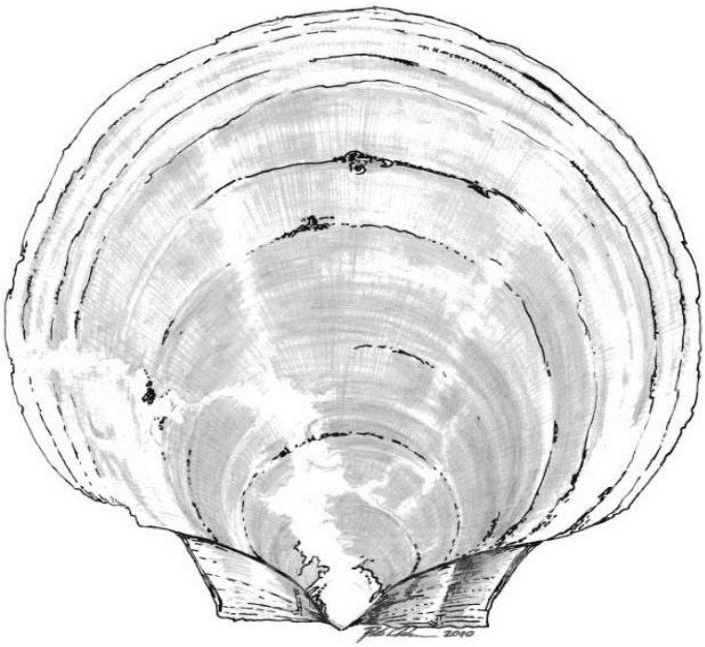
Emergency Action under the Atlantic Sea Scallop Fishery Management Plan: Closure of the Elephant Trunk Scallop Access Area

DRAFT - Environmental Assessment

Including a Regulatory Impact Review



Prepared by the National Marine Fisheries Service

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LIST OF ACRONYMS

ACL – Annual Catch Limit
AM – Accountability Measure(s)
CEQ – Council on Environmental Quality
CA – Closed Area
CAI – Closed Area I
CAII – Closed Area II
CASA – Catch-At-Age Size-At-Age (model)
DAS – Day-at-sea
DMV – Delmarva
DPS – Distinct Population Segment
CPUE – Catch per Unit Effort
EA – Environmental Assessment
EEZ – Exclusive Economic Zone
ESA – Endangered Species Act
EFH – Essential Fish Habitat
ET, ETA – Elephant Trunk Area
F – Fishing Mortality
FMP – Fishery Management Plan
FR – Federal Register
F_{MSY} – Fishing Mortality at Maximum Sustainable Yield
FW- Framework
FY – Fishing Year
GB– Georges Bank
GC – General Category
GOM– Gulf of Maine
HC – Hudson Canyon
LA – Limited Access
LAGC – Limited Access General Category
LPUE – Landings per unit effort, (lb/DAS)
IFQ – Individual Fishing Quota
IRFA – Initial Regulatory Flexibility Analysis
LA – Limited Access
M – Natural Mortality
MA- Mid-Atlantic
MSA – Magnuson Stevens Act
MSY – Maximum Sustainable Yield
NE – New England or Northeast
NEFMC – New England Fishery Management Council
NEFSC – Northeast Fisheries Science Center
NEPA – National Environmental Policy Act
NGOM – Northern Gulf of Maine
NLCA – Nantucket Lightship Closed Area
NLS – Nantucket Lightship Scallop Access Area
NMFS – National Marine Fisheries Service
NOAA – National Oceanographic Atmospheric Administration
NWA – Northwest Atlantic
OA – Open Area
OFD – Overfishing Definition
OFL – Overfishing Limit
RFA – Regulatory Flexibility Act
RIR – Regulatory Impact Review
SARC – Stock Assessment Review Committee
SBRM – Standardized bycatch reporting methodology
SH:MW – Shell height/meat weight conversion, used to estimate scallop biomass
SMAST –School of Marine Science and Technology, University of Massachusetts Dartmouth
SNE – Southern New England
SNE/MA – Southern New England/Mid-Atlantic
SSC – Science and Statistical Committee
TAC– Total Allowable Catch
PDT – Scallop Plan Development Team
VEC – Valued Ecosystem Component
VIMS – Virginia Institute of Marine Science
VTR – Vessel Trip Reports

1.0 INTRODUCTION & BACKGROUND INFORMATION

Under the Sea Scallop Area Rotation Program, as approved in Amendment 10 to the Fishery Management Plan (FMP), three types of areas were established: Rotational Closed Areas; Sea Scallop Access Areas; and Open Areas. Rotational Closed Areas are closed to all scallop harvest as a result of large concentrations of fast-growing, small scallops. Sea Scallop Access Areas are re-opened closed areas or areas needing area-specific effort or harvest controls. Sea Scallop Access Areas have area-specific effort allocation programs, or "Area Access Programs," as described below, established to prevent rapid harvest of the scallop resource within the areas.

Amendment 10 established Rotational Area Closures for areas of small sea scallops, closing areas before the scallops are exposed to fishing. Scallops grow fastest when they are very small and protection of these small scallops through area closures is critical in the rotational management of the scallop resource. After a period of closure, and after evaluation according to the criteria and procedures established in Amendment 10, the areas will re-open for scallop fishing, when the scallops are larger and more suitable for harvest. This process boosts scallop meat yield and yield per recruit.

Following the 2004 closure of the Elephant Trunk Area (ETA) in the Mid-Atlantic between the Hudson Canyon and Delmarva scallop access areas, scallop biomass increased steadily. The closure protected the very strong 2001 year class. In 2007 the ETA contained over one-quarter of the total scallop biomass. The area was fished as a controlled access area for four years (2007-2010) and supported a total of 12 access area trips for full time vessels (around 72 million lb). This heavy fishing effort decreased biomass substantially. Based on 2010 survey results, Framework Adjustment 22 to the Scallop FMP (Framework 22) changed the ETA from an access area to an open area because of low biomass and low recruitment.

Staff from the Northeast Fisheries Science Center and the University of Massachusetts School for Marine Science and Technology (SMAST) presented results from their 2012 ETA scallop resource surveys at the New England Fisheries Management Council's Scallop Plan Development Team (PDT) meeting on August 19 and 20, 2012. All four surveys indicated that the scallop recruitment in the ETA is substantially higher than expected. In 2012, the mean number of recruits and prerecruits (scallops < 75 mm shell height) per tow in the NEFSC sea scallop survey in the ETA was 994, compared to 24 in 2011. These surveys represent the best available scientific information regarding the status of the scallop resource.

Most of the scallops in the Mid-Atlantic (MA) are in the ETA and the Delmarva Area (currently closed). However, most of these are small scallops. The scallop industry has reported that some vessels are targeting pockets of large scallops in the ETA on open area DAS. If vessels choose to fish in this area, they will likely have low catch rates. This increases fishing effort, bycatch, costs, and impacts on protected resources and habitat. Further, this could have negative impacts on recruitment in the short and medium term, and could reduce the long-term biomass and yield from the ETA and the overall MA. The success of the entire scallop access area rotational management program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the MA, where recruitment has been well below average for several years. Framework 24 to the Atlantic Sea Scallop FMP (Framework 24) is scheduled to go into effect in May of 2013, and it is proposing to close the ETA upon its implementation. Framework 24 is proposing 30 percent lower allocations in the next few years to compensate for lower overall biomass in the scallop fishery. It is essential to protect this recruitment in the ETA and allow it to grow and be commercially viable for future

harvest.

Following the PDT meeting, the New England Fisheries Management Council (Council) requested that NMFS take emergency action on this issue. For the reasons outlined above, the Council passed a motion at its September 2012 meeting requesting that NFMS take this emergency action to close the ETA as soon as possible. The Council's recommendation was not unanimous; the NMFS Regional Administrator voted against the recommendation to preserve the Secretary's discretion in promulgating emergency measures, which was explained to the Council. No other Council members voted against the recommendation, resulting in a vote of 15 in favor and 1 opposed with no abstentions and one member recusing herself from the vote due to her association with a scallop fishing business.

2.0 PURPOSE AND NEED FOR THE ACTION

Survey results from the ETA recently became available and indicate that the overall recruitment in ETA is substantially higher than expected. Reports from industry suggested that some vessels were choosing to target pockets of larger scallops in the ETA despite the presence of such strong recruitment. An analysis of Vessel Monitoring System (VMS) data showed that in the two months following the August 19 and 20, 2012, PDT meeting there were 36 trips taken in the ETA resulting in over 3000 hours of fishing activity.

This action is needed to protect the large recruitment event in the ETA.

Not protecting the recruitment in ETA would have the following three risks associated with vessels that utilize this area:

- First, fishing activity in ETA in fishing year (FY) 2012 (March 1, 2012, through February 28, 2013) could negatively impact scallop recruitment and reduce long-term biomass and yield from the area.
- Second, due to low catch rates of legal size scallops in this area, increased fishing time and area swept could result in greater negative impacts on bycatch, habitat, and protected resources.
- Third, the success of the entire scallop area rotation program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the Mid-Atlantic, where recruitment has been well below average for several years but has recently begun to rebound. Fishing effort in ETA could compromise the overall success of the area rotation program.

Specifically, the purpose of this action is to consider closing the ETA as soon as possible during FY 2012 and 2013 to prevent vessels from using open area days-at-sea (DAS) to target pockets of large scallop in the area.

Because fishing in ETA in FY 2012 and 2013 would have implications on the success of Mid-Atlantic scallop yield in future FYs, NMFS would likely implement this action for the entirety of FY 2012 and in FY 2013 until the expected passage of FW 24 (May 2013).

2.1 Justification for Emergency Action

If the Secretary finds that an emergency exists, Section 305(c) of the Magnuson Stevens Fishery Management and Conservation Act (MSA) authorizes her to promulgate emergency regulations to address the emergency for any fishery. NMFS issued policy guidelines in determining

whether the use of an emergency rule is justified on August 21, 1997 (62 FR 44421). The guidelines state that the preparation of management actions under the emergency provisions of the MSA should be limited to special circumstances where substantial harm or disruption of the resource, fishery, or community would be caused in the time it would take to follow standard rulemaking procedures. The emergency criteria of the policy guidelines define the existence of an emergency as a situation that: "(1) results from recent, unforeseen events or recently discovered circumstances; and (2) presents serious conservation or management problems in the fishery; and (3) can be addressed through emergency regulations for which the immediate benefits outweigh the value of advance notice, public comment, and deliberative consideration of the impacts on participants to the same extent as would be expected under the normal rulemaking process." The justifications described in these guidelines and subsequent clarifications specify that emergency rules can be implemented to prevent significant direct economic loss or to preserve a significant economic opportunity that otherwise might be foregone, and the prevention of significant community impacts. Based on the following, NMFS has determined that the current situation meets the guidelines and criteria for emergency action.

The new information from the 2012 scallop surveys in the ETA presents a recently discovered circumstance. The survey results were presented to the Scallop PDT on August 19 and 20, 2012. There is now evidence that there is substantially higher recruitment in ETA than projected through Framework 22, which set the FY 2012 scallop specifications. In addition, the surveys show that adult biomass is low throughout the MA and should be protected. None of this information was previously known or available.

The emergency presents serious conservation and management problems to the fishery because allowing fishing effort in the ETA in FY 2012 with the current levels of recruitment and low biomass could result in negative impacts on recruitment and could reduce the long-term biomass and economic yield from this area. There have been strong signs of recruitment in the MA in 2011 and 2012, protecting scallop recruitment in this area is essential for the future success of area rotation to maximize yield and economic benefits to the scallop fishery. Additionally, it is probable that current catch rates will be much lower for ETA than originally projected because most of the biomass in the area is small scallops. When catch rates fall, vessels must fish longer to get the same total catch increasing area swept, or time that fishing gear is in the water. Increased area swept has greater impacts on bycatch, habitat, and protected resources, as well as increased costs for fishing vessels due to longer trips. The increase in fishing costs would also have negative impacts on the producer surplus and net economic benefits from the fishery.

Although the Council has the authority to develop a management action to close this area, an emergency action can be developed and implemented by NMFS more swiftly than a Council action that is subject to procedural and other requirements not applicable to the Secretary. If the normal regulatory process is used to revise the trip allocations, it would take substantially longer for the revised trip allocations to be implemented, and could result in triggering economically harmful management actions that otherwise may have been avoided. If implemented through emergency action, it may be possible to maintain overall catch allocations for Atlantic sea scallops for the remainder of FY 2012 and avoid unnecessary adverse biological and economic impacts.

3.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This is a discrete action taken in the context of an over-arching FMP that has been developed and amended numerous times since the FMP was first implemented. There has been consideration of

numerous alternatives to the management of scallops including the harvesting of scallops in the ETA. Given this, the short duration that this action, and the fact that the alternatives are within the context of management measures already in place, consideration of a broader suite of alternatives beyond the no action and the proposed action are unnecessary and would undermine NMFS's ability to analyze and implement the action in a timely manner.

3.1 Alternative 1: No Action

Under this alternative, the ETA would remain open until it would likely be closed once Framework 24 was implemented (likely May 2013). Although many vessels would voluntarily stay out of the area to protect the recruitment, vessels would still be allowed to use open area DAS to target pockets of larger scallops in the area.

3.2 Alternative 2: Closure of ETA (Proposed Action)

Under this alternative, the ETA would close once the emergency rule is effective (likely December 2012), and remain closed for up to one year (the maximum length of an emergency action and extension). However, it is expected that FW 24 will close this area in May of 2013 to protect the recruitment for several years. Vessels would no longer be able to target scallops in this area while on open area.

In FY 2013, the ETA would re-open under default measures once this action expires. However, new specifications would be implemented under Framework 24 before the emergency action expires. The Council is completing development of Framework 24 in November 2012 and the allocation alternatives for FY 2013 and FY 2014 suggest that the ETA will remain closed for those two years.

3.3 Considered But Rejected Alternatives

The Council recommended measures in its request for this emergency action. NMFS has identified and considered the Council's recommended alternative as the preferred alternative for this action. No other alternatives, aside from No Action have been considered. Given the short duration that this action would be in effect, and the fact that the alternatives are within the context of management measures already in place, consideration of a broader suite of alternatives would undermine NMFS's ability to analyze and implement the action in a timely manner.

4.0 AFFECTED ENVIRONMENT

The following is excerpted or summarized primarily from the FEIS for Amendment 15 to the Atlantic Sea Scallop Fishery Management Plan (NEFMC, 2010). Please refer to that document (Available at: http://www.nefmc.org/scallops/index.html) for more detailed information on the fisheries and other resources described below. A summary of the results of the 2012 surveys is included, and information about the fishery from 2010 and 2011, as well as a summary of recent activities related to protected resources and EFH has been updated.

4.1 Atlantic Sea Scallop Resource

The Atlantic sea scallop (*Placopetcen magellanicus*) is a bivalve mollusk that is distributed along the continental shelf, typically on sand and gravel bottoms from the Gulf of St. Lawrence to North Carolina (Hart and Chute, 2004). The species generally inhabit waters less than 20° C (68° F) and depths that range from 30-110 m on Georges Bank, 20-80 m in the Mid-Atlantic, and

less than 40 m in the near-shore waters of the Gulf of Maine. Although all sea scallops in the US EEZ are managed as a single stock per Amendment 10, assessments focus on two main parts of the stock and fishery that contain the largest concentrations of sea scallops: Georges Bank and the Mid-Atlantic, which are combined to evaluate the status of the whole stock.

