellowtail Flounder	A	20-50	Sand or sand and mud
Yellowtail Flounder	J	20-50	Sand or sand and mud

Table 5- Depths and Substrates Associated With Essential Fish Habitats for Benthic Life Stage of 15 Species Included in the New England Multi-Species Fishery Management Plan (NEFMC, 1998).

3.2.3.1 SCOPE OF DESCRIPTION AND SOURCE OF FURTHER INFO

A full description of the affected environment with regards to habitat can be found within the EA that accompanied Amendment 11 to the Northeast Multispecies FMP, Amendment 9 to the Atlantic Sea Scallop FMP, Amendment 1 to the Monkfish FMP, Amendment 1 to the Atlantic Salmon FMP and Sections of the Atlantic Herring FMP. This document is commonly known as the Omnibus EFH Amendment. This Amendment also contained EFH designations for all groundfish species managed by the NEFMC (NEFMC, Am 13 FSEIS, Section 9.0). However, the most recent information is contained in a 2004 NOAA Technical Memo (181) entitled “Characterization of the Fishing Practices and Marine

Benthic Ecosystems of the Northeast U.S. Shelf, and an Evaluation of the Potential Effects of Fishing on Essential Fish Habitat.” It should be referenced for further information which is outside the scope of the description included below.

3.2.3.2 EFH DESCRIPTIONS FOR SPECIES IN AFFECTED AREA

Table 5 (above) summarizes the EFH designations for the target species and those other Multispecies stocks with EFH designations and describes the EFH which can be found in the affected area.

A similar description of the depth and substrate features of EFH for the remaining 18 federally-managed species with benthic life stages is not included because EFH for the 15 species that are managed under the NE Multispecies FMP already covers a broad range of habitat types. The aerial extent of EFH for the juvenile and adult stages of all 33 species includes virtually the entire Northeast shelf.

3.3 SOCIAL AND ECONOMIC ENVIRONMENT

3.3.1 BACKGROUND AND DEFINITIONS

The following passage has been excerpted in part from the “Fishing Communities and Fishing Dependency in the Northeast Region of the United States:”

When the Magnuson Act was amended in 1996 by the Sustainable Fisheries Act, a number of standards were identified as requisite for fishery management plans. Among them, National Standard 8 dictates “Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.” In its section on definitions, the Act defines the term “fishing community” as “a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such a community” (Hall-Arber et al, 1998).

Despite this legal requirement, there is still a dearth of adequate data on this subject, and that which exists is open to interpretation. One of the better sources is the MIT Sea Grant report entitled “New England’s Fishing Communities” by Madeleine Hall-Arber et al. It describes at length the different ways to define a fishing community and how this term may or may not be designated by a geographical location. For the general purposes of this document, fishing communities are areas where there are substantial numbers of residents who make their primary living from harvesting the sea. In particular, for the purposes of evaluating the proposed action, there are three levels of fishing communities – New England as a region, the Cape and Islands as a sub-region, and Chatham / Harwich as a community.

This section presents both social and environmental parameters of the affected environment as they are inextricably tied together to form the socio-economic environment affected by fisheries management decisions such as the proposed action.

3.3.2 SOCIAL AND ECONOMIC STATUS OF THE AFFECTED AREA

3.3.2.1 NEW ENGLAND

The entire New England region has centuries of identification as a collection of fishing communities. The New England fisherman in his yellow slicker and corn cob pipe is a world-famous stereotype, underscored by the reality of thousands of people in this region of all types, men and women, young and old, who still make a living today from harvesting the sea. Georges Bank, the Gulf of Maine, and Stellwagen Bank all remain active fishing grounds where generations have ventured and many have died in pursuit of the seafood prized by this region. According to the Northeast Multispecies Amendment 13 SEIS, 1,888 active vessels landed \$105 million worth of groundfish in 2000. The majority of this fleet used otter trawl gear, followed next in numbers by hook and line, and finally by gillnets. New Bedford had the greatest amount of landings, followed in order by Portland, Gloucester, Chatham, and Boston.

Justification for a region-wide, port-by-port consideration of socio-economic environmental impacts from the proposed action can be found in the Amendment 13 Supplemental Environmental Impact Statement (SEIS):

It is important, however, to consider the impacts of the proposed alternatives across all communities. Social impacts can be defined as the changes that a fisheries management action may create in people's way of life (how they live, work, play, and interact), people's cultural traditions (shared beliefs, customs, and values), and people's community (population structure, cohesion, stability, and character). As such, social impacts may result from changes in flexibility, opportunity, stability, certainty, safety, and other factors that are not specific to any community but oftentimes to any individual or entity experiencing changes resulting from a fishing regulation. It is possible that the social impacts of some measures under consideration would not be experienced solely by one community group or another; rather, it is likely that some impacts would be experienced across communities, gear sectors, and vessel size classes. An example of this would be a reduction in allocated DAS if it is applied to all multispecies permit holders. Another example would be a mesh restriction for otter trawl vessels. (NEFMC, Am 13 FSEIA, Section 5.6.1.3)

3.3.2.1.1 PORT ANALYSIS CRITERIA AND OVERVIEW

Ports in New England were selected for consideration based on the criteria outlined in the Amendment 13 SEIS, as listed below:

The communities that are likely to experience significant impacts from the alternatives under consideration include those with at least one of the following characteristics:

- an active and large multispecies fishing fleet,
- vessels and shoreside facilities that currently depend on groundfish for a substantial portion of their business,
- geographically close to areas proposed for additional seasonal or year-round closure, and
- vessels that hold a substantial amount of latent effort (inactive DAS).

(NEFMC, Am 13 FSEIA, Section 5.6.1.3)

And the assignment criteria outlined in the Marine Fisheries Initiative (MARFIN) report as presented in the NEFMC Amendment 13 SEIS are as follows:

The port groups in this document are separated into primary and secondary groups. Primary groups are those communities that are substantially engaged in the groundfish fishery, as explained above, and which are likely to be the most impacted by groundfish

management measures. Secondary groups are those communities that may not be substantially dependent or engaged in the groundfish fishery but have demonstrated some participation in the groundfish fishery since the 1994 fishing year (FY94).

Primary Community Groups
1. Portland, Maine
2. Portsmouth, New Hampshire
3. Gloucester, Massachusetts
4. Boston, Massachusetts
5. Chatham/Harwichport, Massachusetts
6. New Bedford/Fairhaven, Massachusetts
7. Point Judith, Rhode Island
Secondary Community Groups
8. Upper Mid-Coast 1, Maine
9. Lower Mid-Coast 1, Maine
10. NH Seacoast
11. South Shore, Massachusetts
12. Provincetown, Massachusetts
13. Eastern Rhode Island

Table 6 – Community Groups
(NEFMC, Am 13 FSEIS, Section 5.6.1.1.1)

3.3.2.1.2 PORT ANALYSIS SUMMARY

The following passages have been excerpted in part from the Am 13 FSEIS, Section 5.6.2 as prepared by the NEFMC:

Both dependence on fisheries in general and dependence on the multispecies fishery are important to consider for the communities that are involved in groundfish harvesting that are most likely to be impacted by the proposed management measures. The MARFIN Report focuses on overall community dependence on fisheries; the additional information presented in [Amendment 13] focuses on dependence on the multispecies fishery in particular. Both measures of dependence are summarized below. In the MARFIN Report, fishing dependence was assessed based on three indices: 1) the percentage of labor force involved in fishing, 2) the percentage of related occupations within the Bureau of Labor Statistics category of fisheries/forestry/farming, and 3) a summary measure of a series of dependence ratios that compare the number of fishermen per hundred community residents to various alternative occupational roles that fishermen could enter with their particular skill profiles. The last of the indices described above, the occupational alternative index, is the most useful tool for comparison across different communities in the region (MARFIN 2001).

The MARFIN Report divides the New England region into eleven sub-regions, which are also consistent with the sub-regions analyzed for this amendment using the Impact Analysis for Planning (IMPLAN) model, and then ranks these subregions from highest to lowest, based on fishing dependence. Table 7 below is from the MARFIN report and provides the fishing dependence indices for each sub-region. The MARFIN report explains that the three sub-regions with the highest dependence (Downeast Maine, Upper Midcoast Maine, Cape and Islands) share some characteristics that make these

communities significantly more dependent on fishing resources than other regions of New England. These three regions are all relatively isolated from other parts of New England and have small islands and harbors, which give fishermen easy access to nearby fish and shellfish grounds.

MARFIN suggests that the occupational alternative index is significantly lower for the Cape and Islands as compared to the two sub-regions in Maine, because the Cape has experienced intense pressures from tourism and gentrification. However, there is variation among ports within these sub-regions. For example, Chatham is one town on Cape Cod that has remained an active fishing port over the years and has supported a successful fishing industry despite low biomass levels, increased regulations, and pressures from the recreational fishing and tourism industries. (NEFMC, Am 13 FSEIS, Section 5.6.2)

MARFIN SUB-REGION	% Related Occupations	% of Total Employed	Alternative Occupation Ratio Summary
Downeast Maine	45	3.6	255.54
Upper Midcoast Maine	36	2.0	171.05
Cape and Islands	27	0.79	104.43
Lower Midcoast Maine	23	0.46	51.32
New Bedford/South Shore	27	0.40	38.95
Southern Maine	23	0.39	36.94
Rhode Island	24	0.31	30.86
Gloucester/North Shore	20	0.21	24.91
New Hampshire Coast	8	0.09	9.46
Boston Area	7	0.05	6.39
Connecticut Coast	2	0.01	2.61

Table 7 - Comparative fishing dependence indices for the eleven sub-regions of New England. (MARFIN 2001 in NEFMC, Am 13 FSEIS, Section 5.6.2)

For the purposes of this assessment, groundfish revenues expressed as the percentage of total fisheries revenues from federally-permitted vessels homeported in a particular community group represent the community group's current dependence on the groundfish fishery. Information about dependence for all community groups can be found in the Affected Human Environment section of the NEFMC Amendment 13 SEIS. Table 8 ranks average dependence on multispecies from FY99 and FY00 for the communities of interest.

(NEFMC, Am 13 FSEIS, Section 5.6.2)

RANK	COMMUNITY GROUP	AVERAGE GROUND FISH DEPENDENCE FY99-FY00
1	Chatham/Harwichport, MA	71.1%
2	Portland, ME	64.3%
3	Gloucester, MA	61.7%
4	Boston, MA	55.7%
5	Portsmouth, NH	54.7%
6	South Shore, MA	47.7%
7	Provincetown, MA	45.4%
8	NH Seacoast	44%
9	Lower Mid-Coast 1, ME	34%
10	Upper Mid-Coast 1, ME	23.1%
11	New Bedford/Fairhaven, MA	22.3%
12	Point Judith, RI	18.3%
13	Eastern Long Island, NY	16.9%
14	Eastern RI	11.5%
15	Northern Coastal NJ	3%

Table 8 – Ranking of dependence on groundfish for communities of interest. (NEFMC, Am 13 FSEIS, Section 5.6.2)

3.3.2.2 OVERVIEW OF GB FIXED GEAR FISHERY

The GB Fixed Gear Sector, which operates out of Chatham and Harwich, is comprised of approximately 10 fishermen representing approximately 20 permits. Many of these fishermen are second- or third-generation fishermen that hope to pass along this tradition to their sons and daughters. Massachusetts, and specifically the ports of Chatham and Harwichport, has a longstanding history of catching cod.

3.3.2.3 CAPE COD AND THE ISLANDS

The very name of this region speaks volumes about its centuries-old connection to fishing. Ever since 1602, when Bartholomew Gosnold first landed in what is now Provincetown, fishing has drawn people to Cape Cod. The Pilgrims established fishing villages along the length of this sandy peninsula, and several of these endure today, although in much changed form. A look through any promotional material for the area prominently features fishing as a primary attraction for tourism and retirement activity. Seafood originating from towns such as Chatham, Wellfleet, and Eastham is renowned throughout New England for its freshness and quality. A drive through any of these towns at dawn reveals a working world of fishermen, trucks, and boats busily plying their trade. A wide range of ancillary businesses such as gear suppliers, fuel, bait, marine equipment, fish markets, and restaurants depend on this industry for survival. Little hard data exist to measure the financial scope of this industry, but it is clearly becoming a priority, and it is anticipated that such data will become available in the near future. Former Massachusetts Governor Mitt Romney created the Cape Cod Regional Competitiveness Council. NEMFC Council Chairman John Pappalardo was on their Fisheries / Agriculture Sub-Committee and has recommended that the NEFMC begin compiling this kind of data so there will be a better picture of the financial and social value of commercial fishing to the Cape and Islands.

The following passages have been excerpted in part from “Fishing Communities and Fishing Dependency in the Northeast Region of the United States”:

(On) The Cape and Islands... fishing is a natural occupation for those who live in such proximity to fertile fishing grounds. Furthermore, ... distances to major population centers with diverse alternative employment are significant. Consequently, only the tourist industry rivals fishing in importance. Because tourism is limited to the mild or warm seasons, fishing is often regarded as an appropriate year-round enterprise.... Several of the Cape Cod & Islands ports are listed among the top ports [on Cape Cod and the Islands]. For example, Chatham has a ranking of four, Vineyard Haven is ranked as nine, and Sandwich is 14 out of the 36 ranked.

On the gentrification scale, Vineyard Haven is ranked 5th and Provincetown and Chatham are ranked 13th and 14th, respectively. Despite gentrification, these ports are actively engaged in the fishing industry. Provincetown-Chatham are lumped together by “Fisheries of the United States.” In comparison to other major U.S. ports in 1998-99, Provincetown-Chatham numbered among the top 50 ports with landings of 17.8 million pounds in 1998 and 20 million pounds in 1999. The value of these landings was \$10.2 million in 1998 and \$12.9 million in 1999.

While the price per pound was approximately the same as found in Pt. Judith, a port to which Chatham is often compared, the quantities landed in Pt. Judith were much smaller. Chatham is the most active port of the Cape Cod & Islands sub-region. Though small, the town has an important longline/hook fleet in addition to gillnetters and lobster fishermen, a thriving shellfish industry, and a well-developed support industry. Innovation and flexibility are hallmarks of Chatham fishermen. The development of niche fisheries (e.g., dogfish and now, selling to the live fish market) is something that respondents reported with pride. Chatham also has a large retired population (almost a third of the whole). As noted elsewhere, increased cost of property and lack of year round rental property is a major concern.

(Hall-Arber et al, 1998)

3.3.2.4 CHATHAM/HARWICHPORT, MASSACHUSETTS

The following passages have been excerpted in part from the Am 13 FSEIS, Section 9.4.5.8.3.1 as prepared by the NEFMC:

Chatham, MA is a small coastal town on Cape Cod that is primarily known as a tourist destination. In addition to great beaches and quaint shops, another major attraction for tourists in Chatham is the opportunity to view fishermen unload their catch on the Town Pier. Chatham is a geologically diverse area that supports a vast number of different fisheries. According to the 1990 Census, the year-round population was 6,600 in 1989, but it is estimated that this number is increasing significantly in recent years. Close to half of the homes in Chatham are vacant in the winter months, and roughly one-third of the population is over 65. The population of Chatham in 1989 was 98.6% white, and the median household income was \$31,315. The largest category of employed residents in 1995 was the “services” category, and fishing made up 12% of this category, representing a significant portion of the overall employment in Chatham.

According to Chatham harbor master documents, there are 279 commercial vessels at the Chatham Fish Pier and Stage Harbor mooring areas. It is estimated that about two-thirds of these vessels are small skiffs used for shellfishing. MARFIN found that there are currently 64 vessels with docking permits for the Town Pier; 22 gillnets, 17 longliners, 5 combination, 8 lobster vessels, several handline vessels, several draggers, and four party/charter boats. The Town Pier facilities are maintained by the Town and are dedicated solely to commercial fishing interests. In addition to the Town Pier, the majority of finfish activity actually takes place on the two private docks adjacent to the Town’s facility. MARFIN found that the fleet in Chatham primarily targets Georges Bank stocks of groundfish and dogfish. The major species landed are codfish, dogfish, monkfish, haddock, bluefin tuna, and lobster. Chatham also has a substantial shellfish industry. There are numerous support services for the fishing industry in Chatham, such as fish buyers, cutters, gear workers, and shellfish shuckers. Some fishermen in this area only fish part of the year, and others switch their gear to fish for longer periods of time. MARFIN found that the majority of vessels in Chatham are owner-operated.

The recreational sector is growing in Chatham. MARFIN determined that the favorite species for recreational fishermen in Chatham were striped bass, followed by bluefish, scup and cod. MARFIN found many fishing related organizations in Chatham, and some of them are very active in supporting Chatham fishermen and representing their voice in fisheries management. All fishermen interviewed by MARFIN believe there has been a change in effort over the past ten years, except for shellfish, which has remained stable over the years. Some Chatham fishermen voiced that they want to diversify, but they cannot get the permits to do it.

(NEFMC, Am 13 FSEIS, Section 9.4.5.8.3.1)

The following passages have been excerpted in part from the Am 13 FSEIS, Section 5.6.1.3 as prepared by the NEFMC:

In FY99 and FY00, Chatham and Harwichport averaged 5,980,850 pounds of groundfish landings and \$7,254,100 in groundfish revenues, establishing it as an important port of landing for groundfish vessels and a primary port for the multispecies fishery. Chatham and Harwichport also serve as homeports for a significant number of multispecies vessels. In FY99 and FY00, an average of 95 multispecies vessels homeported in Chatham/Harwichport generated \$6,844,500 in revenues from multispecies. Chatham's overall community dependence on multispecies as a percentage of total fisheries revenues from federally-permitted vessels averaged about 71% from FY99 – FY00. It is likely that at least some of the active groundfish vessels in Chatham and Harwichport are even more than 71% dependent on the multispecies fishery.

At the social impact informational meeting in Chatham, a few residents of Chatham and Harwichport submitted comments reporting that they have experienced the most significant social impacts from the May closure on Georges Bank to protect cod. The majority of multispecies vessels from Chatham and Harwichport fish for Georges Bank cod and not Gulf of Maine cod.

(NEFMC, Am 13 FSEIS, Section 5.6.1.3)

4.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This EA presents options including the proposed action and analyzes the impacts of alternatives that are described below.

4.1 ALTERNATIVE 1 (NO ACTION)

The No Action Alternative is the implementation of the GB Cod Fixed Gear Sector Allocation WITHOUT submission or approval of neither the Operations Plan nor any modified Operations Plan. While the Sector would be available under Alternative 1, all vessels would opt to remain in the Common Pool and fish under the regulations implemented in Amendment 13 and subsequent framework adjustments to the Northeast Multispecies FMP. Therefore, no allocation of GB cod would be made to the Sector.

Alternative 1 assumes that no vessels elect to enter the Sector. Under this alternative, all fixed gear vessels decide to remain in the Common Pool under the rules implemented in Amendment 13 and subsequent framework adjustments to the FMP. While there is a Sector (but not vessels electing to enter it), the Sector would not have an allocation of GB cod. Alternative 1 would subject all GB fixed gear vessels to the input control measures designed to reduce the efficiency of the groundfish fleet in Amendment 13.

4.2 ALTERNATIVE 2 (PREFERRED ALTERNATIVE)

The Preferred Alternative is approval of the GB Cod Fixed Gear Sector Operations Plan and receipt of an allocation of GB cod for FY2007. Sector vessels would be subject to the regulations implemented under the Operations Plan.

As part of Amendment 13 to the Northeast Multispecies FMP, the concept of Sector Allocation was passed unanimously by the NEFMC (14-0) as an opportunity for a self-selecting group of fishermen with valid multispecies permits to voluntarily come together and form a cooperative for the purposes of attaining an allocation.

The proposed Preferred Alternative/Ops Plan has been deliberated by the prospective Sector members and represents the culmination of bi-weekly stakeholder meetings for over eighteen months. Further refinement of the Ops Plan is expected throughout the term of the Sector as members grow increasingly familiar with management of a hard TAC. The process by which the Ops Plan was developed is but one example of the social benefits of its implementation. The Ops Plan is the result of authorizing formation of a Sector that empowers stakeholders to more closely “plug in” to the management infrastructure and hold a more active role in development of appropriate regulations. Vessels participating in the are legally-bound to uphold and abide by the following Operations Plan:

Fishing Year 2007-08 (May 2007 – April 2008) GB Cod Fixed Gear Sector Operations Plan Harvesting Rules

The members and the participating vessels of the Sector agree to be legally bound to follow the Operations Plan and Harvesting Rules for fishing year (FY) 2007 as described herein, notwithstanding those rules and regulations applicable to common pool multispecies vessels.

1. Aggregate Sector allocation:

The Sector Members agree that, collectively, they would not harvest more GB cod than the Sector TAC. Once the annual TAC is reached no participating vessel may fish for the remainder of the fishing year under a multispecies DAS, possess or land GB cod or other regulated species managed under the Plan, or use any fishing gear capable of catching GB cod or any regulated species managed under the Plan.

2. Monthly cod quota targets: Commencing May 2007, 8.33% of the Sector’s cod less the amount of any reserve established by the Sector’s Board of Directors pursuant to Section 4.02 of the Agreement, would be allocated to each month of the fishing year (see Table below). Quota that is not landed during a month would be rolled over into the next month. Any delays in implementation of the Ops Plan that would reduce the number of months vessels could participate would result in the aggregate TAC being distributed amongst the remaining months. However, monthly quota targets are subject to further revision and would be revised as necessary. Once the aggregate monthly quota is reached, no Participating Vessel would be authorized to use fishing gear capable of catching GB cod or other species managed under the Plan. All cod harvested by Members and Participating Vessels shall be considered GB cod for the purposes of the Operations Plan and Agreement.

