

# Overview of the Northeast Multispecies Fishery Management Plan<sup>1</sup>

**May 21, 2014**

**Prepared by the  
New England Fishery Management Council  
in cooperation with the  
National Marine Fisheries Service**

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<sup>1</sup> *This document has been prepared as background material for the June 12-13, 2014 peer review by the Center for Independent Experts of the Compass Lexecon report: “Recommendations for Excessive Share Limits in the Northeast Multispecies Fishery.” This document is a modification of the introductory and affected environment sections of recent fishery management plan action documents.*

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## 1.4 LIST OF ACRONYMS

ABC	Acceptable Biological Catch
ACE	Annual Catch Entitlement
ACL	Annual Catch Limit
ALWTRP	Atlantic Large Whale Take Reduction Plan
AM	Accountability Measure
ASPD	Analysis and Program Support Division
ATGTRT	Atlantic Trawl Gear Take Reduction Team
CA	Closed Area
CAM	Closed Area Model
CPH	Confirmation of Permit History
CPUE	Catch Per Unit Effort
DAM	Dynamic Area Management
DAS	Days-At-Sea
EGB	Eastern Georges Bank
EIS	Environmental Impact Statement
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FMP	Fishery Management Plan
FY	Fishing Year
GAP	Groundfish Advisory Panel
GARFO	Greater Atlantic Regional Fisheries Office
GB	Georges Bank
GOM	Gulf of Maine
HA	Handgear A
HHI	Herfindahl-Hirschman Index
HPTRP	Harbor Porpoise Take Reduction Plan
LAPP	Limited Access Privilege Program
MMPA	Marine Mammal Protection Act
MRI	Moratorium Right Identifier
MSA	Magnuson-Stevens Act
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Reauthorization Act
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
NOI	Notice of Intent
OSC	Oversight Committee
OY	Optimum Yield
PBR	Potential Biological Removal
PSC	Potential Sector Contribution
RA	Regional Administrator
RPA	Reasonable and Prudent Alternative
SAM	Seasonal Area Management
SAP	Special Access Program

SFA	Sustainable Fisheries Act
SNE/MA	Southern New England/Mid-Atlantic Bight
SSC	Science and Statistical Committee
TAC	Total Allowable Catch
TMGC	Transboundary Management Guidance Committee
USCG	United States Coast Guard

## **2.0 GOALS AND OBJECTIVES OF THE NORTHEAST MULTISPECIES FMP**

The goals and objectives of the Northeast Multispecies FMP remain as described in Amendment 13 and will continue to frame the long-term management of the resource and fishery.

### **2.1 GOALS**

1. Consistent with the National Standards and other required provisions of the Magnuson-Stevens Fishery Conservation and Management Act and other applicable law, manage the northeast multispecies complex at sustainable levels.
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.
3. Maintain a directed commercial and recreational fishery for northeast multispecies.
4. Minimize, to the extent practicable, adverse impacts on fishing communities and shoreside infrastructure.
5. Provide reasonable and regulated access to the groundfish species covered in this plan to all members of the public of the United States for seafood consumption and recreational purposes during the stock rebuilding period without compromising the Amendment 13 objectives or timetable. If necessary, management measures could be modified in the future to insure that the overall plan objectives are met.
6. To promote stewardship within the fishery.

### **2.2 OBJECTIVES**

1. Achieve, on a continuing basis, optimum yield for the U.S. fishing industry.
2. Clarify the status determination criteria (biological reference points and control rules) for groundfish stocks so they are consistent with the National Standard guidelines and applicable law.
3. Adopt fishery management measures that constrain fishing mortality to levels that are compliant with the Sustainable Fisheries Act.
4. Implement rebuilding schedules for overfished stocks, and prevent overfishing.
5. Adopt measures as appropriate to support international transboundary management of resources.
6. Promote research and improve the collection of information to better understand groundfish population dynamics, biology and ecology, and to improve assessment procedures in cooperation with the industry.
7. To the extent possible, maintain a diverse groundfish fishery, including different gear types, vessel sizes, geographic locations, and levels of participation.
8. Develop biological, economic and social measures of success for the groundfish fishery and resource that insure accountability in achieving fishery management objectives.

9. Adopt measures consistent with the habitat provisions of the MSA, including identification of EFH and minimizing impacts on habitat to the extent practicable.
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.

### **3.0 CONTEXT OF EXISTING MANAGEMENT SYSTEM**

This section describes the existing management program. More detail on these actions can be found at <http://www.nefmc.org>.

#### **3.1 HISTORY OF THE NORTHEAST MULTISPECIES FMP**

Today, 13 species are managed under the Northeast Multispecies Fishery Management Plan (FMP) as large mesh species, based on fish size and type of gear used to harvest the fish: American plaice, Atlantic cod, Atlantic halibut, Atlantic wolffish, haddock, pollock, redfish, ocean pout, yellowtail flounder, white hake, windowpane flounder, winter flounder, and witch flounder. Three species — offshore hake, red hake, and silver hake (whiting) — are managed under a separate small mesh multispecies program (per Amendment 12). Several large mesh species are managed as two or more stocks based on geographic region.

Groundfish stocks have been managed under the Magnuson-Stevens Act (MSA) beginning with the adoption of a groundfish plan for cod, haddock, and yellowtail flounder in 1977. This plan first relied on hard quotas (total allowable catches, or TACs) and proved unworkable. The quota system was rejected in 1982 with the adoption of the Interim Groundfish Plan, which controlled fishing mortality with minimum fish sizes and codend mesh regulations for the Gulf of Maine and Georges Bank. This plan was replaced with the Northeast Multispecies FMP in 1986, which continued to control fishing mortality with gear restrictions and minimum mesh size, but established biological targets to achieve maximum spawning potential.

##### **3.1.1 Amendment 5**

Amendment 5 was a major revision to the FMP. Adopted in 1994, it established a Days-at-Sea (DAS) program that reduced fishing effort for some fleet components and adopted year-round closures to control mortality. It also established a moratorium on groundfish permits. Amendment 5 contains a detailed history of the FMP up to 1994 (NEFMC 1993).

##### **3.1.2 Sustainable Fisheries Act**

Despite the effort reductions taken through Amendment 5, the Sustainable Fisheries Act (SFA), amended the MSA in 1996 to set the standards for effective management higher. The SFA placed new demands on FMPs to reduce bycatch, identify and protect Essential Fish Habitat (EFH), and minimize adverse effects of fishing on EFH to the extent practicable. It also created National Standards 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 (SFA 1996).

### **3.1.3 Amendment 7**

Implemented in 1996, Amendment 7 accelerated the DAS effort reduction program by eliminating significant exemptions from the effort control program. It incentivized fishing 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 lbs. It established a rebuilding program for Georges Bank (GB) and Southern New England (SNE) yellowtail flounder, GB and Gulf of Maine (GOM) cod, and GB haddock based primarily on DAS controls, area closures, and minimum mesh size. Additionally, permit categories were changed or created, including an open access multispecies permit for limited access sea scallop vessels. A program was created for reviewing management measures annually and changing regulations through a framework adjustment process to ensure that plan goals would be met (NEFMC 1997). Of all changes to the FMP prior to 2000, Amendments 5 and 7 had the greatest impact on the fishery, both for stock rebuilding and shaping the socioeconomic conditions of the industry and fishing communities.

### **3.1.4 Amendment 9**

Adopted in 1999, Amendment 9 had a significant impact on the fishery, establishing new status determination criteria (overfishing definitions) and setting the Optimum Yield (OY) for twelve groundfish species to bring the plan into complete compliance with the SFA.

### **3.1.5 Amendments 11 and Essential Fish Habitat**

Amendment 11 adopted Essential Fish Habitat provisions for New England groundfish stocks in 1999 to comply with the SFA. According to a 2000 ruling of the U.S. District Court for the District of Columbia however, EFH considerations were determined to be inadequate. The prosecution contested the adequacy of evaluations of fishing gear impacts on EFH and challenged NMFS approval of FMPs which did not fully address the impacts of fishing on habitat. The Court found that the agency's decisions on EFH amendments were in accordance with the MSA, but determined that the Environmental Assessments (EAs) prepared for EFH amendments did not fully consider all relevant alternatives and thus violated NEPA. The Court specifically criticized several EAs for evaluating only two options for EFH measures (including No Action). The decision noted that the descriptions and analyses of the environmental impacts of the Proposed Actions and alternatives were vague or not fully explained. The Court ordered NMFS to complete a new and thorough NEPA analysis for each EFH amendment named in the suit (*American Oceans Campaign et al. v. Daley et al.* 2000).

### **3.1.6 Frameworks 27 to 39**

In 1999, the NEFMC submitted Framework 27 as the primary annual adjustment framework. Both Frameworks 27 and 30 contained trip limits for GOM and GB cod. In both cases, the Regional Administrator (RA) was authorized to reduce the trip limit when 75% of the target TAC for each stock is reached. On May 1, 1999, a GOM cod trip limit of 200 lbs per day was implemented, but on May 28, the RA reduced the trip limit to 30 lbs per day, just three weeks into the fishing year. Even before the trip limit was reduced, fishermen reported excessive discards of cod as seasonal closures ended. NMFS announced on July 29, 1999 that it disapproved the 30-day closure on GB proposed in Framework 30, but it approved the GB cod trip limit of 2,000 lbs per day and 20,000 lbs maximum possession limit.

The NEFMC submitted Framework 31 on October 14, 1999, which addressed discards in the GB and GOM cod fisheries. NMFS approved an increased GOM cod trip limit on January 5, 2000, but it disapproved a change to the GB cod trip limit program that would have eliminated the authority of the RA to make mid-season adjustments to the trip limit when 75% 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 Amendment 7 rebuilding targets. The framework implemented new seasonal closures, maintained or reduced trip limits, and mandated that party and charter vessels obtain a Letter of Authorization to fish in the GOM closed areas. The NEFMC also proposed changes to the large mesh permit category, but these were not approved by NMFS.

Framework 36 was completed in December 2001, but the NEFMC did not adopt it nor was it submitted. Frameworks 37 and 38 related to the whiting fishery.

Framework 39 was a joint action with the Scallop FMP and addressed scallop area management in Nantucket Lightship Area and Closed Areas (CA) I and II. These closures had been created to achieve groundfish rebuilding objectives and resulted in increased scallop biomass. The Framework allowed access to those scallop resources while minimizing bycatch of groundfish.

### **3.1.7 Amendment 13**

Amendment 13 was developed over a four-year period (1999-2003) to meet SFA requirements, such as adopting rebuilding programs for stocks that were overfished and to end overfishing. In December 2001, during the drafting of the Amendment and immediately following the implementation of Framework 33, Conservation Law Foundation and other organizations successfully filed suit against NMFS alleging that the rebuilding plans NMFS had implemented were not consistent with Amendment 9 overfishing definitions. 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). The plaintiffs prevailed on the issue that the rebuilding plans failed to implement a Standardized Bycatch Reporting Methodology (*Conservation Law Foundation v. Evans* 2001). After a long series of negotiations among various parties, interim measures were adopted by the court and NMFS was instructed to submit a FMP that complies with the law. Amendment 13, which went into effect on May 1, 2004, met the requirements for both this court order and the 2000 ruling on EFH.

The main purpose of Amendment 13 was to end overfishing on groundfish stocks and to rebuild all of the groundfish stocks that were overfished. The Amendment addressed overfishing definitions, stock rebuilding, reduced fishing effort and capacity in the fishery, included measures to minimize bycatch, instituted improved reporting and recordkeeping requirements, and implemented EFH protections. The Amendment also mandated a periodic review of stock data midway through the implementation period and called for corrective action if necessary.

During Amendment 13 development, the relationship between the multispecies fishing industry and the scientific community underwent some important changes. In September 2002, a Cape Cod fisherman convinced federal scientists that the trawl warps used to tow the groundfish survey gear used by the Northeast Fisheries Science Center (NEFSC) were of different lengths, a fact that was confirmed. A series of workshops then assessed how the warp length discrepancy and confounding structural problems with the otter trawl doors and footrope may have affected

data quality. Issues surrounding the trawl warps, reference point estimates, and a trawl survey experiment were evaluated by Payne et al. (2003). They concluded that the data was suitable for management and recommended further investigation of the issues, with greater emphasis on collaborative research to improve communication and understanding among fishermen and scientists, and to collect more comprehensive data for management of the fishery.

### **3.1.8 Frameworks 40A to 43**

Framework 40A (2004) was created to mitigate economic and social impacts of effort reductions imposed by Amendment 13. It was intended to provide more opportunity for vessels in the fishery to target healthy stocks by instituting the Category B (Regular) DAS Pilot Program, the Eastern US/Canada Haddock Special Access Program (SAP) Pilot Program, and the CA I Hook Gear Haddock SAP, a program that allows longline vessels to fish in Closed Area (CA) I to target haddock. The SAP program was partially approved and did not allow participation by vessels that are not members of the GB Cod Hook Sector. An Amendment 13 restriction was relieved that prohibited vessels from fishing both inside and outside the Western U.S./Canada Area on the same trip and allowed for increase in incidental TACs.

The NEFMC sought to improve the effectiveness of the Amendment 13 effort control program, including the opportunities to target healthy stocks. In Framework 40B (2005), the NEFMC considered measures to clarify the DAS allocations and provide a small allocation to all permit holders, to improve opportunities to target healthy stocks, and to adjust the GB Cod Hook Sector provisions to meet those purposes. Framework 40B included measures to address interactions between the herring fishery and regulated groundfish, since catches of groundfish in the herring fishery were discarded and did not contribute to groundfish OY. The framework revised the DAS leasing and transfer programs, modified provisions for the CA II Yellowtail Flounder SAP, changed the allocation criteria for the GB Cod Hook Sector, established a DAS credit for vessels standing by an entangled whale, implemented new notification requirements for Category 1 herring vessels, and removed the net limit for trip gillnet vessels.

Framework 41 (2005) revised the CA I Hook Gear Haddock SAP to allow participation by nonsector vessels. The program, like many of the measures in Framework 40A, was intended to help mitigate the economic and social impacts of Amendment 13.

Framework 42 (2006) introduced several measures to achieve rebuilding and fishing mortality targets, including the biennial adjustment anticipated from Amendment 13. The Framework instituted a GB yellowtail rebuilding strategy, changes to the Category B (regular) DAS Program and two Special Access Programs, and an extension of the DAS leasing program. It introduced the differential DAS system, where DAS were counted at the rate of 2:1 in certain areas in the Gulf of Maine and Southern New England. It also implemented a Vessel Monitoring System (VMS) requirement for DAS vessels.

Large haddock year classes had been leading to increased haddock bycatch by mid-water herring trawlers, particularly on Georges Bank. Framework 43 (2006) imposed a haddock catch cap on the herring fishery, an incidental catch allowance for other regulated multispecies, and a monitoring program for the catch cap. The existing classifications of herring midwater trawl and purse seine gear relative to the multispecies fishery were also modified.

### 3.1.9 FW 42 Lawsuit

The Commonwealth of Massachusetts and State of New Hampshire filed suit against the Secretary of Commerce over FW 42 provisions. The lawsuit argued that the Closed Area Model (CAM) used to develop measures did not comply with National Standard 2 requirements to use the best available science. The lawsuit also argued that measures were more stringent than necessary because the NEFMC and NMFS failed to consider the “mixed stock exception,” which allows overfishing to continue under certain limited conditions.

On January 26, 2009, the U.S. District Court in Massachusetts affirmed the use of the CAM and rejected the argument that its use was not the “best available science.” The order also said “The court temporarily suspends Framework 42 pending serious consideration and analysis of the Mixed-Stock Exception by Defendant.” The court order led to considerable confusion over the management measures that remained in place. After filings by the parties in the suit, the court issued a subsequent ruling on February 17, 2009 that said (in part): “Framework 42 is hereby reinstated except for those provisions relating to the 2:1 DAS counting system, which remains suspended for thirty-eight (38) days from the date of this order.” On February 23, 2009, the court extended the suspension of DAS counting provisions until April 10, 2009 so that the Council could review a NMFS filing on the applicability of the mixed stock exception. Other FW 42 measures were reinstated. On April 10, 2009, the court reinstated FW 42 in its entirety.

### 3.1.10 Magnuson-Stevens Fishery Conservation and Management Reauthorization Act

In 2006, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (MSFCMA) updated the original MSA and its SFA amendments (MSFCMA 2007). The MSFCMA reauthorized the MSA for Fiscal Years 2007-2013 and contained new requirements for fishery management, including:

- The use of Annual Catch Limits (ACLs) and Accountability Measures (AMs) in all U.S. fisheries by 2011 to ensure that overfishing does not occur.
  - The ACLs must be set at or below the Acceptable Biological Catch (ABC) recommended by the Scientific and Statistical Committee (SSC) of the particular regional council.
  - The AMs must detail what actions will be taken in the event of a harvest level overage.
  - For stocks that were currently experiencing overfishing, the deadline for ending that overfishing was 2010.
- The use of Limited Access Privilege Programs (LAPP).
  - The term "limited access privilege" means a Federal permit, issued as part of a limited access system under Section 303A to harvest a quantity of fish representing a portion of the ACL that may be received or held for exclusive use by a person; and: (a) includes an individual fishing quota; but (b) does not include community development quotas as described in Section 305(i).
  - Much of the responsibility for the development of LAPPs and their requirements is delegated to the Councils, including what types of LAPPs can best meet the needs of a specific fishery, eligibility criteria for participation, and procedures for allocating harvest privileges.

One requirement in the MSFCMA applies specifically to New England fisheries. The Act states that the NEFMC, “may not approve or implement a fishery management plan or amendment that creates an individual fishing quota program, including a Secretarial plan, unless such a system, as ultimately developed, has been approved by more than 2/3 of those voting in a referendum among eligible permit holders...” Thus, a system for creating a referendum and determining voting eligibility would need to be formulated if the NEFMC chose to pursue Individual Fishing Quotas (IFQs) as a management tool.

### **3.1.11 Interim Rule**

Although the NEFMC was developing Amendment 16 to comply with the MSFCMA, NMFS reduced fishing mortality through an interim rule effective for Fishing Year 2009 (NMFS 2009a) to ensure compliance with legal deadlines. Interim regulations for commercial vessels include the Amendment 13 default DAS change (an 18% reduction in available Category A DAS) and expansion of the differential DAS counting area in Southern New England. Landing SNE/MA winter flounder, northern windowpane flounder, and ocean pout were prohibited, and a trip limit was adopted for witch flounder. The SNE/MA winter flounder SAP was eliminated for the duration of the rule, as was the state waters winter flounder exemption. There were mitigation measures such as a reduction in the minimum size for haddock, removal of the conservation tax for DAS transfers, liberalization of the DAS leasing program, extension of the Eastern U.S./Canada haddock SAP, and modifications to the CAI Hook Gear Haddock SAP. Recreational measures include an extension of the seasonal closure for GOM cod, a 10-fish bag limit on GB cod for party/charter vessels, a lowering of the minimum size for haddock, and a prohibition on retention of winter flounder in the SNE/MA stock area.

### **3.1.12 Amendment 16**

Amendment 16, implemented May 1, 2010, provided major changes in the realm of groundfish management. Notably, it greatly expanded the catch share sector program. Sectors are voluntary, self-selected groups of fishermen that are allocated a portion of the available catch. Amendment 16 also implements annual catch limits (ACLs); exceeding these limits triggers additional management actions called accountability measures (AMs) in compliance with the MSFCMA. The amendment also included a host of mortality reduction measures for “common pool” (i.e. nonsector) vessels and the recreational component of the fishery. The amendment established that, starting in FY2012, the common pool would be managed with a trimester sub-ACL versus an annual one for all stocks except SNE/MA winter flounder, windowpane flounder, ocean pout, Atlantic wolffish, and Atlantic halibut.