The scallop assessment is a very data-rich assessment. The overall biomass and recruitment information are based on results from multiple surveys. First, the NEFSC has had a dedicated dredge survey since 1979 that has sampled the resource using a stratified random design. More recently, the NEFSC scallop survey has evolved into a combined dredge and optical survey. Dredge tows are still completed in each strata, and a digital camera (Seahorse) is towed behind the survey vessel on all three legs of the survey. In addition, SMAST completes a video survey of the entire scallop resource including more intensive sampling in discrete areas that vary year to year. The Virginia Institute of Marine Science (VIMS) conducts a grid survey of various areas that also vary year to year using both a survey and commercial dredge. Finally, Arnie's Fisheries, working with Woods Hole Oceanografic Institute (WHOI), has completed very intensive optical surveys of discrete areas using a similar towed camera (Habcam) similar to the Seahorse camera. WHOI and Arnie's Fisheries developed this survey technology which was adopted by the NEFSC. The Scallop PDT combines the results from all available surveys to estimate sea scallop biomass and recruitment on an annual basis. For 2012, the overall biomass estimates from all survey methods were within 10 percent of each other; therefore there is a high degree of confidence that the 2012 biomass estimates are accurate.

4.1.1 Biomass

Georges Bank

The scallop abundance and biomass on Georges Bank (GB) increased from 1995-2000 after implementing closures and effort reduction measures. Biomass and abundance then declined from 2006-2008 because of poor recruitment and the reopening of portions of groundfish closed areas. Biomass increased on Georges Bank in both 2009 and 2010, mainly due to increased growth rates and strong recruitment in the Great South Channel (Channel), along with continuing concentrations on the Northern Edge and in the central portion of Closed Area I, especially just south of the "sliver" access area. All surveys in 2012 saw consistent results for GB biomass with highest concentrations in NL, the Channel, and cod HAPC (Figure 1 - Figure 3). Overall, GB biomass has been declining since 2010 (Figure 7).

Figure 1 - Total scallop biomass (g/tow) on Georges Bank from the 2012 NEFSC dredge tows as well as 2012 VIMS dredge tows in NL and in Closed Area II "north" and west of cod HAPC

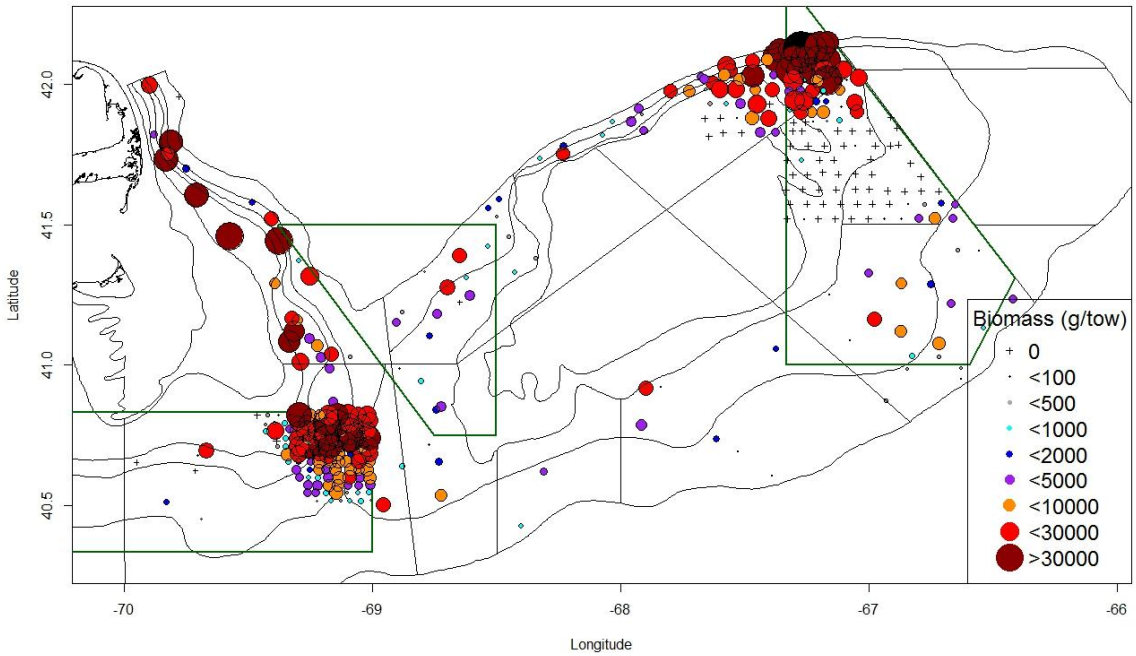


Figure 2 - Total scallop abundance (numbers per station) on Georges Bank from the 2012 SMAST video survey

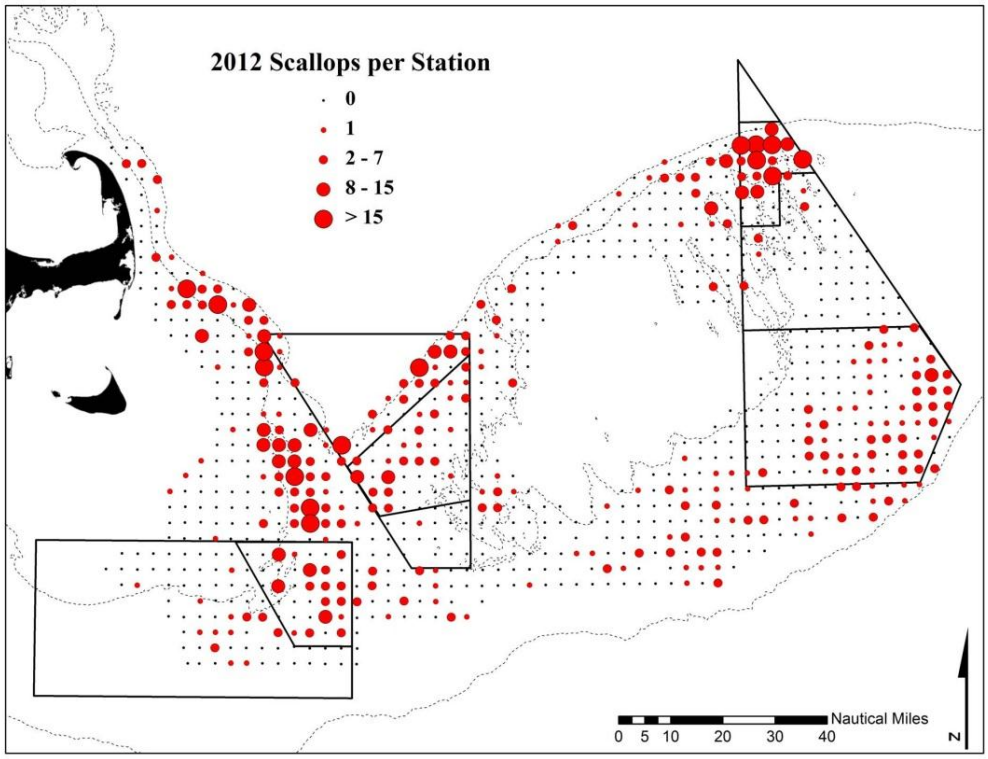
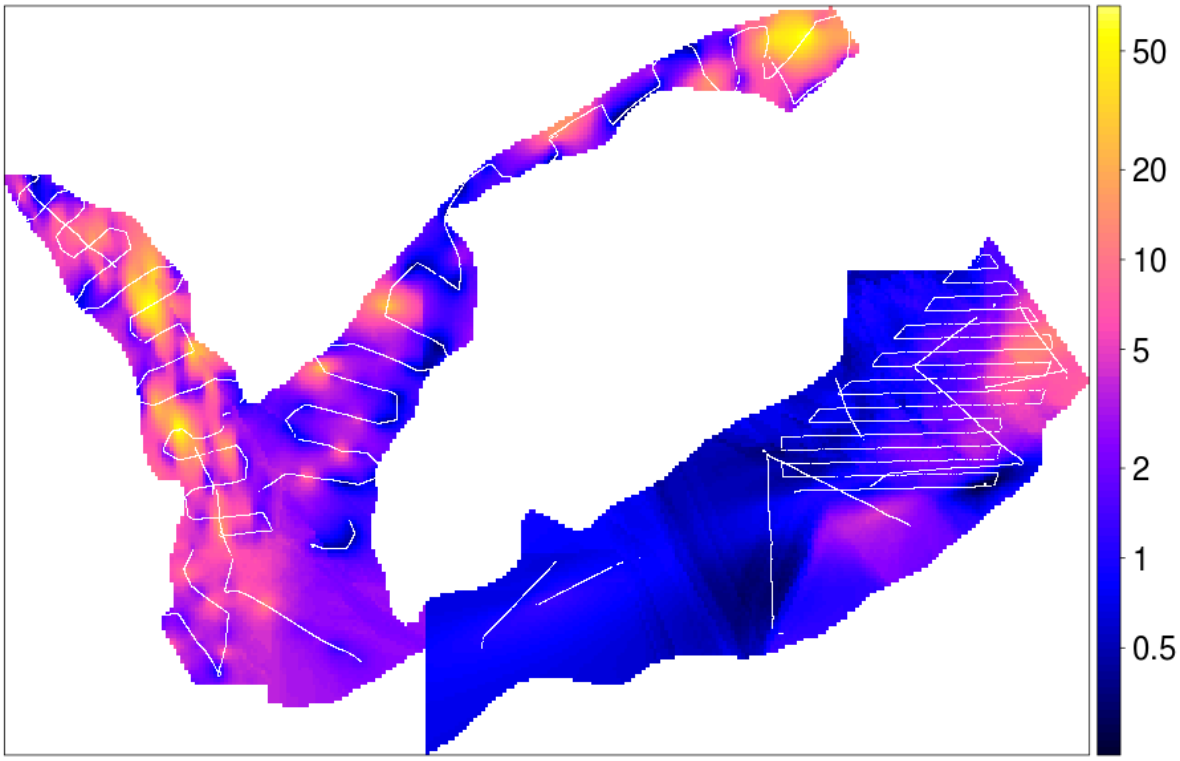


Figure 3 - Total scallop biomass in recruits/m^2 on Georges Bank from the 2012 NEFSC optical survey (Seahorse)



Mid-Atlantic

In general, Mid-Atlantic biomass is declining. This is primarily from depletion of the large biomass in Elephant Trunk and several years of poor recruitment in that area (2009-2011). Figure 4 through Figure 6 show consistent results for MA biomass with highest concentrations in the Hudson Canyon access area as well as the Hudson Canyon itself (northwest of the access area). All surveys saw biomass in ETA and Delmarva, but most of these scallops are smaller. Note the SMAST figure is in numbers and the other two are biomass. MA biomass has declined overall in recent years (Figure 7).

Figure 4 - Total scallop biomass (g/tow) for the Mid-Atlantic from the 2012 NEFSC dredge tows as well as 2012 VIMS dredge tows in Hudson Canyon, Delmarva and inshore NYB

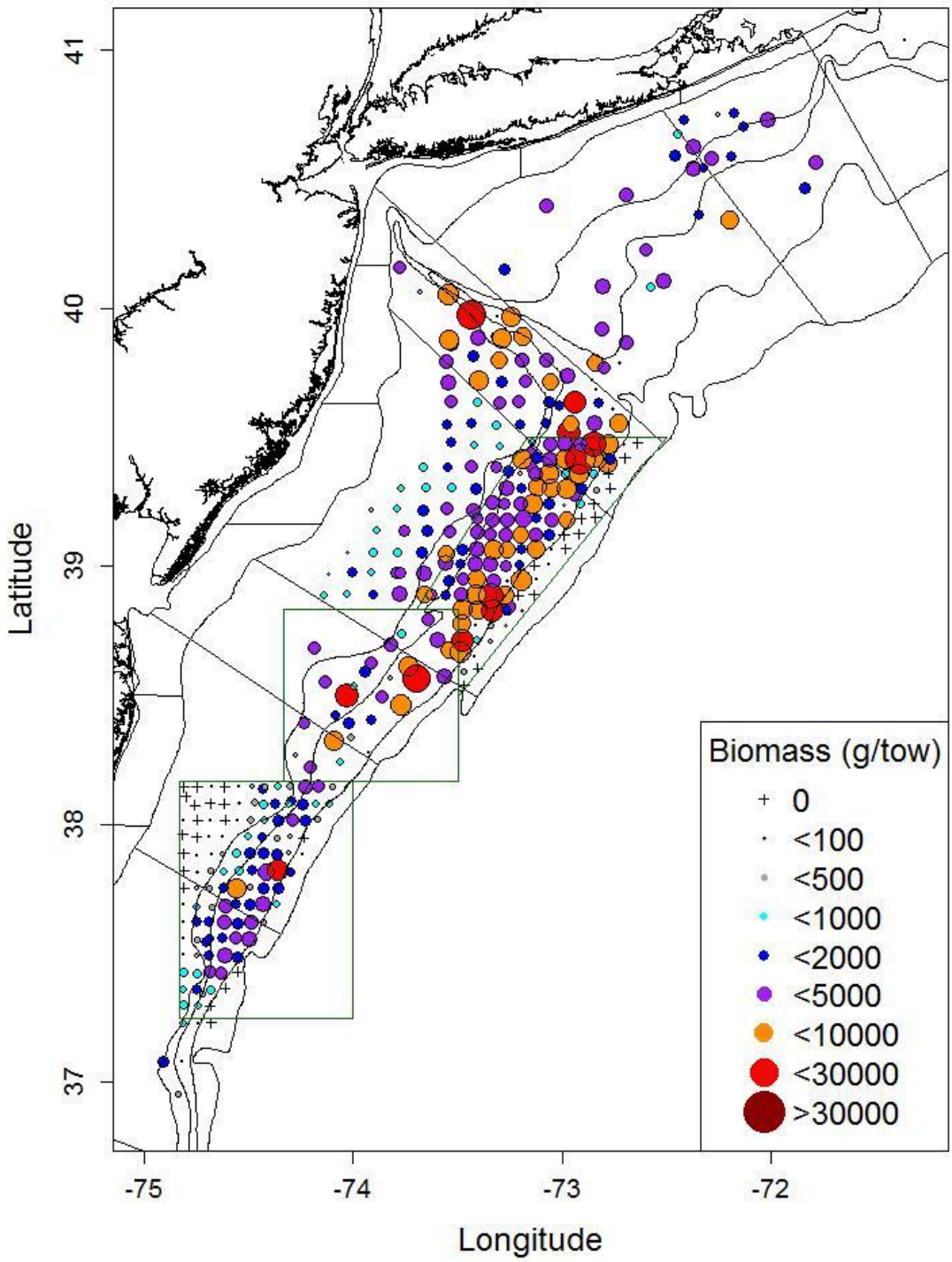


Figure 5 - Total scallop abundance (numbers per station) for the Mid-Atlantic from the 2012 SMAST video survey