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April
%	8.3	16.7	25.0	33.3	41.7	50.0	58.3	66.6	75.0	83.3	91.6	100.0

3. Weekly cod quota targets: In addition to the monthly quota targets, the Manager may impose weekly or trip target quotas to slow down harvest rates. If such target quotas are imposed, Sector Members agree to adjust their fishing operations to avoid exceeding these quotas.
4. Days-At-Sea (“DAS”): Each participating Permit and Participating Vessel would be allocated DAS by the Regional Administrator through Amendment 13, as set forth on Exhibit B to the Agreement. This DAS allocation would be considered the Sector’s DAS allocation to individual Members.
5. Sector Call-In: Each Participating Vessel must notify the Manager or his designated representative prior to departing from port when using fishing gear capable of catching GB cod.
6. DAS Pooling: Participating Vessels and/or Permits may redistribute or pool DAS to other Participating Vessels and/or Permits, provided that the Manager has given his prior written consent to such redistribution or pooling. The Manager shall notify NMFS within 3 calendar days of any such redistribution or pooling. A Participating Vessel and/or Permit may not transfer or lease DAS to any non-Sector vessel and/or permit during the fishing year in which the Participating Vessel and/or Permit is enrolled in the Sector.
7. Full retention: All legal size GB cod harvested during any fishing operation must be retained and counted against the Sector’s Aggregate Allocation.
8. Species Trip Limits: Except for GB cod, participating vessels shall be subject to any trip limits imposed by the National Marine Fisheries Service for species managed under the Plan.
9. Gear Restrictions: No Participating Vessel may fish for GB cod with any gear other than jigs, non-automated demersal longline, handgear or gillnets. While participating in the Georges Bank seasonal closure (May 1 through 31) vessels must use hook gear to target cod or other regulated species managed under the Plan. All Participating Vessels are subject to the same gear restrictions on marking, tagging, mesh size, and number of gill nets applicable to common pool vessels using the same type of gear. No Participating Vessel may fish with tie-down nets. For purposes of these Harvesting Rules and the Agreement, a “tie-down net” is not a monk gillnet but is any sink gillnet rigged specifically for catching flatfish and is constructed with no floats on the float line, or that is constructed with floats on the float line and that has tie-down twine between the float line and the lead line. In addition, when fishing with hooks all hooks must be 12/0 circle hooks. A “circle hook” is defined as a hook with the point turned back towards the shank and the barbed end of the hook is displaced (offset) relative to the parallel plane of the eyed-end, or shank of the hook when laid on its side. Participating Vessels are exempt from the 3,600 hook limit. When monk fishing with gill nets, all participating vessels must use a 10 inch minimum mesh.
10. GB Seasonal Closure/Spawning Season Restrictions: Participating Vessels are not required to adhere to the seasonal closure on Georges Bank (May 1 through May 31) but must use hook gear to target cod or other regulated species managed under the Plan. However, Participating Vessels must continue to comply with the Spawning Season

Restrictions. The 20 day spawning block (March-May) will remain in effect in accordance with NMFS regulations.

11. Closed Areas: Participating Vessels may fish in closed areas to the extent authorized by NMFS.

12. Fishing Area: Participating vessels are restricted to fishing in the designated fishing area when using fishing gear capable of catching GB cod or any regulated species managed under the Plan. The definition of the management area is the GB Cod Hook Sector Area. The geographic boundaries of the management area are defined as straight lines connecting the following waypoints (except for the east-facing shoreline of the U.S.): (1) 70°00' W latitude and the east facing shoreline of Cape Cod, MA; (2) 70°00' W latitude and 42°20' N longitude; (3) 42°20' N longitude and 67°18.4' [the U.S. Canada Maritime Boundary]; (4) follow the U.S. EEZ boundary south to 39°00' N longitude; (5) 39°00' N longitude and 71°40' W latitude; (6) 71°40' W latitude and the south-facing shoreline of Rhode Island.

In addition to the Ops Plan, Sector members are subject to a legally-binding Membership Agreement that delineates the interaction of members within the Sector, including governance, enforcement, and penalties for non-compliance. The Sector operates independent of common pool vessels that still operate under a “soft” TAC and input control measures (such as DAS) as the main controls for managing mortality. The self-governance and monitoring of the Sector allows members to maintain stewardship of the resource upon which they depend. It creates a sense of interconnectedness among fishermen that would discourage violation of the Sector Membership Agreement and Ops Plan. As the Sector manages itself at the community level, NMFS carries less of an enforcement burden. In addition, because community based management is flexible to annual and midseason modifications, it is more responsive to changes in the condition of the fishery than the traditional process has been.

The table presented below identifies and compares those elements of the Ops Plan that are specific to the Fixed Gear Sector (Preferred Alternative) to those elements of current regulations that would pertain to fixed gear vessels in the Common Pool.

	Operations Plan (Preferred Alternative)	Common Pool (No Action)
#1 – Hard TAC Allocation of GB cod	Yes	No
#2 – DAS Allocations	Yes	Yes
#3 – Sector Call-In	Yes	No
#4 – DAS Redistribution/Pooling	Yes	Yes
#5 – Full retention of GB Cod	Yes	No
#6 – Species Trip Limits (GB Cod)	No	1,000 lbs/day
#7 – Hook Limit (size)	Size 12 circle	Size 12 circle
#7a – Hook Limit (number)	No limit	3,600
#8a – GB Seasonal Closure - May	No	Yes
#8b – GB Cod Spawning Block	Yes	Yes
#9 – Closed Area Restrictions	Yes	Yes
#10 – Gear Restrictions	Fixed gear only	No
#11 – Gillnet Limits	50 stand-up	50 stand-up

Table 10 - Comparison of management measures for fixed gear vessels under the Ops Plan and common pool rules.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 ALTERNATIVE 1 (NO ACTION)

Review: The No Action Alternative is the implementation of Amendment 13 and the GB Cod Fixed Gear Sector Allocation. While the Sector would be available through Alternative 1, all vessels would opt to remain in the Common Pool and fish under the regulations implemented under Amendment 13 and subsequent frameworks. Thus, no allocation of GB cod would be made to the Sector.

5.1.1 BIOLOGICAL IMPACTS

Target Species

These vessels would not have a hard TAC to constrain them and with their efficient gear offering them a wider array of species to target, these vessels are likely to reach their 1,000 pound daily GB cod limit and continue fishing, discarding all further GB cod overboard. These discards can, and often do, reach levels upwards of multiple times the daily GB cod limit and can be difficult to avoid. This wasteful practice continues to undermine any rebuilding plan in place and does nothing but delay the goal of achieving MSY.

Non-target Species/Incidental Catch

Gillnetting has interactions with a broad range of species, which creates more opportunities for incidental catch. The following table illustrates the interactions that the sink gillnet fishery has with non-target species for 2004.

Year	Species	Gear	Metric Tons
2004	GOOSEFISH	Sink gillnets	5,229.80
2004	MACKEREL, ATLANTIC	Sink gillnets	5,083.60
2004	SKATES	Sink gillnets	2,633.70
2004	COD, ATLANTIC	Sink gillnets	2,204.70
2004	POLLOCK	Sink gillnets	1,910.90
2004	HAKE, WHITE	Sink gillnets	847.9
2004	SHARK, SPINY DOGFISH	Sink gillnets	431.8
2004	FLOUNDER, WINTER	Sink gillnets	223.4
2004	FLOUNDER, YELLOWTAIL	Sink gillnets	195.4
2004	HADDOCK	Sink gillnets	187.1
2004	SQUIDS	Sink gillnets	113.8
2004	SCUPS OR PORGIES	Sink gillnets	112.1
2004	LOBSTER, AMERICAN	Sink gillnets	78.1
2004	FLOUNDER, SUMMER	Sink gillnets	71.9
2004	BLUEFISH	Sink gillnets	55.4
2004	REDFISH OR OCEAN PERCH	Sink gillnets	51.2
2004	FINFISHES, UNC FOR FOOD	Sink gillnets	47.1
2004	FLOUNDER, WITCH	Sink gillnets	36.2
2004	PLAICE, AMERICAN	Sink gillnets	29.9
2004	HAKE, SILVER	Sink gillnets	25.8
2004	WOLFFISH, ATLANTIC	Sink gillnets	21.5
2004	MENHADEN, ATLANTIC	Sink gillnets	17.4

2004	CUSK	Sink gillnets	15.1
2004	HERRING, ATLANTIC	Sink gillnets	5.9
2004	SEA BASS, BLACK	Sink gillnets	5.8
2004	TAUTOG	Sink gillnets	5.4
2004	SCALLOP, SEA	Sink gillnets	4.7
2004	WEAKFISH	Sink gillnets	3.3
2004	TUNA, YELLOWFIN	Sink gillnets	2.2
2004	MACKEREL, SPANISH	Sink gillnets	2.2
2004	SHARK, PORBEAGLE	Sink gillnets	2.1
2004	HAKE, ATLANTIC, RED/WHITE	Sink gillnets	2
2004	HAKE, RED	Sink gillnets	1.9
2004	BUTTERFISH	Sink gillnets	1.8
2004	FLATFISH	Sink gillnets	1.5
2004	HALIBUT, ATLANTIC	Sink gillnets	1.5
2004	BASS, STRIPED	Sink gillnets	1.2
2004	SHRIMP, MARINE, OTHER	Sink gillnets	1.1

Table 11 lists the non-target species interactions for sink gillnets (species landed under 1 mt are not shown).

The information is based on a NMFS landings database query for 2004 and filtered to show those species which were caught by sink gillnets in amounts greater than or equal to one (1) metric ton. This shows that with the application of this filter (≥ 1 mt), sink gillnets interact with 38 non target species. It is expected that these overall totals would not change in the absence of the Sector. Impacts to non-target species include continued fishing pressure for non-overfished stocks and delayed rebuilding for overfished stocks. Of particular concern is the predictable increase in catch rates of yellowtail flounder, winter flounder, white hake, and American plaice, which would occur with any net increase in otter trawling. Skates, monkfish, pollock, haddock, and lobster catch rates may also increase.

Protected Species

The Northeast sink gillnet fishery is classified as a Level I fishery under the 2006 List of Fisheries (LOF) at 50 CFR Part 229. The bottom longline fishery on Georges Bank is considered part of the Category III listing for the Northeast/Mid-Atlantic bottom longline fishery. An explanation of the classifications used in the LOF is as follows:

Category I fishery means a commercial fishery determined by the Assistant Administrator to have frequent incidental mortality and serious injury of marine mammals. A commercial fishery that frequently causes mortality or serious injury of marine mammals is one that is by itself responsible for the annual removal of 50 percent or more of any stock's potential biological removal level.

Category III fishery means a commercial fishery determined by the Assistant Administrator to have a remote likelihood of, or no known incidental mortality and serious injury of marine mammals. A commercial fishery that has a remote likelihood of causing incidental mortality and serious injury of marine mammals is one that collectively with other fisheries is responsible for the annual removal of:

- (1) Ten percent or less of any marine mammal stock's potential biological removal level,
- or
- (2) More than 10 percent of any marine mammal stock's potential biological removal level, yet that fishery by itself is responsible for the annual removal of 1 percent or less of

that stock's potential biological removal level. In the absence of reliable information indicating the frequency of incidental mortality and serious injury of marine mammals by a commercial fishery, the Assistant Administrator would determine whether the incidental serious injury or mortality is "remote" by evaluating other factors such as fishing techniques, gear used, methods used to deter marine mammals, target species, seasons and areas fished, qualitative data from logbooks or fisher reports, stranding data, and the species and distribution of marine mammals in the area or at the discretion of the Assistant Administrator. (50 CFR 229.2)

Table 12 shows the marine mammals known to have had interactions with sink gillnets and bottom longlines on Georges Bank, as excerpted from the 2006 List of Fisheries at 50 CFR Part 229, which reclassified the "Northeast sink gillnet fishery" as a Category I fishery and the "Northeast/Mid Atlantic bottom longline/hook-and-line fishery" as a Category III fishery.

Fishery Description	Estimated # of vessels/ persons	Marine mammal species and stocks incidentally killed/injured
Category I		
Northeast sink gillnet	341	Bottlenose dolphin, WNA offshore Common dolphin, WNA Fin whale, WNA Gray seal, WNA Harbor porpoise, GME/BF Harbor seal, WNA Harp seal, WNA Hooded seal, WNA Humpback whale, WNA Minke whale, Canadian east coast North Atlantic right whale, WNA Risso's dolphin, WNA White-sided dolphin, WNA
Category III		
Northeast/Mid-Atlantic bottom longline/hook-and-line	46	None documented

Table 12 - List of marine mammals known to have interacted with the longline and gillnet fisheries in the Northeast. Excerpted from the 2006 Final LOF (Department of Commerce, 2006)

As can be seen, Northeast sink gillnets have more interactions with marine mammals than bottom longline gear. Under the No Action alternative in the absence of the Sector, it is expected that these overall totals would not change. This means that there would be a continued level of interaction with non-ESA listed marine mammal species, potentially driving their numbers over potential biological removal (PBR), and with ESA-listed marine mammal species, jeopardizing their chances of recovery.

Under the Atlantic Large Whale Take Reduction Plan (ALWTRP), Harbor Porpoise Take Reduction Plan (HPTRP), and Bottlenose Dolphin Take Reduction Plan (BDTRP), fixed gear must meet federal requirements for gear markings, locations, weak links, and buoyancy requirements. In addition, fixed gear fishermen must abide by rolling closures and seasonal and spawning periods of restricted fishing activity. Under the No Action alternative, Sector members would not have a hard TAC to constrain them; therefore, there would be an unlikely chance that large whale interactions would decrease.

According to the Northeast Fisheries Science Center Sea Turtle Program, four species of turtles migrate northward along the continental shelf of the eastern U.S. to forage in highly productive, nearshore habitats during the spring, summer and fall months: primarily early life history stages of cheloniid loggerhead (*Caretta caretta*), Kemp's ridley (*Lepidochelys kempii*) and green (*Chelonia mydas*) turtles; and sub-adult and adult leatherback turtles (*Dermochelys coriacea*).

Although sea turtles are known to interact with both gillnet and hook-and-line gear, these occurrences happen infrequently with these gear types in the proposed operating area. Between January 2002 and June 2006, 4,651 anchored sink gillnet trips were observed, and 487 bottom longline trips were observed. In this 54 month period, federal observers reported 11 incidental takes of sea turtles in the anchored sink gillnet fishery, and zero incidental takes of sea turtles in the bottom longline fishery. It should be noted that the term "incidental take" can mean "dead," "alive and injured," or "alive and uninjured." Sea turtles often inhabit waters more temperate than the Sector's Operating Area. Under the No Action alternative, Sector members would not have a hard TAC to constrain them; therefore, there would be an unlikely chance that large whale interactions would decrease.

Biological Conclusions

Should the No Action alternative be chosen, an allocation of GB cod would not be made to the Sector. It would be expected that some percentage of fixed gear vessels may convert to otter trawling, which is known to have higher rates of fish bycatch. In addition, many of the smallest vessels within the Sector may be forced to sell their permits because they would not have the protection of the cod allocation and would be out-competed by more efficient vessels. Without a cod allocation to contain fishing effort, gillnetters have more opportunity for increased interactions and incidental catch of non-target and protected species. In addition, there would be no method in place to control the large amounts of GB regulatory discards experienced by the fleet today. If the No Action alternative were approved, there is nothing that would stop these fishermen from shifting effort onto other stocks of concern, including GOM cod and yellowtail flounder.

5.1.2 HABITAT IMPACTS

According to the Magnuson Act, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (Department of Commerce, 1996).

The EFH Final Rule identifies adverse impacts as "any impact, which reduces quality and/or quantity of EFH. Adverse effects from fishing may include physical, chemical, or biological alterations of the substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other components of the ecosystem" (NEFMC, 1998).

The *Workshop on the Effects of Fishing Gear on Marine Habitats off the Northeastern United States*, October 23-25, 2001, had the following findings regarding the impacts of longline and gillnets on marine habitats: "The panel concluded that sink gillnets and longlines cause some low degree impacts in mud, sand and gravel habitats" (Department of Commerce, 2002). As stated in the EFH final rule, the intent of EFH "is to regulate fishing gears that reduce an essential habitat's capacity to support marine resources, not practices that produce inconsequential changes in the habitat" (Department of Commerce, 2002).

Habitat Conclusions

Alternative 1 is expected to have no habitat impacts because it is a baseline condition in which the multispecies fishery would continue to be conducted as is: without the creation of the Sector. Habitat impacts of the existing fishery have already been minimized by the establishment of the habitat closed areas and effort controls that were approved in Amendment 13 and subsequent framework actions. As such, no additional habitat impacts would result that haven't already been accounted for.

5.1.3 SOCIAL AND ECONOMIC IMPACTS

As noted at the Social Impact Informational Meetings, “because of increased regulations in many fisheries, small vessels have lost much of their flexibility to move from one fishery to another. In Chatham, meeting participants felt that regulations have ‘boxed them in’ to particular fisheries, making it difficult or impossible for them to maximize their opportunities and/or adjust to changing conditions. When combined with the inherent limitations of small vessels, the regulations have reduced fishing opportunities to the point that many fishermen cannot guarantee a year-round income from fishing for themselves or for their crew” (NEFMC, Am 13 FSEIS, Appendix I). Alternative 1 would have negative social impacts on local fixed gear fishermen and on the Chatham/Harwich community. The daily GB cod trip limit, in addition to a continued reduction in DAS, gear restrictions, and ever-increasing closed areas would likely eliminate the traditional, small-boat fleet.

Pending changes to multispecies groundfish management may potentially undermine the Sector concept as well as eliminate the likelihood that fixed gear fishing remains profitable. This would cause disruption within the principle communities (Chatham/Harwichport) for shore-based businesses and could eventually lead to the loss of piers, wharves, and docks, all of which are in high demand for residential purposes. This outcome would further diminish the possibility for these communities to re-enter the fishery once stocks have rebuilt. The well-documented social ills that follow the collapse of a traditional industry are likely to be the result of implementation of Alternative 1.

According to the Amendment 13 FSEIS, “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.....these declines will probably have negative impacts on fishing communities throughout the region, but particularly on those ports that rely heavily on groundfish” (NEFMC, Am 13 FSEIS, Section 7.1.1).

Amendment 13 to the FMP, as passed by the NEFMC and approved by NMFS, is having severe, disproportional negative economic impacts on the GB fixed gear fleet.

Trip Limit

“Both gillnet and hook gear groups appear to be split between vessels that may experience significant revenue losses and vessels that may experience revenue gains. This disparity is likely due to differences in dependence on Georges Bank cod and Gulf of Maine cod. Because cod tends to represent such a high proportion of total fishing income for these two gear groups, revenues are very sensitive to changes in cod trip limits. Thus, while the Gulf of Maine cod trip limit would be double that of FY2001, the Georges Bank cod trip limit is more restrictive. This means that even with a 45% DAS reduction, hook and gillnet vessels with a high dependence on Gulf of Maine cod can increase total fishing income while vessels with high dependence on Georges Bank cod experience revenue losses” (NEFMC, Am 13 FSEIS, Section 5.4.4.1).

Gear Limit

Sector vessels are subject to the same gear restrictions on marking, tagging, mesh size, and number of gillnets applicable to common pool vessels using the same type of gear. The 3600 hook limit prevents hook fishermen from maximizing opportunities when codfish and haddock are available for harvest in abundance. The opportunity to fish multiple tides is prevented by regulations that prohibit setting more than 3,600 hooks on a given day. This gear restriction limits the ability of vessels to recognize sufficient revenue to justify the expense and danger of fishing. The 3,600 hook limit was introduced in the Interim Rule and fishermen have employed it since May 2002. The 3,600 hook limit does not allow fishermen the flexibility to maximize their catch when cod appear in their geographical range and unnecessarily restricts the opportunity of Sector members to maximize their efficiency and revenue. With these limited revenue opportunities, vessel owners would be forced to look for options other than hook fishing, including leasing DAS to otter trawlers, selling their permits, or converting to otter trawling. Alternative 1, because it lacks approval of the Operations Plan and allocation of GB cod, would result in all vessel owners remaining outside the Sector so that they can exercise these options.

Discard Mortality

Under Alternative 1, vessels would not have a hard TAC to constrain them. With their efficient gear offering them a wider array of species to target, these vessels are likely to reach their 1,000 pound daily GB cod limit and continue fishing, discarding all further GB cod overboard. By discarding these legal-sized cod, Sector members are contributing to the inefficiency of the current regulatory system and may be experiencing significant revenue loss in the short-term and long-term.

Social and Economic Conclusions

The cod dependent fixed gear fishery of Georges Bank would not survive the multiple regulation changes that would result from Alternative 1. Left with fewer DAS, a high dependence on GB cod, and a limit on the number of hooks which can be used in a given day, and mandatory regulatory discards of GB cod over the daily trip limit, the fixed gear fishery would likely experience a negative economic impact.

5.2 ALTERNATIVE 2 (PREFERRED ALTERNATIVE)

The Preferred Alternative is approval of the GB Cod Fixed Gear Sector Operations Plan and receipt of an allocation of GB cod for FY2007. Sector vessels would be awarded a hard TAC of GB cod and, subject to the regulations implemented under the Operations Plan, allowed to fish it (See Section 4.2 of this document).

5.2.1 BIOLOGICAL IMPACTS

Alternative 2 would have overall positive biological impacts because the Sector Ops Plan would ensure that a traditional portion of GB cod is taken by fixed gear rather than more efficient gears that are known to result in greater fish bycatch and habitat impacts. In addition, implementation of the Sector Ops Plan would reduce the amount of time that fixed gear would remain in the water: by mandating the retention of all legal-sized cod and by operating under a hard TAC rather than a daily trip limit, the Sector would be able to harvest their allocation of cod more efficiently and in less time. By increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. Fixed gear has been used to target groundfish on GB for centuries, and the biological impacts of the Sector would be predictable and minimal. In addition, the imposition of a hard TAC on the Sector would ensure that Sector members are not participating in overfishing of GB cod.

Target Species

By staying within the hard TAC allocated to the Sector, approval of the Sector Ops Plan would not compromise groundfish mortality targets of Amendment 13. The Sector prevents its members from

contributing to overfishing. The Sector is granted an exemption from the 3,600 hook limit. Allowance for a larger number of hooks will maximize the efficiency of hook gear, allowing fishermen to capitalize on the presence of GB cod, while still operating within the confines of a hard TAC of GB cod. The Ops Plan calls for full retention of legal-sized GB cod. Thus, there would be no regulatory discards of legal-sized GB cod associated with the Sector. The full retention clause, as well as other stipulations of the Ops Plan including dealer reporting, would ensure that all legal-sized cod caught by Sector participants would be landed and counted against the Sector quota in real-time. This assures that the Sector and members of the Sector would not contribute to overfishing of GB cod.

According to the Amendment 13 FEIS, “As long as [the sector] allocation is consistent with target fishing mortality rates, this alternative is consistent with the biological objectives of the Amendment” (NEFMC, AM 13 FSEIS, Sec 5.2.4.18).