### **3.1.13 Amendment 16 Lawsuit**

A lawsuit filed by the Cities of Gloucester and New Bedford and several East Coast fishing industry members against NMFS challenged, among other things, that the sector program constituted a LAPP, and as such, should have been subject to additional requirements, like a referendum among permit holders for approval. In September 2012, The U.S. Court of Appeals for the First Circuit in Boston upheld the first court ruling against the plaintiffs. The provisions of Amendment 16 were upheld (Lovgren, J. et al. vs. Locke, G. et al. 2012).

### **3.1.14 Frameworks 44-46**

Framework 44 was also adopted in 2009, and it set specifications for FY 2010 – 2012 and incorporated the best available information in adjusting effort control measures adopted in Amendment 16.

Framework 45 was approved by the Council in 2010 and adopts further modifications to the sector program and fishery specifications; it was implemented May 1, 2011.

Framework 46 revised the allocation of haddock to be caught by the herring fishery and was implemented in August 2011.

### **3.1.15 Amendment 17**

Amendment 17, which authorizes the function of NOAA-sponsored state-operated permit banks, was implemented on April 23, 2012.

### **3.1.16 Frameworks 47-51**

Framework 47, implemented on May 1, 2012, set specifications for some groundfish stocks for FY 2012 – 2014, modified AMs for the groundfish fishery and the administration of the scallop fishery AMs, and revised common pool management measures; modification of the Ruhle trawl definition and clarification of regulations for charter/party and recreational groundfish vessels fishing in groundfish closed areas were proposed under the RA authority.

Framework 48 was partially implemented on May 1, 2014. That action proposes revised status determination criteria for several stocks, modifies the sub-ACL system, adjusts monitoring measures for the groundfish fishery, and changes several AMs. The framework also exempted common pool handgear vessels from the trimester sub-ACL system for white hake.

Framework 49 is a joint Northeast Multispecies/Atlantic Sea Scallop action that modifies the dates for scallop vessel access to the year-round groundfish closed areas; this action was implemented on May 20, 2013.

Framework 50 was implemented on September 30, 2013, which set specifications for many groundfish stocks and modified the rebuilding program for SNE/MA winter flounder.

Framework 51 was partially implemented on May 1, 2014, which set specifications for FY2014 and made several modifications to the administration of ACLs and AMs. Accountability measures for GB yellowtail flounder were set for the small-mesh fisheries. The ten-year rebuilding programs for GOM cod and plaice were modified to include a rebuilding plan review analysis; a 1-year U.S./Canada quota trading mechanism (for FY 2014 only) was established. Administration of eastern and western GB haddock sector allocations was revised. Possession of yellowtail flounder by limited access scallop vessels was prohibited.

## **3.2 OTHER ACTIONS AFFECTING THE FISHERY**

### **3.2.1 Actions to Minimize Interactions with Protected Species**

Many of the factors that serve to mitigate the impacts of the groundfish fishery on protected species are currently being implemented in the Northeast Region under either the Atlantic Large Whale Take Reduction Plan (ALWTRP) or the Harbor Porpoise Take Reduction Plan (HPTRP). In addition, the Northeast Multispecies FMP has undergone repeated consultations pursuant to Section 7 of the Endangered Species Act (ESA), including the Biological Opinion dated June 14, 2001. In that Opinion, NMFS concluded that the continued authorization of the Northeast multispecies FMP would jeopardize the continued existence of ESA-listed right whales as a result of entanglement in gillnet gear. A Reasonable and Prudent Alternative (RPA) was provided to remove the likelihood of jeopardy, and the RPA measures were implemented, in part, through the ALWTRP. On April 2, 2008, NMFS reinitiated Section 7 consultation on the continued authorization of the Northeast Multispecies FMP because: (1) new information on the number of loggerhead sea turtles captured in bottom otter trawl gear used in the fishery, and (2) changes to the ALWTRP that will result in the elimination of measures that were incorporated as a result of the RPA for the June 14, 2001, opinion on the continued authorization of the Northeast Multispecies FMP. The new consultation is on-going but is not complete as of the drafting of this document.

#### **3.2.1.1 Harbor Porpoise Take Reduction Plan**

The Harbor Porpoise Take Reduction Plan (HPTRP) was developed pursuant to Section 118(f) of the Marine Mammal Protection Act (MMPA) to reduce the level of serious injury and mortality of the Gulf of Maine/Bay of Fundy harbor porpoise stock due to incidental interactions with commercial gillnets. Prior to the development of the HPTRP, the bycatch estimate of the Gulf of Maine/Bay of Fundy harbor porpoise stock was estimated at 1,500 animals taken per year in U.S. commercial gillnet fisheries between 1994 and 1998. This exceeded the stock's Potential Biological Removal (PBR) level by more than threefold. Under the MMPA, NMFS was required to take action to reduce the serious injury and mortality of harbor porpoises from incidental interactions with gillnet gear. Thus, NMFS formed two take reduction teams to recommend measures to reduce incidental interactions in the Gulf of Maine and the Mid-Atlantic, respectively.

The GOM component of the HPTRP regulations, implemented on December 2, 1998 (Morreale & Standora 1998) manages commercial gillnet gear that catches or is capable of catching multispecies through time and area regulations, from Maine to Rhode Island, between August and May. This includes seasonal gillnet closures during the peak months when harbor porpoises are most concentrated in four of the six GOM management areas. At other times of the year, the HPTRP management areas require the seasonal use of acoustic deterrent devices (i.e. pingers) on all sink gillnet gear.

After implementation of the HPTRP, harbor porpoise bycatch decreased and remained below the PBR of 610 animals until 2004. However, bycatch showed an increasing trend after 2001, and again exceeded PBR beginning in 2004. From 2001 through 2005, the average annual mortality was 652 harbor porpoises per year in U.S. commercial fisheries. NMFS was required to take further action to reduce harbor porpoise takes in gillnet fisheries. NMFS reconvened the Harbor Porpoise Take Reduction Team in 2007 to review and discuss the most recent harbor porpoise

abundance and bycatch information and to evaluate measures that may reduce harbor porpoise bycatch to below the PBR. NMFS finalized an amendment to the HPTRP in 2010 (NMFS 2010c).

### **3.2.1.2 Atlantic Large Whale Take Reduction Plan**

The ALWTRP contains measures designed to reduce the likelihood of fishing gear entanglements of right, humpback, fin, and minke whales in the North Atlantic. The plan includes broad gear modifications and time/area closures (which are being supplemented by progressive gear research), expanded disentanglement efforts, extensive outreach efforts in key areas, and an expanded right whale surveillance program to supplement the Mandatory Ship Reporting System.

Key regulatory changes implemented in 2002 included: 1) new gear modifications; 2) implementation of a Dynamic Area Management system (DAM) of short-term closures to protect unexpected concentrations of right whales in the Gulf of Maine; and 3) establishment of a Seasonal Area Management system (SAM) of gear modifications to protect seasonal concentrations of right whales in the southern GOM and GB.

The ALWTRP measures published on October 5, 2007 expand the gear mitigation measures by: (a) including additional trap/pot and net fisheries (i.e., gillnet, driftnet) to those already regulated by the ALWTRP, (b) redefining the applicable areas and seasons, (c) changing the buoy line requirements, (d) expanding and modifying the weak link requirements for trap/pot and net gear, and (e) requiring (within a specified timeframe) the use of sinking and/or neutrally buoyant groundline in place of floating line for all fisheries regulated by the ALWTRP on a year-round or seasonal basis (MSFCMA 2007).

### **3.2.1.3 Atlantic Trawl Gear Take Reduction Team**

The Atlantic Trawl Gear Take Reduction Team (ATGTRT) was first convened in September 2006 by NMFS as part of a 2003 settlement agreement between the Center for Biological Diversity and NMFS to address the incidental mortality and serious injury of long-finned pilot whales, short-finned pilot whales, common dolphins, and Atlantic white-sided dolphins in several trawl gear fisheries operating in the Atlantic Ocean. Incidental takes of pilot whales, common dolphins and Atlantic white-sided dolphins have occurred in fisheries operating under the Atlantic Mackerel, Squid, and Butterfish FMP, as well as in mid-water and bottom trawl fisheries in the Northeast. The ATGTRT concluded, with NOAA legal guidance, that additional management measures were not necessary at the time (ATGTRT 2008).

### **3.2.2 EFH Omnibus Amendment**

The NEFMC is currently developing an Omnibus Essential Fish Habitat (EFH) Amendment for all of its FMPs. The amendment is being completed in two phases. Phase I, completed in 2007, reviewed and updated EFH designations and considered identification of Habitat Areas of Particular Concern (HAPCs). Phase II is reviewing and update the gear effects evaluation and consider alternatives for optimizing management measures for minimizing the adverse effects of fishing on EFH across all FMPs. Implementation is expected in 2015.

## **4.0 REGULATORY CHANGES UNDER CONSIDERATION**

### **4.1 FRAMEWORK 52**

The Council initiated FW52 at its February 2014 meeting to revise accountability measures (AMs) for the commercial groundfish fishery for southern and northern windowpane flounder stocks. The current gear restricted area AMs were triggered for FY2014, due to overages of the overall annual catch limits in FY2012 for both stocks. The Council requested that any revision to the current AMs be applied retroactive to FY2014, or any overages that occurred prior to FY2014. The Council was concerned that the current AMs may not effectively prevent overages and could negatively impact the groundfish fishery, due to considerable economic losses in targeted flatfish fisheries (e.g., winter flounder and yellowtail flounder fisheries). The Council also discussed whether the current status of the stocks should be considered when determining if AMs should be implemented. Any revisions to the AMs for windowpane flounder would be intended to mitigate overages that have already occurred, better ensure that additional overages do not occur in FY2014 and beyond, and help minimize economic impacts of the AMs on the commercial groundfish fishery.

### **4.2 AMENDMENT 18**

This amendment is designed to address concerns regarding fleet diversity and fishery consolidation. Amendment 16 expanded the use of sector management for stocks managed by the FMP, and also implemented ACLs and AMs for the fishery. In the specification process for FY2010 (NEFMC 2010), catch limits for many multispecies stocks were set at very low levels, and several of these restrictions have remained in place. There has been concern that the low catch limits, in conjunction with expanded sector management, may lead to excessive consolidation and lack of diversity in the groundfish fleet. Likewise, there is concern that, as stocks rebuild and ABCs increase, there may be increased consolidation and decreased diversity in the groundfish fleet in the future. Because of concerns related to maintaining the diverse makeup of the fleet, as well as an interest in keeping active and thriving fishing ports throughout New England, the Council has considered measures in Amendment 18 that would impose limits on the amount of allocation that individuals or groups of individuals may control. Though the Council has been discussing the concepts considered in Amendment 18 for some time, the Council has been specifically working to develop this action for the past 14 months.

The Council has identified four goals for Amendment 18:

1. Promote a diverse groundfish fishery, including different gear types, vessel sizes, ownership patterns, geographic locations, and levels of participation through sectors and permit banks;
2. Enhance sector management to effectively engage industry to achieve management goals and improve data quality;
3. Promote resilience and stability of fishing businesses by encouraging diversification, quota utilization and capital investment; and
4. Prevent any individual(s), corporation(s), or other entity(ies) from acquiring or controlling excessive shares of the fishery access privileges.

## 5.0 AFFECTED ENVIRONMENT

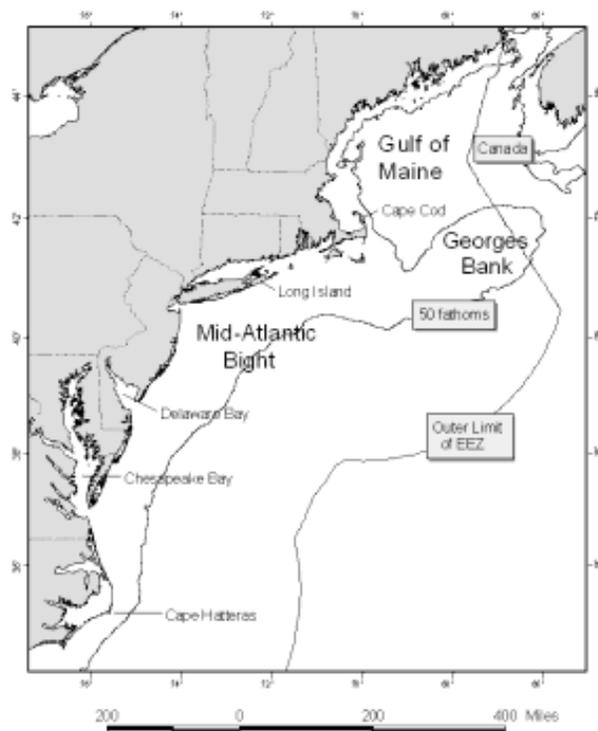
### 5.1 PHYSICAL ENVIRONMENT AND ESSENTIAL FISH HABITAT

The Northeast U.S. Shelf Ecosystem (Figure 1) includes area from the Gulf of Maine south to Cape Hatteras, 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). The continental slope includes the area east of the shelf, out to a depth of 6,562 ft (2,000 m). Four distinct sub-regions are identified: the Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. The groundfish fishery primarily occurs in the inshore and offshore waters of the Gulf of Maine, Georges Bank, and the southern New England/Mid-Atlantic areas. Therefore, the description of the physical environment focuses on these sub-regions. Southern New England is a sub-region occasionally described. Here, its distinctive features are included in the sections describing Georges Bank and the Mid-Atlantic Bight.

Information on the affected physical environments relevant to this amendment is contained in Stevenson et al. (2004) and its primary source references including: Abernathy (1989); Backus (1987); Beardsley et al. (1996); Brooks (1996); Cook (1988); Dorsey (1998); Kelley (1998); Mountain et al. (1994); NEFMC (1998); Reid and Steimle (1988); Schmitz et al. (1987); Sherman et al. (1996); Steimle et al. (1999); Stumpf and Biggs (1988); Townsend (1992); Tucholke (1987); and Wiebe et al. (1987).

Additional information may be found in Framework 51 to the Northeast Multispecies FMP (NEFMC 2014).

**Figure 1 – Northeast U.S. continental shelf ecosystem.**

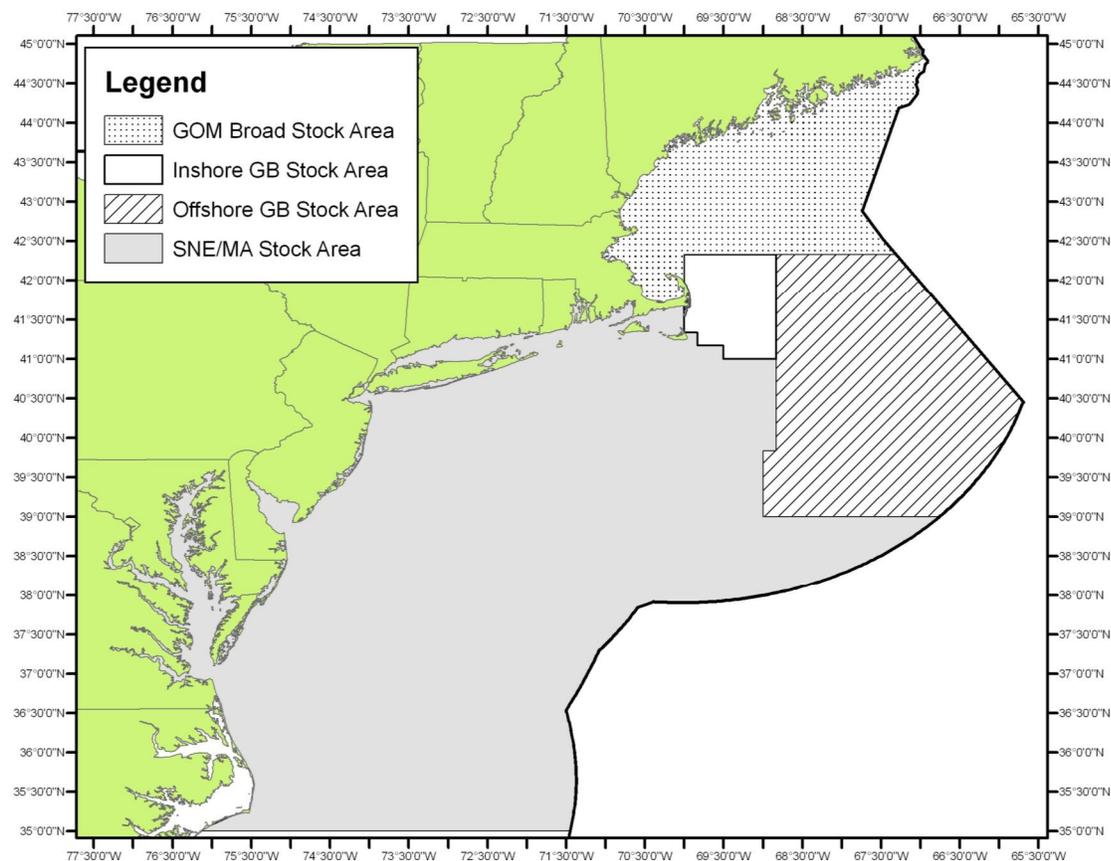


Source: Stevenson et al. (2004).

## 5.2 TARGET SPECIES

This section describes the life history and stock population status for each allocated fish stocks harvested under the Northeast Multispecies FMP. Figure 2 identifies the four broad stock areas used in the fishery. Further information on life history and habitat characteristics of the stocks managed in this FMP can be found in the Essential Fish Habitat Source Documents (NEFSC 2011b).

**Figure 2 – Broad stock areas as defined in Amendment 16**



Revisions to the National Standard Guidelines (NMFS 2009b) expanded on the classification of stocks in an FMP. For the Northeast Multispecies FMP, the stocks identified as the management unit are considered “stocks in the fishery” as defined by the NSGs. There are no stocks currently identified as “ecosystem component species,” though this classification may be used in the future.

The allocated target stocks for the Northeast Multispecies FMP are: GOM Cod, GB Cod, GOM Haddock, GB Haddock, American Plaice, Witch Flounder, GOM Winter Flounder, GB Winter Flounder, Cape Cod/GOM Yellowtail Flounder, GB Yellowtail Flounder, SNE/MA Yellowtail Flounder, Redfish, Pollock and White Hake.

The Northeast Multispecies FMP also manages Atlantic halibut, ocean pout, windowpane flounder, SNE/MA winter flounder, and wolffish. However, the federal fishery does not receive an allocation of these species. These species are discussed in Section 5.3.

The following discussions have been adapted from the most recent stock assessment reports (NEFSC 2013c). Table 1 summarizes the status of the northeast groundfish stocks, which groundfish stocks are overfished or are experiencing overfishing. For FY2013, a total of 12 stocks were overfished ( $B < \frac{1}{2} B_{MSY}$ ) while 8 stocks were not overfished. Similarly, a total of 8 stocks were experiencing overfishing ( $F > F_{MSY}$ ) while 12 stocks were not experiencing overfishing. Seven of the stocks are both overfished and experiencing overfishing. Seven stocks were classified as not overfished and not experiencing overfishing.