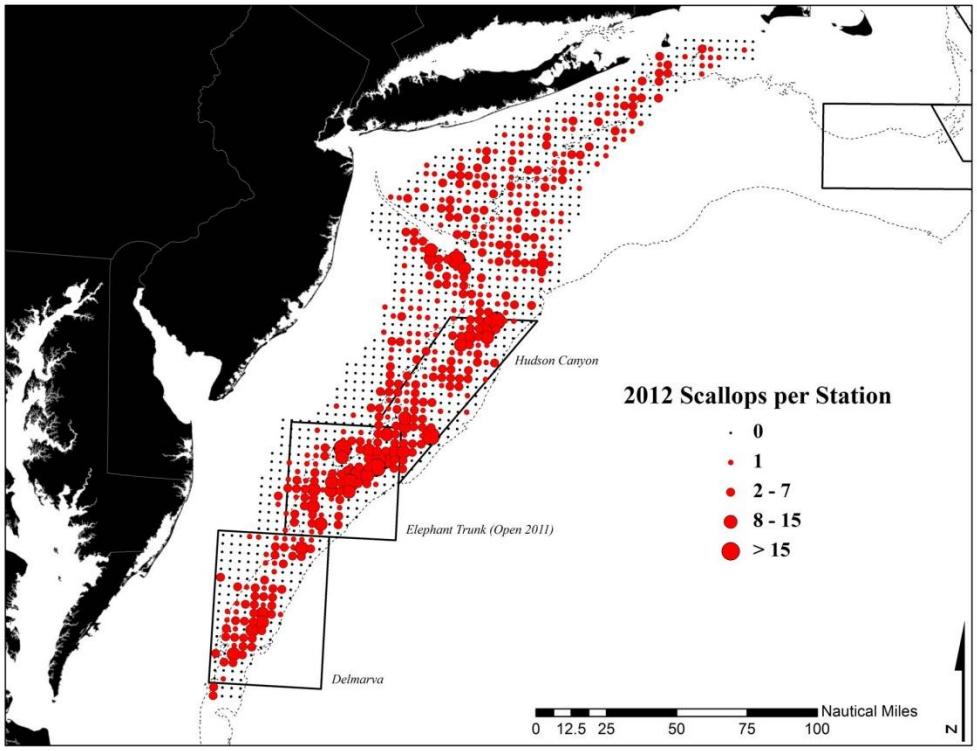


Figure 6 - Total scallop biomass in recruits/m2 for the Mid-Atlantic from the 2012 NEFSC optical survey (Seahorse)

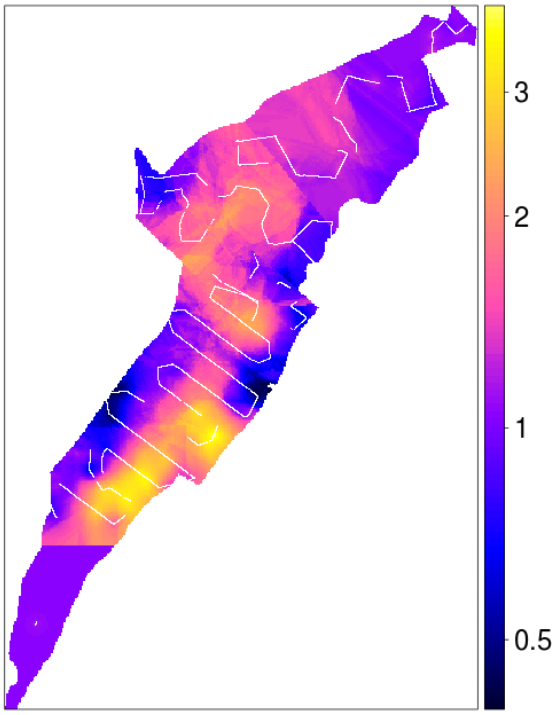
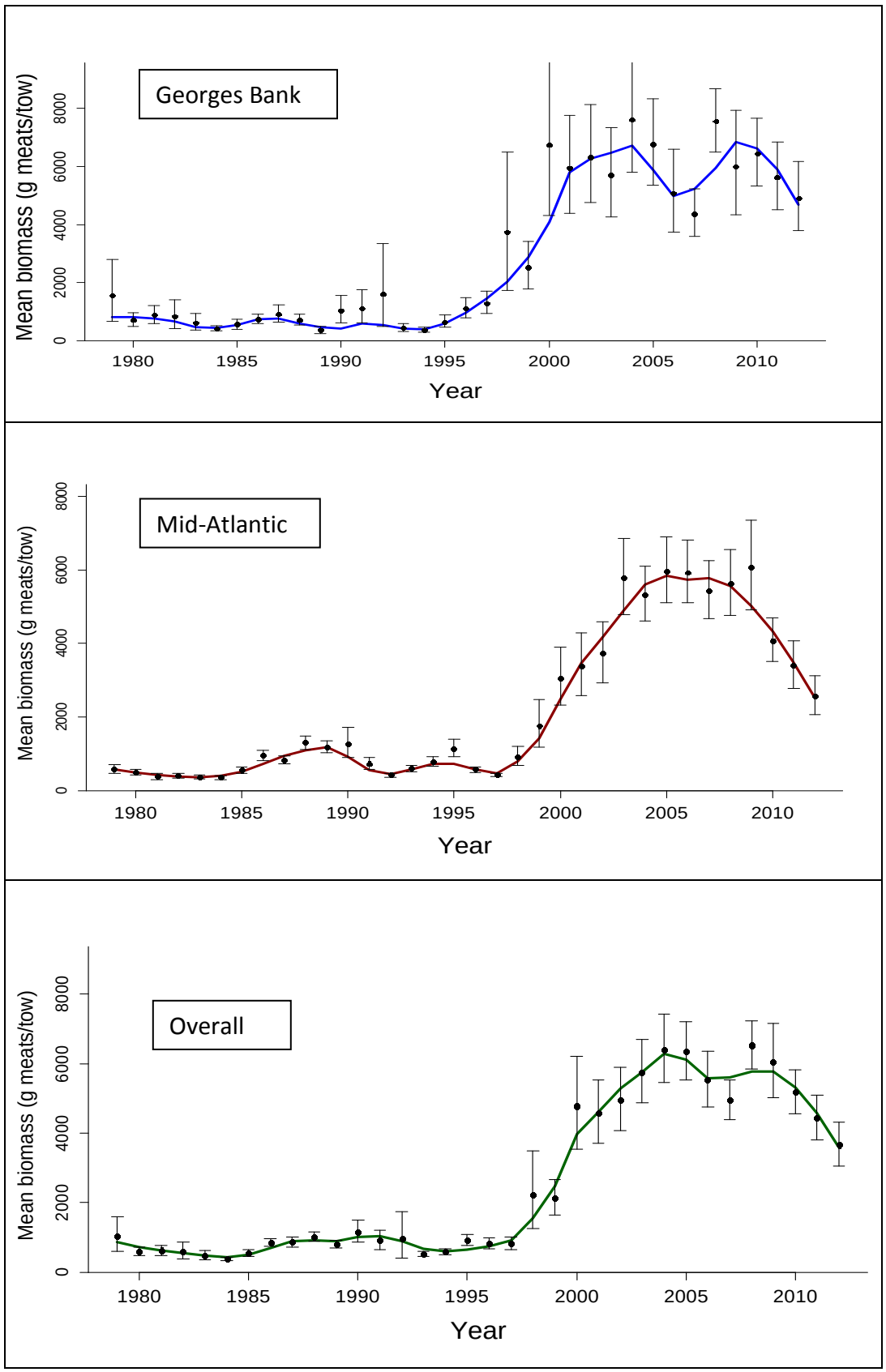


Figure 7 – NEFSC biomass survey indices



4.1.2 Recruitment

Recruitment (small scallops) is essential for the future of the fishery. Strong recruitment indicates the potential for increased catch in the future. Recruitment was strong on GB for several years (2008-2010) but has been declining with very little sign of recruitment in 2012 (Figure 8). The SMAST video survey did see more signs of recruitment on GB, especially north of the CA1 access area (Figure 10). Recruitment in the MA was unusually high during 1998-2008. MA recruitment then declined for several years, but there are strong signs of improved recruitment in 2012. According to all 2012 survey results, recruitment is very widespread in the MA and dense in all MA access areas, especially ETA (Figure 9, Figure 10, and Figure 11). MA recruitment may not be the highest in the time series (2001), but it may be the second highest.