In addition, “Over time, the GB Fixed Gear Sector alternative should have only minor biological impacts. This alternative is based on assigning an appropriate share of the resource to the participants in the Sector. The share is consistent with the rebuilding targets and the Sector must remain within its share or be penalized in following years. It is possible that in a specific year the Sector may catch more than its share, but this results in reductions in following years. Over time, the catch by the sector should be consistent with rebuilding goals.” (NEFMC, AM 13 FSEIS, Sec 5.2.4.19). To counter the idea that the Sector would exceed its TAC, the GB Fixed Gear Sector Ops Plan has provisions for a 10% set aside of Sector TAC to guarantee that the Sector would not exceed the TAC in any given FY.

Several specific elements of the Harvesting Rules have direct impacts on the target species. The elements and their impacts on target species are listed below:

- (1) The hard TAC (Harvesting Rule #1) sets an absolute maximum poundage of fish that the Sector can catch each year and prevents the Sector from overfishing;
- (2) Monthly quota targets (Harvesting Rule #2) spread out the catch evenly throughout the FY and ensure that the Sector does not harvest the Sector allocation in an overly intensive fashion to the detriment of the GB cod stock or to spawning aggregations;
- (3) Weekly quota targets (Harvesting Rule #3) will be enacted, if necessary, to slow down harvest rates;
- (4) DAS allocations (Harvesting Rule #4) set an absolute maximum on the amount of effort the fleet can expend in attempting to catch the Sector allocation each year and will continue to account for mortality. The DAS and the hard TAC work as complementary input and output controls ensuring no overfishing of GB cod by the fleet;
- (5) The full retention (Harvesting Rule #7) clause ensures that all legal-sized cod caught by Sector members will be landed and counted against the Sector quota. This will ensure that the Sector does not overfish GB cod through regulatory discards of legal-sized GB cod;
- (6) Elimination of the daily trip limit for target species (Harvesting Rule #8) in lieu of a hard TAC will allow vessels to operate more efficiently and will likely reduce fishing time due to the achievement of the TAC;
- (7) Gear restrictions (Harvesting Rule #9) mandate that the Sector members be subject to the same gear restrictions on marking, tagging, mesh size, and number of gillnets applicable to common pool vessels using the same type of gear. A benefit of the 6 ½” mesh size restriction (which Sector vessels are subject to) is that the capture of sub-legal fish is minimized. In addition, the size 12 circle hook will reduce the amount of undersized cod caught, thus reducing regulatory discards of undersized cod. The circle requirement allows undersized fish to have better survivability and easier escapement. The increased daily hook limits will have minimal impacts as effort, landings, and discards are strictly controlled through previous measures (hard TAC of GB cod, layered with DAS). In addition, by entering into agreement with the Sector, vessels are

prevented from using mobile gear, which has been known to have higher levels of fish bycatch and discards than fixed gear; and

- (8) The GB seasonal closure/spawning season restriction (Harvesting Rule #10) stipulation has minimal impacts on GB cod. The impact may be offset as Sector members will no longer fish in the Gulf of Maine during the month of May. In addition, Sector members will still be required to take their 20 day spawning block out of the fishery during the months of March, April, or May to protect spawning fish and must continue to comply with spawning season restrictions.
- (9) The fishing area (Harvesting Rule #12) is the GB Cod Hook Sector Operating Area (defined earlier). This area includes traditional winter monkfish fishing areas. Since Sector vessels that target monkfish are using gear capable of catching GB cod, any legal-sized GB cod caught while under a directed cod trip or a directed monkfish trip will be retained and accounted for.

Non-target Species/Incidental Catch

Table 11 summarizes other species that Sector members are likely to catch. Sector members would be employing gear that has been used for decades to catch GB cod. The incidental catch of non-target species is likely to be similar to the incidental catch of non-target species during the qualifying period (1996-2001), because the Sector cod TAC would be identical to the percentage of take of Sector members during the qualifying period. A net increase in the incidental catch of non-target species is not expected. In fact, prohibition of non-monkfish tie-down nets would most likely cap or decrease interactions with flounders of concern, namely yellowtail. DAS would continue to account for mortality on non-target species.

Several specific elements of the Harvesting Rules that have impacts on non-target species are listed below:

- (1) The hard TAC (Harvesting Rule #1) stops Sector members from catching non-target species once the hard TAC is caught each year;
- (2) DAS allocations (Harvesting Rule #4) set an absolute maximum on the amount of effort the fleet can expend in attempting to catch the Sector allocation each year. DAS usage ensures that the effort of the Sector will be similar to the effort of the fleet during the qualifying period and puts a cap on the effort that Sector members can put into the fishery. This sets a corollary maximum on expected bycatch;
- (3) Elimination of the daily trip limit for target species (Harvesting Rule #8) in lieu of a hard TAC will allow vessels to operate more efficiently and will likely reduce fishing time due to the achievement of the TAC; and
- (4) Gear restrictions (Harvesting Rule #9), specifically hook size limits, require a larger hook size, ensuring that some amount of fish with smaller mouths, such as small flounders, is not caught by Sector members. The circle hook requirement increases survivability for non-target species caught incidentally. Additionally, an exemption from the 3,600 hook limit may result in increased interactions with non-target species. However, DAS are still in place to control mortality of non-GB cod species. A benefit of the 6 ½" mesh size restriction (which Sector vessels are subject to) is that the capture of sub-legal fish is minimized. In addition, by entering into agreement with the Sector, vessels are prevented from using mobile gear, which has been known to have higher levels of fish bycatch and discards than fixed gear. Furthermore, Sector vessels are prohibited from fishing with non-monkfish tie-down nets (defined earlier). This rule prevents a shift of effort onto flatfish stocks of concern, namely yellowtail flounder. Finally, by mandating use of 10" minimum mesh size in the monkfish fishery, minimizes the capture of various sub-legal non-target fish species.
- (5) The fishing area (Harvesting Rule #12) that the Sector vessels are restricting themselves to includes traditional monkfish fishing areas. Nearly all Sector vessels are reliant on monkfish for their fishing businesses and have traditionally persecuted monkfish in the Operating Area.

Protected Species

Table 1 in Section 3.2.6 of this document lists protected species in the region. Sector members would be employing gear in the same areas they have been fishing for centuries, so the effect on protected species in that area are likely to be similar to what they have been in the past. . However, by operating under a hard TAC rather than a daily trip limit, the Sector would be able to harvest their allocation of cod more efficiently and in less time. By increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential for protected species interactions.

The newly-reclassified Northeast/Mid-Atlantic bottom longline/hook-and-line fishery is listed as a Category III fishery under 50 CFR Part 229; the Northeast sink gillnet fishery is listed as a Category I fishery. Both fisheries would continue to operate within the mandated level of observer coverage. Entanglements are assumed to occur with increased frequency in areas where more gear is set. The Sector would continue to operate in areas and using gear types that they have traditionally used. A majority of hook-and-line gear would be set during the fall months in the offshore waters of Georges Bank (Northeast and Southeast portion of the Operating Area); anchored sink gillnet gear would be set nearly year-round in the inshore waters of Georges Bank (Northwest portion of the Operating Area), and in winter months in the offshore waters of Georges Bank (Southwest portion of the Operating Area). Interactions between the aforementioned species and fixed gear would vary over time and space, and include getting caught on hooks (longline gear), entanglement in mesh (gillnet fishery), entanglement in float line (gillnet fishery), entanglement in groundline (gillnet and longline fisheries), entanglement in anchor line (gillnet and longline fisheries), or entanglement in vertical lines that connect the gear to the surface (gillnet and longline fisheries). Interactions occur when fishing gear overlaps both spatially and trophically with a species' niche. Spatial interactions are more "passive" and involve unintentional interactions with fishing gear. Trophic interactions are more "active" and occur when species use fishing gear to assist in their predation. When fishing gear is catching fish that protected species prey on, the protected species may interact with the fishing gear as they attempt to consume the fish. Both forms of interactions occur with bottom longline and anchored sink gillnet gear.

Despite the tendency for the gear to interact with protected species, the Sector is taking important steps to account for and mitigate these interactions. Because implementation of the Ops Plan would reduce the amount of time that fixed gear would remain in the water, this alternative is anticipated to have a slight positive impact on protected species, compared to the No Action alternative, as the potential for interactions decreases: by increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. Through DAS and a hard TAC of GB cod (to cap effort), full retention of legal-sized cod (to eliminate discards and increase efficiency) Sector management (to respond in near-real time to constantly changing species interactions), and exemption from daily trip limits in lieu of a hard TAC (to maximize efficiency and reduce the amount of time gear remains in the water), the Sector would account for and reduce the potential for marine mammal interactions. Further actions to reduce the likelihood of interactions between the gear types governed by this FMP and the marine mammals that inhabit the area in which these fisheries are prosecuted would be considered if deemed necessary. Thus, this alternative is anticipated to have a positive impact on protected species, including marine mammals and sea turtles, when compared to what may occur under the No Action alternative.

Several specific elements of the Ops Plan that have impacts on protected species are listed below:

- (1) The hard TAC (Harvesting Rule #1) stops groundfish fishing when allocation is caught, ending the potential for interaction;
- (2) Monthly quota targets (Harvesting Rule #2) stop fishing when monthly quotas are caught, ending the potential for interaction;
- (3) DAS allocations (Harvesting Rule #4) set an absolute maximum on Sector effort each year;

- (4) Hook size (Harvesting Rule #8) mandates a size 12 circle hook allowing better survivability prospects for protected species;
- (5) Elimination of the daily trip limit for target species (Harvesting Rule #8) in lieu of a hard TAC will allow vessels to operate more efficiently and will likely reduce fishing time due to the achievement of the TAC; and
- (6) Gear restrictions (Harvesting Rule #9) require that Sector members will only pursue groundfish with fixed gear. Through daily communication with the Sector members, the Manager has the ability and authority to implement further gear/area restrictions if interactions with protected species can't be avoided. An exemption from the hook limit may result in an increased amount of hook gear used, however impacts on protected species will be minimal as hook gear is known for minimal interactions to begin with. In addition, hook gear restrictions mandate a size 12 circle hook allowing better survivability prospects for protected species. By entering into agreement with the Sector, vessels are prevented from using mobile gear, which has higher levels of fish bycatch and discards than fixed gear. Finally, all gillnet gear used under the Sector Operations Plan will be in compliance with ALWTRP, HPTRP, and BDTRP regulations and notices.
- (7) The fishing area (Harvesting Rule #12) has been traditionally fished while targeting GB cod and monkfish, both of which are found throughout the Area. By mandating daily communication with the Manager, the Sector will be able to monitor its interactions with protected species in a large area and in near-real time.

Biological Conclusions

The impacts on GB cod would be positive, compared to the No Action alternative, as the Sector would harvest up to 20% of the GB cod stock under a hard TAC ensuring that overfishing is not occurring on that portion of the population. The hard TAC and the requirement to use DAS would provide two mechanisms to restrict both the effort and landings of the Sector. Through daily communication with the Sector members, the Manager has the ability and authority to implement further gear restrictions if interactions with protected species can't be avoided. By operating under a hard TAC rather than a daily trip limit, the Sector would be able to harvest their allocation of cod more efficiently and in less time. By increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. As the Operations Area includes areas traditionally used to target monkfish, and as GB cod can be found throughout this area, managing the Sector vessels in near-real time is essential for the success of the Sector. Implementation of the Ops Plan would have a slight positive effect on the species of concern (GB cod) and on flounders of concern with the prohibition on non-monkfish tie-down nets, and a minimal impact on other species when compared to what may occur under the No Action alternative.

5.2.2 HABITAT IMPACTS

See section 5.1.2 of this document for background habitat goals statement from NMFS.

Fixed gear is known to have minimal impacts on habitat (see Section 5.1.2). By assuring that fishermen within the Sector use fixed gear, Alternative 2 results in positive habitat impacts relative to the No Action alternative, under which some fixed gear fishermen, who would otherwise utilize the Sector's allocation for cod, would instead participate in the multispecies bottom trawl fishery. In addition, according to the Amendment 13 FEIS, "Sectors are not geographically constrained; it is unlikely that they, as a management measure, will have any significant habitat impacts" (NEFMC, AM 13 FSEIS, Sec 5.3.4.15). The Sector would operate within a specific geographic area defined as the GB Cod Hook Sector Area. Although the Sector would voluntarily be constrained to this area, the Sector traditionally operates in a much smaller geographic area, notably Statistical Areas 521, 522, 526, and 561.

This excerpt from Table 135 of the Amendment 13 FEIS describes the habitat implications of sector allocation:

Alternative	Overall Habitat Impact	Feature	Description of Essential Fish Habitat Impact
Sector Allocation	Neutral Impact (0)	Approval of sector allocation proposal brought to NMFS through Council. Sector decides about movement among sectors. Allocation based on documented catch. Hard TACs by species.	As a management measure, sector allocation is not expected to have any significant habitat impacts.
GB Fixed Gear Sector	Neutral Impact (0)	Approval of GB Hook Sector	This sector allocation program is not expected to have any significant habitat impacts, especially since fixed gear has been deemed not to have adverse impacts on EFH.

Table 13 - Habitat implications of Sector allocation as presented in the Amendment 13 FEIS. Note that this table does not contemplate every aspect of the Ops Plan. (NEFMC, Am 13 FEIS, Section 5.3.6.7)

Implementation of the GB Cod Fixed Gear Sector Ops Plan would entice more fishermen to opt into the Sector. Thus, more fishermen would be restricted to fishing only on GB, specifically in the GB Cod Hook Sector Operating Area. This would reduce habitat impacts in the Gulf of Maine because fewer fishermen would fish there.

Several specific elements of the Harvesting Rules that have impacts on habitat are listed below:

- (1) The hard TAC (Harvesting Rule #1) ends Sector impacts on habitat when the allocation is caught each year;
- (2) Monthly quota targets (Harvesting Rule #2) end Sector impacts on habitat when the quota is caught each month;
- (3) DAS allocations (Harvesting Rule #4) set an absolute maximum on fishing effort, and therefore habitat interaction for the Sector;
- (4) Elimination of the daily trip limit for target species (Harvesting Rule #8) in lieu of a hard TAC will allow vessels to operate more efficiently and will likely reduce fishing time due to the achievement of the TAC;
- (5) Gear restrictions (Harvesting Rule #9) subjects participating vessels to the same gillnet gear restrictions applicable to common pool vessels, and therefore no increased habitat impacts will occur. In addition, by entering into agreement with the Sector, vessels are prevented from using mobile gear, which has higher levels of bycatch and discards, and greater detrimental habitat impacts than fixed gear. Sector vessels are exempt from hook limits, in contrast to the 3600 hook limit put in place in the Interim Rule and maintained in Amendment 13. Allowing more hooks to be deployed by longlines, will allow more gear to come into contact with the benthic habitat. This may cause a minimal disturbance, but will have a negligible impact on habitat because hook gear has been shown not to have significant habitat impacts and because the Sector will have effort controls and TAC related closures. Finally, all gillnet gear used under the Sector Operations Plan will be in compliance with ALWTRP, HPTRP, and BDTRP regulations; and
- (6) The GB seasonal closure/spawning season restriction (Harvesting Rule #10) stipulation has minimal impacts on habitat. Even though fishing on GB will occur during May, and then only with hook gear, any habitat interactions will be offset by a reduction in GOM fishing effort.

Furthermore, because the Sector is managed under a hard TAC, based on the catch history of Sector members, there will be no yearly net increase in habitat interactions resulting from implementation of the Ops Plan.

Habitat Conclusions

Clearly, implementation of the Ops Plan would have positive habitat impacts because it ensures that fixed gear fishermen remain rather than switching their effort to other gear types that have greater habitat impacts.

5.2.3 SOCIAL AND ECONOMIC IMPACTS

Alternative 2 would provide social benefits to the Sector members as well as to the Chatham/Harwichport, MA communities. Chatham/Harwichport, MA is more than 71% revenue dependent on groundfish stocks, particularly the GB cod stock. “Chatham’s overall community dependence on multispecies as a percentage of total fisheries revenues from federally-permitted vessels averaged about 71% from FY99 – FY00. It is likely that at least some of the active groundfish vessels in Chatham and Harwichport are even more than 71% dependent on the multispecies fishery”(NEFMC, AM 13 FSEIS, Sec 5.6.1.3). By allowing the Ops Plan to be implemented, fishermen at the local level would be making decisions that impact the Sector members and the larger Chatham/Harwichport community. By making collective decisions, Sector members would foster interconnectedness amongst fishermen that would allow them to become more efficient while protecting the fabric of the traditional fishing community.

The Sector Ops Plan allows a range of management measures that would make the Sector economically viable for fixed gear fishermen. By pairing hook and gillnet fishermen together in the Sector, cooperation would be maximized between the two groups; another positive social impact.

Because fixed gear fishing is labor intensive, the Sector would ensure that shoreside jobs such as baiting remain viable opportunities in Chatham/Harwichport. Shoreside jobs and infrastructure are identified and characterized in Section 3.4.4 of this EA. These opportunities would have benefits that trickle throughout the community.

Input controls, such as reduced GB cod trip limits and the GB closure in May, have a significant impact on the Chatham/Harwichport community. According to Amendment 13 FEIS, “At the social impact informational meeting in Chatham, a few residents of Chatham and Harwichport submitted comments reporting that they have experienced the most significant social impacts from the May closure on Georges Bank to protect cod. The majority of multispecies vessels from Chatham/Harwichport fish for Georges Bank cod and not Gulf of Maine cod. The measures proposed in Amendment 13 that are likely to impact this community group the most are those that modify or add nearshore area closures on Georges Bank and those that modify the Georges Bank cod trip limit” (NEFMC, AM 13 FSEIS, Sec 5.6.1.3).

The Amendment 13 FEIS concluded that negative distributional impacts affecting Chatham/Harwichport in Amendment 13 are mitigated by Sector allocation: “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. The EA for the settlement agreement estimated that an average of 46.5% of groundfish activity in Chatham and Harwichport could be affected by the recently-implemented Interim Action” (NEFMC, AM 13 FSEIS, Sec 5.6.1.3). The input controls of Amendment 13 increased the localized impacts experienced as a result of the Interim Rule. Furthermore, FW42 is expected to result in the following changes in revenues for the common poll vessels: -21 change in total revenue (\$ million); -15 change in groundfish revenue (\$ million); -19% change in total revenue on groundfish trips and in groundfish

revenue; and -10% change in total revenue (NEFMC FW42 FSEIS 7.12.5). Sector management would allow for an offset to these costs.

Fixed gear fishermen and the Chatham/Harwichport area are dependent on GB cod. Revenue dependence of 71% renders the fleet subordinate to the fish. Because of this, distributional impacts of fishery management are most severely felt in Chatham/Harwichport and amongst fixed gear fishermen when GB cod is restricted. By implementing the Ops Plan in 2007 and allowing the benefits of community-based management, these negative distributional impacts would be minimized or mitigated.

By allowing fishermen to take part in localized decision-making, fishermen maximize their opportunity to make safety-conscious decisions and potentially save lives. This community-based management also allows for rapid response to changing developments on the ocean. Measures such as the individual quota and DAS usage pulse the fishery so it does not concentrate in times of questionable weather. Having the flexibility of the DAS redistribution/pooling stipulation leads to cooperative fishing and allows the most tired vessels to rest at shore and fishermen to work together to avoid bad weather instead of racing to fish. Implementation of the Ops Plan would have major safety benefits and a positive social impact for both the Sector and Chatham/Harwichport area when compared to what may occur under the No Action alternative.

Implementation of the Sector and Ops Plan and allocation of GB cod would allow Sector members the flexibility to implement management measures that promote efficient methods of harvesting the GB cod resource with fixed gear. This would allow Sector members to remain economically viable while adjusting to changing economic and fishing conditions. By allowing the Sector to create its own input controls while staying within a hard TAC, Sector members would be able to realize greater economic returns on their investment in the groundfishery. This is crucial, given the anticipated -6.5% in total revenue for the port of Chatham as anticipated in FW42 (NEFMC FW42 FSEIS 7.12.5).

This has been very evident in the 3 years of Hook Sector operation. The daily presence of supportive fishermen in the Sector office is a testament to the effectiveness of this action. The socio-economic benefits gained by the Hook Sector have convinced the GB Cod Fixed Gear Sector to pursue this alternative. Furthermore, the NEFMC continues to receive applications for Sector management while developing Amendment 16 (which includes the concept of Sector management) and the Sector Omnibus Amendment. It is evident that Sectors are gaining a stronger foothold in the region, and can be partially attributed to the socio-economic success of the Hook Sector.

The following passages have been excerpted in part from the Amendment 13 FSEIS as prepared by the NEFMC:

As discussed in Section 5.1.3, Chatham/Harwichport has a high degree of dependence on the groundfishery. As the FSEIS stated, the economic impacts of recent multispecies fishery management actions and the proposed changes in FW 42 would be reduced in Chatham/Harwichport through implementation of the Ops Plan. The Sector implementation allows a group of vessels to adapt their fishing behavior so that they remain economically viable in the face of increasing restrictions imposed to rebuild groundfish stocks. The ability to form and operate a Sector is an important component of providing flexibility to small commercial fishing entities to mitigate the economic impacts of Amendment 13 and subsequent framework adjustments. Further, the geographic location of the membership of this Sector provides an opportunity for their fishing communities to reduce localized economic impacts.

The Sector Ops Plan allows flexibility to develop the fishery efficiently and offset economic impacts that result from fishing restrictions required to rebuild groundfish stocks. For instance, “the creation of a voluntary sector for longline/hook and gillnet vessels on GB provides an opportunity for vessels to mitigate the impacts of the management alternatives. By organizing into a cooperative, vessels may be able to develop more efficient ways to harvest groundfish and minimize the inefficiencies that result from the regulations... Depending upon the selected management alternative a sector allocation for this particular sector could be the difference between financial viability and business failure... Thus, relative to other gear sectors in other ports, the proposed GB Fixed Gear Sector Allocation may be an important component in regulatory design to offer small entity flexibility in the Chatham/Harwich fishing community. (NEFMC, Am 13, FSEIS section 5.4.9.3.1)

Sector allocation is cited repeatedly as a measure to mitigate economic harm caused by Amendment 13. For instance, “other opportunities have been created to ensure a viable fishing industry. The proposed action would 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” (NEFMC, Am 13 FSEIS, Section 7.2.10). Furthermore, “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 ... sector allocation...” (NEFMC, Am 13 FSEIS, Section 7.3.3.7.2).