**Table 1 – Status of the Northeast groundfish stocks for FY2014.**

Stock Status	Stock	Assessment Source
<u>Overfished, Overfishing</u> Biomass $< \frac{1}{2} B_{MSY}$ $F > F_{MSY}$	GB Cod GOM Cod Cape Cod/GOM Yellowtail Flounder White Hake Witch Flounder Northern Windowpane GB Yellowtail Flounder	55 <sup>th</sup> SAW (NEFSC 2013a) 55 <sup>th</sup> SAW (NEFSC 2013a) Assessment update (NEFSC 2012b) 56 <sup>th</sup> SAW (NEFSC 2013b) Assessment update (NEFSC 2012b) Assessment update (NEFSC 2012b) 2012 TRAC (Legault et al. 2012)
<u>Overfished, not Overfishing</u> Biomass $< \frac{1}{2} B_{MSY}$ $F \leq F_{MSY}$	Ocean Pout Atlantic Halibut GOM Winter Flounder <sup>a,b</sup> Atlantic Wolffish SNE/MA Winter Flounder	Assessment update (NEFSC 2012b) Assessment update (NEFSC 2012b) 52 <sup>nd</sup> SAW (NEFSC 2011a) Assessment update (NEFSC 2012b) 52 <sup>nd</sup> SAW (NEFSC 2011a)
<u>Not Overfished, Overfishing</u> Biomass $\geq \frac{1}{2} B_{MSY}$ $F > F_{MSY}$	GOM Haddock	Assessment update (NEFSC 2012b)
<u>Not Overfished, not Overfishing</u> Biomass $\geq \frac{1}{2} B_{MSY}$ $F \leq F_{MSY}$	Pollock Acadian Redfish SNE/MA Yellowtail Flounder <sup>b</sup> American Plaice GB Haddock GB Winter Flounder Southern Windowpane	50 <sup>th</sup> SAW (NEFSC 2010) Assessment update (NEFSC 2012b) 54 <sup>th</sup> SAW (NEFSC 2012a) Assessment update (NEFSC 2012b) Assessment update (NEFSC 2012b) 52 <sup>nd</sup> SAW (NEFSC 2011a) Assessment update (NEFSC 2012b)
<i>Notes:</i>  $B_{MSY}$ = biomass necessary to produce maximum sustainable yield (MSY) $F_{MSY}$ = fishing mortality rate that produces the MSY <sup>a</sup> Rebuilding, but no defined rebuilding program due to a lack of data. <sup>b</sup> Unknown whether the stock is overfished.		

## **5.3 NON-TARGET SPECIES AND OTHER FISHERIES**

### **5.3.1 Non-Allocated Groundfish Species**

The Northeast Multispecies FMP also manages Atlantic halibut, ocean pout, windowpane flounder, SNE/MA winter flounder, and wolffish. However, the federal fishery does not receive an allocation of these species. Sector and common pool vessels cannot land wolffish, ocean pout, windowpane flounder, and inshore GB and SNE/MA winter flounder, but can retain one halibut per trip.

### **5.3.2 Non-Groundfish Species**

The Northeast multispecies fishery interacts with fisheries for several other species, including: Spiny Dogfish, Skates, Monkfish, Summer Flounder, American lobster, Whiting (Silver Hake), Loligo Squid, and Atlantic Sea Scallops.

### **5.3.3 Bycatch**

The MSA defines bycatch as fish which are harvested in a fishery, but which are not sold or kept for personal use, including economic discards and regulatory discards. Fish released alive under a recreational catch and release fishery management program are not included. The MSA requires that, to the extent practicable, bycatch and the mortality of bycatch that cannot be avoided should both be minimized. To consider whether these objectives are being met, bycatch must be reported and assessed. To this end, the MSA requires that a standardized reporting methodology assess the amount and type of bycatch occurring in a fishery. The primary tools used to report bycatch in the multispecies fishery are the Vessel Trip Report system (VTR) and the NEFSC Observer Program. Each permitted vessel is required to report discards and landings in VTRs submitted on a periodic basis. The sea sampling/observer program places personnel on boats to observe and estimate the amount of discards on a haul-by-haul basis.

## **5.4 PROTECTED RESOURCES**

Numerous protected species inhabit the environment within the Northeast Multispecies FMP management unit. Therefore, many protected species potentially occur in the operations area of the fishery. These species are under NMFS jurisdiction and are afforded protection under the Endangered Species Act of 1973 (ESA) and/or the Marine Mammal Protection Act of 1972 (MMPA). There are 17 marine mammal, sea turtle, and fish species classified as endangered or threatened under the ESA, three others are candidate species under the ESA. Other species are protected by the MMPA and are known to interact with the Northeast multispecies fishery. Non ESA-listed species protected by the MMPA that use this environment and have no documented interaction with the Northeast multispecies fishery will not be discussed in this document.

## **5.5 FISHERY-RELATED BUSINESSES AND COMMUNITIES**

This section reviews the Northeast multispecies fishery and describes the human communities potentially impacted by the management alternatives. This includes a description of the sector, common pool, and recreational participants and the important port communities in the fishery. Social, economic and fishery information presented in this section are useful in describing the response of the fishery to past management actions and predicting how the present action may affect the multispecies fishery. Additionally, this section establishes a descriptive baseline for the fishery with which to compare actual and predicted future changes that result from management actions. The focus here is on changes since the adoption of Amendment 16 in FY2010. A more complete discussion of prior management actions is provided in Section 0.

Table 2 contains a summary of major trends in the groundfish fishery. Additional information may be found in the FY2010, FY2011, and FY2012 performance reports for this fishery by the NEFSC (Kitts et al. 2011; Murphy et al. 2014; Murphy et al. 2012a).

**Table 2 - Summary of major trends in the Northeast multispecies fishery**

	FY2009	FY2010			FY2011			FY2012		
	Total	Total	Sector Vessels	Common Pool	Total	Sector Vessels	Common Pool	Total	Sector Vessels	Common Pool
<b>Groundfish Gross Nominal Revenue</b>	\$82,510,132	\$83,177,330	\$81,123,145	\$2,054,184	\$90,453,455	\$89,603,929	\$849,526	\$69,778,174	\$69,135,759	\$642,414
<b>Non-groundfish Gross Nominal Revenue</b>	\$180,396,477	\$210,631,484	\$115,682,739	\$94,948,745	\$240,364,488	\$144,718,459	\$95,646,029	\$235,730,686	\$140,108,099	\$95,622,587
<b>Total Gross Nominal Revenue</b>	\$262,906,608	\$293,808,814	\$196,805,885	\$97,002,930	\$330,817,943	\$234,322,388	\$96,495,555	\$305,508,860	\$209,243,859	\$96,265,001
<b>Groundfish average price</b>	\$1.21/lb	\$1.43/lb	\$1.43/lb	\$1.58/lb	\$1.47/lb	\$1.47/lb	\$1.64/lb	\$1.51/lb	\$1.51/lb	\$1.79/lb
<b>Non-groundfish average price</b>	\$0.97/lb	\$1.21/lb	\$1.19/lb	\$1.24/lb	\$1.14/lb	\$1.13/lb	\$1.16/lb	\$1.11/lb	\$1.07/lb	\$1.17/lb
<b>Number of active vessels</b>	916	854	435	419	776	442	337	764	446	320
<b>Number of active vessels that took a groundfish trip</b>	566	445	303	142	419	302	117	401	304	97
<b>Number of groundfish trips</b>	25,897	13,474	11,190	2,284	15,958	13,679	2,279	14,496	12,943	1,553
<b>Number of non-groundfish trips</b>	37,173	38,489	16,527	21,962	33,675	16,795	16,880	32,523	17,090	15,433
<b>Number of days absent on groundfish trips</b>	24,605	18,401	16,796	1,605	21,465	19,963	1,502	19,935	18,964	971
<b>Number of days absent on non-groundfish trip</b>	31,606	31,352	16,022	15,330	27,997	15,484	12,513	28,632	16,189	12,442
<b>Total Crew Positions</b>	2,416	2,255			2,161			2,136		
<b>Total Crew-trips</b>	148,153	123,885			122,003			116,334		
<b>Total Crew-days</b>	187,219	169,939			169,417			167,620		

Notes: Data includes all vessels with a valid limited access multispecies permit. Sector plus common pool vessel counts may exceed the total vessel count because vessels may switch between sector and common pool eligibilities during the fishing year. "Trips" refer to commercial trips in the northeast Exclusive Economic Zone (EEZ). Past reports included party/charter trips. From Murphy et al. (2014).

### 5.5.1 Overview of New England Groundfish Fishery

Groundfish fishing has been integral to New England's industry and culture for over 400 years (Bolster 2008). Broadly described, the Northeast Multispecies fishery includes the landing, processing, and distribution of commercially important fish that live on the sea bottom. In the early years, the fishery focused on cod and haddock. Today, the Northeast Multispecies FMP (large-mesh and small-mesh) includes a total of 13 species of groundfish harvested from three geographic areas representing 19 distinct stocks (Section 5.2).

### 5.5.2 Fishing Communities

There are over 100 communities that are homeport to one or more Northeast groundfish fishing vessels. These ports occur throughout the New England and Mid-Atlantic. Consideration of the economic and social impacts on these communities from proposed fishery regulations is required by the National Environmental Policy Act (NEPA 1970) and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA 2007). Before any agency of the federal government may take "actions significantly affecting the quality of the human environment," that agency must prepare an Environmental Assessment (EA) that includes the integrated use of the social sciences (NEPA Section 102(2)(C)). National Standard 8 of the MSA stipulates that "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" (16 U.S.C. § 1851(a)(8)).

A "fishing community" is defined in the Magnuson-Stevens Act, as amended in 1996, as "a community which is substantially dependent on or substantially engaged in the harvesting 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 community" (16 U.S.C. § 1802(17)). Determining which fishing communities are "substantially dependent" on and "substantially engaged" in the groundfish fishery can be difficult.

Although it is useful to narrow the focus to individual communities in the analysis of fishing dependence, there are a number of potential issues with the confidential nature of the information. There are privacy concerns with presenting the data in such a way that proprietary information (landings, revenue, etc.) can be attributed to an individual vessel or a small group of vessels. This is particularly difficult when presenting information on ports that may only have a small number of active vessels.

#### 5.5.2.1 Primary and Secondary Fishing Ports

In recent amendments to the FMP (e.g., NEFMC 2009), communities dependent on the groundfish resource have been categorized into primary and secondary port groups, so that community data can be cross-referenced with other demographic information (Table 3).

**Primary ports** are those communities that are substantially engaged in the groundfish fishery, and which are likely to be the most impacted by groundfish management measures. Primary ports were selected based on groundfish landings greater than 1,000,000 lbs annually since FY1994 and/or the presence of significant groundfish infrastructure (e.g., auctions and co-ops). They have demonstrated a continued substantial engagement in the groundfish fishery.

**Secondary ports** 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 FY1994. Because of the size and diversity of the groundfish fishery, it is not practical to examine each secondary port individually, which is why most secondary ports are grouped with others in the same county or in geographically adjacent counties.

Using the above definitions provides a way to consider the impacts of management measures on every port in which some amount of groundfish has been landed since 1994, and identifies place-based fishing communities based on level of engagement. Because significant geographical shifts in the distribution of groundfish fishing activity have occurred, the characterization of some ports as “primary” or “secondary” may not reflect their historical participation in and dependence on the groundfish fishery. Descriptions of communities involved in the multispecies fishery, and further descriptions of Northeast fishing communities in general, can be found on Northeast Fisheries Science Center’s website (NEFSC 2013d).

**Table 3 - Primary and secondary multispecies port communities**

Region	Multispecies Port Community	
	Primary	Secondary
Downeast ME	-	Jonesport, West Jonesport, Beals Island, Milbridge, Machias, Eastport, Dyers Bay
Upper Mid-Coast ME 1	-	Winter Harbor, Southwest Harbor, Bar Harbor, Northeast Harbor, Northwest Harbor
Upper Mid-Coast ME 2	-	Stonington, Sunshine/Deer Isle
Upper Mid-Coast ME 3	-	Rockland, St. George (Port Clyde), South Thomaston (Sprucehead), Owls Head, Friendship, Camden, Vinalhaven
Lower Mid-Coast ME 1	-	Bristol, South Bristol, Boothbay Harbor, East Boothbay (Boothbay), Breman (Medomak), Southport, Westport Island
Lower Mid-Coast ME 2	-	Sebasco Estates, Small Point, West Point, Five Islands, Phippsburg
Lower Mid-Coast ME 3	Portland	Cundys Harbor, Orrs Island, Yarmouth, Harpswell, East Harpswell, South Harpswell, Bailey Island, Cape Elizabeth
Southern Maine	-	York, York Harbor, Camp Ellis, Kennebunkport, Kittery, Cape Porpoise, Ogunquit, Saco, Wells
New Hampshire	Portsmouth	Rye, Hampton, Seabrook
North Shore MA	Gloucester	Rockport, Newburyport, Beverly, Salem, Marblehead, Manchester, Swampscott
South Shore MA	Boston	Scituate, Plymouth, Marshfield (Green Harbor)
Cape Cod MA	Chatham/ Harwichport	Provincetown, Sandwich, Barnstable, Wellfleet, Woods Hole, Yarmouth, Orleans, Eastham
Islands MA	-	Nantucket, Oak Bluffs, Tisbury, Edgartown
South Coast MA	New Bedford/ Fairhaven	Dartmouth, Westport
Western RI	Point Judith	Charlestown, Westerly, South Kingstown (Wakefield), North Kingstown (Wickford)
Eastern RI	-	Newport, Tiverton, Portsmouth, Jamestown, Middletown, Little Compton
Connecticut	-	Stonington, New London, Noank, Lyme, Old Lyme, East Lyme, Groton, Waterford
Long Island NY	Montauk/ Hampton Bays/ Shinnecock/ Greenport	Mattituck, Islip, Freeport, Brooklyn, Other Nassau and Suffolk Counties
Northern NJ	-	Point Pleasant, Belford, Long Beach/Barneгат Light, Barneгат, Highlands, Belmar, Sea Bright, Manasquan
Southern NJ	-	Cape May, Wildwood, Burleigh, Sea Isle City, Ocean City, Stone Harbor, Avalon

### 5.5.2.2 Primary Port Descriptions

Information in this section is largely based on demographic data collected by the 2010 US Census and fishery data collected by NMFS, much of which is available on the NEFSC website (NEFSC 2012c). While these data describe a community’s dependence on the groundfish fishery, it is important to remember that at least some of the individual groundfish vessels therein are even more dependent on groundfish.

**Portland, Maine:** In 2010, Portland had a population 66,194, which is a 3.0% increase from the year 2000 (64,249) (Census 2013). In FY2012, 16 vessels that hail from Portland landed groundfish, down from 20 in FY2007 (Table 4). The value of groundfish landings from these vessels was \$8.8M in FY2012, whether they landed in Portland or elsewhere. The value of all groundfish revenue in Portland was \$5.7M in FY2012, indicating that several of the vessels based in Portland landed in other ports, likely in Massachusetts. Since FY2009, the value of landings in Portland has been less than the value of landings by Portland-based vessels. In 2012, about 20% of total fisheries revenues of species landed Portland came from groundfish.

Portland has several dealers, processors, and other shore-side infrastructure that support the groundfish fishery. Opening in 1986, the Portland Fish Exchange, is America’s first all-display seafood auction. In 2013, sold 4.7M pounds of seafood, about 75% of which was groundfish ([www.pfex.org](http://www.pfex.org)). Processors include Bristol Seafood, Channel Fish Processing, Cozy Harbor Seafood, Inc., and North Atlantic, Inc. The Salt and Sea is a community supported fishery is based in Portland.

**Table 4 - Groundfish fishery in Portland, ME**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	20	16	15	15	15	16
Nominal groundfish revenue from the homeport vessels (\$)	\$6.7M	\$6.8M	\$8.3M	\$10M	\$10M	\$8.8M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$8.9M	\$10M	\$4.5M	\$3.4M	\$4.9M	\$5.7M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in Portland.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY12 from Murphy et al. (2014).						

**Portsmouth, New Hampshire:** In 2010, Portsmouth had a population 21,233, which is a 2.2% increase from the year 2000 (20,784) (Bureau 2013). In FY2012, 25 vessels that hail from New Hampshire landed groundfish, down from 44 in FY2007 (Table 5). The value of groundfish landings from these vessels was \$3.4M in FY2012, whether they landed in New Hampshire or elsewhere. The value of all groundfish revenue in New Hampshire was \$3.3M in FY2012, indicating that some vessels based in New Hampshire landed in other ports, likely in Massachusetts or Maine. Since at least FY2007, the value of landings in New Hampshire has

been less than the value of landings by New Hampshire-based vessels. In 2012, about 17% of total fisheries revenues of species landed New Hampshire came from groundfish.

In terms of shore-side infrastructure, the Portsmouth Fishermen’s Cooperative closed in September 2007. Since then, several Portsmouth fishermen have been landing fish in other ports, though some offloading of groundfish has continued at the State Pier through dealers such as Seaport Fish and through private trucking to dealers out of state. Recently, a local commercial fisherman obtained a dealer’s license to help sustain Portsmouth as a landing port. New Hampshire Community Seafood is a community supported fishery based in Portsmouth which was launched in 2012.

**Table 5 - Groundfish fishery in New Hampshire**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	44	42	40	32	29	25
Nominal groundfish revenue from the homeport vessels (\$)	\$4.9M	\$7.2M	\$5.1M	\$3.7M	\$4.6M	\$3.4M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$3.4M	\$4.1M	\$4.2M	\$3.3M	\$4.3M	\$3.3M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in New Hampshire.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**Gloucester, Massachusetts:** In 2010, Gloucester had a population 28,789, which is a 4.9% decrease from the year 2000 (30,273) (Bureau 2013). In FY2012, 61 vessels that hail from Gloucester landed groundfish, down from 95 in FY2007 (Table 6). The value of groundfish landings from these vessels was \$14M in FY2012, whether they landed in Gloucester or elsewhere. The value of all groundfish revenue in Gloucester was \$21M in FY2012, indicating that vessels based in other ports landed in Gloucester. Since at least FY2007, the value of landings in Gloucester has been greater than the value of landings by Gloucester-based vessels. In 2012, about 37% of total fisheries revenues of species landed Gloucester came from groundfish.

The significant amount of landings and revenues, as well as the importance of the Cape Ann Seafood Exchange and other shoreside facilities, indicate that Gloucester is an important port of landing for multispecies vessels. Processors include Channel Fish Processing. Cape Ann Fresh Catch is a community supported fishery is based in Gloucester. Gloucester has gained some business from Maine vessels which land here due to tightening restrictions at the statewide level in Maine.

**Table 6 - Groundfish fishery in Gloucester, MA**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	95	88	97	74	70	61
Nominal groundfish revenue from the homeport vessels (\$)	\$14M	\$15M	\$17M	\$17M	\$17M	\$14M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$24M	\$27M	\$30M	\$28M	\$30M	\$21M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in Gloucester.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**Boston, Massachusetts:** In 2010, Boston had a population 617,594, which is a 4.8% increase from the year 2000 (589,141) (Bureau 2013). In FY2012, 28 vessels that hail from Boston landed groundfish, down from 54 in FY2007 (Table 7). The value of groundfish landings from these vessels was \$13M in FY2012, whether they landed in Boston or elsewhere. The value of all groundfish revenue in Boston was \$12M in FY2012, indicating that some vessels based in Boston landed in other ports. Since at least FY2007, the value of landings in Boston has been less than the value of landings by Boston-based vessels. In 2012, about 63% of total fisheries revenues of species landed Boston came from groundfish.

These landings as well as the historical importance of Boston as a provider of fishing-related support services for smaller communities indicate that Boston is an important primary community. The high cost of real estate in Boston means that fishermen and other maritime users of waterfront areas are face displacement issues. Groups such as the Boston Harbor Association are working to prevent this from happening. There are now only two areas for commercial fishermen to tie-up and unload their catch – Boston Fish Pier and the Cardinal Medeiros docks (used almost exclusively by lobstermen). The New England Seafood is located at the Fish Pier. Groundfish processing facilities in Boston include Channel Fish Processing, Foley Fish, and Pier Fish, Co.

**Table 7 - Groundfish fishery in Boston, MA**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	54	49	46	35	34	28
Nominal groundfish revenue from the homeport vessels (\$)	\$16M	\$15M	\$14M	\$14M	\$18M	\$13M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$8.3M	\$8.9M	\$8.5M	\$12M	\$12M	\$12M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in Boston.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**Chatham/Harwichport, Massachusetts:** In 2010, Chatham and Harwichport had a combined population of 3,065, which is an 11% decrease from the year 2000 (3,476) (Bureau 2013). In FY2012, 23 vessels that hail from Chatham landed groundfish, unchanged from FY2007 (Table 8). The value of groundfish landings from these vessels was \$0.94M in FY2012, whether they landed in Chatham or elsewhere. In FY2010 and FY2011, the value of landings in Chatham was been less than the value of landings by Chatham-based vessels. In 2012, about 6% of total fisheries revenues of species landed Chatham came from groundfish.