Figure 8 – Recruitment on GB from 2012 NEFSC and VIMS dredge surveys combined

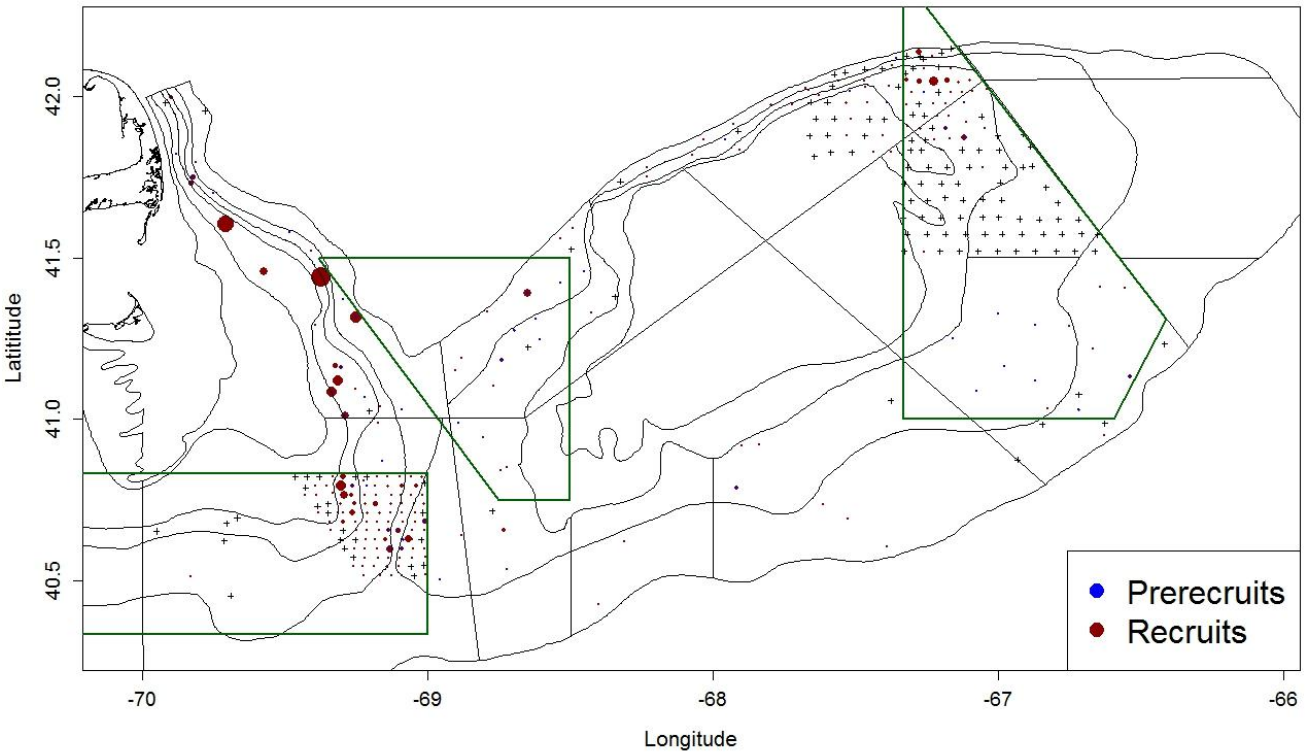


Figure 9 Recruitment in MA from 2012 NEFS and VIMS dredge surveys combined

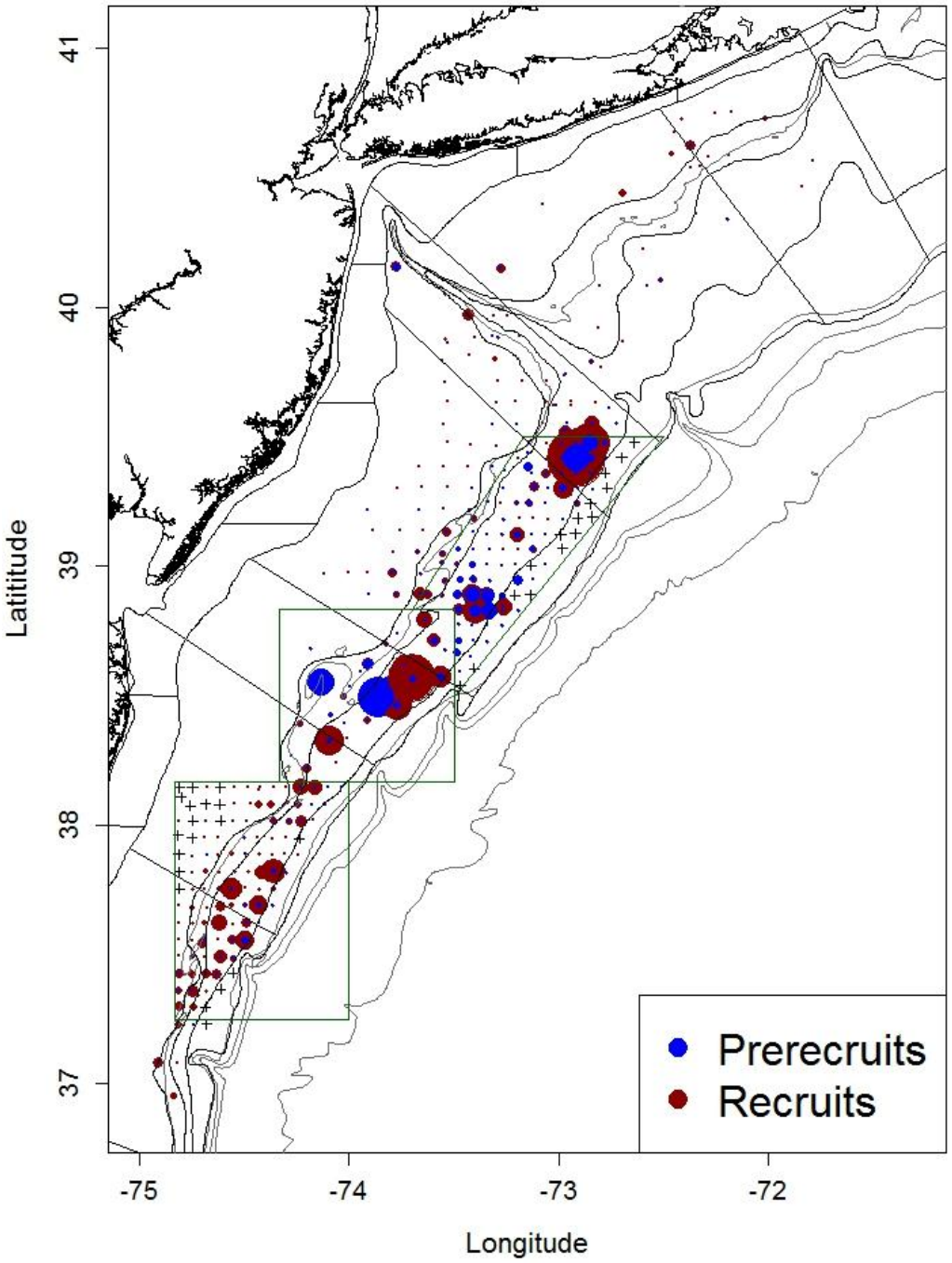


Figure 10 – Recruitment on GB and MA from 2012 SMAST video survey

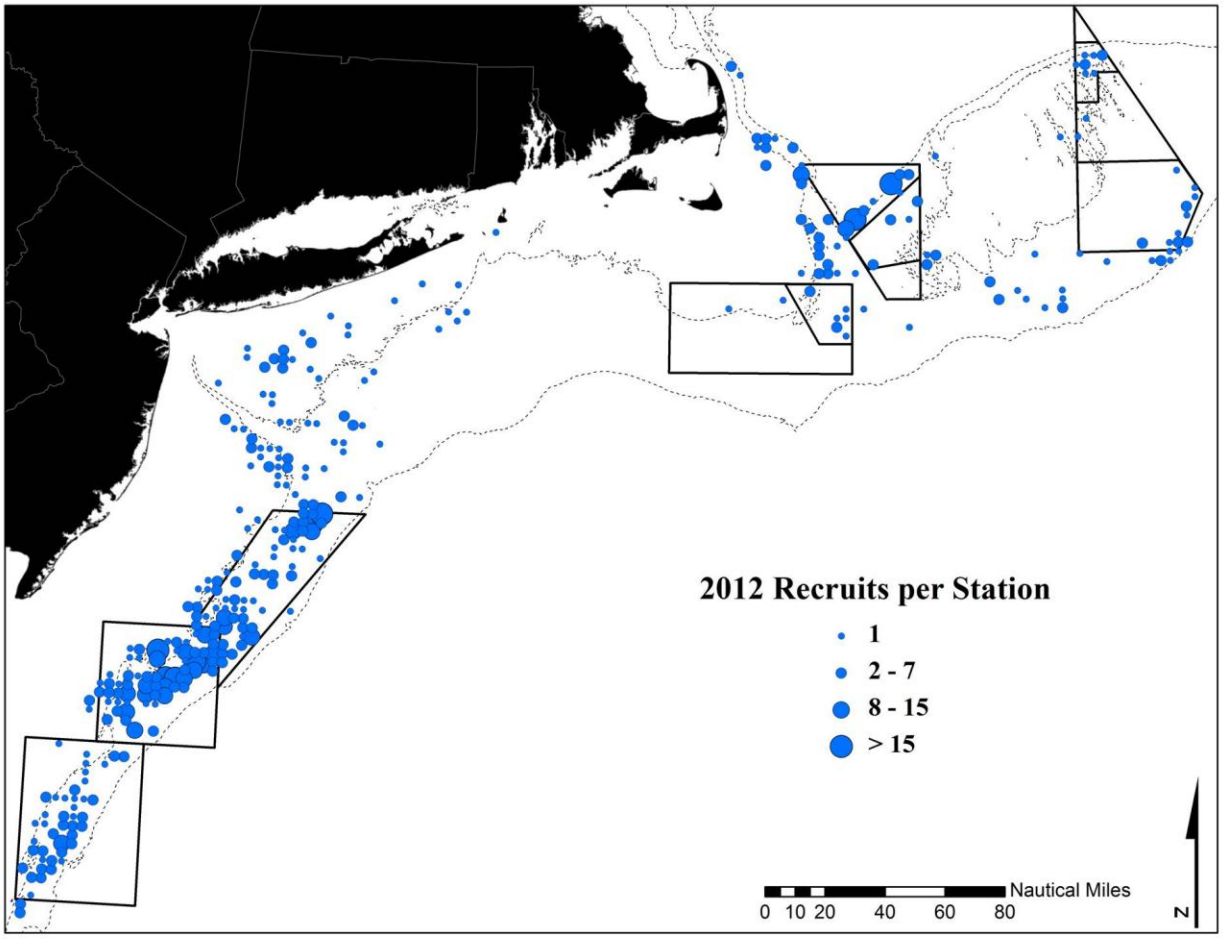
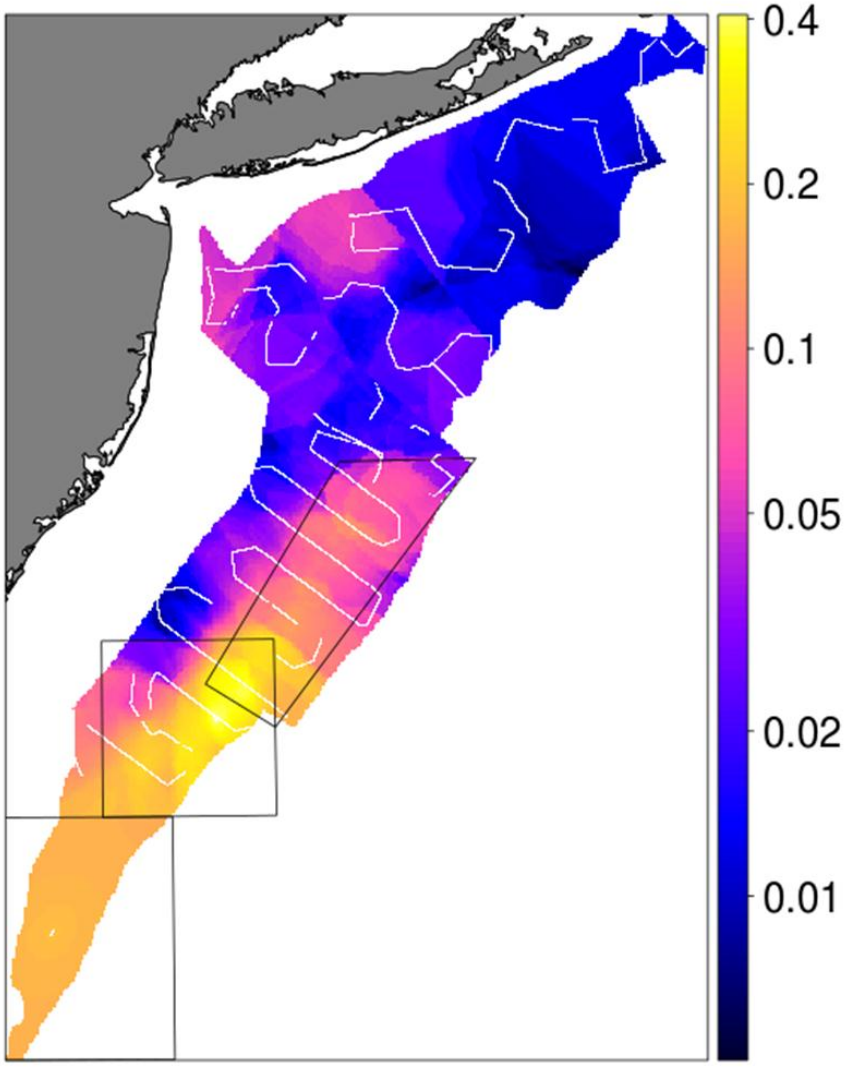


Figure 11 – Recruitment in MA from NEFSC optical survey (Seahorse)



4.1.3 Fishing mortality

Four types of mortality are accounted for in the assessment of the sea scallop resource: natural; discard; incidental; and fishing mortality (F). The updated stock assessment established new values for natural mortality (M) on both stocks. The new estimates are M = 0.12 for Georges Bank, and M = 0.15 for the Mid-Atlantic (NEFSC, 2010), compared to 0.10 used for the resource overall in previous assessments. Discard mortality occurs when scallops are discarded on directed scallop trips because they are too small to be economically profitable to shuck or due to high-grading during access area trips to previously-closed areas. Total discard mortality is estimated at 20 percent (NEFSC, 2007). Incidental mortality is non-landed mortality associated with scallop dredges that likely kill and injure some scallops that are contacted but not caught by crushing their shells. The recent assessment in 2010 used 0.20 on Georges Bank and 0.10 in the Mid-Atlantic (NEFSC, 2010), compared to earlier values of 0.15 on Georges Bank and 0.04 for Mid-Atlantic. The increase in assumed values for both natural and incidental mortality is expected to reduce the productivity potential of the stock, which is likely to cause the model to produce less (over) optimistic projections moving forward.

Finally, fishing mortality, the mortality associated with scallop landings on directed scallop trips, was calculated separately for Georges Bank and the Mid-Atlantic because of differences in growth rates. Fishing mortality peaked for both stocks in the early 1990s, but has decreased substantially since then as tighter regulations were put into place including area closures, and biomass levels recovered. In general, *F* has remained stable on Georges Bank since 1995, and the Mid-Atlantic has shown larger fluctuations and an overall higher *F* (Figure 12). Figure 13 shows F and biomass estimates for the combined stock overall.

The formal stock status update was prepared through FY2009 as part of SARC 50 (NEFSC, 2010), and the F_{max} reference point was changed to F_{msy}. F_{msy} for the whole stock was estimated from the Stochastic Yield Model (SYM) to be 0.38. SARC 50 estimated that overall fishing mortality in 2009 was 0.38, consistent with recent years. Since the fishing mortality in 2009 was equal to F_{msy}, overfishing did not occur (*F* must be above the threshold).

Figure 12 - Fishing mortality (red line) and biomass estimates (y^{-1}, gray bars) from the CASA model for scallops on Georges Bank (right) and in the Mid-Atlantic (left), through 2009

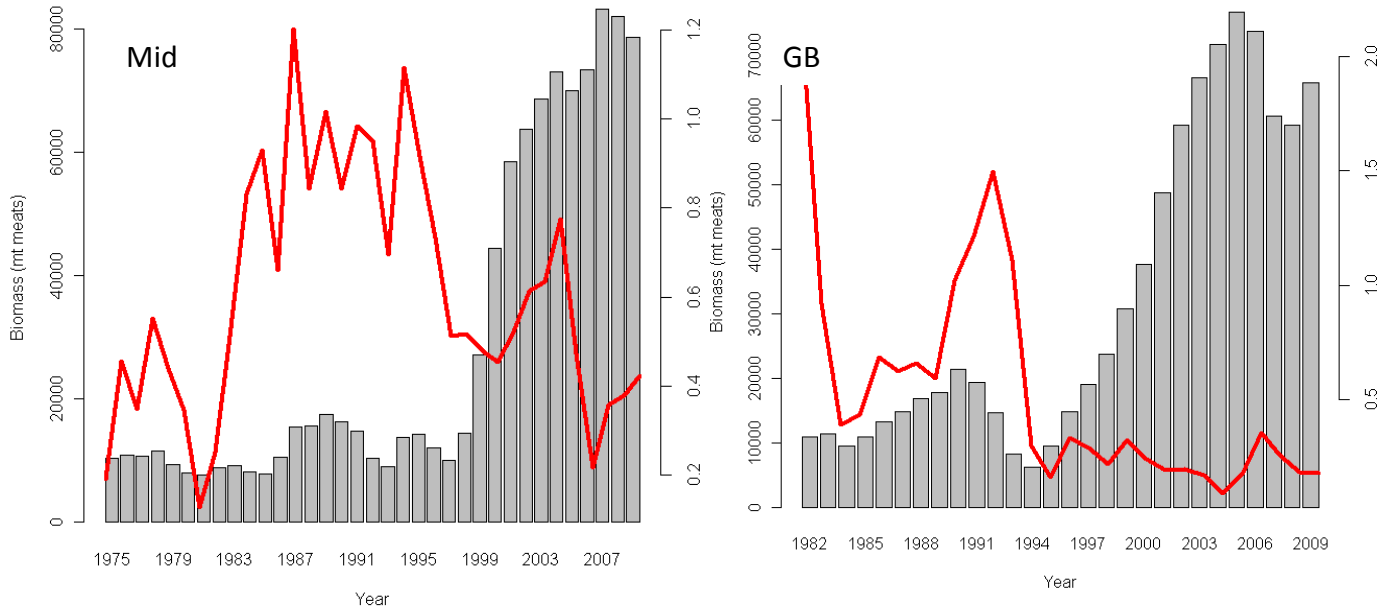
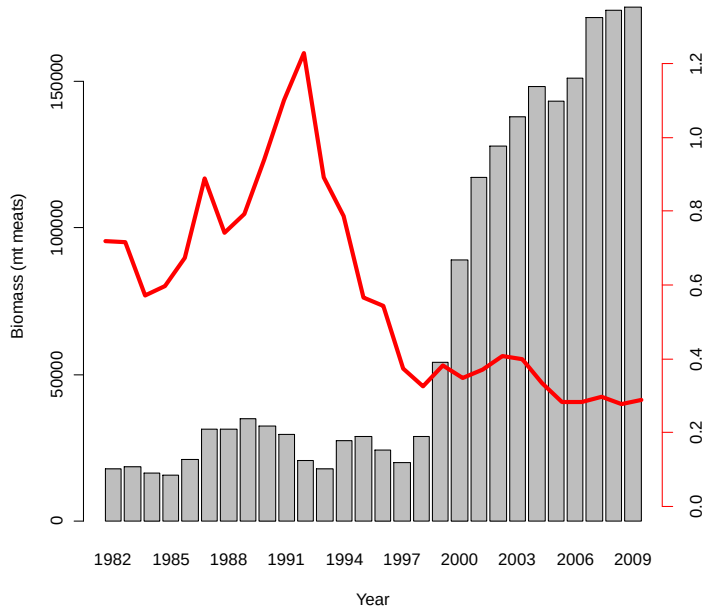


Figure 13 - Fishing mortality (red line) and biomass estimates (y^{-1}, gray bars) from the CASA model for sea scallop resource overall (Georges Bank and Mid-Atlantic combined) through 2009



The Scallop PDT met in July 2012 to review updated biomass and fishing mortality estimates developed for Framework 24. The results are not an official stock status update, but were completed for the purposes of setting fishery allocations for FY2013-FY2015 in Framework 24. A catch at size model (CASA model) is used by the PDT to estimate realized scallop biomass and fishing mortality. It was updated through 2012 using 2012 dredge (NEFSC and VIMS) and video (SMAST, NEFSC Seahorse, and Habcam) surveys. The 2012 fishing year is not over, so the model assumed that total 2012 scallop catch will be similar to 2011, but more of the total will be from the GB area (about 2,000 mt.) due to higher biomass and catch rates on GB compared to the Mid-Atlantic.

Based on the overfishing definition in the Scallop FMP, overfishing occurs when F exceeds Fmsy (0.38). The scallop stock is overfished when biomass is below ½ Bmsy. The last scallop stock assessment estimated Bmsy at 125,358, so ½ Bmsy = 62,679 mt. The updated 2012 CASA model suggests declining biomass and increasing fishing mortality in the Mid-Atlantic. Total biomass is estimated to be 119,000 mt and overall F is estimated at 0.34 (Figure 14 and Figure 15). The CASA modeled estimate of biomass is slightly higher than the biomass estimate from the 2012 surveys (107,000 mt). This is probably because the model pulls a range of recruitment randomly from the time series, but actual recruitment on GB is very low. The updated fishing mortality rate is above the target of 0.32 (ACT) but below the threshold of 0.38 (OFL). **Therefore, overfishing is not occurring and this resource is not overfished (**Table 1**)**. The high fishing mortality in the Mid-Atlantic is a concern, but there are signs of strong recruitment in a widespread area within the Mid-Atlantic.

The PDT also reviewed a CASA run for 2011 earlier this year (PDT meeting in May 2012). In 2011 total biomass was estimated to be 138,700 mt and overall F was 0.28 (0.53 in the MA and 0.14 on GB).