Several specific elements of the Harvesting Rules that have social and/or economic impacts are listed below:

- (1) The hard TAC (Harvesting Rule #1) sets an absolute maximum poundage of fish that the Sector can catch each year which sets a maximum amount of revenue a fisherman or a fishing community can expect for the year. Although there are times of the year when Sector members will not be fishing, they will have peace of mind that comes from knowing the Sector has an allocation and therefore, will not contribute to overfishing. This allocation allows individuals, businesses, and communities to prepare business plans and fishing plans, providing a degree of economic stability. Furthermore, by preventing overfishing in the Sector, the hard TAC allows the possibility of a viable economic future for the fixed gear fleet;
- (2) Monthly quotas (Harvesting Rule #2) spread out the catch evenly throughout the year ensuring opportunities for a diverse set of fishermen, including those who, for whatever reason, choose to codfish more intensively at one time of the year or another. This will more evenly distribute the revenues of the Sector amongst individual members as well as the community. In addition, this will ensure that revenues from groundfishing are felt year round, which will be positive for fish processors and other shoreside businesses;
- (3) DAS allocations (Harvesting Rule #4) set an absolute maximum on the amount of effort the fleet can expend in attempting to catch the Sector allocation each year. DAS restrictions and DAS cuts and their social impacts overall are outside the scope of this EA and well documented in Amendment 13 FSEIS. For the purposes of this EA, usage of DAS as envisioned in the Ops Plan will serve to maintain the relative distribution of effort within the Sector. Compared to the No Action alternative, this alternative will have positive social benefits by maintaining a social structure that is familiar to the community. Generally, fishermen who caught the most during the qualifying period and brought the most catch history to the Sector are the same members who bring the most DAS to the Sector. Thus, relative effort in the Sector will be similar to what it was during the qualifying period. This will keep a similar economic hierarchy in place;
- (4) The Sector call-in provision (Harvesting Rule #5) allows the Manager to monitor the Sector members in real time so as to ensure that the hard TAC and individual quotas are not exceeded. This enforcement opportunity will provide economic security for Sector members;

- (5) The DAS redistribution/pooling (Harvesting Rule #6) stipulation allows Sector members to maximize efficiency within the Sector creating a positive social benefit for the fleet and the community compared to the No Action alternative. Through resource sharing, the community will achieve maximum rents while minimizing effort in the short term. By using the resource cooperatively as designed in the Ops Plan, Sector members can stay in business as GB cod stocks rebuild and the fleet is rationalized. As stated earlier, this will have corollary safety benefits; Allowing Sector members the necessary flexibility and means to create business plans that offer a reasonable shot at keeping them in business while GB cod rebuilds is the underlying principle of sector allocation;
- (6) The full retention (Harvesting Rule #7) requirement ensures that all legal-sized cod caught by Sector members will be landed and counted against the Sector quota. This will end regulatory discards of legal-sized GB cod, allowing Sector members to maximize per trip revenue. This creates an economic benefit to the Sector, as well as the community and the Nation as a whole, because America's fish will not be wasted;
- (7) Gear restrictions (Harvesting Rule #9) ensure that Sector members will only pursue groundfish with fixed gear. This will have no economic impacts for the community as a whole because fishermen will not change current practices. In addition, fishermen will not incur the cost of switching gear. In addition, exemption from hook limits provides the flexibility for Sector members to maximize revenue by bringing in more fish when the market is better. It also allows fishermen to take advantage of temporal and seasonal opportunities to catch GB cod while avoiding bycatch of other species. Creating the flexibility to maximize revenue per trip allows the fleet to maximize revenue while minimizing expenses. This will bring positive economic impacts compared to the No Action alternative; and
- (8) The GB seasonal closure/spawning season restriction (Harvesting Rule #10) allows Sector members to catch quota in May using hook gear. This will keep from having the entire fleet out of business in May, providing a positive social and economic impact as fishermen have revenues. Operating within the Sector Area (Harvesting Rule #12) allows Sector members to continue to pursue monkfish, an economic necessity to nearly every member, in their traditional fishing areas with traditional fixed gear while still maintaining accountability and responsibility for any legal-sized GB cod caught.

Social and Economic Conclusions

Compared with the No Action alternative, Alternative 2 would have positive social impacts for the GB fixed gear fleet and the Chatham/Harwichport area. Implementation of the Ops Plan provides safety benefits as well as regulatory flexibility that would allow cooperative harvest and the maximization of economic opportunity. Implementation of the Ops Plan and allocation of GB cod would allow the Sector the flexibility it needs to maximize revenues while minimizing expenses in the short term. It would allow Chatham/Harwichport to remain in the commercial groundfish business and benefit from the rebuilding of the groundfish resource.

5.3 QUALITATIVE COMPARATIVE IMPACT ASSESSMENT

As this document describes, there would be different impacts depending on which alternative is chosen. Each alternative is expected to have a negligible impact on the biological and physical environment; thus, each alternative is equal in these respects. Alternative 2 offers overall positive social impacts compared to the No Action alternative (Alternative 1). In regards to economic impacts, Alternative 2 provides economic benefits to Sector members that may not be realized as compared to Alternative 1. Table 14 summarizes these impacts as well as cumulative impacts of the alternatives.

	Biological Impacts				Habitat Impacts	Social impacts			Economic Impacts			Cumulative Impacts
	Overall	Target Species	Non-target species	Protected Species		Overall	Chatham/Harwich	Fixed Gear Sector	Economic Impacts	Chatham/Harwich	Fixed Gear Sector	
Alternative 2 (Sector operations plan)	Most beneficial compared to the No Action Alternative: No overfishing, reduced bycatch, and no redirection of effort onto Gulf of Maine stocks	Positive: Full retention and allocation ensures no overfishing	Positive: No net increase in catch of non-target species and no redirection of effort onto Gulf of Maine stocks	Positive: No net increase and minimal impacts	Positive: More fixed gear fishermen and less habitat interactions	Positive: Maximum social benefits	Positive: Shoreside jobs would remain	Positive: Safety benefits, more cooperation	Positive: Most efficient measures would be utilized	Positive: Small entity flexibility	Positive: Creates efficiency and stabilizes revenues	Positive (+): Implementation of the Sector Ops Plan would mitigate harmful impacts of Amendment 13 to the Northeast Multispecies FMP by conveying environmental, social, and economic benefits directly to the Sector members. It would protect fixed gear fishermen and the local community of Chatham/Harwich
Aggregate sector allocation (Hard TAC)	Positive	Positive: Prevents overfishing	Positive: Stops bycatch once TAC is met	Positive: No net increase and minimal impacts	Positive: Ends Sector impacts once TAC is met	Positive: Provides certainty and long range planning	Positive: Maintains low impact fixed gear fishery	Positive: Maintains low impact fixed gear fishery	Positive: Allows for planning and ensures economic stability	Positive: Provides realistic expectations of economic activity	Positive: Allows for planning	
Monthly quota targets	Negligible	Negligible	Negligible: Temporal limit on bycatch	Positive: Stop fishing at quota and reduces interactions	End Sector impacts once quota is met	Positive	Positive: Spread catch throughout year and creates more opportunities	Positive: Spread catch throughout year and creates more opportunities	Positive: Evenly distribute resources throughout year	Positive: Provide groundfish to communities throughout the year	Positive: Distributes catches throughout the year and creates stability	
DAS allocations	Positive	Positive: Protects against overfishing	Positive: Identify number of possible fishing events	Negligible	Negligible: Gear considered low impact	Positive	Positive: Continue social structure familiar to community	Negligible	Positive	Negligible: Maintain relative distribution of catches	Negligible: Maintain relative distribution of catches	
DAS redistribution/pooling	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Positive	Positive: Maximizes efficiency within sector	Positive: Maximizes efficiency within sector	Positive	Negligible	Positive: Maximizes efficiency	
Full retention	Positive	Ensures no overfishing through discards	Not Applicable	Negligible: Fixed gear fishery not considered a threat given the low occurrence of turtles in the proposed study area	Not Applicable	Positive	Positive: Ends regulatory discards and creates goodwill	Positive: Ends regulatory discards and increases efficiency	Positive	Negligible	Positive: Prevents discards and maximizes per trip revenue	
Hook size and limits	Positive	Reduces undersized cod catches	Increases survivability and escapement	Increases survivability and escapement	Allow minimal disturbance	Not Applicable	Not Applicable	Not Applicable	Positive	Negligible	Positive: Creates flexibility and allows fishers to maximize efficiency	

May seasonal closure exemption	Negligible	Negligible: Hard TAC controlled	Negligible: DAS limited	Negligible: Fixed gear fishery not considered a threat given the low occurrence of turtles in the proposed study area	Negligible: Gear considered low impact	Positive: Safety and flexibility increase	Positive: Permits DAS to be used during safer month	Positive: Restores temporal access to hook fishery	Negligible: Possible benefit to members due to limited supply	Negligible: Allows segment of fleet opportunity during closure	Positive: Allows portion of TAC to be fished during "good" weather month	
Gear restrictions	Positive	Positive: Elimination of regulatory discards	No increase	No increase	Positive: Prevent conversion to mobile gear	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	

Table 14 - Biological, habitat, social, economic and cumulative impacts of the proposed management measure in comparison to the No Action alternative presented in this EA.

5.4 ESSENTIAL FISH HABITAT ASSESSMENT

Description of Action

The “Preferred Alternative” is implementation of Framework 42 and submission and approval of the GB Cod Fixed Gear Sector Operations Plan. The Sector is a group of self-selecting fishermen that have come together voluntarily and cooperatively for the purposes of efficiently harvesting an annual allocation of GB cod using hook gear and gillnets in the GB Cod Hook Sector Operating Area. The Sector would operate under a hard TAC of GB cod to meet the overfishing mandates of the SFA amendment to the Magnuson Act.

The “No Action Alternative” is the implementation of the GB Cod Fixed Gear Sector Allocation WITHOUT submission or approval of neither the Operations Plan nor any modified Operations Plan. While the Sector would be available under this alternative, all vessels would opt to remain in the Common Pool and fish under the regulations implemented in Amendment 13 and subsequent framework adjustments to the Northeast Multispecies FMP. Therefore, no allocation of GB cod would be made to the Sector and the fishermen would not be restricted by area or gear type.

Assessing Potential Adverse Impacts on EFH

See section 5.1.2 of this document for background habitat goals statement from NMFS.

Alternative 1 is expected to have no habitat impacts because it is a baseline condition in which the multispecies fishery would continue to be conducted as is: without the creation of the Sector. Habitat impacts of the existing fishery have already been minimized by the establishment of the habitat closed areas and effort controls that were approved in Amendment 13 and subsequent framework actions. As such, no additional habitat impacts would result that haven’t already been accounted for.

The Preferred Alternative is expected to have positive habitat impacts because it ensures that fixed gear fishermen remain rather than switching their effort to other gear types that have greater habitat impacts. This excerpt from Table 135 of the Amendment 13 FEIS describes the habitat implications of sector allocation can be seen below:

Alternative	Overall Habitat Impact	Feature	Description of Essential Fish Habitat Impact
Sector Allocation	Neutral Impact (0)	Approval of sector allocation proposal brought to NMFS through Council. Sector decides about movement among sectors. Allocation based on documented catch. Hard TACs by species.	As a management measure, sector allocation is not expected to have any significant habitat impacts.
GB Fixed Gear Sector	Neutral Impact (0)	Approval of GB Hook Sector	This sector allocation program is not expected to have any significant habitat impacts, especially since fixed gear has been deemed not to have adverse impacts on EFH.

Table 15 – Habitat implications of Sector allocation as presented in the Amendment 13 FEIS. Note that this table does not contemplate every aspect of the Ops Plan. (NEFMC, Am 13 FEIS, Section 5.3.6.7)

Question 3 of the FONSI asks “Can the proposed action reasonably be 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?” In response, the Proposed Action is not expected to allow substantial damage to the ocean and coastal habitats and/or EFH as defined under the under the Magnuson Act and identified in the FMP. The fixed gear used by Sector members in the proposed action has minimal adverse impacts on marine habitats or EFH.

Several specific elements of the Harvesting Rules that have impacts on habitat are re-listed below:

- The hard TAC (Harvesting Rule #1) ends Sector impacts on habitat when the allocation is caught each year;
- Monthly quota targets (Harvesting Rule #2) end Sector impacts on habitat when the quota is caught each month;
- DAS allocations (Harvesting Rule #4) set an absolute maximum on fishing effort, and therefore habitat interaction for the Sector;
- Elimination of the daily trip limit for target species (Harvesting Rule #8) in lieu of a hard TAC would allow vessels to operate more efficiently and would likely reduce fishing time due to the achievement of the TAC;
- Gear restrictions (Harvesting Rule #9) subjects participating vessels to the same gillnet gear restrictions applicable to common pool vessels, and therefore no increased habitat impacts would occur. In addition, by entering into agreement with the Sector, vessels are prevented from using mobile gear, which has higher levels of bycatch and discards than fixed gear. Finally, all gillnet gear used under the Sector Operations Plan would be in compliance with ALWTRP, HPTRP, and BDTRP regulations; and
- The GB seasonal closure/spawning season restriction (Harvesting Rule #10) stipulation has minimal impacts on habitat. Even though fishing on GB would occur during May, and then only with hook gear, any habitat interactions would be offset by a reduction in GOM fishing effort. Furthermore, because the Sector is managed under a hard TAC, based on the catch history of Sector members, there would be no yearly net increase in habitat interactions resulting from implementation of the Ops Plan.

By operating under a hard TAC and within the Sector Ops Plan, it can clearly be seen that the net effect of the previously-mentioned management measures (“harvesting rules”) would result in a positive habitat impact.

Conclusions

Clearly, implementation of the Ops Plan would have positive habitat impacts because it ensures that fixed gear fishermen remain rather than switching their effort to other gear types that have greater habitat impacts. Upon approval of the Ops Plan, Sector members would voluntarily restrict themselves to using only hook and gillnet gear (gear with known minimal habitat impacts) and only in the GB Cod Hook Sector area. Under Alternative 1, fishermen would have the ability to switch to more efficient gear types, including bottom trawls, which have a much greater adverse impact on benthic habitats than fixed gear.

5.5 IMPACTS TO MARINE MAMMALS, ENDANGERED OR THREATENED SPECIES, AND OTHER PROTECTED RESOURCES

In the Northeast region, marine mammals, endangered, and protected species utilize marine habitats to feed, reproduce, and utilize as nursery areas and migratory corridors. Some species occupy these areas year-round while others use these regions only seasonally or move traverse inshore and offshore waters. Due to the overlap between ecological niche and commercial fishing operations, these species occasionally interact with fixed gear. Species that are known to have interacted with the longline and/or gillnet fisheries in the proposed area are as follows: Bottlenose, Common, Risso’s, and White-Sided

dolphin; Fin, Humpback, Canadian East Coast Minke, Pilot, and North Atlantic Right whale; Harbor Porpoise; Gray, Hooded, Harbor, and Harp seal; Leatherback, Kemp's Ridley, Green, and Loggerhead turtle. The status of these species inhabiting the Northwest Atlantic, not including turtle species, has been discussed in detail in the *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments*. Initial assessments were presented in Blaylock *et al.* (1995) and are updated in Waring *et al.* (2005).

The Northeast/Mid Atlantic bottom longline/hook-and-line fishery is currently listed in Category III of the LOF. In addition, the Northeast sink gillnet fishery is currently listed in Category I of the MMPA LOF. Interactions between the aforementioned species and fixed gear include getting caught on hooks (longline gear), entanglement in mesh (gillnet fishery), entanglement in float line (gillnet fishery), entanglement in groundline (gillnet and longline fisheries), entanglement in anchor line (gillnet and longline fisheries), or entanglement in vertical lines that connect the gear to the surface (gillnet and longline fisheries).

The Northeast/Mid-Atlantic bottom longline/hook-and-line fishery recorded no incidental injuries or deaths of any endangered marine mammals, seals, or sea turtles in the MMPA LOF for 2005 or 2006 for the proposed area. Additionally, the Northeast Fisheries Observer Program Annual Marine Mammal and Sea Turtle Incidental Take Report, zero incidental takes of marine mammals, seals, or sea turtles occurred with bottom longline gear in 2005 and 2006 in the proposed area.

According to the LOF, the list of marine mammals incidentally killed or injured in the Northeast sink gillnet fishery in 2005 and 2006 included Offshore Bottlenose, Common, Risso's, and White-sided dolphin; Fin, Minke, Humpback, and North Atlantic Right whales; Gray, Harbor, Harp, and Hooded seals; and Harbor porpoise. The Northeast Fisheries Observer Program Annual Marine Mammal and Sea Turtle Incidental Take Reports indicate that 177 marine mammal and 2 turtle interactions occurred in 2005, and 70 marine mammal and 0 turtle interactions in 2006.

Given the low occurrence of loggerheads and leatherbacks and the rarity of green, Kemp's ridley, and hawksbill turtles in the Northeast region, it is unlikely that the proposed action would have any adverse impact on ESA-listed or other sea turtles.

Over time limited access as well as a cap on landings and effort should contribute toward a reduction in marine mammal interactions, and harbor porpoise specifically. Additionally, less gillnet fishing, provided that effort does not simply shift, may have a direct positive impact on achieving the PBR goals for endangered whales. Based on information collected in similar fisheries, the major gear types used in the monkfish fishery appear to have few interactions with sea turtles, although it must be acknowledged there is little or no information available from the Southern Management Area where such occurrences are likely to take place (NEFMC, Monkfish FMP).

According to Waring *et al.*, effort patterns in sink gillnet fisheries within the proposed area are heavily influenced by pinger requirements, marine mammal time/area closures, fish time/area closures, and gear restrictions due to fish conservation measures, the ALWTRP, and the HPTRP. Effort patterns in bottom longline fisheries result from fish time/area closures, gear restrictions, the ALWTRP, and the HPTRP. These controls would further assist the Sector in monitoring and ultimately reducing its interactions with marine mammals, endangered, threatened, or protected species.

Although marine mammals often frequent the proposed area and can interact with fixed gear, the Sector is not expected to increase their interactions with these marine mammals. The Sector anticipates using DAS and a hard TAC of GB cod (to cap effort), full retention of legal-sized cod (to eliminate discards and increase efficiency) and Sector management (to respond in near-real time to constantly changing species interactions) as tools to minimize the potential for protected species interactions. Furthermore, by

increasing the Sector's efficiency, fixed gear soak times are predicted to decrease; by increasing their operating efficiency, fixed gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. Thus, the Sector anticipates a decreasing rate of interactions with marine mammals, endangered or threatened species, and other protected resources.

The Sector would continue to operate in a traditional manner in a traditional fishing area. However, by operating under a hard TAC rather than a daily trip limit (current management), the Sector would be able to harvest their allocation of cod more efficiently and in less time. Through an increase in efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. Although the Sector would operate differently (monkfish fishing versus cod fishing) during different times of the year, and as the potential for protected species interactions changes, the overall effects of the Sector on protected species are anticipated to be positive. Furthermore, through daily communication with the Sector members, the Manager has the ability and authority to implement further gear and area restrictions if interactions with protected species can't be avoided. The ability of the Manager to monitor the Sector in near-real time is the basis for its effectiveness and a model for regional fisheries management.

5.6 CUMULATIVE IMPACTS

Cumulative impacts are the impacts on the environment that results from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Table 14 provides an overview of the cumulative impacts of the proposed alternative in relation to the No Action alternative. Much of the cumulative effects outlined therein and related below are derivative of the detailed Environmental Impacts sections of this document (5.0 through 5.5) and the cumulative impacts discussion in the Amendment 13 FSEIS. The analyses that follow are qualitative in nature.

5.6.1 GEOGRAPHIC AND TEMPORAL SCOPE

Since Alternative 1 is a continuation of the input controls that have evolved since Amendment 5, the temporal scope of the cumulative effects assessment begins in 1994 with the implementation of the DAS system.

As mandated in Amendment 13, Sectors must submit an EA and Ops Plan to the RO on an annual basis. As such, the scope of the Ops Plan only spans one fishing year; however, due to the constantly changing regulatory environment, the EA must look forward to the reasonably foreseeable future actions of NMFS and the NEFMC and attempt to analyze the potential impacts they may have on the Sector. The temporal scope of the cumulative impacts analysis includes the current condition of the ecosystem components and looks forward to the reasonably foreseeable future actions of NMFS and the NEFMC in an effort to analyze the potential impacts they may have on the Sector.

5.6.1.1 PAST, PRESENT AND REASONABLY FORESEEABLE FUTURE ACTIONS

Past, present, and reasonably foreseeable future actions in the Northeast Multispecies fishery are described, and their impacts summarized, in Section 5.0 of this document. The cumulative impacts of the most recent actions in the Northeast Multispecies are summarized here.

Cumulative Sector Impacts following implementation of Framework 42

Measures considered in Framework 42 have the potential to further reduce efficiency and fishing opportunities for Sector members. While it is premature to identify the likely outcome, the range of alternatives under consideration would likely negatively impact the members of the GB Cod Fixed Gear Sector by compromising the opportunity of the Sector to harvest its allocation of GB cod. The measures in FW 42 are designed to have overall positive impacts on biological resources (i.e., reduce mortality on certain groundfish stocks); however, the FW 42 measures have disproportionate impacts on Sector members due to the prohibition on use of non fixed gear, restrictions on DAS leasing, and capacity of the fleet.

Reasonably Foreseeable Future Actions

The NEFMC is considering initiating a Sector Omnibus Amendment to be developed by the Ad Hoc Sector Omnibus Committee. Creation of this Amendment would allow for insertion of Sector-specific language into all FMPs under the NEFMC, in an attempt to streamline future sector development and implementation.

Additionally, the NEFMC has started work on the next regulatory action: Amendment 16. The previous Amendment (13) called for a review of multispecies rebuilding progress and, if necessary, adjustments to regulations at the beginning of the 2009 FY. For several stocks, Amendment 13 calls for further reductions in fishing mortality beginning in 2009. Assessments are planned in 2008 to evaluate stock status and rebuilding targets. Amendment 16 is being initiated so that the NEFMC can react quickly to the results of those assessments in order to continue stock rebuilding and achieve optimum yield from the fishery (NEFMC).