The Chatham Fish Pier is an active offloading facility in Chatham. The Cape Cod Community Supported Fishery is based in West Chatham. Also on the Cape, the Lobster Trap Co., Inc. purchases groundfish from Chatham-based vessels.

**Table 8 - Groundfish fishery in Chatham, MA**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	26	27	28	26	26	23
Nominal groundfish revenue from the homeport vessels (\$)	\$2.9M	\$2.9M	\$2.7M	\$2.4M	\$2.6M	\$0.94M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$3.4M	\$3.6M	\$3.1M	\$2.2M	\$2.4M	\$1.0M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in Chatham.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**New Bedford/Fairhaven, Massachusetts:** In 2010, New Bedford and Fairhaven had a combined population of 110,945, which is an 0.93% decrease from the year 2000 (109,927) (Bureau 2013). In FY2012, 36 vessels that hail from New Bedford landed groundfish, down from 60 in FY2007 (Table 9). The value of groundfish landings from these vessels was \$16M in FY2012, whether they landed in New Bedford or elsewhere. Since at least FY2007, the value of landings in New Bedford has been greater than the value of landings by New Bedford-based vessels. In 2012, about 5% of total fisheries revenues of species landed New Bedford came from groundfish.

New Bedford/Fairhaven is also an important port of landing for scallop vessels, and its dependence on the scallop fishery for revenues reduces its overall dependence on the multispecies fishery, although many individual vessels may be more dependent on groundfish. New Bedford/Fairhaven, as a fishing community, is less dependent on groundfish for its overall fisheries revenues. Some impacted vessels may have the ability to offset losses in groundfish revenues with revenues from other fisheries.

New Bedford has several dealers, processors, and other shore-side infrastructure that support the groundfish fishery. Opening in 1994, the Whaling City Seafood Display Auction is the only seafood auction in Southern New England. Groundfish processors include American Pride Seafoods, Foley Fish, Marder Trawling, Inc., and Pier Fish, Co.

**Table 9 - Groundfish fishery in New Bedford, MA**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	60	62	51	33	37	36
Nominal groundfish revenue from the homeport vessels (\$)	\$16M	\$18M	\$16M	\$18M	\$21M	\$16M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$27M	\$26M	\$24M	\$29M	\$30M	\$22M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in New Bedford.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**Point Judith, Rhode Island:** Point Judith is considered a village in the town of Narragansett and does not have Census data as it is not incorporated on its own. It is also not a residential town, and fishermen working out of the port live in surrounding communities and all across Rhode Island. In 2010, Narragansett had a population of 15,868, which is a 3.3% decrease from the year 2000 (16,361) (Bureau 2013). In FY2012, 33 vessels that hail from Point Judith landed groundfish, down from 43 in FY2007 (Table 10). The value of groundfish landings from these vessels was \$1.9M in FY2012, whether they landed in Point Judith or elsewhere. Since at least FY2007, the value of landings in Point Judith has been less than the value of landings by Point

Judith-based vessels, indicating that these vessels land in other ports as well. In 2012, about 4% of total fisheries revenues of species landed Point Judith came from groundfish.

Groundfish landings and revenues in this community have increased considerably since the 1994 fishing year, suggesting that Point Judith is becoming a more important port of landing for multispecies vessels. Point Judith, as a fishing community, is less dependent on groundfish for its overall fisheries revenues. Some impacted vessels may have the ability to offset losses in groundfish revenues with revenues from other fisheries. Many of Point Judith’s vessels are actively involved in fisheries in the Mid-Atlantic region (squid, fluke, etc.). However, increasing reliance on groundfish in recent years suggests that vessels may have more difficulty shifting effort as restrictions in these other fisheries increase and opportunities decrease.

Groundfish processors located in Warwick likely serve fishermen offloading in Point Judith, including Gardner’s Wharf Seafood and Great Northern Products, Ltd.

**Table 10 - Groundfish fishery in Point Judith, RI**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	43	36	33	31	28	33
Nominal groundfish revenue from the homeport vessels (\$)	\$4.7M	\$3.3M	\$2.2M	\$2.4M	\$2.0M	\$1.9M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$4.6M	\$2.6M	\$1.8M	\$1.5M	\$1.9M	\$1.8M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in Point Judith.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

**Eastern Long Island, New York:** This community of ports include: Montauk, Hampton Bays, Shinnecock, and Greenport, together, are considered a primary groundfish port. In 2010, these communities had a combined population of 21,314, which is a 12% increase from the year 2000 (19,023) (Bureau 2013). In FY2012, 43 vessels that hail from New York State landed groundfish, down from 52 in FY2007 (Table 11). The value of groundfish landings from these vessels was \$0.73M in FY2012, whether they landed in New York State or elsewhere. Since at least FY2007, the value of landings in New York State has been less than the value of landings by New York State-based vessels. In 2012, about 0.5% of total fisheries revenues of species landed New York State came from groundfish.

Eastern Long Island communities are becoming more important ports of landing for multispecies vessels. However, the amount of landings and revenues are highly variable each year, so it is difficult to determine an absolute trend. Eastern Long Island, as a fishing community, is less

dependent on groundfish for its total fisheries revenues. Some impacted vessels may have the ability to offset losses in groundfish revenues with revenues from other fisheries.

**Table 11 - Groundfish fishery in New York State**

	FY07	FY08	FY09	FY10	FY11	FY12
Active groundfish vessels in this homeport(#) <sup>A</sup>	52	56	47	40	42	43
Nominal groundfish revenue from the homeport vessels (\$)	\$2.3M	\$1.8M	\$0.75M	\$1.1M	\$1.4M	\$0.73M
Nominal value of gf landings in this landing port (\$) <sup>B</sup>	\$1.5M	\$1.1M	\$0.30M	\$0.25M	\$0.079M	\$0.21M
<sup>A</sup> “Active” defined as revenue from at least one groundfish trip from this homeport.						
<sup>B</sup> Revenue includes all vessels landing in New York State.						
<i>Sources:</i> FY07-FY08 from Kitts et al. (2011). FY09-FY11 from Murphy et al. (2014).						

### 5.5.2.3 Employment

Along with the restrictions associated with presenting confidential information, there is also limited quantitative socio-economic data upon which to evaluate the community-specific importance of the multispecies fishery. In addition to the direct employment of captains and crew, the industry is known to support ancillary businesses such as gear, tackle, and bait suppliers; fish processing and transportation; marine construction and repair; and restaurants. Regional economic models do exist that describe some of these inter-connections at that level (Clay et al. 2007; NMFS 2010b; Olson & Clay 2001a; b; Thunberg 2007).

Throughout the Northeast, many communities benefit indirectly from the multispecies fishery, but these benefits are often difficult to attribute. The direct benefit from employment in the fishery can be estimated by the number of crew positions.<sup>2</sup> However, crew positions do not equate to the number of jobs in the fishery and do not make the distinction between full and part-time positions. In FY2012, vessels with limited access groundfish permits provided 2,146 crew positions, with 49% coming from vessels with homeports in Massachusetts (Table 12). Since at least FY2009, the total number of crew positions provided by limited access groundfish vessels has declined by. Changes in crew positions vary across homeport states, with Maine adding a few positions in FY2012.

<sup>2</sup> Crew positions are measured by summing the average crew size of all active vessels on all trips.

**Table 12 - Number of crew positions and crew days on active vessels by homeport and state**

<b>Home Port State</b>		<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
<b>CT</b>	Total crew positions	40	36	42	39
	Total crew days	3,700	3,996	3,001	4,312
<b>MA</b>	Total crew positions	1,231	1,132	1,067	1,053
	Total crew days	95,685	82,066	84,119	81,430
<b>ME</b>	Total crew positions	266	247	221	242
	Total crew days	15,539	15,541	14,783	16,252
<b>NH</b>	Total crew positions	110	107	105	96
	Total crew days	5,407	3,909	4,974	5,085
<b>NJ</b>	Total crew positions	162	149	145	148
	Total crew days	10,865	10,086	9,898	10,292
<b>NY</b>	Total crew positions	219	209	217	209
	Total crew days	16,997	15,772	16,031	14,908
<b>RI</b>	Total crew positions	267	253	248	232
	Total crew days	26,411	26,786	25,130	24,017
<b>Other Northeast</b>	Total crew positions	129	130	128	128
	Total crew days	12,615	11,784	11,480	11,322
<b>Total</b>	<b>Total crew positions</b>	<b>2,424</b>	<b>2,262</b>	<b>2,173</b>	<b>2,146</b>
	<b>Total crew days</b>	<b>187,219</b>	<b>169,939</b>	<b>169,417</b>	<b>167,620</b>

A crew day<sup>3</sup> is another measure of employment opportunity that incorporates information about the time spent at sea earning a share of the revenue. Conversely, crew days can be viewed as an indicator of time invested in the pursuit of “crew share” (the share of trip revenues received at the end of a trip). The time spent at sea has an opportunity cost. For example, if crew earnings remain constant, a decline in crew days would reveal a benefit to crew in that less time was forgone for the same amount of earnings. In FY2012, vessels with limited access groundfish permits used 167,620 crew days, with 48% coming from vessels with homeports in Massachusetts (Table 12). Since at least FY2009, the total number of crew days used by limited access groundfish vessels across the Northeast has declined, though some states had an increase in crew days in FY2012.

The number of crew positions and crew days give some indication of the direct benefit to communities from the multispecies fishery through employment. But these measures, by themselves, do not show the benefit or lack thereof at the individual level. Many groundfish captains and crew are second- or third-generation fishermen who hope to pass the tradition on to their children. This occupational transfer is an important component of community continuity as fishing represents an important occupation in many of the smaller port areas.

<sup>3</sup> Similar to a “man-hour,” a “crew day” is calculated by multiplying a vessel’s crew size by the days absent from port. Since the number of trips affects the crew-days indicator, the indicator is also a measure of work opportunity.

### 5.5.3 Commercial Permit Categories

Since the implementation of Amendment 5 in 1994, all vessels that land regulated groundfish for commercial sale have been required to have a permit. Moratorium - commonly called limited access - permits were granted to vessels based on fishing history during a defined period. Limited access permit holders land most regulated groundfish. The only new limited access permits granted since 1994 have been to a small number of handgear vessels in FY 2004, but the ownership of many vessels issued permits has changed. Most limited access permits are restricted in the number of DAS that can be fished. In addition, there have been open access permit categories. Open access permits can be requested at any time, with the limitation that a vessel cannot have a limited access and open access permit at the same time. Permits are issued in different categories, depending on the activity and history of the vessel. There have been several changes in the defined permit categories, as Amendment 5, Amendment 7, and Amendment 13 all changed the category definitions. For this reason, when examining fishing activity based on permit category, care must be taken to make comparisons to similar permits. Many groundfish vessels have permits for, and participate in, other fisheries. For some vessels groundfish revenues are only a small part of total fishing revenues.

Adopted in 1996, Amendment 7 implemented several different limited and open access permit categories in the multispecies fishery that were in effect in through FY 2003. Limited access multispecies permit categories are described in CFR 648.82, while open access multispecies permit categories are described in CFR 648.88.

#### 5.5.3.1 Limited Access Permit Categories

(A) *Individual DAS*: Individual DAS vessels are subject to DAS restrictions. Any vessel issued a valid Individual DAS permit as of July 1, 1996 (except those that were issued a gillnet permit) was assigned to the Individual DAS category in Amendment 7.

(B) *Fleet DAS*: Fleet DAS vessels are subject to DAS restrictions. Any vessel issued one of the following permits as of July 1, 1996 was assigned to the Fleet DAS category in Amendment 7: Fleet DAS permit, Gillnet permit, limited access Hook-Gear permit, “Less than or equal to 45 ft (13.7 m)” permit to a vessel larger than 20 ft (6.1 m) in length as determined by its most recent permit application.

(C) *Small Vessel Exemption*: Small vessel category vessels may retain up to 300 lb (136.1 kg) of cod, haddock, and yellowtail flounder, combined, and one Atlantic halibut per trip without being subject to DAS restrictions. These vessels are not subject to possession limits for other NE multispecies. Any vessel that has a valid limited access multispecies permit, was fishing with a small vessel category permit (less than or equal to 45 ft (13.7 m)) as of July 1, 1996, and is 20 ft (6.1 m) or less in length as determined by the vessel’s last application for a permit, was assigned to the small vessel category in Amendment 7.

(D) *Hook Gear*: Hook gear vessels are subject to DAS restrictions. Each hook-gear vessel is limited to 4,500 rigged hooks and is prohibited from possessing gear other than hook gear on board.

(E) *Combination Vessel*: Combination vessels are scallop dredge vessels that qualified for a multispecies permit because of groundfish landings using trawls. These vessels are subject to DAS restrictions. A vessel issued a valid limited access multispecies permit and qualified to fish

as a combination vessel as of July 1, 1996 was assigned to the Combination vessel category in Amendment 7.

(F) *Large Mesh Individual DAS*: Large mesh individual DAS vessels are subject to DAS restrictions. Large Mesh Individual vessels are required to fish for the entire year with either trawl gear with a minimum size of 8.5-inch (21.59 cm) diamond or square mesh.

(G) *Large Mesh Fleet DAS*: Large mesh fleet DAS vessels are subject to DAS restrictions. Large Mesh Fleet vessels were required to fish with trawl gear with a minimum size of 8.5-inch (21.59-cm) diamond or square mesh.

(HA) *Handgear A*: A vessel with a valid open access multispecies handgear permit is allowed to possess and land up to 300 lb (136.1 kg) of cod, one Atlantic halibut per trip, and the daily possession limit for other regulated NE multispecies, provided that the vessel did not use or possess on board gear other than rod and reel or handlines while in possession of, fishing for, or landing NE multispecies, and provided it has at least one standard tote on board. A handgear permit vessel may not fish for, possess, or land regulated species from March 1 through March 20 of each year.

#### 5.5.3.2 Open Access Permit Categories

(HB) *Handgear B*: The vessel may possess and land up to 75 lb of cod and up to the landing and possession limit restrictions for other NE multispecies. The vessel may not use or possess on board gear other than handgear while in possession of, fishing for, or landing NE multispecies, and must have at least one standard tote on board; The vessel may not fish for, possess, or land regulated species from March 1 through March 20 of each year; and the vessel, if fishing with tub-trawl gear, may not fish with more than a maximum of 250 hooks.

(I) *Charter/Party*: Any charter/party permit category vessel is subject to restrictions on gear, recreational minimum fish sizes, possession limits, and specified prohibitions on sale.

(J) *Scallop Multispecies Possession Limit*: A vessel that has been issued a valid open access scallop multispecies possession limit permit may possess and land up to 300 lb (136.1 kg) of regulated species when fishing under a scallop DAS, provided the vessel does not fish for, possess, or land haddock from January 1 through June 30 and provided the vessel has at least one standard tote on board.

(K) *Non-Regulated Multispecies*: A vessel issued a valid open access, non-regulated multispecies permit may possess and land one Atlantic halibut and an unlimited quantity of the other non-regulated multispecies. The vessel is subject to restrictions on gear, area, and time and other restrictions.

Unlike previous reports, this section does not combine handgear permits with other permit categories, so that the trends in groundfish landings by this category can be identified. In addition, both large mesh permit categories (fleet and individual DAS) are combined so that comparisons can be made before and after implementation of Amendment 13. Totals do not include data that cannot be reported due to confidentiality concerns.

## 5.5.4 Commercial Fishery Holdings

### 5.5.4.1 Data Caveats

Since June 2013, the PDT has worked with the Analysis and Program Support Division (APSD) at the NMFS Greater Atlantic Fisheries Office (GARFO) to improve queries of holdings data at the individual human person level within the NMFS data systems. The DRAFT data in this Discussion Document is the PDT's current best estimate of PSC holdings by an individual human person or permit bank for each stock in the fishery. The issue is complex and competes for human resources with a number of concurrent issues of varying priority for both NMFS and Council. There continues to be forward progress on improving the data being provided. Much effort has been spent to troubleshoot queries and provide the Council with robust data. Absolute determinations of PSC holdings are ultimately the responsibility of the APSD at the GARFO. Just as limited entry programs provide estimates of potential permit qualifications, until those records are scrutinized after final action, often including a multiphase appeals process, there are changes in the data. The PDT is confident that the data herein portray the holdings in the fishery to within 1-2 percentage points of the true values.

Because the alternatives considered in Amendment 18 would apply an accumulation limit to individual human persons or permit banks, the fishery holdings data in this section is presented at that level. In this data, each permit bank (state and nonprofit) is considered a person. NMFS does not have data on percent interest in fishery permits of the individuals associated with them. Here, it is assumed that each individual has 100% interest in a given MRI.

State-operated permit banks were defined in Amendment 17. There is no regulatory definition of a private/nonprofit permit bank. The permit banks characterized in this section include: the Maine State Permit Bank, New Hampshire State Permit Bank, Boston Sustainable Fishing Community Preservation Fund, Cape Cod Fisheries Trust, Gloucester Fishing Community Preservation Fund, NEFS XI Permit Bank, Penobscot East Permit Bank, South Shore Fishing Community Preservation Fund, and The Nature Conservancy/Island Institute Community Permit Bank. The alternatives in Amendment 18 could apply to other permit banks that form in the future.

### 5.5.4.2 Permit/MRI Holdings

A Moratorium Right Identifier (MRI) is a unique identifying number that is attached to a Northeast multispecies permit. Each permit has its own MRI, and a given MRI is attached to only one permit. Potential Sector Contribution (PSC) is allocated to MRIs. Within the current NMFS data systems, holdings of MRIs would be simpler to track. A plain language description of MRIs and PSC calculation has been published by GARFO (NMFS 2010a).

There have been ~1,400 MRIs in the fishery since FY2010 (Table 13). In FY2013, the highest number of MRIs held by an individual human person or permit bank is 49, which equates to ~4% of the MRIs in the fishery. This entity is a private/nonprofit permit bank. Permit banks collectively hold 104 MRIs, which represent about 7% of the holdings of the entire groundfish fishery (Table 14).

**Table 13 - Number of Northeast multispecies permits/MRIs**

	April 7, 2011	FY2011	FY2012	FY2013
Limited Access Permits/MRIs on Vessels	1,257	*1,320	*1,222	*1,129
Total Limited Access Permits/MRIs	1,422	**1,421	**1,407	**1,380
Limited Access Permits/MRIs with PSC	1,262	**1,210	**1,255	**1,247

*Notes:*

\* at any time during the fishing year.

\*\* on May 1 of fishing year.

*Source:* NMFS Northeast Regional Office. Report date 8/6/2013.**Table 14 - Multispecies MRIs held by permit banks, as of January 28, 2014**

		# of GF MRIs held *	% of fishery **
<b>State-operated:</b>	New Hampshire State Permit Bank	4	0.3%
	State of Maine Permit Bank	11	0.8%
	<b>Total state</b>	<b>15</b>	<b>1%</b>
<b>Private/Nonprofit:</b>	Boston Sustainable Fishing Community Preservation Fund, Inc.	2	0.1%
	Cape Cod Fisheries Trust	23	2%
	Gloucester Fishing Community Preservation Fund	49	4%
	NEFS XI Permit Bank	2	0.1%
	Penobscot East Permit Bank	2	0.1%
	South Shore Fishing Community Preservation Fund	8	0.6%
	The Nature Conservancy/Island Institute Community Permit Bank	3	0.2%
	<b>Total private/nonprofit</b>	<b>89</b>	<b>6%</b>
<b>Grand Total:</b>		<b>104</b>	<b>~7%</b>

*Notes:*

\* The MRI data was downloaded on January 28, 2014, from the NMFS Sector Information Portal.

\*\* Assumes ~1,400 MRIs in the fishery.