Figure 14 – CASA estaimte of biomass through 2012

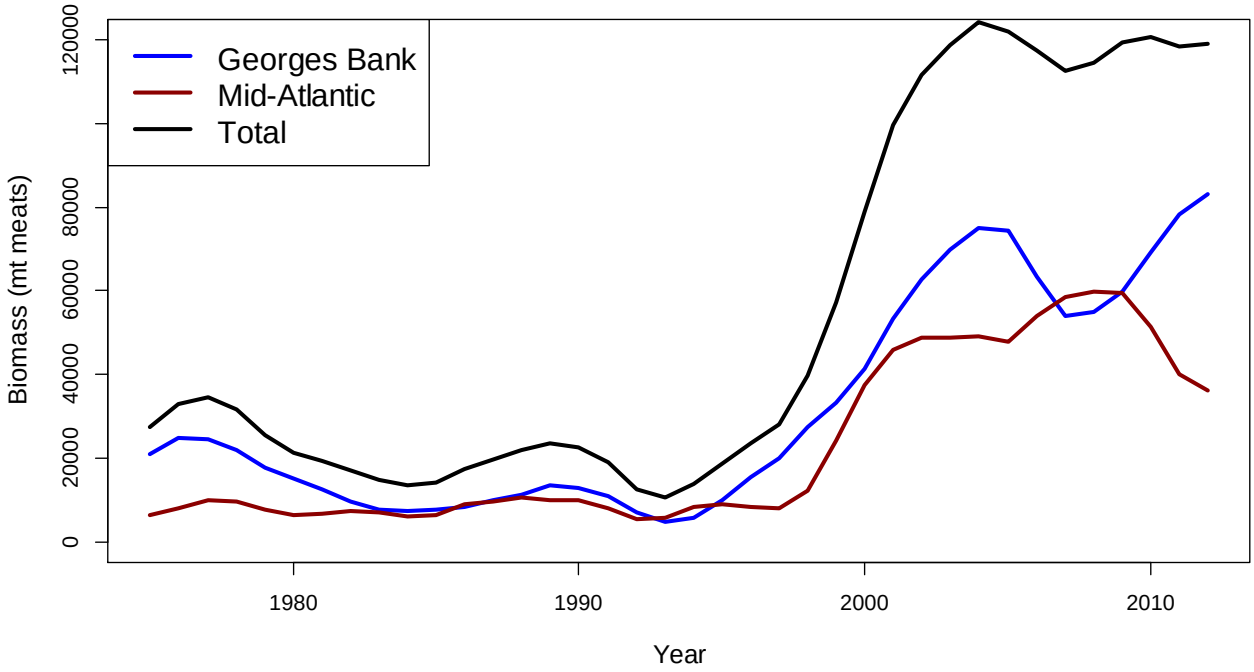


Figure 15 – CASA estimte of fihsing mortaltiy through 2012

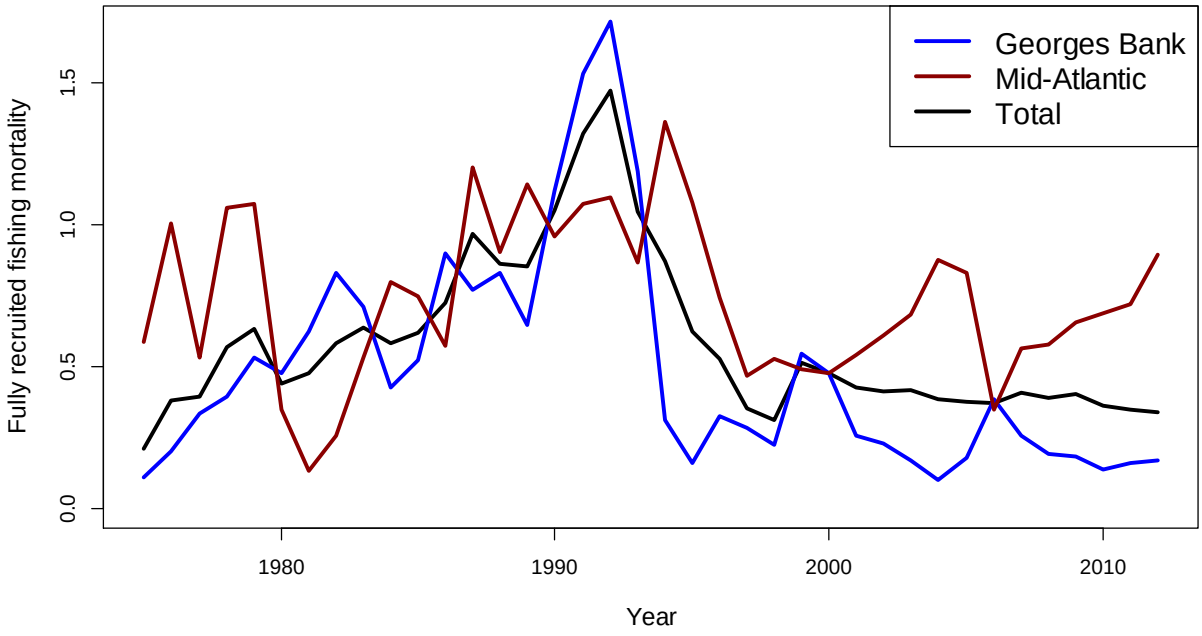


Table 1 – 2012 sea scallop stock status – overfishing is not occurring and the resource is not overfished

	MA 2012 Estimate	GB 2012 Estimate	Total 2012 Estimate	Stock Status Reference Points
Biomass (in 1000 mt)	36	83	119	½ Bmsy = 62,679
F	0.89	0.18	0.34	OFL = 0.38

4.1.4 Overall performance in terms of exceeding ACL

Annual Catch Limits (ACLs) were implemented under Amendment 15 to the Scallop FMP. Fishing year 2011 was the first year the fishery was managed under ACLs. For the first year under ACLs, the scallop fishery caught about 98 percent of the Acceptable Biological Catch (ABC) (Table 2). Fishing year 2012 is not over yet, but it does not appear that the ABC will be exceeded.

Table 2 – Summary of OFL, ABC and catch values under FW22 and proposed for FW24

	OFL	ABC	Discards	ABC available to fishery (after discards removed)	Landings	Catch (landings plus assumed discards)	percent of ABC caught
2011	32,387	31,279	4,009	27,270	26,513	30,522	97.6 percent
2012*	34,383	33,234	4,266	28,968	26,513	30,779	92.6 percent
2013 proposed	31,974	27,610	5,625	21,985			
2014 proposed	35,427	30,619	6021	24,598			
2015 proposed	39,117	33,565	6,317	27,248			

4.2 Non-Target Species

Non-target species (sometimes referred to as incidental catch or bycatch) include species caught by scallop gear that are both landed and not landed, including small scallops. The impacts of the scallop fishery on bycatch have been minimized to the extent practicable through management measures involving ring size, larger twine top, limits on effort, etc. In general, rotational area management is designed to improve and maintain high scallop yield, while minimizing impacts on groundfish mortality and other finfish catches. Access programs may even reduce fishing mortality for some finfish species, because the total amount of fishing time in access areas is low compared with fishing time in open areas due to differences in LPUE. Incidental catch is sometimes higher in access areas compared to open areas, but in general total scallop landings is also usually higher in access areas.

Potential non-target species caught incidentally in the scallop fishery were identified in Amendment 15 and Framework 23 based on discard information from the 2009 SBRM report

(NEFSC 2009) and various assessments such as GARM III and the Skates Data-poor Workshop. Based on a report presented by NEFSC (2009), the Scallop PDT identified the following species as having more than 5 percent of total estimated catch from discards in the scallop fishery: monkfish, skate (overall), and windowpane flounder. The status of these species is listed in Table 3.

Data from GARM III show that the scallop fishery caught more than 5 percent of the bycatch (compared to overall catch) for some multispecies stocks by region. Georges Bank and Southern New England yellowtail flounder were caught in amounts greater than 5 percent, but Cape Cod yellowtail only has occasional spikes over 5 percent. Although there is greater than 5 percent caught in both the Georges Bank /Gulf of Maine and Southern New England /Mid-Atlantic regions for windowpane flounder, the catch is generally greater in Southern New England / Mid-Atlantic. The Skate Data-poor Working Group identified the greatest bycatch for the scallop fishery as little and winter skates. See Table 3 for the current status of these species (Source: http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm).

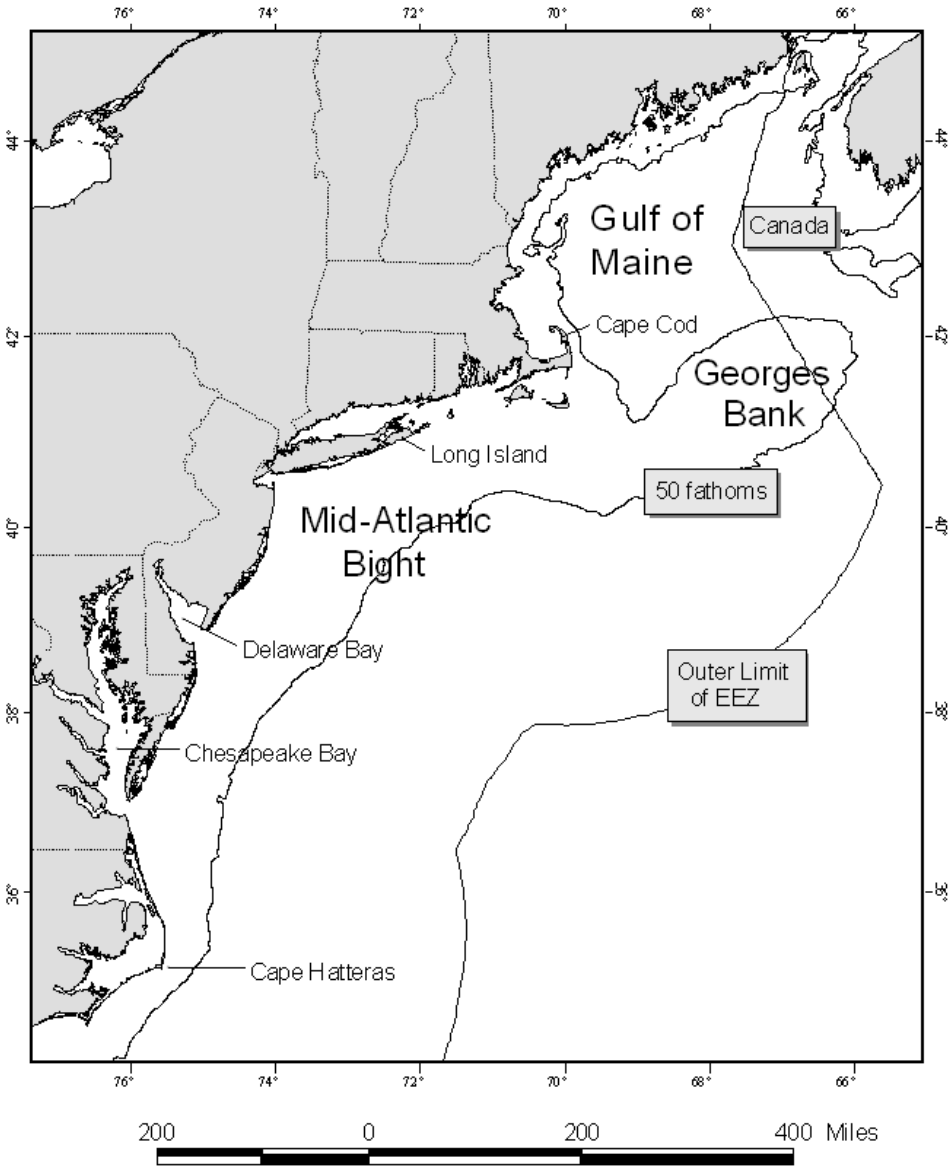
Table 3. Status of non-target species known to be caught in scallop fishing gear (GB – Georges Bank; GOM – Gulf of Maine; MA – Mid-Atlantic; SNE-Southern New England).

Species	***Stock***	***Overfished?***	***Overfishing?***
Summer flounder (fluke)	Mid-Atlantic Coast	No	No
Monkfish	GOM/Northern GB	No	No
Monkfish	Southern GB/MA	No	No
Northeast Skate Complex	Barndoor skate	No	No
Northeast Skate Complex	Clearnose skate	No	No
Northeast Skate Complex	Little skate	No	No
Northeast Skate Complex	Rosette skate	No	No
Northeast Skate Complex	Smooth skate	No	No
Northeast Skate Complex	Thorny skate	Yes	No
Multispecies	Windowpane - GOM/GB	Yes	Yes
Multispecies	Windowpane - SNE/MA	No	No
Multispecies	Winter flounder - GB	No	No
Multispecies	Winter flounder - GOM	Unknown	No
Multispecies	Winter flounder - SNE/MA	Yes	No
Multispecies	Yellowtail flounder - CC/GOM	Yes	Yes
Multispecies	Yellowtail flounder - GB	Yes	No
Multispecies	Yellowtail flounder - SNE/MA	No	No
Atlantic Surfclam	Mid-Atlantic Coast	No	No
Ocean Quahog	Atlantic Coast	No	No

4.3 Physical Environment and Essential Fish Habitat (EFH)

The Northeast U.S. Shelf Ecosystem includes 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 to a depth of 2,000 m (Figure 14**,** Sherman et al. 1996). Four distinct sub-regions are identified: the Gulf of Maine, Georges Bank, the Mid-Atlantic Bight, and the continental slope. The physical oceanography and biota of these regions were described in the Scallop Amendment 11. Much of this information was extracted from Stevenson et al. (2004), and the reader is referred to this document and sources referenced therein for additional information. Primarily relevant to the scallop fishery are Georges Bank and the Mid-Atlantic Bight, although some fishing also occurs in the Gulf of Maine.