5.6.2 ALTERNATIVE 1 (NO ACTION)

No cumulative impacts have been identified for Alternative 1 that have not been analyzed by the FSEIS for Framework 42. Because Alternative 1 is a continuation of the input controls that have evolved since Amendment 5 in the 1990s, the cumulative impacts are the same as Framework 42. The cumulative impacts were analyzed in Framework 42: “The cumulative impacts of past and present management actions have resulted in substantial effort reductions in the multispecies fishery. Although this has benefited some stocks (GB haddock), rebuilding has been slow for others (GB and GOM cod, CC/GOM, GB and SNE/MA yellowtail flounder, GB and SNE/MA winter flounder and white hake). It is anticipated that new effort reductions implemented under Amendment 13 and this action will end overfishing for all stocks, while also creating new opportunities for groundfish vessels to target healthy stocks” (NEFMC FW42 Section 7.11.4).

Additionally, “The cumulative effects of this action are not likely to have a significant impact on regulated groundfish stocks (target and non-target), non-groundfish species (incidental catch and bycatch), endangered and other protected species, and habitat, including non-fishing effects. The overall reductions in fishing effort adopted by previous management actions would have a positive biological impact on groundfish and other stocks. This action would further reduce fishing effort on many stocks in order to maintain progress in the rebuilding program. While there may be a small increase in mortality for some stocks (GB haddock) as a result of increased SAPs and the use of Category B (regular) DAS, this increase is not likely to have a significant impact. With respect to endangered and other protected species, the proposed measures would have negligible impacts. Impacts on habitat and EFH are also expected to be minimal. Therefore, the Proposed Action would not result in significant cumulative impacts to fisheries resources, habitat, protected species. The cumulative effects of this action are likely to have a significant impact on fishing communities and the economic returns from the groundfish fishery. Additional short-term revenue losses are expected to result from the need to reduce fishing mortality on several stocks to continue stock rebuilding” (NEFMC FW42, Section 7.11.4)

While the overall cumulative impacts of Alternative 1 are considered to be negligible, the cod-dependent fixed gear fishery of Georges Bank would not survive the multiple regulation changes that apply to Common Pool vessels and Alternative 1. Furthermore, additional restrictive measures are expected in Amendment 16 if the 2008 assessments reflect the current mindset of much of the fleet, including further reductions in DAS and trip limits. The Sector Omnibus Amendment, if completed in a timely manner and implemented appropriately, may provide minimal relief. However, under the No Action alternative, the fixed gear fishery would likely experience mostly negative direct social and economic impacts compared to Alternative 2.

5.6.3 ALTERNATIVE 2 (PREFERRED ALTERNATIVE)

Alternative 2 would approve and implement the GB Fixed Gear Sector Ops Plan for FY2007. This would have minimal or positive direct biological, habitat, social and economic impacts, as outlined in Section 5.2 of this EA, and also by the excerpt below from Table 363, Section 5.7 of the Amendment 13 FSEIS. It should be noted that this excerpt does not present cumulative impacts per se, but instead it demonstrates the minimal-to-positive nature of the categorical impacts of Sector Allocation, both general and gear specific. However, because of the limited scope (less than 25 vessels compromising less than 20% of the catch for one of 15 managed species) of the proposed management measure when considered in the context of the overall Northeast Multispecies fishery, minimal positive cumulative impacts would result. Implementation of the Ops Plan would allow the Sector the flexibility it needs to maximize revenues while minimizing expenses in the short term. It would allow Chatham/Harwichport to remain in the commercial groundfish business and benefit from the rebuilding of the groundfish resource. This has been very evident in the 3 years of Hook Sector operation. The daily presence of supportive fishermen in the Sector office is a testament to the effectiveness of this action. The socio-economic benefits gained by the Hook Sector have convinced the GB Cod Fixed Gear Sector to pursue this alternative. Furthermore, the NEFMC continues to receive applications for Sector management while developing Amendment 16 (which includes the concept of Sector management) and the Sector Omnibus Amendment. It is evident that Sectors are gaining a stronger foothold in the region, and can be partially attributed to the socio-economic success of the Hook Sector.

Alternative Name	Effects on Communities	Effects on Groundfish Stocks	Effects on Protected Species	Effects on Habitat			
Sector Allocation (general) (Proposed action)	(+) increased opportunity participate in regulatory process; provides autonomy to fishers	(O)	(O)	(O)			
<ul style="list-style-type: none"> • Formation of a Sector • Sector Review and Approval o Option 1 – Streamlined Approval Process o Option 2 – Periodic Adjustment Process (Proposed action) • Movement Between Sectors o Option 1 o Option 2 o Option 3 (Proposed action) • Allocation of Resources o Option 1 o Option 2 (Proposed action) • Mortality/Conservation Controls • Enforcement of Sector Provisions/VMS Requirements • Interaction of Sector with Common Pool Vessels 							
Georges Bank Hook/Gillnet Sector Allocation							
<ul style="list-style-type: none"> • Georges Bank Cod Hook Sector (Proposed action) • Georges Bank Cod Gillnet Sector (Not selected) 							
					(+) gear restrictions, TACs, closed seasons		
					(+) increased opportunity to participate in regulatory process; provides autonomy to GB cod hook and gillnet sectors		(O)

Table 16 - Impacts of Sector Allocation components of Amendment 13
(NEFMC, Am 13 FSEIS, Section 5.7)

Georges Bank has been intensively fished for centuries with all manner of gear for all manner of species. Consequently, many fisheries have impacted the ecosystem found there. It is unlikely that the proposed action would interact with any other fisheries or actions to cause direct impacts on biological, physical, social, or economic resources in the Georges Bank management area that, when considered together, would result in cumulative impacts. Rather in the context of the groundfish fishery, the proposed action would result in some minor direct and indirect impacts.

While Alternative 2 would have negligible biological and habitat implications, its combined positive social and economic impacts constitute a positive impact that is mainly experienced by the GB fixed gear fleet and the Chatham/Harwichport area. Although negligible, the biological impacts of Alternative 2 clearly have the potential to be positive: a portion of GB cod landings would be securely constrained under the three-fold protection of a hard TAC, DAS, and full retention. When social and economic impacts are considered, it is clear that Alternative 2 would have positive cumulative impacts for the GB fixed gear fleet and the Chatham/Harwichport area that would not be realized under Alternative 1. Because the GB cod trip limit is reduced from what it was prior, past actions, such as Amendment 13 and upcoming framework adjustments, have and are expected to continue to have disproportionate negative impacts on communities and fleets that are most dependent on GB cod (NEFMC, Am 13 FSEIS, Executive Summary). As such, Chatham/Harwichport and the GB fixed gear fleet are expected to share a disproportionate burden under the current regulatory environment. The disproportionate economic impacts of the past, present, and reasonably foreseeable future actions may only be mitigated through the positive direct impacts that would be experienced through implementation of the GB Fixed Gear Sector Ops Plan for FY2007. The positive cumulative impacts that would be derived from many factors outlined in Sections 5.2.3 and 5.3 of this EA include the preservation of sink gillnetting and bottom longlining as viable businesses, the preservation of the infrastructure that supports it, the localized cooperative decision-making that crafted the Ops Plan, and the social benefits generated by working closely within the community with the GB Cod Hook Sector. The excerpt below of relevant parts of Table 367, Section 5.7 of the Amendment 13 FSEIS presents the cumulative impacts of the proposed action:

Alternative Name	Cumulative Effects on Communities	Cumulative Effects on Groundfish Stocks	Cumulative Effects on Protected Species	Cumulative Effects on Habitat
Georges Bank Hook/Gillnet Sector Allocation	positive for hook/gillnet sectors, extent unknown	positive, low (Georges Bank)	unknown	none
• Georges Bank Cod Hook Sector (selected)				

Table 17 - Relevant excerpts from the summary of impacts of Amendment 13
(NEFMC, Am 13 FSEIS, Section 5.7)

Further consideration of the Amendment 13 FSEIS bolsters the conclusions of this EA: “In general, sector allocation may be positive for fishermen, since it provides them with more control over specific management measures that would affect their fishing practices. It may lend flexibility to fishers and a greater sense of involvement in the regulatory process. Cumulative effects on fishing communities are, however, unknown at this time. Cumulative effects on the resource and habitat are negligible” (NEFMC, Am 13 FSEIS, Section 5.7.7.1). Furthermore, “Designed by stakeholders in the hook and fixed gear sectors, this proposal is likely to have some positive cumulative effects for Georges Bank hook and fixed gear vessels and their associated communities, although the extent of these benefits are unknown. The cumulative effects of this alternative on the resource are positive for Georges Bank cod for which a quota is established, and positive but low for other Georges Bank stocks due to the additional effort restrictions proposed. There are no cumulative effects on habitat” (NEFMC, Am 13 FSEIS, Section 5.7.7.1).

By creating and implementing a model for other groups to create sectors, Alternative 2 would have a positive, though unquantifiable, social cumulative impact. As groups of fishermen voluntarily come together for the purpose of securing a resource allocation in New England, the Ops Plan provides a model to follow. By being some of the first fishermen in New England to voluntarily accept a hard TAC-based and community-based management regime, the Sector is creating a positive example for the fleet that could translate into social and economic benefit to other fishing groups, while continuing to meet mortality objectives on groundfish stocks. Working with the local hook fleet to form the GB Cod Fixed Gear Sector has provided economic (cost-sharing) opportunities and social cohesiveness within the community.

Past management measures, beginning with Amendment 5 in the mid-1990s, have, over time, restricted GB fixed gear fishermen with input controls that make fixed gear fishing increasingly inefficient. This inefficiency eventually came to the point that Amendment 13, as characterized in Alternative 1, would likely force most bottom longliners and gillnetters to switch to other gears or otherwise shift their effort to more efficient vessels. Amendment 16 will most likely further reduce effort and increase inefficiency in the common pool, but will compliment the Sector Omnibus Amendment and allow for pre-existing Sectors to further develop and refine their operations, maximizing the flexibility and accountability of the Sector. The proposed Sector, with implementation of the Ops Plan, has a positive cumulative impact on the GB fixed gear fleet and the Chatham/Harwichport area as it allows the fleet to escape the inefficiencies of past management actions.

Summary of Cumulative Impacts

As a whole, approval and implementation of the suite of management measures contained in the Ops Plan (Alternative 2), when considered in conjunction with other past, present, and reasonably foreseeable future actions, would result in minor positive social and economic cumulative impacts. It would not result in cumulative impacts to target species, non-target species, protected resources, or habitat. Each measure in the Ops Plan is designed to be a piece of a larger whole that creates an opportunity for the GB fixed gear fleet to survive and for Chatham/Harwichport to remain an active part of the commercial groundfish industry in New England. Alternative 1 would not provide additional social or economic benefits to Sector members nor would it provide any additional protection or benefits to target species, non-target species, protected resources, or habitat, which result in negligible cumulative impacts. Alternative 2 creates a positive cumulative impact when compared with the No Action alternative. Whereas the biological and habitat impacts of Alternative 2 are not compelling in and of themselves, when coupled with the positive social and economic impacts that Alternative 2 offers. Thus, Alternative 2 offers a positive cumulative impact in comparison with the No Action alternative.

6.0 LIST OF PREPARERS

This document was prepared through the cooperative efforts of members of the staffs of the Cape Cod Commercial Hook Fishermen's Association and NOAA Fisheries Service.

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7.0 LIST OF AGENCIES AND PERSONS CONSULTED

The Northeast Regional Office (NERO) of NOAA Fisheries Service and the NEFMC Staff were consulted in preparing this EA.

8.0 REGULATORY IMPACT REVIEW

Description of the Management Objectives

The NEFMC has authorized the formation of Sectors under Amendment 13 to the Northeast Multispecies FMP and has set forth criteria for establishing Sectors in that action. The Sector Ops Plan, approved and implemented under Framework 42 to the same FMP, provides the specific details for how the Sector would function and is required to finalize formation of the Sector. However, the RA must, on an annual basis, approve the Sector's Ops Plan and Agreement. For specific Goals and Objectives to the Amendment, and to see specific goals for the Sector, please refer to Section 1.2 of the EA. Additionally, Sector objectives must take into account the requirements of multiple laws and mandates, including MSA, ESA, MMPA, CZMA, NEPA, APA, QRA, IPA, and EOs 13132, 13158, and 12898. For further information on these laws and mandates, please refer to Section 9.0 of the EA.

Description of the Fishery

The Sector is a group of less than 20 self-selecting, small, dayboat hook and gillnet fishermen that have come together voluntarily and cooperatively for the purposes of efficiently harvesting an annual allocation of GB cod. Each business qualifies as a Small Business under the Small Business Administration (SBA). The Sector would operate under a hard TAC of GB cod to meet the overfishing mandates of the SFA amendment to the Magnuson Act. The Sector participants target GB cod as a primary species, but have had to diversify their fishing businesses to catch other groundfish, monkfish, and skates. They operate year-round, but most intensely from the late-spring to late-fall. They would operate within the GB Hook Sector Operating Area, defined in Section 3.2.1 in the EA, and would be legally bound to adhering to the Sector's Harvesting Rules, outlined in Section 4.2 of the EA.

Statement of the Problem

Amendment 13 will end overfishing and initiate rebuilding plans for stocks in the groundfish complex, as well as minimize bycatch and protect habitat. It will also bring about many positive environmental changes and increased revenue in the long-term but is likely to result in social and economic costs for the New England groundfish fleet in the short-term. Additionally, input control management measures have diminished other fleets in the Gulf of Maine and on Georges Bank. Low trip limits and a diminished GB cod stock status have severely undermined the ability of the GB fixed gear fleet to remain economically viable.

The Sector would allow the GB fixed gear fleet to survive and prosper as stocks rebuild. In addition, the Sector would provide a model for other New England day boat fleets that seek alternative management options. The Sector represents a heretofore unique opportunity for fishermen to lead the way in promoting conservation and stewardship of the resources on which they depend. Authorization of the Sector would provide a vehicle to mitigate many of the Amendment 13 impacts. Likewise, full implementation of the GB Cod Fixed Gear Sector Ops Plan would establish additional means to generate social, economic, and environmental efficiencies. Authorization of the Sector would initiate a viable framework for GB fixed gear vessels to alleviate social and economic hardships while meeting the biological objectives of Amendment 13. For further analysis, please refer to Section 1.3 of the EA.

Description and Economic Analysis of Each Selected Alternative

Alternative 1 is a No Action Alternative: implementation of the Sector Allocation without submission or approval of neither the Operations Plan nor any modified Operations Plan. While the Sector would be available under Alternative 1, all vessels would opt to remain in the Common Pool and fish under the regulations implemented in Amendment 13 and subsequent framework adjustments to the Northeast Multispecies FMP. Therefore, no allocation of GB cod would be made to the Sector.

Alternative 1 would have negative social impacts on local fixed gear fishermen and on the Chatham/Harwich community. The daily GB cod trip limit, in addition to a continued reduction in DAS,

gear restrictions, and ever-increasing closed areas would likely eliminate the traditional, small-boat fleet, as noted at the Social Impact Informational Meetings, “because of increased regulations in many fisheries, small vessels have lost much of their flexibility to move from one fishery to another. In Chatham, meeting participants felt that regulations have ‘boxed them in’ to particular fisheries, making it difficult or impossible for them to maximize their opportunities and/or adjust to changing conditions. When combined with the inherent limitations of small vessels, the regulations have reduced fishing opportunities to the point that many fishermen cannot guarantee a year-round income from fishing for themselves or for their crew” (NEFMC, Am 13 FSEIS, Appendix I). For further economic analysis, please refer to Section 5.1.3 of the EA.

Alternative 2, the Preferred Alternative, is approval of the 2007 GB Cod Fixed Gear Sector Operations Plan and receipt of an allocation of GB cod for FY2007. Sector vessels would be subject to the regulations implemented under the Harvesting Rules (please see Section 4.2 of the EA). In addition to the Ops Plan, Sector members are subject to a legally-binding Membership Agreement that delineates the interaction of members within the Sector, including governance, enforcement, and penalties for non-compliance.

Alternative 2 would provide social benefits to the Sector members as well as to the Chatham/Harwichport, MA communities, which are more than 71% revenue dependent on groundfish stocks, particularly the GB cod stock (NEFMC, AM 13 FSEIS, Sec 5.6.1.3). The Sector Ops Plan allows a range of management measures that would make the Sector economically viable for fixed gear fishermen. The Amendment 13 FEIS concluded that negative distributional impacts affecting Chatham/Harwichport in Amendment 13 are mitigated by Sector allocation: “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. The EA for the settlement agreement estimated that an average of 46.5% of groundfish activity in Chatham and Harwichport could be affected by the recently-implemented Interim Action” (NEFMC, AM 13 FSEIS, Sec 5.6.1.3). For further economic analysis, please refer to Section 5.2.3 of the EA.

Conclusions

Amendment 13 to the FMP, as passed by the NEFMC and approved by NMFS, is having severe, disproportional negative economic impacts on the GB fixed gear fleet. Compared with the No Action alternative, Alternative 2 would have positive social impacts for the GB fixed gear fleet and the Chatham/Harwichport area. Implementation of the Ops Plan provides safety benefits as well as regulatory flexibility that would allow cooperative harvest and the maximization of economic opportunity. Implementation of the Ops Plan and allocation of GB cod would allow the Sector the flexibility it needs to maximize revenues while minimizing expenses in the short term. It would allow Chatham/Harwichport to remain in the commercial groundfish business and benefit from the rebuilding of the groundfish resource. For further conclusions, please refer to Section 5.6.2 (Alternative 1), and Section 5.6.3 (Alternative 2) of the EA.

8.1 DETERMINATION OF SIGNIFICANCE UNDER E.O. 12866

NMFS guidelines provide criteria to be used to evaluate whether a proposed action is significant. A “significant regulatory action” means any regulatory action that is likely to result in a rule that may:

- 1. Have an annual effect on the economy of \$100 Million or more, or adversely effect in a material way the economy, a sector of the economy, productivity, competition, job, the environment, public health or safety, or State, local or tribal governments or communities;*

The proposed action will have neither an annual effect on the economy of \$100 Million, nor adversely effect, in a material way the economy, a sector of the economy, productivity, competition, the environment, public health or safety, or State, local, tribal governments or communities. The SBA defines a small business in the commercial fishing and recreational fishing sector, as a firm with receipts (gross revenues) of up to \$4 million. According to this definition, each member of the Sector qualifies as a small business; their cumulative effect on the economy is less than \$100 Million.

2. *Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;*

The proposed action does not create an inconsistency or otherwise interfere with an action taken or planned by another agency. The activity that would be allowed under this action was approved as part of Framework 42 to the Northeast FMP (71 FR 62156, October 23, 2006), authorized by the NEFMC and approved by NOAA NMFS. Therefore, there is no interference with actions taken by another agency, and no inconsistencies would be created in the management of commercial fisheries in the Northeast.

3. *Materially alter the budgetary impact of entitlements, grants, use fees, or loan programs or the rights and obligations of recipients thereof;*

The proposed action requests approval and implementation of the Sector Ops Plan during the 2007-08 fishing year. Sector members must have documented landings of GB cod during the qualifying period in order to be eligible for participation in the Sector. Sector members would be required to declare their intention to join the Sector to the NMFS RA on an annual basis. Once declared into the Sector, members would fish for groundfish solely within the Georges Bank Hook Sector area (defined earlier). Furthermore, Sector members must utilize fixed (gillnet and hook-and-line) gear to target groundfish. Sector members would be legally bound by a Membership Contract that sets forth the requirements for each member as well as a schedule of penalties for violations of Sector rules. The proposed action does not materially alter the budgetary impact of entitlements, grants, use fees, or loan programs or the rights and obligations of recipients thereof.

4. *Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order;*

The proposed action is being taken pursuant to the mandates of Framework 42 to the Northeast FMP (71 FR 62156, October 23, 2006). Therefore, the proposed action would not be considered significant.

Because none of these criteria apply, NMFS has determined that the proposed action to approve and implement the Sector Operations Plan for 2007-2008, is not significant for the purpose of E.O. 12866.

The Regulatory Flexibility Act requires agencies to assess the impacts of their proposed regulations on small entities. The Regulatory Flexibility Act Analysis (RFAA) determines whether the proposed action would have a significant economic impact on a substantial number of small entities. The SBA size standards define whether a business entity is small and, thus, eligible for Government programs and preferences reserved for "small business" concerns. Size standards have been established for all for-profit economic activities or industries in the North American Industry Classification System (NAICS). The SBA defines a small business in the commercial fishing and recreational fishing sector, as a firm with receipts (gross revenues) of up to \$4 million

9.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The following section provides an assessment and discussion of the potential economic impacts, as required of the RFA, of various proposed management and regulatory actions and alternatives. The objective of the RFA is to require consideration of the capacity of those affected by regulations to bear the direct and indirect costs of regulation. The initial RFA (IRFA) must identify the number and types of businesses that would be regulated, indicate how many of these entities are small businesses, explain the expected economic impact of the regulation on small businesses, and describe any feasible alternatives that would minimize the economic impacts. The number of regulated entities for this action is less than 20 vessels, each of which would be considered a small entity, based on the definition as stated above. The economic impact resulting from this action on these small entities is positive since the action would mitigate the disproportionate impacts of Amendment 13 on the Chatham/Harwichport fixed gear fleet.

Description of the Reasons Why Action by Agency is Being Considered

The specification of hard TACs is necessary in order to limit GB cod mortality in the proposed area. Limitation of fishing mortality in this area enhances management of such stocks. Upon approval of the Ops Plan, the Fixed Gear Sector would be only the second group of fishermen fishing under a hard TAC of GB cod, ensuring that they do not contribute to overfishing of that species. Further description of the purpose and need for the TACs is contained in Section 4.0. The specification of Target TACs is necessary in order to enable the allocation of GB cod to the GB Fixed Gear Sector.

The Objectives and Legal Basis for the Proposed Action

The Northeast (NE) Multispecies Fishery Management Plan and promulgating regulations at 50 CFR §§ 648.87(b.)

Estimate of the Number of Small Entities

Under the SBA size standards for small fishing entities (\$4 million), all permitted and participating vessels in the groundfish fishery are considered to be small. Gross sales by any one entity (vessel) do not exceed this threshold. The maximum number of entities that could be affected by the proposed TAC is approximately 1,000 vessels: the approximate number of vessels in New England with limited access multispecies days-at-sea (DAS) permits and an allocation of Category A or B DAS. Realistically however, the number of vessels that would chose to fish in the Sector would be substantially less than 1,000 vessels. Therefore, those vessels subject to the restrictions associated with the TACs would be substantially less than 1,000 vessels. The number of vessels who anticipate participating in the Sector in FY2007 is approximately 20. However, this number is not likely to increase substantially in FY2008 and beyond, principally due to more restrictive management measures anticipated for that year.