**5.5.4.3 PSC Holdings****5.5.4.3.1 Fishery-wide PSC Holdings**

Table 15 and Table 16 summarize the PSC shares of all groundfish stocks held by individual human persons and permit banks at the beginning of FY2010, the control date for Amendment 18 (April 7, 2011), and the beginning of FY2013. The data in Table 15 were calculated by averaging the PSC held by an individual human person or permit bank across all stocks and then identifying the individuals with the maximum, mean, and median fishery-wide holdings. For example, if an individual holds a PSC of 3.000 of stock A and 1.000 of stock B, the average holdings would be 2.000. For FY2010, the individual with the highest average PSC held 7.316, while the mean individual held 0.128, and median held 0.010. The data in Table 16 were calculated by summing the PSC held by an individual human person or permit bank across all stocks and then identifying the individuals with the maximum, mean, and median fishery-wide holdings. For FY2010, the individual with the highest total PSC held 102.423, while the mean individual held 1.797, and median held 0.146. Note that SNE/MA winter flounder was not allocated until FY2012. Data for FY2013 with and without this stock are shown. Either way,

the PSC holdings increased during this time series (average and total) for the individual (person or permit bank) holding the highest average PSC.

**Table 15 – Average PSC shares held by individual human persons and permit banks**

	<u>Average PSC holdings</u>			
	FY2010*	April 7, 2011*	FY2013*	FY2013**
<b>Maximum</b>	7.316	7.316	8.894	9.358
<b>Mean</b>	0.128	0.129	0.144	0.146
<b>Median</b>	0.010	0.011	0.015	0.018

*Notes:* This data averages the PSC of all stocks for each individual human person and permit bank (n ≈ 1,460 in FY2010 and the control date and ~1,500 for FY2013). PSC holdings data is accurate to nine decimal places.

\* Does not include SNE/MA winter flounder.

\*\* Includes SNE/MA winter flounder.

**Table 16 – Total PSC shares held by individual human persons and permit banks**

	<u>Total PSC holdings</u>			
	FY2010*	April 7, 2011*	FY2013*	FY2013**
<b>Maximum</b>	102.423	102.423	124.514	140.366
<b>Mean</b>	1.797	1.806	2.031	2.189
<b>Median</b>	0.146	0.147	0.263	0.264

*Notes:* This data sums the PSC of all stocks for each individual human person and permit bank (n ≈ 1,460 in FY2010 and the control date and ~1,500 for FY2013). PSC holdings data is accurate to nine decimal places.

\* Does not include SNE/MA winter flounder.

\*\* Includes SNE/MA winter flounder.

#### 5.5.4.3.2 Stock-specific PSC Holdings

Table 17 to Table 23 summarize the PSC shares of all groundfish stocks held by individual human persons and permit banks at the beginning of FY2010, the control date for Amendment 18 (April 7, 2011), and the beginning of FY2013. The tables also detail the maximum held by a permit bank and by an individual human person, and the number of individual human persons and permit banks with PSC>0 for a stock. SNE/MA winter flounder was not allocated until FY2012, so Table 17 and Table 18 do not include that stock.

The most concentrated stocks are GB winter flounder, GB yellowtail flounder, and SNE/MA winter flounder, while SNE/MA yellowtail flounder and pollock are the least concentrated stocks. The PSC holdings increased during this time series for the individual (person or permit bank) holding the highest average PSC. For some stocks, an individual human person has the highest holdings (e.g., GB cod), and in other cases, a permit bank does (e.g., GOM cod). In FY2013, Pollock and GB cod are the stocks with some amount of PSC held by the largest number of individual human persons or permit banks (~1,080), and redfish PSC is held by the least (754).

**Table 17 - Stock-specific PSC shares held by individual human persons and permit banks, as of May 1, 2010 (FY2010)**

Stock	All human persons and permit banks			Permit banks	Human persons
	Max	Mean	Median	Max	Max
<b>GB cod</b>	9.944	0.135	0.001	4.195	9.944
<b>GOM cod</b>	7.451	0.102	0.001	7.451	2.518
<b>GB haddock</b>	14.594	0.150	0.000	5.389	14.594
<b>GOM haddock</b>	7.153	0.112	0.000	5.773	7.153
<b>GB yellowtail flounder</b>	14.030	0.160	*0.000	2.159	14.030
<b>SNE/MA yellowtail</b>	5.028	0.124	0.000	2.678	5.028
<b>CC/GOM yellowtail</b>	7.967	0.121	0.000	6.189	7.967
<b>Plaice</b>	8.989	0.129	0.000	8.989	6.295
<b>Witch flounder</b>	8.502	0.129	0.001	8.502	6.568
<b>GB winter flounder</b>	22.681	0.159	0.000	0.707	22.681
<b>GOM winter flounder</b>	6.576	0.114	0.000	6.576	5.423
<b>Redfish</b>	9.650	0.133	*0.000	6.302	9.650
<b>White hake</b>	7.662	0.120	0.000	7.662	6.506
<b>Pollock</b>	5.895	0.116	0.000	5.490	5.895
<b>SNE/MA winter flounder</b>	n/a	n/a	n/a	n/a	n/a

*Notes:*

The data do not include SNE/MA winter flounder, because it was not allocated until FY2012. There are about 1,460 individual human persons and permit banks in the data. PSC holdings data is accurate to nine decimal places.

\* Value is equal to zero exactly. Other zero values represent a small fraction beyond four decimal places.

**Table 18 - Stock-specific PSC shares held by individual human persons and permit banks, as of April 7, 2011 (FY2010)**

Stock	All human persons and permit banks			Permit banks	Human persons
	Max	Mean	Median	Max	Max
<b>GB cod</b>	9.944	0.135	0.001	4.195	9.944
<b>GOM cod</b>	7.451	0.102	0.001	7.451	2.518
<b>GB haddock</b>	14.594	0.151	0.000	5.389	14.594
<b>GOM haddock</b>	7.153	0.113	0.000	5.773	7.153
<b>GB yellowtail flounder</b>	14.030	0.160	*0.000	2.159	14.030
<b>SNE/MA yellowtail</b>	5.028	0.124	0.000	2.678	5.028
<b>CC/GOM yellowtail</b>	7.967	0.122	0.000	6.187	7.967
<b>Plaice</b>	8.989	0.130	0.000	8.989	6.295
<b>Witch flounder</b>	8.502	0.130	0.001	8.502	6.568
<b>GB winter flounder</b>	22.681	0.160	0.000	0.707	22.681
<b>GOM winter flounder</b>	6.576	0.115	0.000	6.576	5.423
<b>Redfish</b>	9.650	0.134	*0.000	6.302	9.650
<b>White hake</b>	7.662	0.121	0.000	7.662	6.506
<b>Pollock</b>	5.895	0.116	0.000	5.490	5.895
<b>SNE/MA winter flounder</b>	n/a	n/a	n/a	n/a	n/a

*Notes:*

Data do not include SNE/MA winter flounder. There are about 1,460 individual persons and permit banks in the data. PSC holdings data is accurate to nine decimal places.

\* Value is equal to zero exactly. Other zero values represent a small fraction beyond four decimal places.

**Table 19 - Stock-specific PSC shares held by individual human persons and permit banks, as of May 1, 2013 (FY2013)**

Stock	All human persons and permit banks			Permit banks	Human persons	*Total individuals
	Max	Mean	Median	Max	Max	PSC >0
<b>GB cod</b>	11.955	0.149	0.001	6.226	11.955	1,082
<b>GOM cod</b>	9.512	0.119	0.001	9.512	2.628	1,018
<b>GB haddock</b>	14.788	0.165	0.000	2.352	14.788	827
<b>GOM haddock</b>	8.137	0.128	0.000	8.137	6.906	787
<b>GB yellowtail</b>	16.818	0.182	0.000	1.990	16.818	762
<b>SNE/MA yellowtail</b>	6.197	0.144	0.000	2.719	6.197	865
<b>CC/GOM yellowtail</b>	8.804	0.132	0.000	6.441	8.804	883
<b>Plaice</b>	8.871	0.143	0.001	8.871	8.492	878
<b>Witch flounder</b>	8.736	0.143	0.001	8.073	8.736	993
<b>GB winter flounder</b>	26.031	0.183	0.000	0.524	26.031	842
<b>GOM winter flounder</b>	9.138	0.122	0.000	7.467	9.138	901
<b>Redfish</b>	9.673	0.144	0.000	4.660	9.673	754
<b>White hake</b>	7.200	0.136	0.000	7.200	6.540	968
<b>Pollock</b>	5.881	0.130	0.001	4.943	5.881	1,080
<b>SNE/MA winter flounder</b>	15.853	0.159%	0.000%	1.489%	15.853%	1,016

*Notes:*

There are about 1,500 individual human persons and permit banks in the data. Zero values represent a small fraction beyond four decimal places, but do not equal zero exactly. PSC holdings data is accurate to nine decimal places.

\* The total number of individual human persons and permit banks with PSC >0 for the given stock.

**Permit Banks.** Table 20 identifies the PSC held by permit banks for each allocated stock in the fishery. The maximum, mean, and median held by a permit bank are listed, as well as the total held by all permit banks. Permit banks included in the data are listed in the table.

Permit banks collectively hold the most PSC for GOM cod, white hake, plaice and pollock. Individually, a permit bank holds the most PSC for GOM cod, plaice, GOM haddock, and witch flounder.

*Note: The data in Table 20 vary slightly from the permit bank data in Table 19. The data in Table 20 are provided directly by the ASPD at GARFO and thus should not have any error associated with data queries (as described in Section 5.5.4.1). Data discrepancies may be attributable to differences in actual permit/MRI holdings between the dates queried (~9 months).*

**Table 20 – Stock-specific PSC shares held by permit banks (state and private/nonprofit), as of January 28, 2014 (FY2013)**

	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>	<b>Total</b>
<b>GB cod</b>	5.438	1.104	0.088	9.777
<b>GOM cod</b>	9.343	1.678	0.678	15.091
<b>GB haddock</b>	4.992	0.712	0.044	6.380
<b>GOM haddock</b>	8.314	1.249	0.092	11.237
<b>GB yellowtail</b>	1.692	0.242	*0.000	2.177
<b>SNE/MA yellowtail</b>	2.334	0.323	0.025	2.813
<b>CC/GOM yellowtail</b>	4.815	0.973	0.318	8.755
<b>Plaice</b>	8.788	1.444	0.288	12.996
<b>Witch flounder</b>	8.065	1.296	0.399	11.666
<b>GB winter flounder</b>	0.550	0.078	*0.000	0.704
<b>GOM winter flounder</b>	5.636	1.177	0.214	10.594
<b>Redfish</b>	6.3585	1.033	0.186	9.296
<b>White hake</b>	7.896	1.654	0.304	14.885
<b>Pollock</b>	6.048	1.304	0.140	12.053
<b>SNE/MA winter flounder</b>	1.203	0.227	0.018	1.622

*Notes:*

The PSC data was downloaded on January 28, 2014, from the NMFS Sector Information Portal. PSC holdings data is accurate to nine decimal places.

Permit banks included: the Maine State Permit Bank, New Hampshire State Permit Bank, Boston Sustainable Fishing Community Preservation Fund, Cape Cod Fisheries Trust, Gloucester Fishing Community Preservation Fund, NEFS XI Permit Bank, Penobscot East Permit Bank, South Shore Fishing Community Preservation Fund, and The Nature Conservancy/Island Institute Community Permit Bank.

\* Value is >0.

#### 5.5.4.4 Excessive Shares

Goal #4 of Amendment 18, currently under development, is to “Prevent any individual(s), corporation(s), or other entity(ies) from acquiring or controlling excessive shares of the fishery access privileges.” During the course of developing Amendment 18, it was determined that additional expertise from an external contractor would be needed to help the Council determine whether excessive shares exist in the Northeast multispecies fishery today and to recommend an appropriate excessive shares limit in the fishery. In July 2013, Compass Lexecon was asked to provide such analysis. Their report was completed in December 2013 (Mitchell & Peterson 2013) and is expected to be peer reviewed by the Center for Independent Experts during the summer of 2014.

Compass Lexecon defined “excessive share” as:

*“...a share of access rights that would allow a permit owner [holder] or sector to influence to its advantage the prices of the fishery’s output...”*  
(Mitchell & Peterson 2013, p. 2)

They also linked the concepts of excessive shares and market power:

*“The ability to manipulate prices to one’s advantage based on the share of participation in a market is a typical example of what economists call market power.”* (Mitchell & Peterson 2013, p. 2)

They received input from ~50 fishery stakeholders via surveys, interviews, and a webinar. They also analyzed NMFS fishery data, including fishery holdings at the business entity level. They assessed available models for evaluating the presence of market power and for their appropriateness for setting excessive share limits.

Their conclusions included:

*“The evidence we analyzed does not support a conclusion that market power is currently being exercised through the withholding of ACE in any part of the groundfish fishery, nor is there evidence of market power in the sales of fish or transfers of permits.”* (Mitchell & Peterson 2013, p. 47)

Thus, they concluded that, defined in terms of market power, excessive shares do not exist in the Northeast multispecies fishery today. Their report included recommendations for how excessive shares may be prevented in the future.

### 5.5.5 Sector Fishery

In FY2010, the sector vessels landed the overwhelming majority of the groundfish ACL. Each sector receives a total amount of fish it can harvest for each stock, its Annual Catch Entitlement (ACE). Since the ACE is dependent on the amount of the ACL in a given fishing year, the ACE may be higher or lower from year to year even if the sector's membership remains the same. There are substantial shifts in ACE for various stocks between FY2009 and FY2012 (Table 21). There has been a general decrease in trips, and catch for sector vessels, and there has been a shift in effort out of the groundfish fishery into other fisheries. However, these changes may correlate to a certain extent with the decrease in ACL.

Combined, 161M (live) pounds of ACE was allotted to the sectors in FY2011, but only 70M (live) pounds were landed. Of the 16 stocks allocated to sectors, the catch of 7 stocks approached (>80% conversion) the catch limit set by the ACE (Table 22). By comparison, the catch of only five stocks approached the catch limit set by the total allocated ACE in FY2010. The catch of white hake in FY2011 was particularly close to reaching the limit, with 98% of the white hake ACE being realized. As was the case in FY2010, the majority of the unrealized landings in 2011 were caused by a failure to land Georges Bank haddock. Collectively, East and West GB haddock, accounted for 63M pounds (62%) of the uncaught ACE in FY2011.

**Table 21 - Commercial groundfish sub-ACL, FY2009 to FY2012**

Groundfish Stock	FY2009 TAC (lbs)	FY2010 ACL (lbs)	% Change 2009 to 2010	FY2011 ACL (lbs)	% Change 2010 to 2011	FY2012 ACL (lbs)	% Change 2011 to 2012
GB cod W	10,965,793	6,816,693	-37.84%	9,041,157	32.63%	9,795,138	8.34%
GB cod E	1,161,836	745,162	-35.86%	440,925	-40.83%	357,149	-19.00%
GOM Cod	23,642,373	10,068,512	-57.41%	10,637,304	5.65%	4,310,037	-59.48%
GB haddock W	171,861,356	62,725,923	-63.50%	46,164,798	-26.40%	45,322,632	-1.82%
GB haddock E	24,471,311	26,429,016	8.00%	21,252,562	-19.59%	15,167,804	-28.63%
GOM Haddock	3,448,030	1,818,814	-47.25%	1,715,196	-5.70%	1,439,619	-16.07
GB Yellowtail Flounder	3,564,875	1,814,404	-49.10%	2,517,679	38.76%	479,946	80.94%
SNE/MA Yellowtail Fl.	857,598	683,433	-20.31%	1,155,222	69.03%	1,675,513	45.04%
CC/GOM Yellowtail Fl.	1,895,975	1,717,401	-9.42%	2,072,345	20.67%	2,306,035	11.28%
Plaice	7,085,657	6,278,765	-11.39%	6,851,967	9.13%	7,226,753	5.47%
Witch Flounder	2,489,019	1,878,338	-24.53%	2,724,914	45.07%	3,192,294	8.34%
GB Winter Flounder	4,418,064	4,082,961	-7.58%	4,424,678	8.37%	7,467,057	68.76%
GOM Winter Flounder	835,552	348,330	-58.31%	348,330	0.00%	1,576,305	352.53%
Redfish	18,990,619	15,092,846	-20.52%	16,625,059	10.15%	18,653,483	10.40
White Hake	5,238,183	5,635,015	7.58%	6,556,548	16.35%	7,237,776	10.39%
Pollock	13,990,535	36,493,118	160.84%	30,758,895	-15.71%	27,804,700	-9.60%
<b>Totals</b>	<b>294,916,777</b>	<b>182,628,733</b>	<b>-38.07%</b>	<b>163,287,579</b>	<b>-10.59%</b>	<b>153,712,242</b>	<b>-5.86%</b>

**Table 22 - Annual Catch Entitlement and catch (live lbs.)**

	<u>2010</u>			<u>2011</u>			<u>2012</u>		
	Allocated ACE	Catch	% caught	Allocated ACE*	Catch	% caught	Allocated ACE*	Catch	% caught
<b>Cod, GB East</b>	717,441	562,610	78%	<b>431,334</b>	<b>357,578</b>	<b>83%</b>	350,835	148,576	42%
<b>Cod, GB West</b>	<b>6,563,099</b>	<b>5,492,557</b>	<b>84%</b>	9,604,207	6,727,837	70%	10,542,407	3,363,415	32%
<b>Cod, GOM</b>	<b>9,540,389</b>	<b>7,991,172</b>	<b>84%</b>	<b>11,242,220</b>	<b>9,561,153</b>	<b>85%</b>	9,008,557	4,808,408	53%
<b>Haddock, GB East</b>	26,262,695	4,122,910	16%	21,122,565	2,336,964	11%	15,126,216	806,562	5%
<b>Haddock, GB West</b>	62,331,182	13,982,173	22%	50,507,974	6,101,400	12%	51,898,296	1,832,577	4%
<b>Haddock, GOM</b>	1,761,206	819,069	47%	1,796,740	1,061,841	59%	1,599,136	540,299	34%
<b>Plaice</b>	6,058,149	3,305,950	55%	7,084,289	3,587,356	51%	7,771,254	3,530,494	45%
<b>Pollock</b>	35,666,741	11,842,969	33%	32,350,451	16,297,273	50%	30,670,586	14,097,873	46%
<b>Redfish</b>	14,894,618	4,647,978	31%	17,369,940	5,951,045	34%	19,933,122	9,751,824	49%
<b>White hake</b>	<b>5,522,677</b>	<b>4,687,905</b>	<b>85%</b>	<b>6,708,641</b>	<b>6,598,273</b>	<b>98%</b>	7,527,513	5,394,273	72%
<b>Winter flounder, GB</b>	4,018,496	3,036,352	76%	<b>4,679,039</b>	<b>4,241,177</b>	<b>91%</b>	7,752,484	4,256,996	55%
<b>Winter flounder, GOM</b>	293,736	178,183	61%	750,606	343,152	46%	1,590,301	568,828	36%
<b>Witch flounder</b>	<b>1,824,125</b>	<b>1,528,215</b>	<b>84%</b>	2,839,697	2,178,941	77%	3,409,459	2,162,678	63%
<b>Yellowtail flounder, CC/GOM</b>	1,608,084	1,268,961	79%	<b>2,185,802</b>	<b>1,743,168</b>	<b>80%</b>	<b>2,448,240</b>	<b>2,103,947</b>	<b>86%</b>
<b>Yellowtail flounder, GB</b>	<b>1,770,451</b>	<b>1,625,963</b>	<b>92%</b>	<b>2,474,662</b>	<b>2,176,921</b>	<b>88%</b>	802,654	474,540	59%
<b>Yellowtail flounder, SNE</b>	517,372	340,662	66%	<b>963,033</b>	<b>795,267</b>	<b>83%</b>	1,422,815	938,303	66%
<b>Total</b>	179,350,461	65,433,630	36%	172,111,201	70,059,346	41%	171,853,874	54,779,592	32%

Notes: Stocks with > 80% ACE conversion highlighted in bold. 2010 and 2011 data from Murphy et al (Table 37, 2012a). FY12 data from GARFO.