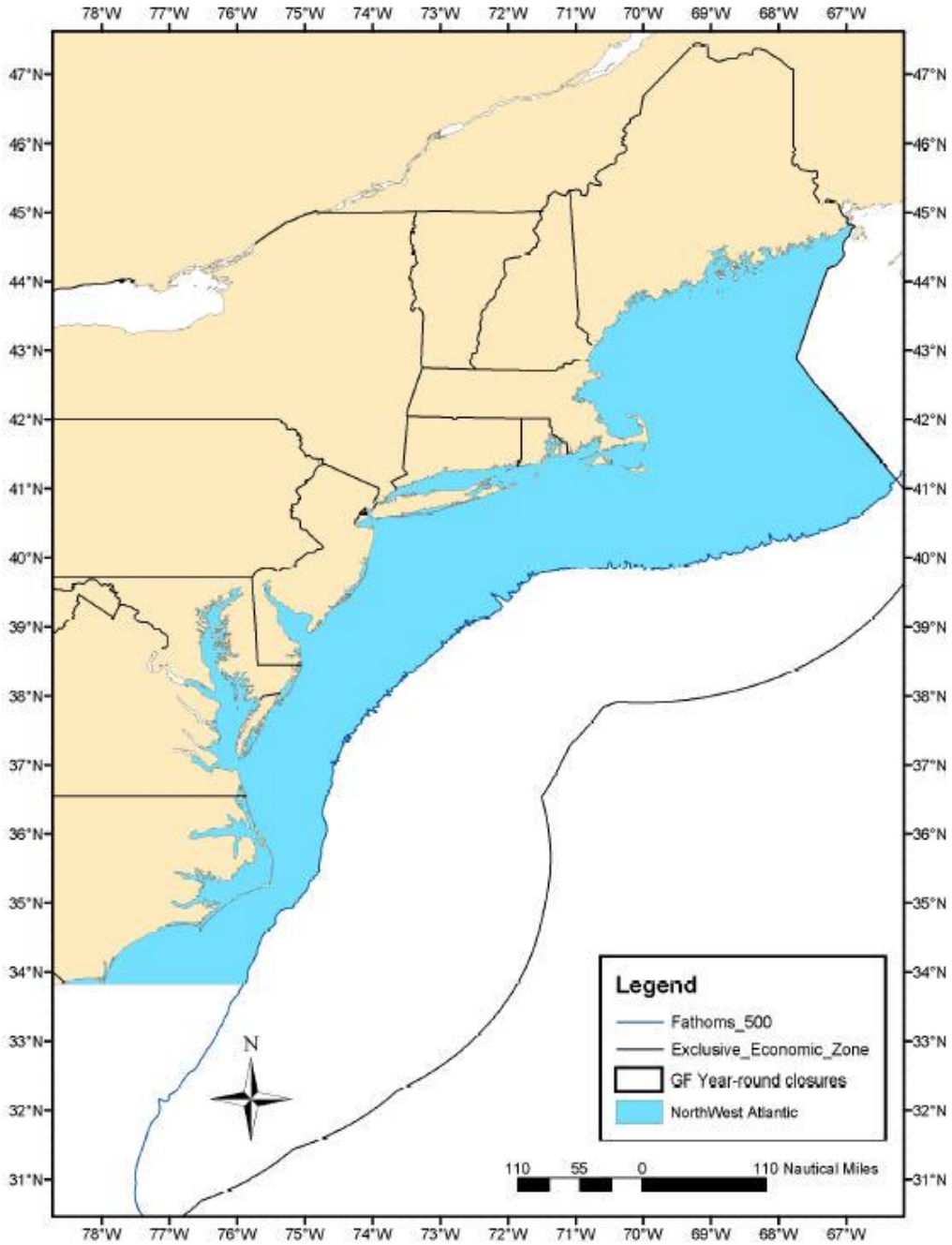
Figure 16 – Northeast U.S Shelf Ecosystem



The Atlantic sea scallop fishery is prosecuted in concentrated areas in and around Georges Bank and off the Mid-Atlantic coast, in waters extending from the near-coast out to the edge of the continental shelf. Atlantic sea scallops occur primarily in depths less than 110 meters on sand, gravel, shells, and cobble substrates (Hart et al. 2004). This area, which could potentially be affected by the preferred alternative, has been identified as EFH for various species. These species include American plaice, Atlantic cod, Atlantic halibut, Atlantic herring, Atlantic sea scallop, Atlantic surfclam, Atlantic wolfish, barndoor skate, black sea bass, clearnose skate, haddock, little skate, longfin squid, monkfish, ocean pout, ocean quahog, pollock, red hake, redfish, rosette skate, scup, silver hake, smooth skate, summer flounder, thorny skate, tilefish, white hake, windowpane flounder, winter flounder, witch flounder and yellowtail flounder. For more information on the geographic area, depth, and EFH description for each applicable life stage of these species, the reader is referred to Table 45 of the scallop Amendment 15 EIS.

Most of the current EFH designations were developed in NEFMC Essential Fish Habitat Omnibus Amendment 1 (1998). Most recently, Amendment 16 to the Northeast Multispecies FMP adds Atlantic wolfish to the management unit and includes an EFH designation for the species. For additional information, the reader is referred to the Omnibus Amendment and the other FMP documents listed in Table 28 of the scallop Amendment 15 EIS. In addition, summaries of EFH descriptions and maps for Northeast region species can be accessed at http://www.nero.noaa.gov/hcd/webintro.html. Designations for all species are being reviewed and updated in NEFMC Essential Fish Habitat Omnibus Amendment 2.

Figure 17 – Geographic extent of the Atlantic sea scallop fishery



4.4 Protected Resources

The following protected species are found in the environment in which the sea scallop fishery is prosecuted. A number of them are listed under the Endangered Species Act of 1973 (ESA) as endangered or threatened, while others are identified as protected under the Marine Mammal Protection Act of 1972 (MMPA). An update and summary is provided here to facilitate consideration of the species most likely to interact with the scallop fishery relative to the preferred alternative.

A more complete description of protected resources inhabiting the action area is provided in Amendment 15 to the Sea Scallop FMP (See Amendment 15 to the Atlantic Sea Scallop Fishery Management Plan, Section 4.3, Protected Species, for a complete list. An electronic version of the document is available at http://www.nefmc.org/scallops/index.html.).

Cetaceans	***Status***
North Atlantic right whale (*Eubalaena glacialis*)	Endangered
Humpback whale (*Megaptera novaeangliae*)	Endangered
Fin whale (*Balaenoptera physalus*)	Endangered
Blue whale (*Balaenoptera musculus*)	Endangered
Sei whale (*Balaenoptera borealis*)	Endangered
Sperm whale (*Physeter macrocephalus*)	Endangered
Minke whale (*Balaenoptera acutorostrata*)	Protected
Beaked whale (*Ziphius* and *Mesoplodon spp.*)	Protected
Pilot whale (*Globicephala* spp.)	Protected
Spotted and striped dolphin (*Stenella spp.*)	Protected
Risso's dolphin (*Grampus griseus*)	Protected
White-sided dolphin (*Lagenorhynchus acutus*)	Protected
Common dolphin (*Delphinus delphis*)	Protected
Bottlenose dolphin: coastal stocks (*Tursiops truncatus*)	Protected
Harbor porpoise (*Phocoena phocoena*)	Protected
Pinnipeds	
Harbor seal (*Phoca vitulina*)	Protected
Gray seal (*Halichoerus grypus*)	Protected
Harp seal (*Phoca groenlandica*)	Protected
Hooded seal (*Crystophora cristata*)	Protected
Sea Turtles	
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered
Green sea turtle (*Chelonia mydas*)	Endangered[1]
Loggerhead sea turtle – Northwest Atlantic (NWA) Distinct Population Segment (DPS_(*Caretta caretta*)	Threatened[2]
Fish	
Shortnose sturgeon (*Acipenser brevirostrum*)	Endangered
Atlantic salmon (*Salmo salar*)	Endangered
Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)	
Gulf of Maine DPS	Threatened
New York Bight DPS, Chesapeake Bay DPS, Carolina DPS & South Atlantic DPS	Endangered

[1] *Green sea turtles in U.S. waters are listed as threatened except for the Florida breeding population, which is listed as endangered. Due to the inability to distinguish between these populations away from the nesting beach, green sea turtles are considered endangered wherever they occur in U.S. waters.*

[2] *NWA DPS = Northwest Atlantic distinct population segment which encompasses loggerheads found north of the equator, south of 60° N latitude, and west of 40° W longitude.*

Threatened and Endangered Species Not Likely to be Affected by the Alternatives under Consideration

According to the most recent Biological Opinion (Opinion) issued by NMFS on July 12, 2012, the agency has determined that species not likely to be affected by the Atlantic Sea Scallop FMP or by the operation of the fishery include the shortnose sturgeon, the Gulf of Maine DPS of Atlantic salmon, hawksbill sea turtles, and the following whales: North Atlantic right, humpback, fin, sei, blue, and sperm whales, all of which are listed as endangered species under the ESA. NMFS also concluded that the continued authorization of the sea scallop fishery would not have any adverse impacts on cetacean prey, and that it would not affect the oceanographic conditions that are conducive for calving and nursing of large cetaceans. The reader is referred to Section 4.3.1.1 of the scallop Amendment 15 EIS for a complete description regarding species not likely to be affected by the alternatives under consideration. These species descriptions include the cetaceans and pinnipeds listed above. In addition, it is noted that according to the 2012 List of Fisheries, there have been no documented marine mammal species interactions with either the sea scallop dredge fishery or the Atlantic shellfish bottom trawl fishery; therefore, the scallop fishery is considered a Category III fishery under the MMPA (i.e., a remote likelihood or no known incidental mortality and serious injuries of marine mammals).

Threatened and Endangered Species Potentially Affected Adversely by the Alternatives under Consideration

Section 7 of the ESA of 1973 requires each Federal agency to insure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or critical habitat of such species. Since the Scallop FMP is approved and implemented by NMFS Northeast Region (NERO), NERO requested intra-service section 7 consultation on February 28, 2012.

NMFS requested reinitiating consultation because of the recent listing of five DPS of Atlantic sturgeon under ESA as well as new information on sea turtle interactions with the sea scallop fishery. New information includes: 1) new sources of information on the effects of the scallop fishery on sea turtles based on new estimates of average annual sea turtle bycatch (Murray (2011) and Warden (2011)); 2) new information about levels of serious injury/mortality to sea turtles in the fishery (Upite 2011); 3) updated assessments of the likelihood of serious injury/mortality from new gear requirements (Milliken et al (2007), Smolowitz et al (2010) and Scallop PDT analyses in Framework 23); and 4) new management measures required in FW22 and FW23 that reduce impacts on sea turtles. Finally, the recent opinion explained the change in ESA listing of loggerhead from a single species to a separate DPS.

The 2012 consultation concludes that the continued operation of the scallop fishery may adversely affect, but is not likely to jeopardize the continued existence of loggerhead, leatherback, Kepm's ridley, or green sea turtles, or any other ESA-listed species under NMFS jurisdiction. NMFS anticipates the incidental take of ESA-listed species as follows:

- for the NWA DPS of loggerhead sea turtles, we anticipate (a) the annual average take of up to 161 individuals in dredge gear, of which up to 129 per year may be lethal in 20l2 and up to 46 per year may be lethal in2013 and beyond, and (b) the annual average take of up to 140 individuals in trawl gear, of which up to 66 per year may be lethal;
- for leatherback sea turtles, we anticipate the annual lethal take of up to two individuals in dredge and trawl gear combined;

- for Kemp's ridley sea turtles, we anticipate the annual take of up to three individuals in dredge and trawl gear combined (for 2012, up to three takes are anticipated to be lethal, while for 2013 and beyond, up to two takes are anticipated to be lethal);
- for green sea turtles, we anticipate the annual lethal take of up to two individuals in dredge and trawl gear combined;
- for Atlantic sturgeon, we anticipate the annual take of up to one individual from either the GOM, NYB, CB, Carolina, or SA DPS in trawl gear; once every 20 years this take is expected to result in mortality.

NMFS is still required to minimize these takes so several Reasonable and Prudent (RPMs) have been identified. Terms and conditions are included to specify how the RPMs should be implemented. Both RPMs and terms and conditions are non-discretionary and must be implemented by NMFS.

Reasonable and Prudent Measures

1. NMFS must annually monitor and assess the distribution of fishing effort in the Mid-Atlantic scallop dredge fishery during the period of known sea turtle overlap (May through November) to ensure that there are no increases in the likelihood of interactions with sea turtles that may result from increased effort.
2. NMFS must continue to investigate and implement, within a reasonable time frame following sound research, modifications to gears used in these fisheries to reduce incidental takes of sea turtles and Atlantic sturgeon and the severity of the interactions that occur.
3. NMFS must continue to review available data to determine whether there are areas or conditions within the action area where sea turtle and Atlantic sturgeon interactions with fishing gear used in the scallop fishery are more likely to occur.
4. NMFS must continue to quantify the extent to which chain mats and TDDs reduce the number of serious injuries/deaths of sea turtles that interact with scallop dredge gear.
5. NMFS must continue to research the extent to which sea turtle interactions with scallop dredge gear occur on the bottom versus within the water column.
6. NMFS must ensure that any sea turtles incidentally taken in scallop dredge or trawl gear and any Atlantic sturgeon incidentally taken in scallop trawl gear are handled in a way as to minimize stress to the animal and increase its survival rate.
7. NMFS must seek to ensure that monitoring and reporting of any sea turtles and Atlantic sturgeon encountered in scallop fishing gear: (1) detects any adverse effects such as injury or mortality; (2) detects whether the anticipated level of take has occurred or been exceeded; and 3) collects data from individual encounters.
8. NMFS must continue to engage in outreach efforts with commercial fishermen regarding the proper installation and use of chain mats on their scallop dredges.

Terms and Conditions

1. To comply with RPM #1 above, NMFS must continue to monitor dredge hours in the Mid-Atlantic scallop dredge fishery during the months of May through November when sea turtle interactions are most likely to occur. NMFS must collect and review effort data as stipulated under the monitoring plan below (i.e. two-year running averages) to determine if dredge effort in the Mid-Atlantic is on the rise, and, if needed, re-evaluate the monitoring plan methodology annually in the event more refined methods become available through discussions within the agency or with the NEFMC or scallop industry. The calculation and comparison of two-year running averages should also be performed on an annual basis, with 2007-2008 serving as the baseline effort levels post-chain mats.

2. To comply with RPM #2 above, NMFS must continue to investigate modifications to scallop dredge and trawl gear to further minimize adverse effects on sea turtles due to collisions with and/or entrainment in the gear. Through continued experimental gear trials from or by any source (e.g., through the Scallop RSA program), NMFS and its partners must review all data collected from those trials, determine the next appropriate course of action (e.g., expanded gear testing, further gear modification, rulemaking to require the gear modification), and initiate management action based on the determination. These trials may include further refinements of and improvements to the TDD as well as continued testing and evaluation of modified trawls (e.g. trawls with TEDs, topless trawls).
3. To comply with RPM #3 above, NMFS must continue to review all available data on the incidental take of sea turtles in the scallop fishery (observable plus unobservable, quantifiable) and other suitable information (e.g., data on observed sea turtle interactions with other trawl fisheries, sea turtle distribution information, or fishery surveys in the area where the scallop fishery operates) to assess whether correlations with environmental conditions (e.g., depth, SST, salinity) or other drivers of incidental take (e.g., gear configuration) can be made for some or all portions of the action area. If additional analysis is deemed appropriate, within a reasonable amount of time after completing the review, NMFS must take action, if appropriate, to reduce sea turtle interactions and/or their impacts.
4. To comply with RPM #4 above, NMFS must continue to use available and appropriate technologies to quantify the extent to which chain mats and TDDs reduce the number of serious injuries/deaths of sea turtles that interact with scallop dredge gear. This information is necessary to better determine the extent to which these two gear modifications reduce injuries leading to death for sea turtles and may result in further modifications of the fishery to ensure sea turtle interactions, including those causing serious injuries and mortalities are minimized.
5. To comply with RPM#5 above, NMFS must continue to use available and appropriate technologies to better determine where (on the bottom or in the water column) and how sea turtle interactions with scallop dredge gear are occurring. Such information is necessary to assess whether further gear modifications in the scallop dredge fishery will actually provide a benefit to sea turtles by either reducing the number of interactions or the number of interactions causing serious injury and mortality.
6. To comply with RPM #6 above, NMFS must ensure that all Federal permit holders in the scallop fishery possess handling and resuscitation guidelines for sea turtles and Atlantic sturgeon. For sea turtles, all Federally-permitted fishing vessels should have the handling and resuscitation requirements listed in 50 CFR 223.206(d)(1) and as reproduced in Appendix C. For Atlantic sturgeon, NMFS must instruct fishermen and observers to resuscitate any individuals that may appear to be dead by providing a running source of water over the gills.
7. To also comply with RPM #6 above, NMFS must continue to develop and distribute training materials for commercial fishermen regarding the use of recommended sea turtle and Atlantic sturgeon release equipment and protocols. Such training materials would be able to be brought onboard fishing vessels and accessed upon incidental capture (e.g., CD that could be used in on-board computer, placard, etc.).
8. To comply with RPM #7 above, NMFS must continue to place observers onboard scallop dredge and trawl vessels to document and estimate incidental bycatch of sea turtles and Atlantic sturgeon, Monthly summaries and an annual report of observed sea turtle takes in gears primarily landing scallops must be provided to the NERO Protected Resources Division. A similar data reporting plan must be developed for Atlantic sturgeon.