Reporting, Recordkeeping and Other Compliance Requirements

The proposed action mandates reporting requirements that are as stringent or more so than current federal regulations. Sector reporting and recordkeeping regulations do not exempt participants from State and Federal reporting and recordkeeping, but are mandated above and beyond current State and Federal requirements. A full list of compliance requirements can be found in the Sector Operations Plan.

Duplication, Overlap or Conflict with other Federal Rules

The proposed action that would be allowed under this action was approved as part of Framework 42 to the Northeast FMP (71 FR 62156, October 23, 2006), authorized by the NEFMC and approved by NOAA NMFS. It does not duplicate, overlap, or conflict with other Federal rules.

Alternatives which Minimize any Significant Economic Impact of Proposed Action on Small Entities

The Preferred Action would create a positive economic impact for the participating vessels because it would mitigate the harmful, disproportionate impacts of Amendment 13 and ensuing Frameworks on the Chatham/Harwichport fixed gear fleet. At this time, due to the fact that Sector management is new to New England groundfish management, quantitative data on the precise economic impacts is not available. However, the economic impacts are qualitatively present: by coming out from under the inefficient input controls of the current management regime and by operating under both a hard TAC and DAS, Sector members would remain economically viable while adjusting to changing economic and fishing conditions. The No Action Alternative is inconsistent with the fishery management plan in both the short and long term. As such, the no action alternative would likely provide fewer economic benefits to the industry in the long term than the proposed alternative.

Economic Impacts on Small Entities Resulting from Proposed Action

The proposed action would affect less than 20 commercial fishing vessels from Chatham and Harwichport that have voluntarily joined the Sector. In FY99 and FY00, Chatham and Harwichport averaged 5,980,850 pounds of groundfish landings and \$7,254,100 in groundfish revenues, establishing it as an important port of landing for groundfish vessels and a primary port for the multispecies fishery. In FY99 and FY00, an average of 95 multispecies vessels homeported in Chatham/Harwichport generated \$6,844,500 in revenues from multispecies. Chatham's overall community dependence on multispecies as a percentage of total fisheries revenues from federally-permitted vessels averaged about 71% from FY99 – FY00. It is likely that at least some of the active groundfish vessels in Chatham and Harwichport are even more than 71% dependent on the multispecies fishery.

The Amendment 13 FEIS concluded that negative distributional impacts affecting Chatham/Harwichport in Amendment 13 are mitigated by Sector allocation: “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. The EA for the settlement agreement estimated that an average of 46.5% of groundfish activity in Chatham and Harwichport could be affected by the recently-implemented Interim Action” (NEFMC, AM 13 FSEIS, Sec 5.6.1.3).

Sector allocation is cited repeatedly as a measure to mitigate economic harm caused by Amendment 13. For instance, “other opportunities have been created to ensure a viable fishing industry. The proposed action would 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” (NEFMC, Am 13 FSEIS, Section 7.2.10). Furthermore, “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 ... sector allocation...” (NEFMC, Am 13 FSEIS, Section 7.3.3.7.2). The Sector Ops Plan allows a range of management measures that would make the Sector economically viable for fixed gear fishermen. For further economic impacts, please refer to Section 5.3 (Table 14) of the EA.

10.0 APPLICABLE LAW

Magnuson-Stevens Fishery Conservation and Management Act (MSA)

The proposed action would comply with all elements of the Magnuson Act, including the National Standards, and the Northeast Multispecies FMP.

Endangered Species Act (ESA)

Section 7 of the ESA requires Federal agencies conducting, authorizing, or funding activities that affect threatened or endangered species to ensure that those effects do not jeopardize the continued existence of listed species. As such, the proposed action is not expected to jeopardize the continued existence of the threatened and endangered species found within the proposed area. There are listed species which interact with the bottom longline and anchored sink gillnet fisheries to varying degrees, depending on the gear type deployed and the area and season in which it is fished. However, the impacts of the proposed action on protected species are considered in section 5.2.1 of the EA. Although the Northeast sink gillnet fishery is listed as a Category I fishery in the MMPA LOF, interactions with protected species are not expected to increase. The hard TAC and the requirement to use DAS would provide two mechanisms to restrict both the effort and landings of the Sector. Through daily communication with the Sector members, the Manager has the ability and authority to implement additional gear restrictions if interactions with endangered species present an ongoing problem. By operating under a hard TAC rather than a daily trip limit, the Sector would be able to harvest their allocation of cod more efficiently and in less time. By increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. In addition, none of the proposed exempted activities are expected to result in the additional adverse impacts that would change the basis for the determinations in previous consultations. It is expected that both hook and anchored sink gillnet interactions with endangered species would remain status quo, or would be reduced due to increased monitoring, accountability, and fishing efficiency (Section 3.1.3). In conclusion, NOAA Fisheries Service has determined that there would be no increased direct or indirect impacts on protected resources, including endangered or threatened species or their habitat.

Marine Mammal Protection Act (MMPA)

All U.S. commercial fishing operations are placed into one of three categories based on their levels of incidental and serious injury of marine mammals as required by section 118 of the MMPA. The anchored sink gillnet fishery in the Northeast is listed as a Category I fishery (frequent incidental mortality) while the Northeast/Mid-Atlantic bottom longline/hook-and-line fishery is listed as a Category III fishery (remote likelihood of, or no known incidental mortality).

Although the Proposed Action is likely to affect species inhabiting the proposed area, the measures would not alter the effectiveness of existing MMPA measures, such as take reduction plans, to protect those species based on overall reductions in fishing effort that have been implemented through the Proposed Action. Through DAS and a hard TAC of GB cod (to cap effort), full retention of legal-sized cod (to eliminate discards and increase efficiency) Sector management (to respond in near-real time to constantly changing species interactions), and exemption from daily trip limits in lieu of a hard TAC (to maximize efficiency and reduce the amount of time gear remains in the water), the Sector would account for and reduce the potential for marine mammal interactions. Further actions to reduce the likelihood of interactions between the gear types governed by this FMP and the marine mammals that inhabit the area in which these fisheries are prosecuted would be considered if deemed necessary.

NOAA Fisheries Service has concluded that there would be no direct or indirect negative impacts on marine mammals, that the proposed action is consistent with the provisions of the MMPA, and that the proposed action would not alter existing measures to protect the species likely to inhabit the management units of the subject fisheries.

Coastal Zone Management Act (CZMA)

According to Section 307(c)(1) of the CZMA, all Federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable.

The NEFMC has determined that this action would have no effect on any coastal use or resources of any state. The NEFMC reviewed the approved coastal zone management plans of the following states to determine the consistency of the EA and Ops Plan with the enforceable policies of the state programs: Massachusetts, and Rhode Island (the coastline of Maine, New Hampshire, and Connecticut do not adjoin the GB cod stock area). The NEFMC has determined that this action would have no effect on any coastal use or resources of any state. Letters documenting the negative determination by the NEFMC would be sent to the coastal zone management program offices of the aforementioned states. A list of the specific state contacts and a copy of the letters would be available upon completion and if requested.

National Environmental Policy Act (NEPA)

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Finding of No Significant Impact for Approval of the Georges Bank Cod Fixed Gear Sector Operations Plan

National Marine Fisheries Service

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NOAA Administrative Order 216-6 criteria and CEQ’s context and intensity criteria. These include:

1) *Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?*

Response: The Proposed Action would not jeopardize the sustainability of the target species (cod) affected by the action because the GB Cod Fixed Gear Sector has a set TAC for cod that would be adhered to on an annual basis. The biological impacts of the proposed action are analyzed in Section 5.2.1.

2) *Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?*

Response: The Proposed Action is not expected to jeopardize the sustainability of any non-target species. Mortality of non-target species would be controlled within the Sector by continued use of DAS (Sections 5.2.1 and 3.1.2)

3) *Can the proposed action reasonably be 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?*

Response: The Proposed Action is not expected to allow substantial damage to the ocean and coastal habitats and/or EFH as defined under the under the Magnuson Act and identified in the FMP. The fixed gear used by Sector members in the proposed action has minimal adverse impacts on marine habitats or EFH (Sections 5.2.2 and 5.4)

4) *Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?*

Response: The Proposed Action is not expected to have a substantial adverse impact on public health and safety. The proposed GB Cod Fixed Gear Sector involves routine fishing operations and would not decrease safety at sea. In fact, it is expected that the centralized and local controls placed on the Sector would result in positive impacts on public health and safety. This would occur through daily monitoring and increased communication among Sector members and the ability to respond rapidly to changing developments on the ocean (Section 5.2.3).

5) *Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?*

Response: The Proposed Action is not expected to have an increased adverse impact on endangered or threatened species, marine mammals, or critical habitat of these species. Fixed gear use within the GB Cod Fixed Gear Sector is not expected to increase interference with threatened species, marine mammals, or their habitat. By mandating the retention of all legal-sized cod and by operating under a hard TAC rather than a daily trip limit, the Sector would be able to harvest their allocation of cod more efficiently and in less time. By increasing this efficiency, gear would remain in the water less time than it would under common pool rules, thereby reducing the potential interactions with protected species. Because implementation of the Ops Plan would reduce the amount of time that fixed gear would remain in the water, this alternative may have some positive impact on protected species as the potential for interactions decreases (Section 5.2.1).

6) *Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?*

Response: The Proposed Action is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area. Implementation of the Operations Plan would cap the maximum amount of effort within the Sector. In addition, it would prevent fixed gear fishermen from converting to otter trawling, leasing days to otter trawlers, or selling permits to otter trawlers. As a result, the biodiversity and ecosystem impacts common to the otter trawl fleet would not expand (Section 5.2.2 and 5.4).

7) *Are significant social or economic impacts interrelated with natural or physical environmental effects?*

Response: The social and economic impacts of the Proposed Action are not interrelated with significant natural or physical environmental effects. As discussed in the EA, no significant social, economic, or biological effects are expected as a result of this project (Sections 5.2.1 and 5.2.2 and 5.2.3).

8) *Are the effects on the quality of the human environment likely to be highly controversial?*

Response: The implementation of the GB Fixed Gear Sector was approved by a majority of the NEFMC. The GB Fixed Gear Sector is the second GB cod sector in New England that voluntarily fishes under a hard TAC of GB cod. Through the promotion of hard TACs as an alternative to DAS, the Fixed Gear Sector draws some controversy. However, healthy discussions revolving around alternative forms of management allow for the NEFMC to more informatively and effectively manage its fisheries (Section 5.2.3). Additionally, the effects on the quality of the human environment of this action are not expected to negatively impact target species, non-target species, habitat or protected resources as described in Section 4.0.

9) *Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?*

Response: There are no known historic or cultural resources, park land, prime farmlands, wetlands, or wild scenic rivers in the study area. All bottom-set, longline and sink gillnet gear is considered fixed and passive because once deployed the gear does not move. The general impacts to EFH from the use of these gears would be minimal and the level of damage to the habitat overall is considered to be quite low (Section 5.2.2 of original EA- Habitat Impacts (Alternative 2: Preferred Alternative)).

10) *Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?*

Response: The Sector Operations Plan would mitigate harmful impacts of Amendment 13 to the Northeast Multispecies FMP by conveying environmental, social, and economic benefits directly to the Sector members and thereby to the communities of Chatham and Harwichport. The effects of the proposed action on the human environment are not expected to be highly uncertain or involve unique or unknown risks (Section 5.2.3).

11) *Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?*

Response: The proposed action is not related to other actions with individually insignificant, but cumulatively significant impacts (see Section 5.6).

12) *Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?*

Response: There are no adjacent human communities that would be affected by the Sector Operations Plan. The study would take place on ocean waters and would not affect any human communities on the adjacent shorelines. There are no known districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. Due to the minimal impact on the human environment, the effect of the Sector Operations Plan would not be significant on scientific, cultural, or historical resources.

13) *Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?*

Response: No non-indigenous species would be introduced during the Proposed Action because operation of the Sector is confined to a traditional fishing area, the GB Hook Sector Area (Section 3.2.1). Therefore, introduction or spread of non-indigenous species is minimized.

14) *Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?*

Response: The NEFMC has authorized the formation of Sectors under Amendment 13 to the Northeast Multispecies FMP and has set forth criteria for establishing Sectors in that action. The Proposed Action was initiated in response to Amendment 13, as would any related future actions.

The Proposed Action does not set a precedent because it abides by the criteria set forth in Amendment 13. However, it should be noted that while Amendment 13 established the process for Sector allocation, each sector proposal is considered individually on its own merits and expected impacts, and include a specified process for public comment and consideration.

15) *Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?*

Response: The Proposed Action is not expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. In addition to Sector rules, the Sector would comply with all local, regional, and national laws and permitting requirements.

16) *Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?*

Response: The Proposed Action is not expected to result in cumulative adverse effects that could have a substantial effect on target or non-target species. As stated in Section 5.0, impact on resources, encompassing groundfish, and other stocks is expected to be minimal.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for Approval of the Georges Bank Cod Fixed Gear Sector Operations Plan, it is hereby determined that the Approval of the Georges Bank Cod Fixed Gear Sector Operations Plan will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an EIS for this action is not necessary.

Assistant Administrator for Fisheries, NOAA

Date

Administrative Procedure Act (APA)

Section 553 of the Administrative Procedure Act establishes procedural requirements applicable to informal rulemaking by Federal agencies. The purpose of these requirements is to ensure public access to the Federal rulemaking process and to give the public adequate notice and opportunity for comment. At this time, the Council is not requesting any abridgement of the rulemaking process for this action.

Paperwork Reduction Act (PRA)

The purpose of the PRA is to control and, to the extent possible, minimize the paperwork burden for individuals, small businesses, nonprofit institutions, and other persons resulting from the collection of information by or for the Federal Government. This action does not propose to modify any existing collections or to add any new collections; therefore, no review under the PRA is necessary.

Information Quality Act (Section 515)

In accordance with the Information Quality Act (Public Law 106-554), the Office of Management and Budget directed each Federal agency to issue guidelines that ensure the quality, objectivity, utility, and integrity of information disseminated by Federal agencies. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the Information Quality Act. Information must meet standards of utility, integrity, and objectivity. This section provides information that demonstrates compliance with these standards.

Utility of Information Product

A *Is the information helpful, beneficial or serviceable to the intended user?*

The EA contains a description of the authority for the formation of a Sector, as well as a description of the Georges Bank Cod Fixed Gear Sector and the proposed Sector agreement and Operations Plan. In addition, this EA contains specific information on the proposed number of participants in the Sector and the amount of cod TAC proposed for allocation to the Sector. Therefore, the EA contains the various information elements of interest to the public and necessary for decision makers to make informed decisions.

B *Is the data or information product an improvement over previously available information? Is it more current or detailed? Is it more useful or accessible to the public? Has it been improved based on comments from or interactions with customers?*

The proposed Sector Agreement and Operations Plan for the 2007 fishing year is the second Sector proposal submitted by the Sector; the first was submitted for FY2006. However, Sector vessels were not allowed to fish during the 2006 fishing year prior to approval of the Sector and Operations Plan. Due to delays in the implementation of FW42, final approval and implementation occurred in November 2006. As such, the number of vessels that were eligible to participate in the Sector (1) was substantially smaller than anticipated since most vessels could not afford to forgo fishing operations until approval of the Sector. The Sector looks forward to no delays in implementation for FY2007 and anticipates a larger number of vessels participating (12). The EA and Operations Plan for FY2007 has therefore changed somewhat to reflect further harvesting rule restrictions via a no tie-down provision for non-monkfish gillnets, a smaller Operating Area, and a larger number of participants.

C *What media are used in the dissemination of the information? Printed publications? CD-ROM? Internet? Is the product made available in a standard data format? Does it use consistent attribute naming and unit conventions to ensure that the information is accessible to a broad range of users with a variety of operating systems and data needs?*

The Federal Register notice that announces the proposed Operations Plan and Sector Agreement will be made available in printed publication and on the Internet website for the Northeast Regional Office. Instructions for obtaining a copy of this EA are included in the Federal Register notice.

Integrity of Information Product

The information product meets the following standards for integrity:

All electronic information disseminated by NOAA Fisheries Service adheres to the standards set out in Appendix III, "Security of Automated Information Resources," of Office of Management and Budget

(OMB) Circular A-130; the Computer Security Act; and the Government Information Security Act. If information is confidential, it is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business, and financial information); the Confidentiality of Statistics provisions of the Magnuson-Stevens Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

Objectivity of Information

(1) Indicate which of the following categories of information products apply for this product:

- Original Data
- Synthesized Products
- Interpreted Products
- Hydrometeorological, Hazardous Chemical Spill, and Space Weather Warnings, Forecasts, and Advisories
- Experimental Products
- X** Natural Resource Plans
- Corporate and General Information

(2) Describe how this information product meets the applicable objectivity standards.

What published standard(s) governs the creation of the Natural Resources Plan? Does the Plan adhere to the published standards?

The Sector Operations Plan and Sector Agreement must comply with the requirements of the Northeast Multispecies FMP, as well as the requirements of the Magnuson-Stevens Act, NEPA, APA, CZMA, ESA, MMPA, and EOs 12612 (Federalism), 12630 (Property Rights), 12866 (Regulatory Planning), and 13158 (MPAs, Marine Protected Areas). The NMFS Administrator, Northeast Region, has authority, under 50 CFR 648.87, to approve the Operations Plan and Sector Agreement and allocate TAC to the Sector. NOAA Fisheries Service has made a preliminary determination that the proposed Sector Agreement and Operations Plan are consistent with the FMP and all applicable laws. In making a final decision, NOAA Fisheries Service will take into account comments received on the proposed rule and pertinent information that may be more current than previous information.

Was the Plan developed using the best information available? Please explain.

The proposed Sector Agreement and Operations Plan are based upon currently available information, and the proposed TAC is based upon the best scientific information available, including Amendment 13 and FW42.

Has a clear distinction been drawn between policy choices and the supporting science upon which they are based? Have all supporting materials, information, data and analyses used within the Plan been properly reference to ensure transparency?

The policy choices that are proposed are supported by the available scientific information. The overall GB cod target TAC from which the proposed GB cod hard TAC for the Sector is derived was based upon Amendment 13 data as well as the 2005 GARM II data in accordance with the process described in the FMP. The supporting materials and analyses used to develop the TAC are contained in readily available documents. The process utilized to develop the Sector TAC is described in the FMP.

Describe the review process of the Plan by technically qualified individuals to ensure that the Plan is valid, complete, unbiased, objective and relevant. For example, internal review by staff who were not involved in the development of the Plan to formal, independent, external peer review. The level of review should be commensurate with the importance of the Plan and the constraints imposed by legally enforceable deadlines.

The NMFS Administrator, Northeast Region made a preliminary determination that the proposed Sector Operations Plan, Sector Agreement, and proposed Sector TAC are consistent with Amendment 13, the FMP, and applicable laws. Staff from the Sustainable Fisheries Division and Fishery Statistics Division and staff responsible for implementation of NEPA reviewed the pertinent information. Establishment of the overall GB cod target TAC involved scientists with specialties in population dynamics, stock assessment methods, and demersal resources. In accordance with the FMP regulations, the RA will make a final determination after obtaining public comment.

Executive Order 13132 (Federalism)

This EO established nine fundamental federalism principles for Federal agencies to follow when developing and implementing actions with federalism implications. The EO also lists a series of policy making criteria to which Federal agencies must adhere when formulating and implementing policies that have federalism implications. However, no federalism issues or implications have been identified relative to the measures proposed in the Approval of the Georges Bank Cod Fixed Gear Sector Operations Plan. This action does not contain policies with federalism implications sufficient to warrant preparation of an assessment under EO 13132. The affected states have been closely involved in the development of the proposed management measures through their representation on the Council (all affected states are represented as voting members of at least one Regional Fishery Management Council). No comments were received from any state officials relative to any federalism implications that may be associated with this action.

Executive Order 13158 (Marine Protected Areas (MPAs))

The EO on MPAs requires Federal agencies whose actions affect the natural or cultural resources that are protected by an MPA to identify such actions and, to the extent permitted by law and to the maximum extent practicable, in taking such actions to avoid harm to the natural and cultural resources that are protected by an MPA. The EO directs Federal agencies to refer to the MPAs identified in a list developed and maintained by the Departments of Commerce and Interior. As of the date of submission of this document, the List of MPAs has not yet been developed. No further guidance related to this EO is available at this time.

Executive Order 12898 (Environmental Justice)

EO 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...”. Few, if any, low income or ethnic minority populations participate in the local Fixed Gear fishery. Those that do are more likely to be crew members rather than owners/operators. Very few minority populations reside in Chatham/Harwichport and almost none currently participate in this fishery. Due to the scale of the fishery (approximately 20 vessels in FY2007), there is no indication that the

Preferred Alternative will have disproportionately high and adverse effects on income-poor or minority populations; thus, the overall impacts are not expected to be significant.

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11.0 GLOSSARY OF ACRONYMS AND TERMS

ALWTRP	Atlantic Large Whale Take Reduction Plan
APA	Administrative Procedure Act
BDTRP	Bottlenose Dolphin Take Reduction Plan
Council	New England Fishery Management Council
DAS	Days-at-Sea
DFO	Department of Fisheries and Oceans
DPS	Distinct Population Segment
DQA	Information Quality Act
EA	Environmental Assessment
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act of 1973
F	Mortality
FMP	Fishery Management Plan
FMSY	Mortality That Produces the Maximum Sustainable Yield
FONSI	Finding of No Significant Impact
FSEIS	Final Supplemental Environmental Impact Statement
FW40A	Framework Adjustment 40A
FW40B	Framework Adjustment 40B
FW41	Framework Adjustment 41
FW42	Framework Adjustment 42

FY	Fishing Year
GARM	Groundfish Assessment Review Meeting
GB	Georges Bank
GB Cod	Georges Bank Cod
GB Haddock	Georges Bank Haddock
Gillnetter	Gillnet gear employed by fisherman
GOM	Gulf of Maine
Handline	Hook gear employed by hand (jig)
Hook Sector	Georges Bank Cod Hook Sector
HPTRP	Harbor Porpoise Take Reduction Plan
IMPLAN	Impact Analysis for Planning
Jig	Hook gear employed by hand or rod
Jigger	Fisherman or vessel which employs rod and reel and/or handline
Longline	Demersal longline or tub trawl
LOF	List of Fisheries
Magnuson Act	Magnuson-Stevens Fishery Conservation and Management Act of 1996
Manager	Individual employed by the Sector to manage the Sector
MARFIN	Marine Fisheries Initiative
MMPA	Marine Mammal Protection Act of 1972
MPA	Marine Protected Area
MSY	Maximum Sustainable Yield
mt	Metric Ton
NE	New England
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NERO	Northeast Regional Office
OMB	Office of Management and Budget
Operating Area	Georges Bank Cod Fixed Gear Sector Area
Operations Plan	Georges Bank Cod Fixed Gear Sector Allocation Operations Plan
Ops Plan	Georges Bank Cod Fixed Gear Sector Allocation Operations Plan
OY	Optimum Yield
PBR	Potential Biological Removal
PDT	Plan Development Team
PRA	Paperwork Reduction Act
RA	Regional Administrator
SAP	Special Access Program
SAW	Stock Assessment Workshop
Sector	Georges Bank Cod Fixed Gear Sector
Sector Area	Georges Bank Cod Fixed Gear Sector Area
SFA	1996 Sustainable Fisheries Act Amendment to the Magnuson-Stevens Fishery Conservation and Management Act
SEIS	Supplemental Environmental Impact Statement
SNE	Southern New England
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
WGOM	Western Gulf of Maine Closed Area

**GB Cod Fixed Gear Sector
Fishing Year 2007-2008
Operations Plan and Agreement**

This OPERATIONS PLAN AND AGREEMENT (this "Agreement") is entered into as of this _____ day of _____, 2007 by and among the permit owners listed on the signature pages hereto and any other permit owners that are admitted pursuant to the terms of this Agreement (each, a "Member" and, collectively, the "Members").