\*includes carryover from the prior fishing year.

### 5.5.5.1 ACE Leasing

Starting with allocations in FY2010, each sector was given an initial ACE determined by the pooled potential sector contribution (PSC) from each entity joining that sector. Every limited access groundfish permit also has a tracking identification number called a Moratorium Right Identifier (MRI). PSC is technically allocated to MRIs, which are subsequently linked to vessels through Northeast Multispecies limited access fishing permits. A vessel's PSC is a percentage share of the total allocation for each allocated groundfish stock based on that vessel's fishing history. Once a sector roster and associated PSC is set at the beginning of a fishing year, each sector is then able to distribute its ACE among its members. By regulation, ACE is pooled within sectors, however most sectors seem to follow the practice of assigning catch allowances to member vessels based on PSC allocations. This is an important assumption because vessels catching more than their allocation of PSC must have leased additional quota, either as PSC from within the sector or as ACE from another sector.

During FY2010, 282 sector-affiliated MRIs had catch that exceeded their individual PSC allocations for at least one stock. These vessels are then assumed to have leased in an additional 22M pounds of ACE and/or PSC with an approximate value of \$13.5M. In FY2011, 256 sector-affiliated vessels had catch that exceeded their individual PSC allocations. These vessels are then assumed to have leased in 31M pounds of quota. Although the number of vessels leasing ACE fell by 9% the estimated number of pounds leased was almost 41% greater in FY2011 than in FY2010 (Murphy, et al. 2012a). There were 241 sector-affiliated MRIs had catch that exceeded individual PSC allocations for at least one stock. These MRIs leased in >23M pounds of ACE and/or PSC in FY2012 (Murphy, et al. 2014).

### 5.5.5.2 Permit Banks

#### 5.5.5.2.1 State-operated Permit Banks

Amendment 17 to the Northeast multispecies FMP defined a NOAA-sponsored, state-operated permit bank as a:

*“...partnership between NOAA and one or more states in which Federal grant funds are used by the state(s) to establish a bank of Federal fishing vessel permits and to obtain Federal fishing vessel permits so that the fishing access privileges associated with those permits may be allocated by the state(s) to qualifying commercial fishermen and sectors according to criteria to which NOAA and the state(s) have agreed.”*

These permit banks are:

*“...subject to U.S. Department of Commerce regulations regarding program income, such that any revenue generated by the permit banks may only be used to defray the program costs of operating the permit bank, or must be returned to the Federal Government to reduce the amount of the initial grant award.”*

For FY2011, there were no official state-operated permit banks, because Amendment 17 had not been finalized, and the State of Maine had permits enrolled in a sector. For FY2012, there were two state-operated permit banks, in Maine and New Hampshire. These permit banks continue to operate today.

### 5.5.5.2.2 Nonprofit Permit Banks

There is no standard definition of “nonprofit permit bank,” though this term has generally been used to refer to organizations with nonprofit status (e.g., 501(c)3) that hold Federal Northeast Multispecies Permits for the purpose of leasing ACE to active fishermen. The existing regulations do not distinguish between private permit banks and commercial business entities that lease ACE, though this is a topic that is being considered in Amendment 18. All entities must enroll permits in sectors to receive the Annual Catch Entitlement (ACE) allocation (state-operated permit banks excepted).

### 5.5.5.2.3 Permit Bank Activity

During the development of Amendment 18, the PDT queried the state and nonprofit permit banks, to help the Groundfish OSC answer the question:

*In the absence of accumulation limits and fleet diversity measures today, how are permit banks helping foster diversity in the fishery?*

A brief and voluntary questionnaire was developed, which was then reviewed by and sent on behalf of the OSC Chairman to representatives of nine state and nonprofit permit banks with Federal Northeast Multispecies permits. For some, their primary focus is to acquire and hold permits to provide allocation to active fishermen. For others, operating the permit bank is just one of a suite of activities for the organization. The representatives were asked to provide short responses (NEFMC 2013b), which are summarized here.

Permit banks have formed primarily in response to concerns and evidence that the catch share management system poses challenges for smaller-scale fishing businesses to remain viable. Each permit bank has a unique mission, but they generally exist to help provide fishing opportunities for specific segments of the industry (e.g., specific ports, gear types, vessel sizes), with a larger aim of providing stability for the industry and fishing communities. Some permit banks also specifically assist new entrants to the fishery or provide business planning services. In total, the permit banks own more than 95 Federal Northeast Multispecies Permits. The state-operated permit banks have acquired permits primarily using federal dollars. Nonprofit organizations have financed permits through grants and loans.

ACE is distributed according to the mission of each permit bank. Some permit banks are established to lease ACE to fishermen in a particular sector, community, or state. For others, a set group has priority for the ACE, but if unused by the priority group, then the ACE is distributed on the open market. Some permit banks offer an equal share of ACE to all qualifying participants. Others identify needs through informal networks or more structured application processes. In total, the permit banks reported leasing ACE used by at least 170 sector vessels, though duplicates are unknown. Across all the permit banks, ACE is distributed to a diverse range of groundfish sector members in terms of gear types, vessel sizes, and fishing ports. Lease price determinations vary across the permit banks, but for the most part, ACE is offered to eligible buyers at prices lower than market value. Rates of groundfish ACE leased out by the permit banks has varied with the specific allocation portfolio and demands for quota within target segments of the industry. Some fishermen use the revenue from permit bank ACE landings as capital to enter the open leasing market. Fishermen have been able to harvest more of the allocation associated with their own permits by using permit bank ACE for the low-allocation “choke” stocks (NEFMC 2013b).

### 5.5.6 Common Pool Fishery

With the adoption of Amendment 16, most commercial groundfish fishing activity occurs under sector management regulations. There are, however, a few vessels that are not members of sectors and continue to fish under the effort control system. Collectively, this part of the fishery is referred to as the “common pool.” These vessels fish under both limited access and open access groundfish fishing permits. Common pool vessels accounted for only a small amount of groundfish catch in FY2012 (Table 37). The largest common pool catch (pollock, 67.8 mt) was only 0.8% of the total groundfish fishery catch of this stock. Common pool vessels caught 0.8% of the GOM cod and 0.2% of the GOM haddock groundfish fishery catch.

#### 5.5.6.1 Landings and Revenue

Common pool vessels with limited access permits landed 1.3M lbs. (landed lbs.) of regulated groundfish in FY2010, worth over \$2M in ex-vessel revenues (Table 23). Landings declined to 518K lbs., worth about \$850,000 in FY2011 and declined again in FY2012 to 358K lbs., worth \$642,000. Most common pool vessel groundfish fishing activity takes place in the state of Massachusetts. From FY2010 to FY2011, the activity from Maine ports declined dramatically and from FY2011 to FY2012 the decline can be seen in Massachusetts (Table 24). The primary ports for this activity over the last 4 years (FY2009-2012) are Gloucester, Portland, and New Bedford (Table 25).

**Table 23 - Summary of common pool fishing activity**

		<b>A</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>HA</b>	<b>Total</b>
<b>FY2010</b>	Permits landing groundfish	78	4	6	5	33	<b>126</b>
	Groundfish lbs. landed	1,256,311	1,843	2,012	596	35,367	<b>1,296,129</b>
	Groundfish revenues	\$1,981,076	\$4,727	\$3,643	\$682	\$64,056	<b>\$2,054,184</b>
<b>FY2011</b>	Permits landing groundfish	61	6	3	12	32	<b>115</b>
	Groundfish lbs. landed	401,715	31,844	2,836	1,990	80,441	<b>518,831</b>
	Groundfish revenues	\$601,506	\$62,408	\$7,042	\$2,634	\$175,929	<b>\$849,526</b>
<b>FY2012</b>	Permits landing groundfish	56	6		8	25	<b>98</b>
	Groundfish lbs. landed	281,212	52,955		1,954	22,251	<b>358,414</b>
	Groundfish revenues	\$479,051	\$109,630		\$2,522	\$51,132	<b>\$642,414</b>

*Notes:* Confidential data excluded.

**Table 24 - Common pool groundfish landings by state of trip (landed lbs.)**

	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
CT	1,574	2,561	1,579
MA	809,231	372,282	169,662
MD		88	375
ME	344,783	49,559	49,260
NC	315		
NH	6,547	25,912	26,634
NJ	13,128	19,060	20,628
NY	94,900	37,115	58,331
RI	24,712	12,248	31,944
VA	916		
<b>Total</b>	<b>1,296,106</b>	<b>518,825</b>	<b>358,414</b>

*Note:* Confidential data removed

**Table 25 - Common pool groundfish landings by port (landed lbs.)**

<b>Port</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
Gloucester, MA	372,481	260,347	150,405
Portland, ME	333,852	40,520	34,054
New Bedford, MA	278,221	39,884	8,248
Provincetown, MA	100,952	51,561	2,116
Montauk, NY	75,460	17,894	54,212
Sandwich, MA	40,385	2,666	0
Point Judith, RI	3,478	4,708	13,161
Little Compton, NY	20,787	7,478	15,952
Hampton Bays, NY	13,512	6,807	3,770
Plymouth, MA	4,527	4,444	0
Rye, NH	1,491	20,304	21,845
Point Pleasant, NJ	9,043	16,932	15,195

The primary groundfish stocks landed by common pool vessels include GOM cod, GB cod, and pollock (Table 26). GB haddock was an important component in FY2010 but not in FY2011 or FY2012. Vessels using HA and HB permits on groundfish trips primarily target GB and COM cod, GOM haddock, and pollock.

For the common pool permits that landed at least one pound of regulated groundfish in either FY2010 or FY2011, groundfish revenues were a major portion of revenues on groundfish fishing trips. Groundfish revenues were 80% or more of the trip revenues for 49% of these vessels; they were 60% of the revenues for 61.5% of these vessels. Dependence on groundfish was greatest for HA permitted vessels, with 70% of these vessels earning all revenues on these trips from regulated groundfish.

**Table 26 - Common pool landings (landed lbs.) by permit category and stock**

<b>FY2010 Landings</b>	<b>A</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>HA</b>	<b>Total</b>
GB Cod W	109,582	1,120	1,269		6,179	118,150
GOM Cod	350,947	651			17,048	368,646
GB Haddock W	177,033				202	177,235
GOM Haddock	12,257				995	13,252
GB Yellowtail Flounder	17,260					17,260
SNE Yellowtail Flounder	32,901			596		33,497
CC/GOM Yellowtail Flounder	35,969				245	36,214
Plaice	48,020				112	48,133
Witch Flounder	57,158					57,158
GB Winter Flounder	13,011					13,011
GOM Winter Flounder	45,172				250	45,423
SNE Winter Flounder	4,646					4,646
Redfish	14,007				763	14,769
White Hake	68,756				139	68,894
Pollock	265,840		730		9,156	275,726
Southern Windowpane	3,566					3,566
Halibut	162				255	417
Wolffish	3					3
<b>Total</b>	<b>1,256,290</b>	<b>1,771</b>	<b>1,999</b>	<b>596</b>	<b>35,344</b>	<b>1,296,000</b>
<b>FY2011 Landings</b>	<b>A</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>HA</b>	<b>Total</b>
GB Cod W	102,450	3,186	168		15,577	121,382
GB Cod E	3,340					3,340
GOM Cod	53,984	18,816	2,666		54,982	130,448
GB Haddock W	33,053				85	33,138
GOM Haddock	1,945	161			763	2,869
GB Yellowtail Flounder	3,944			1,521		5,465
SNE Yellowtail Flounder	25,272					25,272
CC/GOM Yellowtail Flounder	23,408	66		19		23,493
Plaice	10,213	686				10,899
Witch Flounder	9,448	972				10,420
GB Winter Flounder	2,411					2,411
GOM Winter Flounder	5,257	374				5,631
SNE/MA Winter Flounder	816					816
Redfish	7,208	38			147	7,393
White Hake	19,901	2,890			177	22,968
Pollock	89,533	4,653			7,644	101,830
Northern Windowpane	850					850
Southern Windowpane	8,607					8,607
Halibut					1,065	1,065
<b>Total</b>	<b>401,640</b>	<b>31,842</b>	<b>2,834</b>	<b>1,540</b>	<b>80,441</b>	<b>518,297</b>

<b>FY2012 Landings</b>	<b>A</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>HA</b>	<b>Total</b>
GB Cod W	38,725	266			9,428	48,419
GOM Cod	13,209	22,379	16		8,983	44,587
GB Haddock W	13,373					13,373
GOM Haddock	1,117	420			470	2,007
GB Yellowtail Flounder	758			1,550		2,308
SNE Yellowtail Flounder	77,293			285		77,578
CC/GOM Yellowtail Flounder	876	799				1,675
Plaice	4,028	1,443				5,471
Witch Flounder	3,671	795				4,466
GB Winter Flounder	1,626					1,626
GOM Winter Flounder	669	1,775				2,444
SNE Winter Flounder	278					278
Redfish	11,678	253			25	11,956
White Hake	19,936	10,586			160	30,682
Pollock	92,614	14,221			3,122	109,957
Southern Windowpane	940					940
Ocean Pout		18				18
Halibut	218					218
<b>Total</b>	<b>281,010</b>	<b>52,955</b>	<b>16</b>	<b>1,835</b>	<b>22,188</b>	<b>358,004</b>

### 5.5.6.2 Trimesters

Amendment 16 established that in FY2012, the common pool would be managed with a trimester sub-ACL versus an annual one for all stocks except SNE/MA winter flounder, windowpane flounder, ocean pout, Atlantic wolffish, and Atlantic halibut. Table 27 shows the common pool sub-ACL and cumulative catch since FY2010, broken down by trimesters. Given that the trimester approach was instituted in FY2012, the percent of total catch in the trimesters for FY2010 and FY2011 are estimates.

In FY2010 and FY2011, most of the common pool effort occurred within the first three months of the fishing year. This could be due to a preference for fishing in seasonable weather, but there could also be a “race to fish” factor in play. The annual sub-ACLs were not exceeded.

Since the implementation of trimesters, the common pool has exceeded its trimester sub-ACL in a few cases (noted in red, Table 2). Both the annual and the trimester Gulf of Maine haddock sub-ACL was exceeded during the first trimester of FY2013. NMFS published a notice on July 16, 2013 that the GOM Haddock Trimester Total Allowable Catch (TAC) Area would be closed for the remainder of the first trimester (through August 31), because the common pool had caught 147% of its Trimester 1 TAC for this stock. NMFS cited that “because there are relatively few common pool vessels, and the Trimester 1 TAC for GOM haddock is so small, it was difficult to project when 90% of the Trimester TAC would be reached” (NMFS 2013a). Then, based on data reported through August 21, 2013, the common pool fishery caught 96% of its annual Gulf of Maine haddock allocation of 2 mt, despite the closure. NMFS projected that the annual allocation would likely be exceeded, so the GOM haddock trip limit was reduced to zero for all common pool vessels, effective August 28, 2013 through the remainder of the fishing year (NMFS 2013b).

Table 27 – Common pool sub-ACL and catch

	Annual sub-ACL (mt)	Trimester 1 (5/1–8/31)		Trimester 2 (9/1–12/30)		Trimester 3 (1/1–4/30)		Annual Catch	
		sub-ACL	Catch (% total or mt)	sub-ACL	Catch (% total or mt)	sub-ACL	Catch (% total or mt)	Total	% of annual sub-ACL
<b>FY2010</b>									
GOM cod	240	n/a	97%	n/a	2%	n/a	1%	226.0	94%
GOM haddock	26	n/a	83%	n/a	3%	n/a	14%	7.1	27%
Pollock	375	n/a	n.d.	n/a	n.d.	n/a	n.d.	151.2	40%
<b>FY2011</b>									
GOM cod	104	n/a	64%	n/a	20%	n/a	16%	93.4	90%
GOM haddock	8	n/a	48%	n/a	5%	n/a	48%	1.9	24%
Pollock	104	n/a	n.d.	n/a	n.d.	n/a	n.d.	69.2	67%
<b>FY2012</b>									
GOM cod	80.0	21.6	22.0	29.9	6.1	28.5	1.8	29.9	37%
GOM haddock	5.0	1.2	0.8	1.7	0.1	2.1	0	0.9	18%
Pollock	82.0	22.9	18.9	33.4	40.0	25.7	8.9	67.8	82%
<b>FY2013</b>									
GOM cod	18	4.9	3.2	8.3	0.3	4.8	tbd	3.3	18%
GOM haddock	2	0.5	2.0	0.5	0.1	1.0	tbd	2.1	105%
Pollock	91	23.4	12.7	44.7	5.5	23	tbd	18.1	20%

*Notes:*

Data from NOAA Fisheries Northeast Multispecies (Groundfish) Monitoring Reports.

<http://www.nero.noaa.gov/ro/fso/MultiMonReports.htm>. FY2010 and FY2011 trimester catch are estimates of the % of total annual catch. “n.d.” = Estimate was not available in time for this memo. Shading notes when a sub-ACL was exceeded. FY2013 data as of 10/9/13. These data are the best available to NMFS when this report was compiled. Data for this report may be supplied to NMFS from the following sources: (1) vessels via Vessel Monitoring System; (2) Vessel Trip Reports; (3) fish dealer purchase reports; and the (4) NOAA Fisheries Service Observer Program, through audited observer reports submitted by the NEFSC. Data in this report are for landings made through September 04 2013 and may be preliminary. Differences with data from previous reports are due to corrections made to the database and updates to observer data.

There are a number of convergent factors that cause managing the common pool quotas by trimesters challenging. For quotas that are as small as those for the common pool trimesters, the current data delivery systems make it difficult to estimate in-season when 90% of the TAC (and total TAC) is projected to be reached. For GOM haddock in FY2013, the trimester sub-ACLs are particularly small. When the common pool fleet was alerted that this TAC was approaching full utilization, rather than slowing or stopping fishing, some continued to fish. Following the closure, additional landings data from prior weeks was submitted to the NMFS Greater Atlantic Regional Office (GARFO) and processed. These exceeded the quota.

## 5.5.7 Handgear A Permit Fishing Activity

### 5.5.7.1 Active Permits

Handgear A permits operating in the common pool are restricted to using only handgear or a limited amount of tub trawl gear (250 hooks). Amendment 16 allowed HA permits to be enrolled in sectors, and thus, the ACE associated with these permits can be leased and harvested using other gear types.

In FY2013, there were 103 HA permits renewed. This includes 20 HA permits enrolled in seven unique sectors, of which one was actively fished. The ACE associated with the other 19 HA permits in sectors was leased, potentially for use by vessels fishing with other gear types. There were 83 HA permits enrolled in the common pool. As of early September 2013, 21 of these had been used to actively fish. Since the common pool fishery closed on January 1, 2014 and HA fishing is infrequent in October to December, it is unlikely that additional permits have been actively used in FY2013. For FY2014, there are 111 HA permits renewed, but the distribution between sectors and the common pool has not been finalized.

HA permits account for a small fraction of the total groundfish fishery. Landings and revenue from harvests with HA permits account for less than 0.2% of the fishery-wide totals (Table 28). Table 29 shows, by stock, the estimate of the FY2013 Annual Catch Entitlement (ACE) distribution between sectors and the common pool. The majority (62.9%) of ACE is associated with sectors, though for Gulf of Maine cod, the split is about even. Technically, these data are "potential" ACE, because permits enrolled in the common pool do not have ACE calculated. PSC is not turned into ACE in the common pool (i.e., they are not constrained to anything but the total common pool sub-ACL/trip limit/trimester TAC for any given stock). Confidentiality rules prohibit reporting the split of sector ACE associated with HA permits between ACE actively harvested vs. leased, because only one HA permit is being actively harvested in a sector.