9. To also comply with RPM #7 above, NMFS must continue to instruct observers to tag and take tissue samples from incidentally captured sea turtles as stipulated under their ESA section 10 permit. The current NEFOP protocols are to tag any sea turtles caught that are larger than26 centimeters in notch-to-tip carapace length and to collect tissue samples for genetic analysis from any sea turtles caught that are larger than centimeters in notch-to-tip carapace length. NMFS must continue to instruct observers to send any genetic samples of sea turtles taken to the NEFSC. NMFS must further instruct observers to take fin clips from all incidentally captured Atlantic sturgeon and send them to NMFS for genetic analysis. Fin clips must be taken according to the procedures outlined in Appendix D and prior to preservation of other fish parts or whole bodies.
10. To also comply with RPM #7 above, NMFS must continue to reconvene the Sea Turtle Injury Working Group in order to better assess and evaluate injuries sustained by sea turtles in scallop dredge and trawl gear, and their potential impact on sea turtle populations. New data should be reviewed on an annual basis.
11. To comply with RPM #8 above, NMFS must distribute information to scallop permit holders specifying the chain mat and TDD regulations and be prepared to provide them assistance to resolve issues that may cause chain mats or any components of the TDD to be rigged improperly or malfunction.

4.5 Human Communities (Economic and Social Trends)

4.5.1 Introduction

This section of the document summarizes the economic and social trends of the scallop fishery, including trends in landings, revenues, prices and foreign trade for the sea scallop fishery since 1994. In addition, it provides background information about the scallop fishery in various ports and coastal communities in the Northeast.

4.5.2 Trends in Landings, prices and revenues

In the fishing years 2003-2011, the landings from the northeast sea scallop fishery stayed above 50 million pounds, surpassing the levels observed historically (Figure 18). The recovery of the scallop resource and consequent increase in landings and revenues was striking given that average scallop landings per year were below 16 million pounds during the 1994-1998 fishing years, less than one-third of the present level of landings. The increase in the abundance of scallops coupled with higher scallop prices increased the profitability of fishing for scallops by the general category vessels. As a result, general category landings increased from less than 0.4 million pounds during the 1994-1998 fishing years to more than 4 million pounds during the fishing years 2005-2009, peaking at 7 million pounds in 2005 or 13.5 percent of the total scallop landings (Figure 18). The landings by the general category vessels declined after 2009 as a result of the Amendment 11 implementation that restricts TAC for the limited access general category fishery to 5.5 percent of the total ACL. However, the landings by limited access general category IFQ fishery increased in 2011 from its levels in 2010 due to a higher projected catch and a higher ACT for all permit categories.

Figure 19 shows that total fleet revenues more than quadrupled in FY 2011 ($582 million) from its level in 1994 ($123 million, in inflation adjusted 2011 dollars). Scallop ex-vessel prices increased after 2001 as the composition of landings changed to larger scallops that in general command a higher price than smaller scallops. However, the rise in prices was not the only factor that led to the increase in revenue in the recent years compared to 1994-1998. In fact, inflation adjusted ex-vessel prices in 2008-2009 were lower than prices in 1994 (Figure 20). The

increase in total fleet revenue was mainly due to the increase in scallop landings and the increase in the number of active limited access vessels during the same period. The ex-vessel prices increased significantly to about $10 per pound of scallops in 2011 fishing year, however, as the decline in dollar attracted more imports of large scallops from the European countries resulting in record revenues from scallops reaching to $582 million for the first time in scallop fishing industry history (Figure 19 and Figure 20).

Figure 18. Scallop landings by permit category and fishing year (in lb., dealer data)

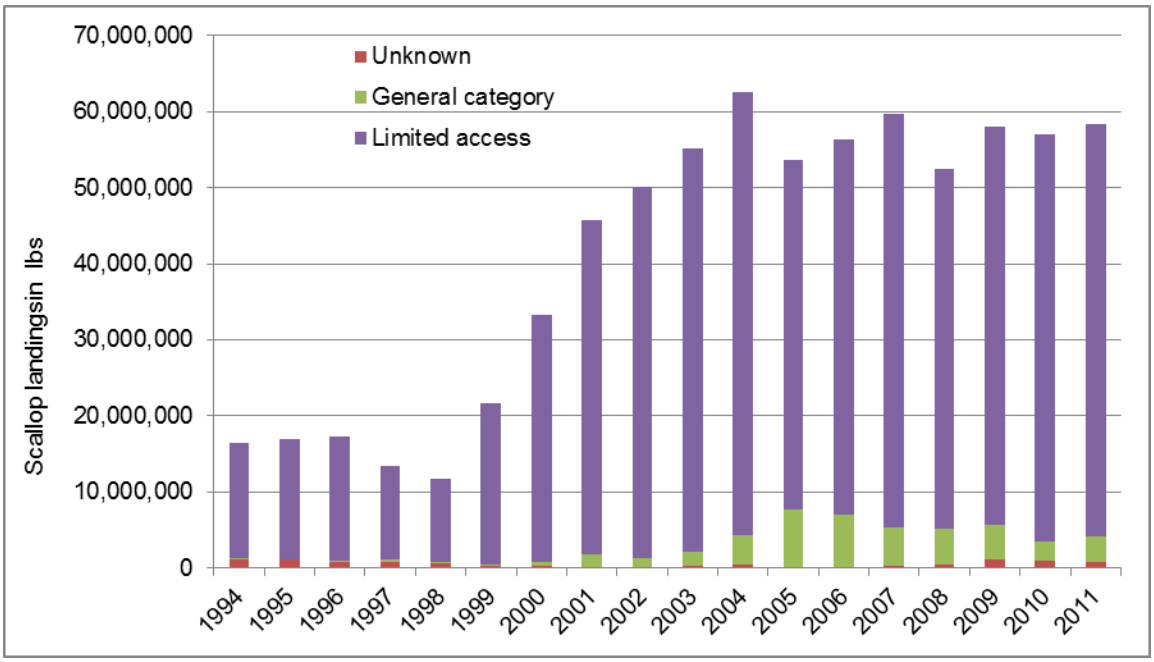


Figure 19. Scallop revenue by fishing year in 2011 inflation adjusted prices (dealer data)

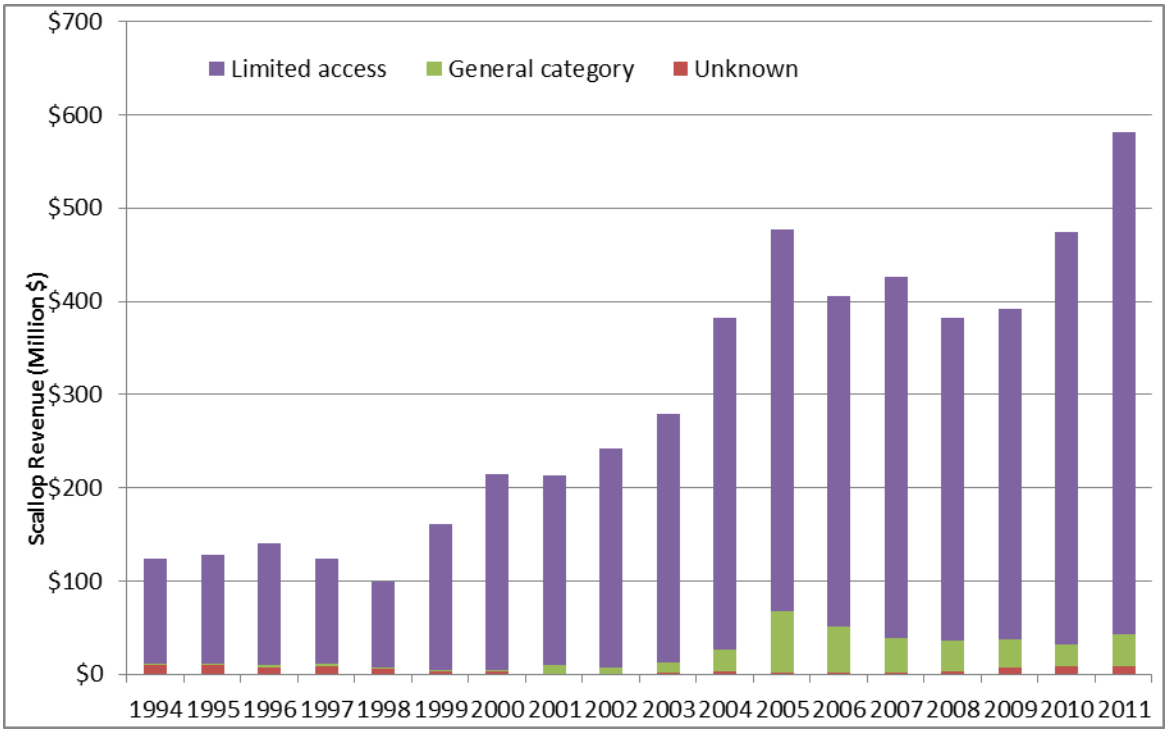
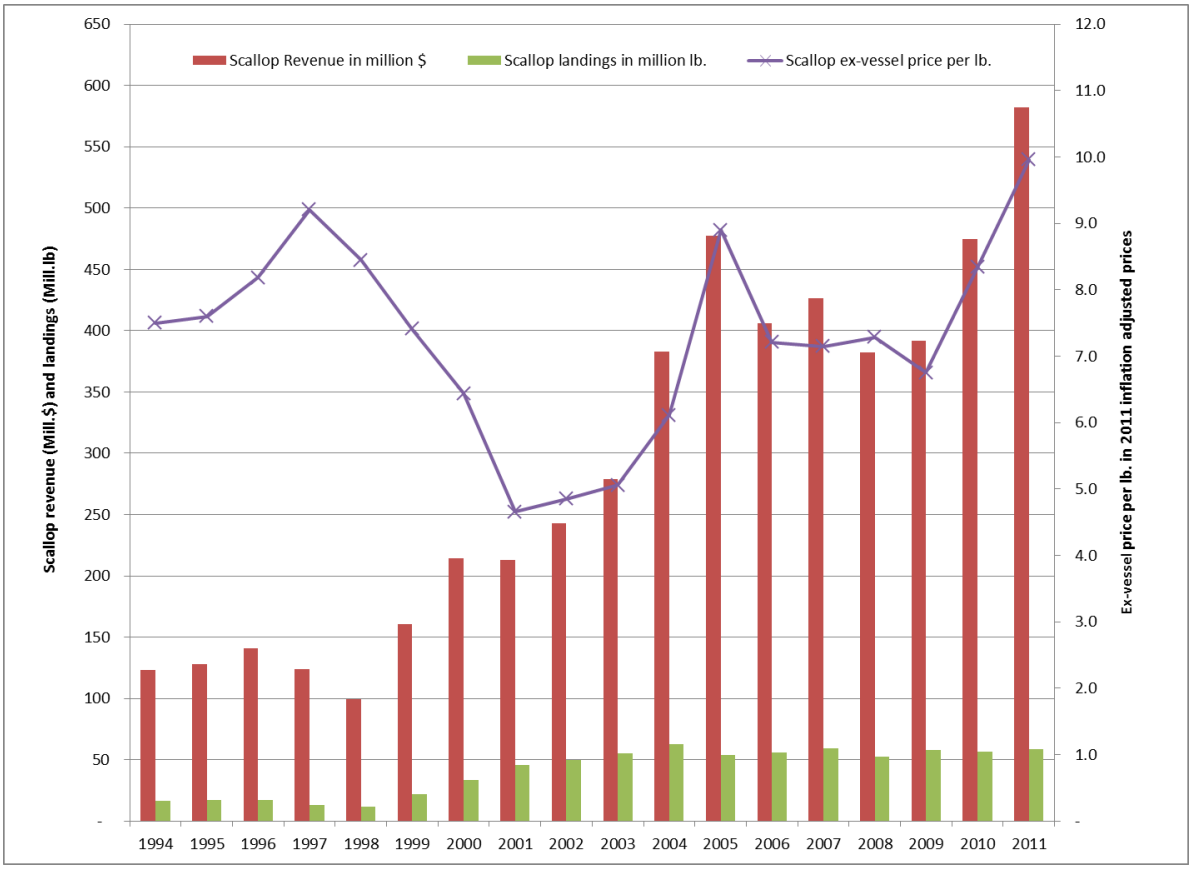


Figure 20. Trends in total scallop landings, revenue and ex-vessel price by fishing year (including limited access and general category fisheries, revenues and prices are expressed in 2011 constant prices)



The trends in revenue per full-time vessel were similar to the trends for the fleet as a whole. Figure 20 shows that average scallop revenue per limited access vessel (includes all categories) almost quadrupled from about $430,000 in 1994 to over $1,548,000 in 2011 as a result of higher landings combined with an increase in ex-vessel price to about $10.00 per pound of scallops. For full-time dredge vessels, average revenue per vessel increased from $518,000 in 1994 to over $1,728,000 in 2011.

4.5.3 Trends in effort and LPUE

There has been a steady decline in the total DAS used by the limited access scallop vessels from 1994 to 2010 fishing years as a result of the effort-reduction measures since Amendment 4 (1994) (Table 3, Appendix I of Amendment 15). Total DAS-used declined further in 2008 to 24,121 days as the open area DAS allocations are reduced by 30 percent from 51 days to 35 days per full-time vessel, but increased to 26,300 in 2009 as the limited access vessels received access area trips (5 trips per vessel). Open area DAS allocations were slightly higher in 2010 (38 DAS versus 37 DAS in 2009). Total DAS-used by the limited access vessels were slightly higher in 2010 fishing year despite lower number of access area trips (4 trips per vessel) (Figure 7 of Amendment 15).

The impact of the decline in effort below 30,000 days-at-sea since 2005 (with the exception of 2007) on scallop revenue per vessel was small, however, due to the increase in LPUE from about 1600 pounds per day-at-sea in 2007 to over 2000 pounds per day-at-sea in 2010 (Figure 8,

Appendix I of Amendment 15). For trends in LPUE by permit plan and category please see Figure 7 and Figure 8 in Appendix I of Amendment 15.

4.5.4 Trends in the meat count and size composition of scallops

Average scallop meat count (the number of scallop meats per pound) has declined continuously since 1999 as a result of effort-reduction measures, area closures, and an increase in ring sizes implemented by the Sea Scallop FMP. The share of larger scallops increased with the share of U10 scallops rising to 15 percent in 2009 and 2010 compared to less than 10 percent in 2000-2004. The share of 11-20 count scallops increased from 12 percent in 1999 to 63 percent in 2010 and, the share of 30 or more count scallops declined from 30 percent in 1999 to less than 1 percent in 2010 on (Table 4, Appendix I of Amendment 15). Larger scallops priced higher than the smaller scallops contributed to the increase in average scallop prices in recent years despite larger landings (Table 4 to Table 6, Appendix I of Amendment 15).

4.5.5 The trends in participation by permit, vessel characteristics and gear type

The limited access scallop fishery consists of 347 vessels. It is primarily full-time, with 250 full-time (FT) dredge, 52 FT small dredge vessels and 11 FT net boats (Table 7 and Table 8, Appendix I of Amendment 15). There no occasional permits left in the fishery since 2009 because they were converted to part-time small dredge (32 vessels in 2010). Similarly, there are only two part-time permits because most were converted into full-time dredge vessels after 2000.