RECITALS

WHEREAS, under Amendment 13 to the Northeast Multispecies Fishery Management Plan (such amendment shall hereinafter be referred to as "Amendment 13" and the plan shall be referred to as the "Plan"), and the regulations promulgated thereunder, a self-selecting co-operative, or "sector," of fishermen is authorized to submit to the New England Fishery Management Council (the "Council") a proposal for the allocation of catch or effort of a regulated groundfish species to such sector;

WHEREAS, the Members applied to the Council for the creation of a sector of Georges Bank ("GB") cod fixed gear fishermen, and, on February 1, 2006, the Council adopted Framework Adjustment [42] (the "Framework Adjustment") authorizing such sector and an allocation of GB cod to such sector;

WHEREAS, the Regional Administrator of the National Marine Fisheries Service ("NMFS") is authorized under the Plan, Amendment 13 and the regulations promulgated thereunder to consider and approve a legally binding operations plan for such sector;

WHEREAS, the Members desire to form the sector contemplated by the Framework Adjustment through GB Cod Fixed Gear Sector Inc. (the "Sector"), for the purposes of establishing a legally responsible entity (i) to obtain an aggregate annual sector allocation of GB cod from NMFS, as authorized by the Framework Adjustment, and to sub-allocate such aggregate sector allocation among the Members and/or their permits and vessels, (ii) to participate in Special Access Programs ("SAPs") in closed areas to the extent that such SAPs are available to the Sector and (iii) to take such actions as may be necessary to ensure that the Sector, its Members and their vessels conduct groundfish harvesting activities in compliance with the Plan, Amendment 13, the Magnuson-Stevens Fishery Conservation and Management Act (the "Act"), the Framework Adjustment, and applicable regulations promulgated by NMFS;

WHEREAS, in connection with the formation of the Sector, one of the Members executed that certain Operations Plan and Agreement, dated as of November 22, 2006 (the "Original Agreement"); and

WHEREAS, the Members desire to amend and restate the Original Agreement to make certain adjustments thereto and to the Members' obligations thereunder, in order to account for the circumstances of the 2007-2008 fishing year.

NOW, THEREFORE, in consideration of the mutual agreements, covenants, rights and obligations set forth in this Agreement, the benefits to be derived therefrom and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound hereby, agree as follows:

Article I. Representations and Warranties of the Members. As of the date hereof, each of the Members represents and warrants to the other Members and the Sector that:

Section 1.01. Eligibility. Each Member has been issued a limited access multispecies permit, which (i) is based on a documented landing of GB cod between May 1, 1996, and April 30, 2002, which are the 1996 through 2001 fishing years (such period of time shall hereinafter be referred to as the "Qualifying Period"), (ii) is related to a minimum of 5,000 pounds of regulated species landings in the baseline year during the Qualifying Period and (iii) has received an allocation of "A" or "B" Days-At-Sea ("DAS") from NMFS under Amendment 13 for the 2007 fishing year. Each such permit, which meets the criteria set forth in the foregoing sentence and which the Member intends to enroll in the Sector, is listed below such Member's name on the signature pages hereto (each, a "Permit"). Further, each Member has assigned its Permit to a Participating Vessel, which is listed below such Member's name on the signature pages hereto along with the corresponding Permit. Notwithstanding the list of Participating Vessels set forth on the signature pages hereto, for purposes of this Agreement, "Participating Vessel" shall mean the vessel to which a Member's Permit applies at any given time.

Section 1.02. Organization and Authority. Each Member (i) to the extent that it is an entity, is duly organized, validly existing and in good standing in its state of organization and (ii) has all authority, corporate or otherwise, to enter into this Agreement on its own behalf and on behalf of the Participating Vessels that it represents. This Agreement constitutes a legally valid and binding obligation of each Member, enforceable against such Member in accordance with its terms. Each of the Members represents that its Participating Vessel(s) and Permit(s) have no sanctions or other restrictions against them that would prevent such Participating Vessels and Permits from enrolling in the Sector and/or complying with the terms of this Agreement.

Article II. Membership

Section 2.01. Voluntary Membership. Participation in the Sector is completely voluntary among the Members, their Permits and the related Participating Vessels.

Section 2.02. Scope of Membership Obligations. The obligations of the Members set forth in this Agreement shall only apply to the Permits and

Participating Vessels (and not to any other permits or vessels owned by the Members that are not enrolled in the Sector pursuant to the terms hereof) to the extent that such Permits or Participating Vessels are fishing commercially (i) in the Area (as hereinafter defined) and (ii) with gear that is capable of harvesting GB cod or other groundfish species managed under the Plan. Notwithstanding the foregoing, the Members acknowledge and agree that the Sector and its Members may, from time to time, be permitted to participate in certain Special Access Programs (each an “SAP”) and that it may be necessary to expand the scope of the membership obligations hereunder, in order to ensure that the Sector and its Members are in compliance with the rules, regulations, and legislative intent relating to each such SAP. Therefore, the Members hereby agree to execute any amendments or supplements to this Agreement, which may reasonably be requested by the Sector or the Sector Manager in order to comply with the rules, regulations, or legislative intent relating to any such SAP, including, without limitation, any amendments or supplements that expand the scope of the membership obligations hereunder to apply to vessels and/or permits that are not enrolled in the Sector.

Section 2.03. Length of Commitment. Each Member hereby agrees to cause each of its Permits and the related Participating Vessels to remain enrolled in the Sector for the entire fishing year following the date on which such Member enrolled in the Sector (the “Commitment Period”); provided, however, that if NMFS shall not approve the Sector’s Operations Plan and Agreement, as the same may be amended, for any fishing year during a Member’s Commitment Period, then the obligation of such Member under this Section 2.03 shall terminate on the last day of the last fishing year for which the Sector’s Operation Plan and Agreement shall have received approval from NMFS. Each Member further agrees that if its Permit leaves the Sector for any reason during the Commitment Period, (i) such Member shall be subject to the penalty or penalties described on the Schedule of Penalties (as hereinafter defined) and (ii) such Member, its Permit and the related Participating Vessel shall be ineligible to participate in the Sector for a period of five (5) years following the date of such departure from the Sector. Each Member acknowledges and agrees that 50 CFR Part 648.87 requires that each of its Permits and the related Participating Vessels must remain in the Sector for the entire fishing year in which such Permits and/or Participating Vessels are enrolled in the Sector, and that each Member’s Participating Vessels may not fish outside the Sector under a multispecies DAS program during any fishing year in which its Permits and/or Participating Vessels are enrolled in the Sector. Notwithstanding anything to the contrary in this Section 2.03, no Member shall be prohibited from making a substitution of an enrolled Permit or Participating Vessel pursuant to Section 2.07 hereof.

Section 2.04. New Members. The owner of a permit that is eligible under the criteria set forth in Section 1.01 hereto, but that is not enrolled as a Member (and/or whose permit is not so enrolled) may apply to the Board (as hereinafter defined) for membership in the Sector. Such application shall be made in writing no later than 120 calendar days prior to the first day of the fishing year for which the applicant seeks to be included as a Member (and/or seeks to have its permit included as a Permit) and shall include evidence of

eligibility. The Board shall, in its reasonable discretion, determine whether the applicant shall be admitted as a Member of the Sector and/or its permit included as a Permit. Notwithstanding the foregoing, (i) no such admission shall be effective until such new Member has agreed in writing to be bound by, and to cause its Permit and Participating Vessel to comply with, the terms of this Agreement, and until the provisions of this Agreement shall have been amended or modified to reflect such additional Member, Permit and/or Participating Vessel and (ii) the Board shall not admit any applicant whose fishing history would cause the aggregate fishing history of all of the Members of the Sector (inclusive of such applicant's fishing history) to exceed the maximum percentage allocated to the Sector under 50 CFR 648.87 for the fishing year in which the applicant seeks to be admitted.

Section 2.05. Permit Transfers. Each Member agrees that so long as it is a party to this Agreement, such Member (i) shall not have the authority to sell, lease or transfer the ownership of its Permit to a party that is not or does not agree in writing to be bound by this Agreement for the remainder of the fishing year in which such sale, lease or transfer is to occur, (ii) shall not transfer, lease or assign any DAS allocated to its Permit by NMFS to any non-Sector permit, and (iii) shall comply with the right of first refusal provisions of Section 2.08 hereof prior to the consummation of any proposed sale, lease or transfer permitted hereunder. To the extent that a Member sells, leases or transfers its Permit to another individual or entity (a "Transferee") in compliance with the foregoing sentence, then (a) such Transferee shall only be permitted to participate in the Sector for the remainder of the fishing year in which the transfer occurred (the "Transfer Year") and (b) prior to the commencement of the fishing year immediately following the Transfer Year, the Transferee must apply for admission to the Sector pursuant to the provisions of Section 2.04 hereof in order to be admitted to the Sector as a Member. For the avoidance of all doubt, for the purposes of calculating a Member's Commitment Period under Section 2.03 hereof, no portion of a Transfer Year shall be included in such calculation.

Section 2.06. Membership Dues. The Sector may, to the extent necessary for the payment of the costs and expenses associated with the administration and management of the Sector (including the payment of the Manager's salary), require the payment by the Members of annual membership dues and/or poundage fees. Such annual membership dues and/or poundage fees shall be fixed by resolution of the Board prior to the commencement of the applicable fishing year or at such other time as the Board may deem necessary or appropriate.

Section 2.07. Substitutions. Notwithstanding anything to the contrary in this Agreement, including, specifically, Section 2.03 hereof, prior to the commencement of any upcoming fishing year during a Member's Commitment Period, a Member may seek to substitute its existing Permit and the related Participating Vessel with another permit that meets the eligibility requirements set forth in Section 1.01 hereof ("Substituted Permit") and such Substituted Permit's related vessel ("Substituted Vessel"). Such application shall be made in writing no later than 120 calendar days prior to the first day of the fishing

year for which the applicant seeks to substitute its Permit and Participating Vessel with the Substituted Permit and Substituted Vessel, and shall include evidence of the Substituted Permit's eligibility. The Board shall, in its reasonable discretion, determine whether the substitution shall be permitted; provided, that the Board shall not permit any substitution that would cause the aggregate fishing history of all of the Members of the Sector (inclusive of the Substituted Permit's fishing history) to exceed the maximum percentage of the GB cod total allowable catch authorized to be allocated under the Framework Adjustment to the Sector for the fishing year in which the substitution is to occur. If the Board shall have approved the substitution, then the Substituted Permit and Substituted Vessel shall, as of the first day of the fishing year for which the substitution has been approved, be considered such Member's "Permit" and "Participating Vessel" hereunder, subject to all of the terms and conditions of this Agreement, as the same may be amended. By seeking such substitution, a Member hereby agrees to cause its Substituted Permit and Substituted Vessel to comply with the terms and conditions of this Agreement, as the same may be amended.

Section 2.08. Right of First Refusal. In the event that any Member (a "Transferring Member") at any time proposes to sell, transfer or lease (a "Transfer") its Permit to any proposed Transferee who shall make a good faith, bona fide written offer therefore (a "Bona Fide Offer"), then the Transferring Member shall first deliver to the Sector a written notice ("First Refusal Notice") that the Transferring Member proposes to make such Transfer, which First Refusal Notice shall (i) state the identity of the prospective Transferee, (ii) state the amount of consideration for the Permit and the material terms and conditions upon which the proposed Transfer is to be made (the date on which the Sector receives the First Refusal Notice being the "First Refusal Notice Date"), (iii) represent that the Bona Fide Offer is an actual bona fide offer, and (iv) include a copy of any written proposal, letter of intent or other agreement relating to the Bona Fide Offer. The Sector shall have a period of 5 calendar days following the First Refusal Notice Date (the "Election Period") in which to elect to purchase or lease the Permit at the price and subject to the same material terms and conditions set forth in the First Refusal Notice. The Sector shall exercise its right to purchase or lease such Permit by delivering a written notice ("Election Notice") to the Transferring Member within the Election Period. In the event that the Sector desires to purchase the Permit, then the parties shall schedule a closing for the payment for, and the delivery of, the Permit, which shall be no later than 90 calendar days after the First Refusal Notice Date. The Transferring Member agrees to enter into and deliver an agreement for the benefit of the Sector, containing standard and customary representations, warranties, covenants and indemnities by the Transferring Member for the benefit of the Sector. If the Sector has not elected to purchase the Permit within the Election Period, then the Transferring Member is free to Transfer the Permit to the Transferee; provided that such Transfer is on the terms and conditions specified in the First Refusal Notice. If the proposed Transfer is not consummated within 90 calendar days following the termination of the Election Period, the Transferring Member may not Transfer the Permit without complying again with all the provisions of Section 2.05 and this Section 2.08.

Article III. ADMINISTRATION

Section 3.01. Sector Manager. The Board of Directors (the “Board”) of the Sector shall appoint a manager of the Sector (the “Manager”), which Manager shall have the authority to manage the day-to-day business of the Sector and to act as its designated agent for service of process.

Section 3.02. Manager Authority. The Manager shall have the authority (i) to monitor the activities of the Members and the Participating Vessels and to take such other actions as may be necessary to ensure compliance by the Members and their Permits and Participating Vessels with this Agreement and other Sector requirements as may be adopted under the terms of this Agreement or the Sector’s Bylaws, as well as applicable laws, rules and regulations, and (ii) subject to the authority of the Board or a committee delegated thereby pursuant to Section 3.03 of this Agreement, the Sector’s Bylaws or any other agreement relating to the Sector’s internal governance, to enforce this Agreement, including specifically, without limitation, the authority to impose penalties set forth in the Schedule of Penalties (as hereinafter defined). The Manager shall also act as the liaison between NMFS and the Sector.

Section 3.03. Infractions Committee. The Board shall appoint an infractions committee (the “Committee”) to ensure fair, consistent and appropriate enforcement of this Agreement, the Harvesting Rules, the DAS (as hereinafter defined) requirements set forth on Exhibit B hereto, the Plan, the Framework Adjustment and other Sector requirements as may be adopted under the terms of this Agreement or the Sector’s Bylaws. The Committee shall annually prepare and recommend to the Board for its approval a schedule of penalties, which shall be similar in form to Exhibit A hereto (the “Schedule of Penalties”), for any unauthorized fishing activities (whether under applicable laws, rules and regulations or otherwise) and for violations of this Agreement, the Harvesting Rules, the DAS (as hereinafter defined) requirements set forth on Exhibit B hereto, the Plan, the Framework Adjustment and other Sector requirements as may be adopted under the terms of this Agreement or the Sector’s Bylaws. The Board shall review and approve any Schedule of Penalties prepared and recommended by the Committee prior to the commencement of the fishing year for which such Schedule of Penalties has been prepared. In addition, the Committee, on its own or at the request of a Manager or Member pursuant to Section 3.04 hereof, shall have the authority to take any number of enforcement measures against the Members for the non-payment of membership dues and/or poundage fees. Such enforcement measures may include requesting expulsion of the violating Member under Section 7.02 and issuing a “stop fishing” order against such Member.

Section 3.04. Procedures for Investigations. In addition to the Manager’s authority to invoke penalties under the Schedule of Penalties pursuant to Section 3.02 hereof, the Manager may, on his own, and shall, at the request of a Member, request that the Committee conduct an investigation of possible infractions of the Agreement, the Harvesting Rules, the Plan, the Framework Adjustment or other Sector requirements as may be adopted under

the terms of this Agreement or the Sector's Bylaws, by calling a meeting of the Committee and presenting it with the information that is the basis for the Manager's or Member's opinion that an infraction occurred. The Committee shall operate as a "blind" committee, such that the identity of the Member, Permit and/or Participating Vessel under consideration shall only be known to the Manager. The Committee shall assign a number of its members, which constitutes no more than 50% of the Committee, to investigate the matter further and to recommend action, if any, to the full Committee. Such Committee member assignments shall be rotated. If, upon the conclusion of such investigation, the Committee determines by an affirmative vote of a majority (51%) of its members that a violation of this Agreement, the Harvesting Rules, the Plan, the Framework Adjustment or other Sector requirements (as may be adopted under the terms of this Agreement or the Sector's Bylaws) has occurred, it may, and is hereby given the authority to (in addition to the imposition of any penalties prescribed in the Schedule of Penalties), invoke sanctions, ranging from letters of warning to reductions in allocation of days-at-sea allotted ("DAS") to the Member, its Permits and its Participating Vessels by the Sector, or issue stop fishing orders. The Committee shall exercise all reasonable efforts to ensure that penalties and settlements are commensurate with the nature and extent of the violation, are designed to further the purposes of the Plan, the Framework Adjustment and Amendment 13 and are uniform with those reached in similar circumstances. All appeals from such Committee action shall be taken in accordance with Section 6.04 hereof. Each of the Members agrees to cooperate fully with the Manager and the Committee in such investigations and procedures (including cooperation with any requests for information or data that may be made by the Manager or the Committee).

Section 3.05. Annual Report. The Manager shall prepare and submit to the Council and NMFS an annual year-end report on the fishing activities of its Members, including the harvest levels of all Participating Vessels for cod and other federally-managed limited access groundfish species, any enforcement actions taken against the Members, their Permits or Participating Vessels, and other information necessary to evaluate the Sector's performance.

Article IV. ALLOCATION

Section 4.01. Annual Distribution. Each Member hereby acknowledges and agrees that the aggregate allocation of GB cod authorized by the Framework Adjustment and NMFS to the Sector (the "Aggregate Allocation") shall be harvested in accordance with the Harvesting Rules, which are set forth as Exhibit C hereto, and the requirements as to DAS set forth on Exhibit B hereto. Each Member agrees to, and agrees to cause its Participating Vessels to, exercise all commercially reasonable efforts to (i) assist in harvesting an amount of GB cod equal to, but not greater than, the Aggregate Allocation, as further set forth on Exhibit C, and (ii) to comply with all of the other Sector requirements set forth on Exhibit B and Exhibit C hereto. If the Board determines that the Aggregate Allocation may not be fully harvested in any fishing year, the Board shall, subject to the provisions of Section 4.02, redistribute the Aggregate Allocation, through DAS, monthly quota targets or otherwise, to ensure that the Aggregate Allocation is fully harvested. In addition, to the extent that the

Aggregate Allocation is adjusted upward or downward after the commencement of any fishing year, whether by the authority of NMFS, by framework adjustment or by other regulatory action, the Board shall have the authority to redistribute the adjusted Aggregate Allocation through DAS, monthly quotas or otherwise, to ensure that the adjusted Aggregate Allocation is properly harvested by the Members

Section 4.02. Reserve. Each Member agrees that the Board may, in its sole discretion, establish a reserve of GB cod in order to ensure that the Sector remains in compliance with its Aggregate Allocation limit; provided, however, that such reserve shall not exceed ten percent (10%) of the Aggregate Allocation. The amount of the reserve shall be deducted from the Aggregate Allocation before such Aggregate Allocation is distributed among the Members, their Permits and their Participating Vessels through DAS, monthly quota targets or otherwise.

Section 4.03. Distribution of Reserve. If the Board, subsequent to the establishment of a reserve pursuant to Section 4.02 hereof, determines that the Aggregate Allocation, as adjusted pursuant to Section 4.02, will be fully harvested by the Participating Vessels, the Board shall release and authorize the harvesting of the reserve by the Members, their Permits and their Participating Vessels.

Section 4.04. Fishing History in Sector. The Members agree that any fishing history, which is accumulated or established by a Member's Permit while it is participating in the Sector (the "Sector History"), shall be attributed to such Member's Permit, and not to any other permits. Notwithstanding the foregoing, the Members further agree that any future allocations of GB cod made within the Sector shall be based on the fishing history of the Members' Permits that is accumulated during the Qualifying Period, and shall not be based on such Permits' Sector History.

Section 4.05. Non-Prejudicial. It is the intent of the Members that the fishing history and DAS allocation of any Member's Permit during the Qualifying Period, as reported to NMFS prior to joining the Sector, shall not be diminished or penalized as a result of participation in the Sector in lieu of participation in the multispecies DAS program.

Article V. CATCH MONITORING AND VERIFICATION; CERTAIN OTHER MEMBERSHIP REQUIREMENTS

Section 5.01. Participating Vessel Catch Reports. To enable each Member and the Sector to monitor the Members' compliance with this Agreement, each Member agrees to report each of its Participating Vessels' entire catch on a landing-by-landing basis, by providing the Manager with a copy of the official Vessel Trip Report or other reporting document authorized by NMFS within 48 hours of offloading fish in the form and manner prescribed by the Manager. The Members agree that these records shall be maintained by the Manager. The Manager shall, upon the request of any Member, provide such Member with the Sector's aggregate catch information that is generated

from such records. The Manager shall, on a monthly basis, transmit to NMFS such Vessel Trip Reports (or other document authorized by NMFS), together with the aggregate catch information generated from such reports ("Aggregate Reports"). After 90% of the Sector's Aggregate Allocation has been harvested, the Manager shall provide NMFS with Aggregate Reports on a weekly basis.