**Table 28 - Contribution of HA permits to the commercial groundfish fishery**

		HA permits <sup>1</sup>	Total Common Pool <sup>2</sup>	Total Fishery <sup>2</sup>
FY2010	Groundfish Pounds Landed	36,844	1,404,614	58,622,152
	Groundfish Revenues	\$59,727	\$2,234,905	\$82,984,988
FY2011	Groundfish Pounds Landed	91,585	595,705	61,721,659
	Groundfish Revenues	\$167,838	\$971,226	\$90,115,537

<sup>1</sup> Source: NEFMC (2013a, Table 43).

<sup>2</sup> Source: Murphy et al. (2012b, Table 2)

**Table 29 - Estimate of FY2013 potential Annual Catch Entitlement contribution of allocated stocks held by Handgear A permits as of September 20, 2013.**

Stock	HA permits FY13 ACE contribution		
	Total HA (lbs)	% Sector	% Common Pool
GB Cod East	350	9.8%	90.2%
GB Cod West	6,516	9.8%	90.2%
GOM Cod	13,428	48.0%	52.0%
GB Haddock East	1,366	9.9%	90.1%
GB Haddock West	8,167	9.9%	90.1%
GOM Haddock	464	7.3%	92.7%
GB Yellowtail Flounder	36	52.3%	47.7%
SNE/MA Yellowtail Flounder	108	12.5%	87.5%
CC/GOM Yellowtail Flounder	249	21.0%	79.0%
Plaice	555	8.6%	91.4%
Witch Flounder	123	11.4%	88.6%
GB Winter Flounder	632	0.7%	99.3%
GOM Winter Flounder	177	22.5%	77.5%
Redfish	16,809	93.2%	6.8%
White Hake	14,309	86.1%	13.9%
Pollock	59,968	69.1%	30.9%
SNE/MA Winter Flounder	250	1.3%	98.7%
<b>Total</b>	<b>123,505</b>	<b>62.9%</b>	<b>37.1%</b>

*Note:* Data from NMFS Northeast Regional Office, updated September 30, 2013.

### 5.5.7.2 Non-Target Catch

The HA permit-related alternatives in Amendment 18 consider creating a new sub-ACL for five stocks primarily landed by vessels fishing with HA permits and accounting for the catch of non-target stocks under the “Other sub-Components” fishery. To understand what the potential catch by vessels fishing in the HA fishery of these non-target stocks, information about recent HA effort on these stocks is provided here. Table 30 to Table 33 illustrate the magnitude of the ACE contribution by stock, catch, and discards for HA permits for FY2010-2013. In most cases, the non-target catch by HA vessels are <1% of the Other Sub-Component catch.

**Table 30 - Handgear A ACE by stock (weight in lb), FY2010-2013.**

	GB Yellowtail Flounder	SNE/MA Yellowtail Flounder	CC/GOM Yellowtail Flounder	Plaice	Witch Flounder	GB Winter Flounder	GOM Winter Flounder	Redfish	White Hake	SNE/MA Winter Flounder
2010	624	120	4,708	4,051	1,714	494	310	13,152	9,778	N/A
2011	347	99	490	1,215	245	360	82	12,543	11,034	N/A
2012	112	144	544	1,281	292	607	177	13,849	12,204	N/A
2013	47	111	249	555	123	632	177	16,809	14,309	250

Note: Values are what a Handgear A sub-ACL would have been, assuming all HA permits enrolled.

**Table 31 - Handgear kept catch by stock (weight in lbs), FY2010-2013.**

	GB Yellowtail Flounder	SNE/MA Yellowtail Flounder	CC/GOM Yellowtail Flounder	Plaice	Witch Flounder	GB Winter Flounder	GOM Winter Flounder	Redfish	White Hake	SNE/MA Winter Flounder
2010	0	0	247	112	0	0	253	763	186	N/A
2011	0	0	0	0	0	0	0	160	244	N/A
2012	0	0	1	3	1	0	0	79	218	N/A
2013	0	0	0	0	0	0	9	100	65	0

Note: Includes common pool and sector catch.

**Table 32 - Handgear discards by stock (weight in lbs), FY2010-2013.**

	GB Yellowtail Flounder	SNE/MA Yellowtail Flounder	CC/GOM Yellowtail Flounder	Plaice	Witch Flounder	GB Winter Flounder	GOM Winter Flounder	Redfish	White Hake	SNE/MA Winter Flounder
2010	0	9	459	80	34	0	84	11	46	0
2011	0	60	782	366	140	0	121	68	374	88
2012	0	47	324	14	11	0	0	18	450	1381
2013	0	37	309	53	20	0	6	34	44	155

Note: Includes common pool and sector catch.

**Table 33 - Handgear discards as a percent of the Other Sub-Component catch by stock, FY2010-2013.**

	GB Yellowtail Flounder	SNE/MA Yellowtail Flounder	CC/GOM Yellowtail Flounder	Plaice	Witch Flounder	GB Winter Flounder	GOM Winter Flounder	Redfish	White Hake	SNE/MA Winter Flounder
2010	0	0.02%	0.59%	0.03%	0.04%	0.00%	0.32%	0.02%	0.01%	N/A
2011	0	0.10%	4.38%	1.32%	0.04%	0.00%	0.42%	0.02%	1.66%	N/A
2012	0	0.05%	0.64%	0.00%	0.04%	0.00%	0.00%	0.01%	0.06%	N/A

### 5.5.7.3 Standard Fish Tote Requirement

In 1994, through an Emergency Rule and subsequently in Amendment 5, standard totes were required of all vessels. At the time, it was intended to enforce a haddock trip limit in the groundfish fishery (500 pounds for large-mesh vessels), or in other fisheries, enforce the allowed retention of a small amount of groundfish (e.g., July-December for the scallop fishery). The premise was that the standard totes help keep fish separate and could be used as a volumetric benchmark by the Coast Guard.

In 1996, through Amendment 7, a DAS limit for haddock was created, and NMFS specifically required a standard tote for all multispecies trips, as well as for handgear vessels that were allowed cod, haddock, and/or yellowtail. In other words, totes were required of everyone, not just a specific permit category.

Subsequently, NMFS published possession limits for cod, pollock, winter flounder, etc., but did not specify the tote requirement in each case. NMFS has intended to keep the requirement for all permit types, but in fact, the requirement now only applies in a few instances, including vessels fishing with a Handgear A multispecies permit.

### 5.5.1 Commercial Effort

The overall trend since the start of sector management has been a decline in the number of vessels with a limited access groundfish permit, at a low of 1,177 in FY2012 (Table 34). Of those vessels, those with revenue from at least one groundfish trip have also declined, with 401 in FY2012. The proportion of vessels affiliated with a sector has increased each year since FY2010. A key aspect of Amendment 16 is the ability of a sector to jointly decide how its ACE will be harvested, through redistribution within a sector and/or transferring ACE between sectors. Because inactive sector vessels may benefit if other sector vessels harvest their allocation, changes in the number of inactive vessels may result from a transfer of allocation and not necessarily vessels exiting the fishery. Since FY2010, 35-37% of the vessels were inactive (no landings). Of these inactive vessels, 64-69% were affiliated with sectors.

The groundfish fishery has traditionally been made up of a diverse fleet, comprised of a range of vessel sizes and gear types. Over the years, as vessels entered and exited the fishery, the typical characteristics defining the fleet changed as well. The number of active vessels has declined each year since at least FY2009. This decline has occurred across all vessel size categories (Table 35). Since FY2009, the 30' to < 50' vessel size category, which has the largest number of active groundfish vessels, experienced a 32% decline (305 to 206 active vessels). The <30' vessel size category, containing the least number of active groundfish vessels, experienced the largest (53%) reduction since FY2009 (34 to 16 vessels). The vessels in the largest ( $\geq 75'$ ) vessel size category experienced the least reduction (9%) since FY2009.

**Table 34 - Number of vessels by fishing year**

	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
<b>As of May 1 each Fishing Year:</b>				
Total groundfish limited access eligibilities	1,464	1,441	1,422	1,408
Eligibilities held as CPH	81	94	168	228
<b>During any part of the fishing year*:</b>				
Total eligible vessels	1,459	1,409	1,321	1,223
Eligible vessels that did not renew a limited access groundfish permit	28	26	42	46
Vessels with a limited access groundfish permit	1,431	1,383	1,279	1,177
<b>While under a limited access groundfish permit:</b>				
... those with revenue from any species**	916	854	776	764
... those with revenue from at least one groundfish trip	566	445	419	401
... those with no landings	515	529	503	413
Percent of inactive (no landings) vessels	(36%)	(38%)	(39%)	(35%)

Source: Murphy et al (2014, Table 10).

\* On May 1st of the fishing year the number of vessels will equal to the number of eligibilities not in Confirmation of Permit History (CPH). Over time the number of vessels will differ from the number of eligibilities because these eligibilities can be transferred from vessel to vessel during the fishing year. These numbers exclude groundfish limited access eligibilities held as CPH. Starting in 2010, Amendment 16 authorized CPH owners to join Sectors and to lease DAS. For purposes of comparison, CPH vessels are not included in the data for either Sector or Common Pool.

\*\*Active vessels in this report received revenue from any species while fishing under a limited access groundfish permit.

**Table 35 - Vessel activity by size class**

	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
<b>Vessels with landings from any species</b>				
<b>Less than 30</b>	73	65	51	48
<b>30 to &lt; 50</b>	478	455	398	396
<b>50 to &lt; 75</b>	236	217	211	205
<b>75 and above</b>	129	117	116	115
<b>Total</b>	<b>916</b>	<b>854</b>	<b>776</b>	<b>764</b>
<b>Vessels with at least one groundfish trip</b>				
<b>Less than 30</b>	34	24	20	16
<b>30 to &lt; 50</b>	305	240	216	206
<b>50 to &lt; 75</b>	157	118	117	115
<b>75 and above</b>	70	63	66	64
<b>Total</b>	<b>566</b>	<b>445</b>	<b>419</b>	<b>401</b>

Source: Murphy et al. (2014, Tables 13 and 14).

Some of the proposed benefits of a catch share system of management are the potential efficiency gains associated with increasing operational flexibility (NOAA 2010). Being released from the former effort controls, but being held to ACLs, sector vessels were expected to increase their catch per unit effort by decreasing effort. Between 2009 and FY2010, the number of groundfish fishing trips<sup>4</sup> and total days absent on groundfish trips declined by 48% and 27%, respectively (Table 36).<sup>5</sup> During the second year of sector management, 2011, the number of groundfish fishing trips and total days absent on groundfish trips increased. Effort on groundfish trips generally decreased in FY2012. Vessels took fewer groundfish trips, with fewer total days absent of groundfish trips, though average trip length increased slightly over FY2011.

The groundfish fleet overall took fewer non-groundfish trips in FY2012 than they did in FY2009-FY2011, but those trips are longer than they were in FY2010 and FY2011 (Table 36). The total number of non-groundfish trips taken by the fleet in FY2012 was 32,523 trips, a four year low and 3.4% lower than in FY2011. However, for the fleet overall, the total number of days absent on non-groundfish trips in FY2012 was higher than it was in 2011, with 635 (2.3%) more days absent. Furthermore, although the total number of days absent was 9.4% fewer than 2009, the average trip length in 2012 was the same as 2009 (0.92 days per trip) and higher than in 2010 and 2011 (0.86 days per trip).

**Table 36 - Effort by active vessels**

	FY2009	FY2010	FY2011	FY2012
<b>Number of trips</b>				
groundfish	25,897	13,474	15,958	14,496
non-groundfish	37,173	38,489	33,675	32,523
<b>Number of days absent on trips</b>				
groundfish	24,605	18,401	21,465	19,935
non-groundfish	31,606	31,352	27,997	28,632
<b>Average trip length*</b>				
groundfish	0.96	1.37	1.35	1.38
(std. dev.)	(1.74)	(2.14)	(2.20)	(2.19)
non-groundfish	0.92	0.86	0.86	0.92
(std. dev.)	(1.66)	(1.56)	(1.52)	(1.62)

*Source:* Murphy et al. (2014, Table 15).

\*This is the average trip length of all individual trips that have non-missing values for days absent. Since some trip records have missing values for days absent, average trip length reported here may be higher than what is obtained by dividing the overall number of days absent by the overall number of trips.

<sup>4</sup> “Groundfish trip” is defined as a trip where the vessel owner or operator declared, either through the vessel monitoring system or through the interactive voice response system, that the vessel was making a groundfish trip.

<sup>5</sup> The data is taken from different source materials (VMS, etc.) than other data in this document, and thus, may be slightly different than.

### **5.5.2 Groundfish Catch**

The Northeast Multispecies FMP specifies Annual Catch Limits (ACLs) for 20 stocks. Exceeding an ACL for a stock results in the implementation of Accountability Measures (AMs) to prevent overfishing. The ACL is sub-divided into different components. Those components that are subject to AMs are referred to as sub-ACLs. There are also components of the fishery that are not subject to AMs. These include state waters catches that are outside of federal jurisdiction, and a category referred to as “other sub-components” that combines small catches from various fisheries.

Table 37 to Table 39 compare FY2012 catches to ACLs. As shown in Table 38, catches exceed ACLs for only two stocks: GOM/GB windowpane flounder and SNE/MA windowpane flounder. ACLs for these two stocks were also exceeded in FY2010 and FY2011. AMs for those stocks were modified in FW47. Table 39 summarizes catches by non-groundfish components of the ACLs. Assignment of catches to a specific FMP is difficult unless the FMP uses a specific gear (e.g. the scallop fishery) or has a trip activity declaration (e.g. groundfish and monkfish trips). For this reason, the assignment of catch to FMP should be viewed with caution.

**Table 37 - FY2012 catches of regulated groundfish stocks (metric tons, live weight)**

Stock	Components with ACLs and sub-ACLs; (with accountability measures (AMs))							sub-components: No AMs	
	Total Groundfish	Groundfish Fishery	Sector	Common Pool	Recreational*	Midwater Trawl Herring Fishery**	Scallop Fishery	State Water	Other
	A to G	A+B+C	A	B	C	D	E	F	G
GB Cod	1,724.1	1,621.7	1,593.0	28.656				21.5	80.9
GOM Cod	3,903.8	3,854.9	2,181.1	29.9	1,644.0			44.6	4.3
GB Haddock	1,525.5	1,197.6	1,197.1	0.5		288.6		14.2	25.1
GOM Haddock	530.0	526.7	245.1	0.9	280.7	0.1		1.7	1.6
GB Yellowtail Flounder	384.9	215.5	215.2	0.3			164.0	0.0	5.4
SNE/MA Yellowtail Flounder	593.5	463.0	425.6	37.4			54.0	12.0	64.6
CC/GOM Yellowtail Flounder	1,012.3	957.6	954.3	3.2				33.7	20.9
Plaice	1,642.8	1,604.7	1,601.4	3.3				15.3	22.8
Witch Flounder	1,174.0	983.3	981.0	2.3				28.2	162.5
GB Winter Flounder	2,057.6	1,931.7	1,930.9	0.8				0.0	125.9
GOM Winter Flounder	322.8	260.0	258.0	2.0				60.2	2.6
SNE/MA Winter Flounder	315.9	106.0	104.8	1.1				58.9	151.0
Redfish	4,445.4	4,429.0	4,423.4	5.6				13.4	3.1
White Hake	2,485.4	2,470.6	2,446.8	23.8				2.8	12.0
Pollock	8,092.4	6,462.5	6,394.7	67.8				532.3	1,097.6
Northern Windowpane	208.9	129.6	129.5	0.1				2.3	77.0
Southern Windowpane	520.9	106.5	95.9	10.6				34.4	380.0
Ocean Pout	53.2	39.1	35.4	3.6				1.2	13.0
Halibut	75.7	60.7	57.4	3.3				13.3	1.7
Wolffish	32.4	30.2	30.0	0.1				1.0	1.2

Notes: Catch includes any FY2011 carryover caught by sectors in FY2012. Data as of Nov. 5, 2013, Northeast Regional Office. Values for a non-allocated species may include landings of that stock; misreporting of species and/or stock area; and/or estimated landings (in lieu of missing reports) based on vessel histories.  
 \*Recreational estimates based on Marine Recreational Information Program (MRIP) data.  
 \*\*Landings extrapolated from observer data.

**Table 38 - FY2012 catches as percent of ACL**

Stock	Components with ACLs and sub-ACLs (with accountability measures (AMs))							sub-components: No AMs	
	Total Groundfish*	Groundfish Fishery*	Sector*	Common Pool	Recreational**	Midwater Trawl Herring Fishery	Scallop Fishery	State Water	Other
GB Cod	26.9	26.1	26.0	35.4				42.2	39.7
GOM Cod	58.3	60.4	47.4	37.3	74.2			17.6	6.9
GB Haddock	1.1	0.0	-	0.6		100.9		4.6	2.0
GOM Haddock	47.3	49.3	25.9	18.6	108.4	0.6		11.1	7.1
GB Yellowtail Flounder	70.3	58.5	59.1	6.1			104.5	n/a	23.9
SNE Yellowtail Flounder	59.3	55.8	63.7	24.4			42.5	120.2	161.5
CC/GOM YTF	83.5	82.9	84.7	13.0				96.4	91.0
Plaice	38.8	39.7	40.3	6.1				42.5	15.7
Witch Flounder	67.4	59.6	60.3	10.5				57.5	246.2
GB Winter Flounder	53.4	52.6	52.9	3.9				n/a	67.0
GOM Winter Flounder	28.1	32.0	32.9	7.8				22.1	4.9
SNE/MA Winter Flounder	52.4	35.0	n/a	n/a				33.7	120.8
Redfish	42.1	44.2	44.3	16.6				14.5	0.8
White Hake	67.2	70.5	70.3	91.6				3.8	11.0
Pollock	45.5	40.3	40.0	82.7				70.6	80.1
Northern Windowpane	128.2	100.5	n/a	n/a				115.9	233.2
Southern Windowpane	136.7	147.9	n/a	n/a				88.3	140.7
Ocean Pout	22.2	18.3	n/a	n/a				38.5	56.3
Halibut	91.2	168.7	n/a	n/a				30.8	42.2
Wolffish	42.0	41.3	n/a	n/a				99.2	40.6

Notes: Data as of Nov. 5, 2013, Northeast Regional Office.

\* With the exception of GOM cod the percent of the FY 2012 catch limits caught does not include any FY 2011 carryover caught by sectors in FY 2012. FY 2011 carryover caught is not applied to the FY 2012 ACL. For 2012 year-end accounting, all sector carryover for GOM cod should be counted against the groundfish sub-ACL. As with all other stocks, do not apply sector carryover for GOM cod against a sector's ACE or the sector sub-ACL for in-season monitoring.

\*\* To determine if recreational AM is triggered, the Regional Administrator must use the 3-year average catch compared to the 3-year average of the recreational sub-ACL for a stock.

**Table 39 - FY2012 catches by nongroundfish fisheries (metric tons, live weight)**

Stock	Total	Scallop <sup>1</sup>	Fluke	Hagfish	Herring	Lobster/ Crab	Menhaden	Monkfish	Red Crab	Research
GB Cod	90.2	5.7	0.6	0.0	0.3	0.7	0.1	0.1	0.0	12.3
GOM Cod	28.8	-	0.6	0.0	2.9	0.1	0.0	0.0	-	8.7
GB Haddock	305.8	2.4	8.2	-	14.4**	2.3	-	0.1	-	18.1
GOM Haddock	8.4	-	0.0	0.0	2.6**	0.1	-	-	-	0.2
GB Yellowtail Flounder	43.2	-**	0.1	0.0	1.0	0.0	-	0.0	0.0	-
SNE Yellowtail Flounder	26.7	-**	8.5	-	0.1	0.0	0.0	0.1	0.0	3.4
CC/GOM Yellowtail Flounder	8.1	2.9	0.1	0.0	0.5	0.0	0.0	0.0	-	2.5
Plaice	12.6	0.0	1.3	0.0	1.4	0.5	0.3	0.0	0.0	1.5
Witch Flounder	166.4	18.0	19.5	0.0	7.2	1.5	0.4	0.2	0.0	1.1
GB Winter Flounder	59.4	38.4	0.3	-	0.4	0.0	-	-	-	-
GOM Winter Flounder	13.2	2.0	0.0	0.0	0.2	0.0	-	-	-	0.2
SNE Winter Flounder	164.9	60.3	16.4	0.0	2.6	0.6	0.0	0.2	0.0	3.5
Redfish	10.2	0.0	3.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1
White Hake	4.4	2.0	0.4	0.0	0.0	0.1	0.0	0.6	0.0	0.0
Pollock	757.6	-	0.8	0.0	0.5	0.2	0.1	0.0	0.0	0.6
Northern Windowpane	34.8	33.0	0.0	0.0	0.2	0.0	-	0.0	0.0	0.0
Southern Windowpane	376.0	135.3	75.9	-	1.6	0.6	0.1	0.6	0.0	0.0
Ocean Pout	29.5	6.4	6.5	0.0	0.4	0.1	0.0	0.0	0.0	0.0
Halibut	2.5	0.8	0.1	-	0.1	0.4	-	0.0	-	0.0
Wolffish	0.1	-	0.0	-	-	-	-	-	-	-

*Notes:*

<sup>1</sup>Based on scallop fishing year March, 2011 through February, 2012

\*Estimates not applicable. Recreational amounts are not attributed to the ACL consistent with the assessments for these stocks used to set FY2011 quotas.

**Table 39 – Cont.**

Stock	Scup	Shrimp	Squid	Squid/ Whiting	Surf Clam	Tilefish	Whelk/ Conch	Whiting	Unknown	Rec.
GB Cod	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	15.2	54.6
GOM Cod	2.5	0.7	0.4	3.1	0.0	-	0.0	2.6	7.3	-**
GB Haddock	5.5	0.1	98.8	52.0	-	-	-	0.9	102.9	N/A*
GOM Haddock	-	0.5	0.0	0.8	-	-	0.0	1.9	2.4	-**
GB Yellowtail Flounder	0.2	0.0	0.2	40.7	-	-	0.0	-	1.0	
SNE Yellowtail Flounder	4.5	0.0	1.2	1.2	0.0	0.0	0.0	0.0	7.7	
CC/GOM Yellowtail Flounder	0.3	0.1	0.0	0.4	0.0	-	0.0	0.3	0.9	
Plaice	0.8	0.0	2.1	1.3	0.0	0.0	0.0	0.0	3.2	
Witch Flounder	13.0	0.2	35.3	20.7	0.0	0.0	0.1	0.8	48.3	
GB Winter Flounder	1.2	0.0	0.2	16.7	-	-	-	0.1	2.2	
GOM Winter Flounder	-	0.0	0.0	0.1	-	-	0.0	0.2	0.2	10.3
SNE Winter Flounder	8.3	0.0	19.5	6.8	0.0	0.0	0.0	0.1	34.9	11.7
Redfish	2.1	0.0	0.9	0.8	0.0	0.0	0.0	0.0	2.9	
White Hake	0.4	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.6	
Pollock	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	6.1	748.5
Northern Windowpane	0.0	0.0	0.0	1.4	0.0	-	0.0	0.1	0.1	
Southern Windowpane	48.7	0.0	17.8	14.9	0.0	0.0	0.0	0.1	80.5	
Ocean Pout	4.4	0.0	2.7	2.1	0.0	0.0	0.0	0.1	6.9	
Halibut	0.1	0.0	0.3	0.2	-	-	-	0.0	0.5	
Wolffish	-	-	-	-	-	-	-	-	0.1	

### 5.5.3 Groundfish Landings and Revenue

Total groundfish landings on trips made by vessels possessing a limited access groundfish permit in FY2012 were 46.3M pounds, which is the lowest landings since at least FY2009 (Table 40, Table 41). Because only 16 groundfish stocks are limited by sector allocations, it is important to consider the landings of non-groundfish species and groundfish species separately as a means of describing any possible shift in effort to other fisheries. Non-groundfish landings made by limited access vessels increased from 178.1M pounds in FY2010 to 213.8M pounds in FY2011, and remained fairly steady at 212.0M pounds in FY2012. Total landings of all species made by limited access vessels in the Northeast multispecies fishery was 258.3M pounds in FY2012. This compares to landings ranging from 236.4M – 272.9M pounds in the 2009–2011 fishing years. In FY2012, sector vessels accounted for 68% of all landings, 99% of groundfish landings, and 62% of non-groundfish landings.

During the first year of sector management, groundfish revenues from vessels with limited access groundfish permits in FY2010, were \$83.2M (Table 40, Table 41). This was slightly lower than FY2009 revenues. In FY2011, the groundfish revenues from vessels with limited access groundfish permits were \$90.4M. Groundfish revenue in FY2012 decreased to a four-year low of \$69.8 million (22.9% lower than in 2011). Non-groundfish revenue decreased to \$235.7 million (2% lower than in FY2011), but was still higher than in FY2009 and FY2010. In FY2012, sector vessels accounted for about 69% of all revenue earned by limited access permitted vessels. Sector vessels also earned 99% of revenue from groundfish landings and 59% of non-groundfish revenue.

**Table 40 - Total landings and revenue from all trips by fishing year**

	FY2009	FY2010	FY2011	FY2012
<b>Landed Pounds</b>				
<b>Groundfish</b>	68,416,222	58,178,065	61,661,450	46,295,753
<b>Non-Groundfish</b>	185,631,323	174,269,060	211,226,012	211,983,492
<b>Total Pounds</b>	254,047,546	232,447,125	272,887,462	258,279,245
<b>Gross Revenue</b>				
<b>Groundfish</b>	\$82,510,132	\$83,177,330	\$90,453,455	\$69,778,174
<b>(in 2010 dollars*)</b>	(\$83,386,467)	(\$83,177,330)	(\$88,658,472)	(\$67,252,170)
<b>Non-Groundfish</b>	\$180,396,477	\$210,631,484	\$240,364,488	\$235,730,686
<b>(in 2010 dollars*)</b>	(\$182,312,457)	(\$210,631,484)	(\$235,594,629)	(\$227,197,123)
<b>Total Revenue</b>	\$262,906,608	\$293,808,814	\$330,817,943	\$305,508,860
<b>(in 2010 dollars*)</b>	(\$265,698,924)	(\$293,808,814)	(\$324,253,101)	(\$294,449,293)

Source: Murphy et al. (2014, Table 2).

\* Deflated by the calendar year 2010 Q2 GDP Implicit Price Deflator.

**Table 41 - Total landings and nominal revenue from groundfish trips by fishing year**

	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>
<b>Landed Pounds</b>				
<b>Groundfish</b>	68,362,567	58,067,026	61,520,629	46,238,230
<b>Non-Groundfish</b>	30,965,367	23,147,600	28,781,804	27,527,755
<b>Total Pounds</b>	99,327,934	81,214,627	90,302,433	73,765,985
<b>Gross Revenue</b>				
<b>Groundfish</b>	\$82,456,833	\$82,964,771	\$90,237,532	\$69,669,582
<b>Non-Groundfish</b>	\$25,862,188	\$22,339,660	\$31,826,744	\$25,768,848
<b>Total Revenue</b>	\$108,319,021	\$105,304,431	\$122,064,276	\$95,438,430

Source: Murphy et al. (2014, Table 3).

\* Deflated by the calendar year 2010 Q2 GDP Implicit Price Deflator.

## 5.5.4 Groundfish Trade and Processing

### 5.5.4.1 Groundfish Dealers

All Federally permitted groundfish vessels are required to sell to a federally permitted dealer. Federally permitted dealers are required to report all purchases of seafood, regardless of whether the vessels held a Federal or state-waters only permit. Dealers may obtain product from many other sources, so the groundfish activity levels are likely to capture only a portion of business activity by seafood wholesalers. Given dealer reporting requirements, dealer records account for 99% of reported sales of groundfish in the Northeast region.

In most states, the number of dealers reporting purchases of groundfish is too small to report detailed statistics due to confidentiality restrictions. The states with sufficient numbers of participating dealers include Massachusetts, New York, New Jersey, and Rhode Island. The number of permits reported includes dealer permits issued to seafood auctions (e.g., Portland Fish Exchange, Whaling City Display Auction, Gloucester Fish Exchange, and New England Fish Exchange). Thus, the total number of entities involved in seafood wholesale trade is likely to be larger than what official dealer records may suggest.

Auctions function as clearinghouses, where member dealers purchase seafood, but do not necessarily possess a Federal dealer permit, since the auction itself is the dealer of record. Three of the four auction markets are located in Massachusetts while the Portland Fish Exchange is located in Maine. The Portland Fish Exchange accounts for nearly all of the groundfish purchased in Maine, while the auction markets in Massachusetts account for less than 40% of reported purchases. Including auction markets, seafood dealers in Massachusetts alone traditionally account for over 70% of the value of groundfish purchased, and the combined purchases by Maine and Massachusetts dealers accounted for over 90% of total groundfish purchased. A substantial proportion of groundfish have been purchased through the four auctions located in New England, averaging over 50% of total groundfish purchased.

Groundfish are also sold through cooperatives, such as the Yankee Fishermen's Cooperative in Seabrook, NH. Member fishermen can pool resources to increase bargaining and purchase power, market access and profitability. Cooperatives can participate in purchasing marketing, transportation, and fish processing.

#### **5.5.4.2 Groundfish Processors**

Studies of the processing sector suggest that it is less susceptible than the harvesting sector to fluctuations in the availability of domestic sources of wild-caught fish, as processors are able to find alternative sources of supply or use substitute species to maintain product lines (Dirlam & Georgianna 1994; Jin et al. 2005). This does not necessarily mean that all segments of the processing industry are readily able to find alternatives, as some processors may be more reliant on local sources of seafood to meet customer demand. Groundfish processors are located in communities such as New Bedford, Boston, Gloucester, Fall River, Melrose and Bourne MA; Portland, MM; and Wickford and Warwick, RI.

#### **5.5.4.3 Community-Supported Fisheries**

A community-supported fishery (CSF) is a program where fish consumers pre-pay and organization of member fishermen for a weekly or bi-weekly allotment of fish over the course of a season. Within the past few years, at least eight CSFs have formed throughout New England by fishermen and their communities. Currently, there are CSFs based in Port Clyde and Portland, Maine; coastal New Hampshire; Gloucester, Scituate, and Chatham; Massachusetts; and Newport, Rhode Island. These are distributing fresh local product to surrounding communities (Local Catch 2014).

### 5.5.1 Recreational Harvesting Component

The recreational fishery includes private anglers, party boat operators, and charter vessel operators. Several groundfish stocks are targeted by the recreational fishery, including GOM cod, GOM haddock, pollock, and GOM winter flounder. GB cod and haddock are targeted as well, but to a lesser extent. SNE/MA winter flounder is also a target species. Amendment 16 (NEFMC 2009, Section 6.2.5) included a detailed overview of recreational fishing activity.

Recreational removals of GOM cod declined by 72% from FY2011 to FY2012, but then increased slightly in FY2013 (Table 42). Removals of GOM haddock were more equivalent through the time series. The number of angler trips also declined by about 30%. There were 122 active party or charter vessels catching cod or haddock in the Gulf of Maine in 2013, down from 188-195 vessels between 2004-2010 (Table 43).

**Table 42 - Recreational fishing activity for GOM cod and GOM haddock**

	FY2011	FY2012	FY2013
Angler Trips	235,343	182,999	225,624
Cod Total Catch (numbers, a+b1+b2)	1,389,408	846,655	879,366
Cod Removals (numbers, a+b1+(0.3*b2))	773,085	410,231	491,568
Cod Removals (weight, mt)	2,116	596	706
Haddock Total Catch (numbers, a+b1+b2)	184,709	369,427	654,227
Haddock Total removals (numbers, a+b1)	146,042	166,610	146,976
Haddock Total Removal (weight, mt)	231	211	256

*Note:* FY2013 catches are an estimate since not all data are available.

**Table 43 - Recreational vessels catching cod or haddock from the Gulf of Maine**

Calendar Year	Party	Charter	Total
1999	53	100	153
2000	48	103	151
2001	59	116	175
2002	43	130	173
2003	53	128	181
2004	64	124	188
2005	60	135	195
2006	62	126	188
2007	52	133	185
2008	54	128	182
2009	48	131	179
2010	60	135	195
2011	47	128	175
2012	44	108	152
2013	31	89	120

*Notes:* Includes catch (kept and discarded) from any of the Gulf of Maine statistical areas.

*Source:* GARFO, January 2014.

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## 7.0 GLOSSARY

**Annual Catch Limit (ACL):** The limit of each groundfish stock that can be harvested by all vessels during each fishing year.

**Annual Catch Entitlement (ACE):** The sum of the PSCs for each MRI participating in a sector, multiplied by the commercial groundfish fishery ACL each stock for that year. The product of that multiplication is the ACE for that sector for each stock — the amount of stock in pounds that the sector is allowed to catch for that fishing year. The ACE of each stock equals the sum of PSCs times the ACL.

**Bycatch:** (v.) The capture of nontarget species in directed fisheries which occurs because fishing gear and methods are not selective enough to catch only target species. (n.) Fish which are harvested in a fishery but are not sold or kept for personal use, including economic discards and regulatory discards but not fish released alive under a recreational catch and release fishery management program.

**Capacity:** The level of output a fishing fleet is able to produce given specified conditions and constraints. Maximum fishing capacity results when all fishing capital is applied over the maximum amount of available (or permitted) fishing time, assuming that all variable inputs are utilized efficiently.

**Catch:** The sum total of fish killed in a fishery in a given period. Catch is given in either weight or number of fish and may include landings, unreported landings, discards, and incidental deaths.

**Competitive fringe:** A group of numerous small firms, each with 1 to 2 percent market shares, which cannot profitably influence market prices and will behave competitively. A competitive fringe limits the potential for firms with larger shares to successfully exercise market power.

**Continental shelf waters:** The waters overlying the continental shelf, which extends seaward from the shoreline and deepens gradually to the point where the sea floor begins a slightly steeper descent to the deep ocean floor; the depth of the shelf edge varies, but is approximately 200 meters in many regions.

**Days absent:** An estimate by port agents of trip length. This data was collected as part of the NMFS weighout system prior to May 1, 1994.

**Days-at-sea (DAS):** The total days, including steaming time that a boat spends at sea to fish. Amendment 13 categorized DAS for the multispecies fishery into three categories, based on each individual vessel's fishing history during the period fishing year 1996 through 2001. The three categories are: Category A: can be used to target any groundfish stock; Category B: can only be used to target healthy stocks; Category C: cannot be used until some point in the future. Category B DAS are further divided equally into Category B (regular) and Category B (reserve).

**Discards:** Animals returned to sea after being caught; see *bycatch* (n.).

**Essential Fish Habitat (EFH):** Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The EFH designation for most managed species in this region is based on a legal text definition and geographical area that are described in the Habitat Omnibus Amendment (NEFMC 1998).

**Exclusive Economic Zone (EEZ):** A zone in which the inner boundary is a line coterminous with the seaward boundary of each of the coastal States and the outer boundary is line 200 miles away and parallel to the inner boundary

**Exempt fisheries:** Any fishery determined by the Regional Director to have less than 5 percent regulated species as a bycatch (by weight) of total catch according to 50 CFR 648.80(a)(7).

**Fishing effort:** The amount of time and fishing power used to harvest fish. Fishing power is a function of gear size, boat size and horsepower.

**Framework adjustments:** Adjustments within a range of measures previously specified in a fishery management plan (FMP). A change usually can be made more quickly and easily by a framework adjustment than through an amendment. For plans developed by the NEFMC, the procedure requires at least two Council meetings including at least one public hearing and an evaluation of environmental impacts not already analyzed as part of the FMP.

**Individual Fishing Quota (IFQ):** Federal permit under a limited access system to harvest a quantity of fish, expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by an individual person or entity

**Landings:** The portion of the catch that is harvested for personal use or sold.

**Limited-access permits:** Permits issued to vessels that met certain qualification criteria by a specified date (the "control date").

**Market power:** The ability to manipulate prices to one's advantage based on one's share of participation in a market (e.g., by withholding supply from the market).

**Meter:** A measure of length, equal to 39.37 English inches, the standard of linear measure in the metric system of weights and measures. It was intended to be, and is very nearly, the ten millionth part of the distance from the equator to the north pole, as ascertained by actual measurement of an arc of a meridian.

**Metric ton:** A unit of weight equal to a thousand kilograms (1kgs = 2.2 lbs.). A metric ton is equivalent to 2,205 lbs. A thousand metric tons is equivalent to 2.2 million lbs.

**Moratorium Right Identifier (MRI):** A unique identifying number that is attached to a Northeast multispecies permit. Each permit has its own MRI, and a given MRI is attached to only one permit. When NMFS calculates Potential Sector Contribution, it uses the MRI history, because this is the best way to determine how much multispecies groundfish has been associated with that permit over time.

**Multispecies:** The group of species managed under the Northeast Multispecies Fishery Management Plan. This group includes whiting, red hake and ocean pout plus the regulated species (cod, haddock, pollock, yellowtail flounder, winter flounder, witch flounder, American plaice, windowpane flounder, white hake and redfish).

**Northeast Shelf Ecosystem:** The Northeast U.S. Shelf Ecosystem has been described as including the area from the Gulf of Maine south to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream.

**Observer:** Any person required or authorized to be carried on a vessel for conservation and management purposes by regulations or permits under this Act

**Open access:** Describes a fishery or permit for which there is no qualification criteria to participate. Open-access permits may be issued with restrictions on fishing (for example, the type of gear that may be used or the amount of fish that may be caught).

**Potential Sector Contribution (PSC):** The proportion of the total landings of a particular groundfish stock (in live pounds) associated with an individual MRI over a particular period. For most stocks managed by the Northeast Multispecies FMP the PSC is based on a MRI's landings history during fishing years (FYs) 1996-2006, divided by the landings history of the entire fleet for each stock.

**Regulated groundfish species:** Cod, haddock, pollock, yellowtail flounder, winter flounder, witch flounder, American plaice, windowpane flounder, white hake and redfish. These species are usually targeted with large-mesh net gear.

**Species composition:** A term relating the relative abundance of one species to another using a common measurement; the proportion (percentage) of various species in relation to the total on a given area.

**Species diversity:** The number of different species in an area and their relative abundance

**Species richness:** See *species diversity*. A measurement or expression of the number of species present in an area; the more species present, the higher the degree of species richness.

**Statistical area:** A delineated area of ocean used to track where fish were caught. NMFS overlays a grid of statistical areas onto nautical charts to accurately identify specific areas of the ocean. Statistical areas are approximately one degree square although in many cases they do not correspond exactly to specific latitudes and longitudes.

**Stock:** A grouping of fish usually based on genetic relationship, geographic distribution and movement patterns. A region may have more than one stock of a species (for example, Gulf of Maine cod and Georges Bank cod). A species, subspecies, geographical grouping, or other category of fish capable of management as a unit.

**Stock area:** A group of connected statistical areas that defines the geographic distribution of a particular population of an individual species. For example, the Gulf of Maine (GOM) cod stock area comprises statistical areas 464, 465, 467, 510, 511, 512, 513, 514, and 515. All catch of cod in any of these stock areas is attributed to the GOM cod stock.

**Total Allowable Catch (TAC):** The amount (in metric tons) of a stock that is permitted to be caught during a fishing year. This value is calculated by applying a target fishing mortality rate to exploitable biomass. In the Multispecies FMP, TACs can either be "hard" (fishing ceases when the TAC is caught) or a "target" (the TAC is merely used as an indicator to monitor effectiveness of management measures, but does not trigger a closure of the fishery).

**Valued Ecosystem Component (VEC):** A resource or environmental feature that is important (not only economically) to a local human population, or has a national or international profile, or if altered from its existing status, will be important for the evaluation of environmental impacts of industrial developments, and the focusing of administrative efforts.