Section 5.02. Dealer Reporting. Each Member agrees to (i) sell the catch of its Participating Vessels only to a dealer licensed under the Plan by NMFS and (ii) cause any such dealer to provide the Manager with a copy of the official dealer weigh out slip or other official reporting document required by NMFS on a weekly basis. Each Member further acknowledges and agrees that (a) it is responsible for ensuring timely dealer reporting in accordance with the provisions of this Section 5.02 and (b) failure of the dealer to timely deliver the reports for a Member's Participating Vessel in accordance with this Section 5.02 shall be deemed a breach of this Agreement by such Member.

Section 5.03. Catch Verification. The Manager (or his designated agent) shall, and each Member (or its designated agent) shall ensure that the Manager does compare, verify and validate each Participating Vessel's catch records with the dealer reports for such Participating Vessel on a continuing and frequent basis. If the Manager identifies a discrepancy, he shall immediately notify the affected Member and seek to resolve the discrepancy. If the Manager is unable to satisfactorily reconcile the catch records, he shall notify the Committee of the discrepancy for its consideration and resolution. Each Member further agrees to cooperate fully with any requests for information or data that are made by the Manager or the Committee in an effort to resolve such discrepancy.

Section 5.04. Designated Landing Ports. To enable the Members and the Manager to monitor, observe and verify catches, each Member agrees that each of its Participating Vessels will only offload fish in the designated ports of Aunt Lydia's Cove, Chatham; Stage Harbor, Chatham; Saquatucket Harbor, Harwich; Allens Harbor, Harwich; and Wychmere Harbor, Harwichport.

Section 5.05. Landing Port Exceptions. Landings in ports other than those listed in Section 5.04 hereof are permitted on a temporary, case-by-case basis, subject to prior approval of the Manager; provided, that the Manager determines that the excepted landing will not impair effective enforcement and monitoring of the Sector and this Agreement. Such exceptions may be granted in the sole discretion of the Manager. The Manager shall report to NMFS any landing port exceptions that are of a significant or prolonged nature.

Section 5.06. Observed Offloading. Each Member agrees that, in order to enhance the monitoring and enforcement of the provisions in this Agreement, the Manager may timely request that an observer be present during offloading operations. If such a request is made, each Member agrees not to permit its Participating Vessels to offload fish until the Manager or his designee is present.

Section 5.07. Advanced Notice of Offloading. If appropriate or necessary for purposes of quota monitoring or Sector efficiency, the Members'

Participating Vessels may be required to notify the Manager prior to offloading fish.

Section 5.08. Proof of Sector Membership. Each Member agrees that its Participating Vessels shall maintain on-board at all times while fishing for groundfish a Letter of Authorization from NMFS verifying such Participating Vessels' participation in the Sector, except when such Participating Vessels are fishing as charter/party vessels pursuant to Section 5.12 hereof.

Section 5.09. Gear Restrictions. Each Member agrees that its Participating Vessels shall not fish for GB cod with any gear other than jigs, non-automated demersal longline, handgear or gillnets.

Section 5.10. Area Restrictions. Each Member agrees that it shall not fish commercially with gear that is capable of harvesting GB cod or other groundfish species managed under the Plan outside the area (the "Area") identified in the Harvesting Rules set forth in Exhibit C hereto.

Section 5.11. Operators. Each Member agrees to ensure that any operators of its Participating Vessels fully comply with the obligations and restrictions set forth in this Agreement. Each Member further agrees to accept responsibility hereunder for the actions of any such operators that result in a violation of this Agreement.

Article VI. ENFORCEMENT

Section 6.01. Agreement Enforcement. Each Member agrees that the Sector, by or through its representatives, and/or any other Member may enforce this Agreement on behalf of the Sector and/or its Members. Each Member agrees to take all actions and to execute all documents necessary or convenient to give effect to the enforcement procedures contemplated by this Agreement, the Harvesting Rules and any Schedule of Penalties.

Section 6.02. Restrictions on Fishing Activity. The Members acknowledge that a violation of this Agreement or applicable federal fishery regulations by one or more Members (or the Members' Permits, Participating Vessels or Participating Vessels' operators, if any) that causes the Sector to exceed its Aggregate Allocation could subject the Sector and its Members to joint and several liability to NMFS for fishing violations. The Members further acknowledge and agree that monetary penalties could be inadequate recourse under such circumstances. Therefore, the Members acknowledge and agree that each of them will (and will cause their Permits, Participating Vessels and Participating Vessels' operators, if any, to) comply with a "stop fishing" order from the Sector, which shall be issued by the Board, the Manager or the Committee, and each of the Members further agrees that if any Member (or its Permits, its Participating Vessels or the Participating Vessels' operators) fails to comply with such order, the Sector shall have the authority to obtain an injunction, restraining order or other equivalent form of equitable relief to give effect to such "stop fishing" order.

Section 6.03. Penalties for Violations. Any penalties that are imposed upon a Member by the Sector pursuant to the terms of this Agreement shall be in addition to, and not in lieu of, any other potential state or federal penalty that may be imposed upon such Member.

Section 6.04. Appeal from Committee Decision. If the Committee (i) has determined, pursuant to the procedures set forth in Section 3.04 hereof, that a Member has violated this Agreement or (ii) makes any other determination with respect to a Member under this Agreement (including, specifically, without limitation Section 5.03 hereof), such violating Member shall have five business days following the date of the Committee's determination to request reconsideration of the enforcement or other action and/or propose an alternative form of penalty. Such request shall be made in writing and shall be addressed to the Board. The Board may, in its sole discretion, grant or deny any request for reconsideration and may, in its sole discretion, approve or disapprove any alternative form of penalty; provided, that the Board shall exercise all reasonable efforts to ensure that penalties and settlements are commensurate with the nature and extent of the violation, are designed to further the purposes of the Plan, the Framework Adjustment and Amendment 13 and are uniform with those reached in similar circumstances.

Section 6.05. Penalties and Attorneys' Fees. Penalties for any violations of this Agreement shall, to the extent addressed in the Schedule of Penalties, be limited to the amounts set forth on the Schedule of Penalties plus all costs, fees and expenses, including attorneys fees, incurred by the Sector or, in a case in which the Sector does not take enforcement action, by the Members bringing such action, in enforcing the provisions of this Agreement. To the extent the Schedule of Penalties addresses such matter, the Members and the Sector hereby waive any claims to actual, direct, or indirect damages, and instead agree that payment of the amounts set forth on the Schedule of Penalties and costs of enforcement shall be their sole remedy for breaches of this Agreement. In connection with any legal proceeding related to this Agreement, the non-prevailing party shall pay the prevailing party's reasonable costs and attorney's fees associated with the proceeding.

Section 6.06. Application of Penalties, Fines and Damages. All penalties, fines and/or other damages paid to the Sector shall, first, be applied to the cost of enforcement of such violations and, second, any remaining amounts shall be applied to the costs and expenses of the administration, management and preservation of the Sector. Any funds remaining after the application of the foregoing sentence shall be used to further research into efficient management of groundfish stocks for the benefit of the resource and those that harvest the resource.

Section 6.07. Dispute Procedures. Notwithstanding the provisions of Section 6.01 hereof, prior to instituting any litigation or other dispute resolution, the parties shall follow any applicable procedures set forth in this Agreement, including specifically Sections 3.04, 6.04 and 7.02, for the resolution of such dispute. Any appeals taken with respect to any dispute that arises in connection with this Agreement shall be taken in the federal district

court in Boston, Massachusetts or, if said court does not have jurisdiction, in such courts in the Commonwealth of Massachusetts that do have jurisdiction.

Section 6.08. Specific Performance. In furtherance and not limitation of Section 6.02 hereof, each of the Members and the Sector shall have the right to have any provision of this Agreement specifically enforced, through injunction, restraining order or other form of equitable relief.

Section 6.09. Indemnification. Each party that violates this Agreement (the "Indemnitor") hereby severally agrees to indemnify, defend and hold harmless the other parties hereto (each, an "Indemnitee") in respect of their respective Losses; provided, that such Losses result or arise from a third party claim or governmental proceeding brought against or involving the Indemnitee, which is based on or relates to such Indemnitor's (or its Permits', its Participating Vessels' or such Participating Vessels operators', if different from such Indemnitor) (i) violation of applicable laws, rules or federal fishery regulations or (ii) breach of any covenant, agreement or obligation contained in this Agreement, the Harvesting Rules or other Sector requirements as may be adopted under the terms of this Agreement or the Sector's Bylaws. The indemnification obligations of the parties hereto shall be several and not joint and several. For the purposes of this Section 6.09, "Losses" shall mean any and all claims, liabilities, obligations, judgments, liens, injunctions, charges, orders, decrees, rulings, damages, dues, assessments, taxes, losses, fines, penalties, expenses, fees, costs, amounts paid in settlement (including reasonable attorneys' and witness fees and disbursements in connection with investigating, defending or settling any action or threatened action) arising out of any claim, complaint, demand, cause of action, action, suit or other proceeding asserted or initiated or otherwise existing. The obligations under this Section 6.09 shall survive the termination of this Agreement and the expulsion of any Member pursuant to Article VII.

Article VII. EXPULSION OF MEMBERS

Section 7.01. Cause. The Members agree that any Member, its Permits and/or its Participating Vessels may be expelled from the Sector if (i) the actions of such Member and/or its Participating Vessels (or the Participating Vessels' operators) seriously undermine and threaten the existence of the Sector, (ii) the actions of such Member and/or its Participating Vessels (or the Participating Vessels' operators) have exposed other Members of the Sector to monetary penalties and/or legal actions, (iii) such Member has been convicted of a serious crime, or (iv) such Member has not paid its membership dues and/or poundage fees as required by Section 2.06.

Section 7.02. Procedure. Any Member, the Committee or the Manager may submit to the Board a request to have a Member, its Permits and/or its Participating Vessels expelled from the Sector (the "Expulsion Request"). Such Expulsion Request shall be in writing and shall include an explanation of the basis for expulsion. The Board shall vote on such Expulsion Request within fourteen (14) days of receipt of such Expulsion Request. The affirmative vote of three-fourths (75%) of the members of the Board shall be required in order to

expel a Member, its Permits and/or its Participating Vessels. Expulsion shall be effective immediately upon the receipt of the requisite vote by the Board. As required by 50 CFR Part 648.87 or any substitute or successor provision, a Member, its Permits and/or its Participating Vessels expelled during any fishing year may not fish outside of the Sector under a multispecies DAS program during the remainder of such fishing year. Upon expulsion of any Member, its Permits and/or its Participating Vessels, the Manager shall immediately notify NMFS via certified mail that the Member's Permits and/or Participating Vessels are no longer included in the Sector.

Article VIII. TERM/TERMINATION

Section 8.01. This Agreement takes effect upon the approval hereof by the Regional Administrator in accordance with 50 CFR Part 648.87 and terminates on the last day of the 2007 fishing year (the "Term"). The Term of this Agreement may be extended by the written consent of the Members. Such written consent to extend the Term of this Agreement shall be given 20 calendar days in advance of the date by which the Sector's Operations Plan and Agreement for the upcoming fishing year must be submitted to NMFS. Notwithstanding the foregoing, if NMFS shall not approve the Sector's Operations Plan and Agreement, as the same may be amended, for any fishing year during the Term or any extension thereof, then this Agreement shall terminate on the last day of the last fishing year for which the Sector's Operations Plan and Agreement shall have received approval from NMFS.

Article IX. MISCELLANEOUS

Section 9.01. Entire Agreement. This Agreement, including the Exhibits hereto, the Schedule of Penalties and any other documents incorporated by reference herein, constitutes the entire agreement among the parties and supersedes any prior understandings, agreements, or representations by or among the parties, written or oral, to the extent they related in any way to the subject matter hereof.

Section 9.02. Succession and Assignment. This Agreement and all of the provisions hereof shall be binding upon and inure to the benefit of the parties and their respective successors and permitted assigns, but neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any party, including by operation of law, without the prior written consent of the Manager, such consent not to be unreasonably withheld or delayed, nor is this Agreement intended to confer upon any person except the parties hereto any rights, interests, benefits, obligations or remedies hereunder. Any assignment in contravention of this Agreement shall be null and void.

Section 9.03. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

Section 9.04. Notices. All notices, requests, demands, consents, claims and other communications hereunder shall be deemed duly given (i) one

business day following the date sent when sent by overnight delivery, (ii) five business days following the date mailed when mailed by registered or certified mail return receipt requested and postage prepaid, and (iii) upon delivery confirmation when sent by facsimile, at the contact information provided by each such Member to, and maintained by, the Manager.

Section 9.05. Governing Law. This Agreement shall be governed by and construed in accordance with federal fisheries laws and, to the extent that federal fisheries laws do not apply, with the domestic laws of the Commonwealth of Massachusetts without giving effect to any choice of law provision or rules (whether of Massachusetts or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the Commonwealth of Massachusetts.

Section 9.06. Change in Law. If and to the extent that any laws or regulations that govern any aspect of this Agreement shall change, so as to make any aspect to this Agreement unenforceable, then the parties agree to make such modifications to this Agreement as may be reasonably necessary for this Agreement to accommodate any such legal or regulatory changes, without materially changing the overall benefits or consideration expected hereunder by the parties.

Section 9.07. Consent to Jurisdiction and Venue. Subject to and without limiting the dispute resolution procedures set forth in Article VI, each of the Members consent to the exclusive jurisdiction and venue of the federal district court in Boston, Massachusetts or, if said court does not have jurisdiction, in such courts in the Commonwealth of Massachusetts that do have jurisdiction, for adjudication of any suit, claim, action or other proceeding at law or in equity relating to this Agreement. Each of the Members accepts, generally and unconditionally, the exclusive jurisdiction and venue of the aforesaid courts and waives any objection as to venue, and any defense of *forum non conveniens*.

Section 9.08. Amendments and Waivers. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by each of the Members.

Section 9.10. Severability. Any term or provision of this Agreement that is held invalid or unenforceable in any situation shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation.

Section 9.11. Expenses. Except as otherwise provided herein, each of the members shall bear its own costs and expenses (including legal and accounting fees and expenses) incurred in connection with this Agreement.

Section 9.12. Incorporation of Exhibits and Other Documents. The Exhibits and Schedule of Penalties identified in this Agreement are incorporated herein by reference and made a part hereof.

IN WITNESS WHEREOF, the undersigned parties have executed this Agreement as of the date first written above.

EXHIBIT A

GB Cod Fixed Gear Sector Penalty Schedule			
VIOLATION	FIRST	SECOND	THIRD
VIOLATIONS REGARDING PERMITS, REPORTING, DOCUMENTATION, EXEMPTION PERMIT REQUIREMENTS			
All Violations including but not limited to: providing false statements or supporting documentation on applications or reports to the Sector; late or non-reporting; failure to comply with a permit condition/ restriction/ letter of authorization or exemption issued by the Sector; providing false statements or failing to comply with VMS/DAS requirements (technical and minor violations may result in a letter of warning).	Up to \$5,000 (and/or stop fishing order)	\$5,000-\$15,000 (and/or stop fishing order)	\$20,000- (and/or stop fishing order)
VIOLATIONS REGARDING TIME AND AREA RESTRICTIONS			
All violations including, but not limited to: exemption areas, closed fisheries, closed seasons, restricted gear/management areas and Days at Sea violations.	Up to \$50,000 (stop fishing order for 30 days)	\$50,000-\$100,000 (unable to fish for the remainder of the fishing year)	Expulsion
VIOLATIONS THAT PLACE THE SECTOR AGREEMENT AT RISK			
All violations including but not limited to a violation of a stop order, fishing in a closed area, transfer of fish from a non-sector vessel to a sector vessel, subverting the reporting requirements (misappropriating landings) or any other action which could cause the Authorized Georges Bank Cod Fixed Gear Sector Allocation to be in violation of its agreement.	Up to \$50,000 (loss of fishing rights for 365 days)	Expulsion	
VIOLATIONS REGARDING MEMBERSHIP COMMITMENT			
Violation of 50 CFR Part 48 or failing to remain in the Sector for the Commitment Period (i.e., breach of Section 2.03 of the Agreement).	\$10,000	N/A	N/A

EXHIBIT B
GB Cod Fixed Gear Sector

Permit Number	Current Owner	Vessel Name	Enrollment Year	NMFS Allocation of Landings	DAS Allocation		
					A	B regular	B reserve
	Linnell, J. Matthew and Tolley, Stuart	Lori B	2007				
	Linnell, J. Matthew	Suzie Q	2007				
	Margeson, Jan	Decisive	2007				
	Mallowes, Edward	Bad Boys	2007				
	Our, John	Miss Fitz	2007				
	Our, John	22 Highliner	2007				
	Our, John	<i>Name TBD</i>	2007				
	Pechie, James	Little Rascal	2007				
	Red Death Inc.	I'm Alone	2007				
	Russo, Michael	Gulf Venture	2007				
	Russo, Michael	Susan Lee	2007				
	Russo, Michael	Regis B	2007				
	Russo, Michael	Zach n' Abbie	2007				
	Smith, Mark	Joanne H	2007				
	St. Pierre, Robert	Rug Rats	2007				
	Tolley, Kenneth	Hunter	2007				
	Tolley, Stuart	Dawn T	2007				
	Linnell, J. Matthew and Tolley, Stuart	Sea Dancer	2007				
	Tuttle, John	Cuda	2007				

EXHIBIT C

HARVESTING RULES Fishing Year 2007-2008 GB Cod Fixed Gear Sector

The Members and the Participating Vessels of the Sector agree to be legally bound to follow the Harvesting Rules for the fishing year 2007-2008 as described herein, notwithstanding those rules and regulations applicable to common pool Multispecies vessels.

1. **Aggregate Sector allocation: GB cod TAC: (insert poundage)**

The Sector Members agree that, collectively, they will not harvest more GB cod than the Sector TAC. Once the annual TAC is reached no participating vessel may fish for the remainder of the fishing year under a multispecies DAS, possess or land GB cod or other regulated species managed under the Plan, or use any fishing gear capable of catching GB cod or any regulated species managed under the Plan.

2. **Monthly cod quota targets:** Commencing May 2007, 8.33% of the Sector's cod less the amount of any reserve established by the Sector's Board of Directors pursuant to Section 4.02 of the Agreement, would be allocated to each month of the fishing year (see Table below). Quota that is not landed during a month will be rolled over into the next month. Any delays in implementation of the Ops Plan that would reduce the number of months vessels could participate would result in the aggregate TAC being distributed amongst the remaining months. However, monthly quota targets are subject to further revision and will be revised as necessary. Once the aggregate monthly quota is reached, no Participating Vessel will be authorized to use fishing gear capable of catching GB cod or other species managed under the Plan. All cod harvested by Members and Participating Vessels shall be considered GB cod for the purposes of the Operations Plan and Agreement.

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April
%	8.3	16.7	25.0	33.3	41.7	50.0	58.3	66.6	75.0	83.3	91.6	100.0

3. **Weekly cod quota targets:** In addition to the monthly quota targets, the Manager may impose weekly or trip target quotas to slow down harvest rates. If such target quotas are imposed, Sector Members agree to adjust their fishing operations to avoid exceeding these quotas.

4. **Days-At-Sea ("DAS"):** Each participating Permit and Participating Vessel will

be allocated DAS by the Regional Administrator through Amendment 13, as set forth on Exhibit B to the Agreement. This DAS allocation will be considered the Sector's DAS allocation to individual Members.

5. Sector Call-In: Each Participating Vessel must notify the Manager or his designated representative prior to departing from port when using fishing gear capable of catching GB cod.

6. DAS Pooling: Participating Vessels and/or Permits may redistribute or pool DAS to other Participating Vessels and/or Permits, provided that the Manager has given his prior written consent to such redistribution or pooling. The Manager shall notify NMFS within 3 calendar days of any such redistribution or pooling. A Participating Vessel and/or Permit may not transfer or lease DAS to any non-Sector vessel and/or permit during the fishing year in which the Participating Vessel and/or Permit is enrolled in the Sector.

7. Full retention: All legal size GB cod harvested during any fishing operation must be retained and counted against the Sector's Aggregate Allocation.

8. Species Trip Limits: Except for GB cod, participating vessels shall be subject to any trip limits imposed by the National Marine Fisheries Service for species managed under the Plan.

9. Gear Restrictions: No Participating Vessel may fish for GB cod with any gear other than jigs, non-automated demersal longline, handgear or gillnets. While participating in the Georges Bank seasonal closure (May 1 through 31) vessels must use hook gear to target cod or other regulated species managed under the Plan. All Participating Vessels are subject to the same gear restrictions on marking, tagging, mesh size, and number of gill nets applicable to common pool vessels using the same type of gear. No Participating Vessel may fish with tie-down nets. For purposes of these Harvesting Rules and the Agreement, a "tie-down net" is not a monk gillnet but is any sink gillnet rigged specifically for catching flatfish and is constructed with no floats on the float line, or that is constructed with floats on the float line and that has tie-down twine between the float line and the lead line. In addition, when fishing with hooks all hooks must be 12/0 circle hooks. A "circle hook" is defined as a hook with the point turned back towards the shank and the barbed end of the hook is displaced (offset) relative to the parallel plane of the eyed-end, or shank of the hook when laid on its side. Participating Vessels are exempt from the 3,600 hook limit. When monk fishing with gill nets, all participating vessels must use a 10 inch minimum mesh.

10. GB Seasonal Closure/Spawning Season Restrictions: Participating Vessels are not required to adhere to the seasonal closure on Georges Bank (May 1 through May 31) but must use hook gear to target cod or other regulated species managed under the Plan. However, Participating Vessels must continue to comply with the Spawning Season Restrictions. The 20 day spawning block (March-May) will remain in effect in accordance with NMFS regulations.

11. Closed Areas: Participating Vessels may fish in closed areas to the extent authorized by NMFS.

12. Fishing Area: Participating vessels are restricted to fishing in the designated fishing area when using fishing gear capable of catching GB cod or any regulated species managed under the Plan. The definition of the management area is the GB Cod Hook Sector Area. The geographic boundaries of the management area are defined as straight lines connecting the following waypoints (except for the east-facing shoreline of the U.S.): (1) 70°00' W latitude and the east facing shoreline of Cape Cod, MA; (2) 70°00' W latitude and 42°20' N longitude; (3) 42°20' N longitude and 67°18.4' [the U.S. Canada Maritime Boundary]; (4) follow the U.S. EEZ boundary south to 39°00' N longitude; (5) 39°00' N longitude and 71°40' W latitude; (6) 71°40' W latitude and the south-facing shoreline of Rhode Island.