Since 2001, there has been considerable growth in fishing effort and landings by vessels with general category permits, primarily as a result of resource recovery and higher scallop prices (Table 9 to Table 11, Appendix I of Amendment 15). Amendment 11 implemented a limited entry program for the general category fishery reducing the number of general category permits after 2007. In 2010, there were 333 LAGC IFQ permits, 122 NGOM and 285 incidental catch permits in the fishery totaling 740 permits. Although not all vessels with general category permits were active in the years preceding 2008, there is no question that the number of vessels (and owners) that hold a limited access general category permit under the Amendment 11 regulations are less than the number of general category vessels that were active prior to 2008 (Table 11 and Table 12 in Appendix I of Amendment 15).

4.5.6 Landings by gear type

Most limited access category effort is from vessels using scallop dredges, including small dredges. The number of vessels using scallop trawl gear has decreased continuously and has been at 11 full-time trawl vessels since 2006. In comparison, there has been an increase in the numbers of full-time and part-time small dredge vessels after 2002 (Table 13 through Table 15, Appendix I of Amendment 15). About 80 percent of the scallop pounds are landed by full-time dredge and about 13 percent landed by full-time small dredge vessels since the 2007 fishing year.

Most general category effort is, and has been, from vessels using scallop dredge and other trawl gear. The percentages of scallop landings show that landings made with a scallop dredge in 2010 continue to be the highest compared to other general category gear types (Table 16 through Table 18, Appendix I of Amendment 15).

4.5.7 Trends in ownership patterns in the scallop fishery

Sea Scallop Limited access fishery has a highly concentrated ownership structure (Table 19 to Table 26, Appendix 1 of Amendment 15). According to the ownership data for 2011, only 71 out of 343 vessels belonged to single boat owners (Table 21, Appendix I of Amendment 15). The rest were owned by several individuals and/or different corporations with ownership interest in more than one vessel. This is in contrast to the LAGC IFQ Fishery which is dominated mostly with single boat owners (155 out of 259 vessels belonged to the single boat owners, Table 27 to Table 30 of Amendment 15).

4.5.8 Trends in Foreign Trade

One of most substantial changes in the trend for foreign trade for scallops after 1999 was the striking increase in scallop exports. The increase in landings especially of larger scallops led to a tripling of U.S. exports of scallops from about 5 million pounds in 1999 to about 25 million pounds per year since 2005 (Figure 11 to Figure 12, Appendix I of Amendment 15). In 2010, exports were about 25 million lb. and imports were 51.9 million lb. From January to May 2011, exports were 10.9 million lb. and imports were 35 million lb. Rebuilding of scallops as a result of the management of the scallop fishery benefited the nation by reducing the scallop trade deficit from over $230 million in 1994 to less than $80 million in 2009.

4.5.9 Dependence on the Scallop Fishery

Both full-time and part-time limited access vessels had a high dependence on scallops as a source of their income. Full-time limited access vessels had a high dependence on scallops as a source of their income and the majority of the full-time vessels (94 percent) derived more than 90 percent of their revenue from the scallop fishery in 2010 Comparatively, part-time limited access vessels were less dependent on the scallop fishery in 2010, with only 46 percent of part-time vessels earning more than 90 percent of their revenue from scallops (Appendix I of Amendment 15, Table 31).

Table 32, Appendix I of Amendment 15, shows that general category permit holders (IFQ and NGOM) are less dependent on scallops compared to vessels with limited access permits. In 2010, only about half (49 percent) of IFQ permitted vessels earned greater than 50 percent of their revenue from scallops. Among NGOM permitted vessels, only 31 percent earned more than 50 percent of their revenue from scallops in 2010. Scallops still comprise the largest proportion of the revenue for these general category vessels, accounting for 59 percent - 66 percent of the revenue for IFQ and NGOM vessels respectively (Appendix I of Amendment 15, Table 32). The composition of revenue for the general category vessels are shown in Table 33, Appendix I.

The relative ease with which a vessel is able to switch between fisheries is an indicator of the dependence on any one fishery or species. Table 34 and Table 35 (Appendix I of Amendment 15), show the number and percentage of scallop vessels with permits from other fishery management plans, while Table 34 to Table 39 (Appendix I of Amendment 15) show the number scallop vessels that have actual landings of other species. Together, Table 34 through Table 37 describe a limited access fishery where a large percentage of vessels have permits in other fisheries but relatively few vessels actually landing species other than scallops. Alternatively, Table 38 and Table 39 (Appendix I of Amendment 15) show a general category fishery where a large percentage of vessels have permits in other fisheries and landings of corresponding species.

4.5.10 Trends in scallop landings by port

The landed value of scallops by port landing fluctuated from 1994 through 2010 for many ports. During the past five years, five ports have consistently brought in the most landed value: New Bedford, MA; Cape May, NJ; Newport News, VA; Barnegat Light/Long Beach, NJ, and Seaford, VA (Appendix I, Table 40). In addition to bringing in the most landed value, in 1994 scallop landings represented more than 37 percent of the total landed value for New Bedford, MA and Cape May, NJ, and more than 65 percent of the total landed value for Newport News and Barnegat Light/Long Beach, NJ. This increased in 2010 to 84 percent and 87 percent for New Bedford, MA and Cape May, NJ, respectively, and 97 percent and 90 percent for Newport News and Barnegat Light/Long Beach, NJ, respectively. Collectively, 2010 has the highest landed value of scallops since 2005. 75 percent of ports saw an increase in the percentage of landed scallop value to total landed value in 2010 compared to 2009 (Appendix I of Amendment 15, Table 41).

The largest numbers of permitted limited access scallop vessels are currently in the ports of New Bedford, MA and Cape May, NJ, which represent 38 percent and 19 percent of the total, respectively (Appendix I of Amendment 15, Table 42). Of the 349 permitted limited access vessels in 2010, 199 originate from New Bedford, MA and Cape May, NJ. In addition to having the greatest number of permitted limited access scallop vessels, New Bedford, MA also has the greatest number of general category scallop vessels. Gloucester, MA, Boston, MA, and Point Judith, RI, also have high numbers of general category scallop vessels (Appendix I of Amendment 15, Table 44). These major ports can also be described by the characteristics of the vessels that hail from each port. Table 45 (Appendix B of Amendment 15) shows that on average limited access vessels are larger, by length and weight, than their general category counterparts.

5.0 ENVIRONMENTAL CONSEQUENCES- IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

5.1 Alternative 1: No Action Alternative

This section describes the expected impacts of the No Action alternative on the Atlantic sea scallop resource, non-target species, physical environment and EFH, protected species, and human communities.

5.1.1 Impacts to the Atlantic Sea Scallop Resource

Under the No Action alternative, scallop vessels would still be able to fish in the ETA on open area DAS. Vessels are expected to target pockets of larger scallops in the area. If vessels choose to fish in this area, it could have negative impacts on recruitment in the short and medium term, and could reduce the long-term biomass and yield from the ETA and the overall MA because of increased mortality of small scallops. Further, there will likely be low catch rates of legal-size scallops, which increases fishing effort and bycatch.

Due to low catch rates of legal size scallops in this area, discard and bycatch mortality of the abundant smaller scallops will occur while vessels are targeting the larger scallops. Although some of the smaller scallops (<75 mm) would pass through the 4-in rings of the scallop dredge, scallops can be crushed by fishing gear on the sea floor, and those that do get caught are risk from handling on deck with increased mortality.

The success of the entire scallop access area rotational management program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the MA, where recruitment has been well below average for several years. If the smaller scallops are not protected it would jeopardize the area rotation program and production in the ETA in the future. Fishing effort in the ETA could compromise the overall success of the area rotation program.

In summary, the No Action alternative would have negative impacts on the scallop resource as it would increase the mortality of smaller scallops in the short-term and potentially impact overall recruitment in the Mid-Atlantic in the long-term. However, these impacts are not expected to be significant because the scallop industry is aware of the negative impacts that could result by targeting scallop from the ETA and many have declined to fish in the area. Further, Framework 24 to the Scallop FMP will likely be implemented in spring 2013 and should close the area through Council action.

5.1.2 Impacts to Non-Target Species

As previously explained, since most of the biomass in the ETA is smaller scallops, it is probable that catch rates will be much lower for this access area than originally projected, resulting in longer fishing trips and higher area swept. This could result in low negative impacts on non-target species in the ETA (e.g., fluke, monkfish, and skates), which could be caught incidentally during these longer dredge tows, potentially resulting in increased mortality of those species.

5.1.3 Impacts to the Physical Environment and EFH

Most of the biomass in the ETA is smaller scallops. Therefore, it is probable that catch rates will be much lower for this access area than originally projected, resulting in longer fishing trips and higher area swept. This could result in negative impacts on the physical environment and EFH in the ETA because of the potential of increased gear interactions with habitat in the water. Therefore, the No Action alternative would have negligible to low negative impacts on EFH and habitat because of the predicted increase in fishing effort that would be required to target larger scallops in the ETA. Although, effort in the scallop fishery is monitored by DAS, increases in tow duration would cause greater impacts on EFH and the physical environment.

5.1.4 Impacts to Protected Species

As stated above, most of the biomass in the ETA is smaller scallops. It is probable that catch rates will be much lower for this access area than originally projected, resulting in longer fishing trips and higher area swept. This could result in negative impacts on protected resources in the ETA because of the potential of increased gear interactions with protected resources in the water. The impact to sea turtles under the No Action alternative compared to Alternative 1 would likely be neutral because they are not present in the ETA during the months of the proposed closure. Therefore, the No Action alternative would likely have low negative impacts on protected resources because of the predicted increase in fishing effort that would be required to target larger scallops in the ETA. Although, effort in the scallop fishery is monitored by DAS, increases in tow duration would cause greater interaction with or mortality of protected species.

5.1.5 Impacts to Human Communities

Under the No Action alternative, scallop vessels would still be able to fish in the ETA on open area DAS. The impacts of the No action Alternative would therefore likely have some short-

term positive effects on human communities but also potentially long-term negative effects. The short-term positive effects would include giving fishermen more areas to fish on DAS. If members of the industry are choosing to fish in the ETA, it is likely because this is an area that can generate profits despite low catch rates and potentially longer trips. Some fishermen may prefer the immediate profits and risk the depletion of the small scallops.

The long-term negative effects would likely have a greater impact on human communities than the short-term positive impacts. Because of the epic recruitment in the ETA (the 3rd highest since 1979), there is an enormous potential for a large increase in the productivity of the ETA in the next several years. The success of the entire scallop area rotation program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the Mid-Atlantic, where recruitment has been well below average for several years but has recently begun to rebound. If the smaller scallops are not protected it would jeopardize the area rotation program and production in the ETA in the future. Fishing effort in the ETA could compromise the overall success of the area rotation program.

The potential economic gains from protecting the ETA can be seen by the results of previous closures to this area. In 2003 and 2004, the ETA experienced its largest recruitment event on record. In 2004, the ETA was closed, and following its closure biomass increased steadily. Two very strong year classes were protected by the ETA closure, which contained over one-quarter of the total scallop biomass in 2007. The area was fished as a controlled access area for four years (2007-2010) and supported a total of 12 access area trips for full time vessels (around 72 million lb). The recruitment event in ETA in 2012 is about 1/3 the size of the 2003 recruitment and represents the 3rd highest recruitment event since 1979. If this recruitment is protected, the ETA has the potential to see large increases in biomass. At this point the industry would be allocated access area trips in the ETA to harvest the projected high concentrations of adult scallops. In summary, the No Action Alternative fails to protect this recruitment event from incidental mortality and could put this projected future harvest at risk. Therefore, the No Action has the potential for negative long-term impacts on human communities.

5.2 Alternative 2: Closure of ETA (Proposed Action)

This section describes the expected impacts of the Proposed Action on the Atlantic sea scallop resource, non-target species, physical environment and EFH, protected species, and human communities.

5.2.1 Impacts to the Atlantic Sea Scallop Resource

If the ETA is closed under the Proposed Action, scallop vessels will be prohibited from fishing for, possessing, or retaining scallops in or from the ETA. Any fishing effort that would have gone into the ETA would have to be redistributed into different open areas. Closing the ETA would have positive impacts on the scallop resource. In 2003 and 2004, the ETA experienced its largest recruitment event on record. In 2004, the ETA was closed, and following its closure biomass increased steadily. Two very strong year classes were protected by the ETA closure, which contained over one-quarter of the total scallop biomass in 2007. The area was fished as a controlled access area for four years (2007-2010) and supported a total of 12 access area trips for full time vessels (around 72 million lb). The recruitment event in ETA in 2012 is about 1/3 the size of the 2003 recruitment, but it represents the 3rd highest recruitment event since 1979. In 2012, the mean number of scallops per tow with less than 75 mm (3 in) shell height in the ETA

was 99 in the NEFSC sea scallop survey, compared to 24 in 2011. If this recruitment is protected, the ETA has the potential to see large increases in biomass.

As stated above, the success of the entire scallop access area rotational management program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the MA, where recruitment has been well below average for several years. Protecting this epic recruitment event in the ETA under Alternative 2 would help ensure large amounts of adult scallop biomass in the area for several years. Compared to the No Action Alternative (Alternative 1), Alternative 2 protects this large recruitment from incidental and discard mortality that could occur through fishing pressure. Therefore, the Proposed Action would have a positive impact on the scallop resource but is not expected to be significant because the Council is scheduled to take action to close the ETA in spring 2013 through Framework 24 to the FMP.

5.2.2 Impacts to Non-Target Species

The Proposed Action would have negligible to low positive impacts on non-target species compared to the No Action Alternative. If the ETA is closed, scallop fishing effort would be shifted to other areas. Therefore, there would not be a substantial change in the amount of fishing effort overall. Scallop fishermen would continue to use their allocated DAS and gear would continue to interact with non-target species on these trips.

As stated above, most of the biomass in the ETA is smaller scallops, and it is probable that catch rates will be similar or higher in other open areas. Higher catch rates would result in shorter fishing trips, lower area swept and subsequently less interaction with non-target species. Therefore, NFMS expects negligible to low positive impacts on non-target species for Alternative 2.

5.2.3 Impacts to the Physical Environment and EFH

The Proposed Action would have negligible to low positive impacts on habitat and EFH compared to the No Action Alternative. If the ETA is closed, open area DAS effort would likely be shifted to other areas. Therefore, there would not be a substantial change in the amount of fishing effort overall. Scallop fishermen would continue to use their allocated DAS and gear would continue to interact with the physical environment and EFH on these trips.

As stated above, most of the biomass in the ETA is smaller scallops, and it is probable that catch rates will be similar or higher in other open areas. Higher catch rates would result in shorter fishing trips, lower area swept and subsequently less impact on the physical environment and EFH. Therefore, NFMS expects Alternative 2 would have negligible to low positive impacts on physical environment and EFH compared to the No Action Alternative.

5.2.4 Impacts to Protected Species

The Proposed Action would have negligible to low positive impacts on protected species compared to the No Action Alternative. If the ETA is closed, open area DAS effort would likely be shifted to other areas. Therefore, there would not be a substantial change in the amount of fishing effort overall. Scallop fishermen would continue to use their allocated DAS and gear would continue to interact with protected species on these trips.

As stated above, most of the biomass in the ETA is smaller scallops, and it is probable that catch rates will be similar or higher in other open areas. Higher catch rates would result in shorter fishing trips, lower area swept and subsequently less potential for protected species interactions. The impact to sea turtles under Alternative 1 compared to the No Action alternative would likely be neutral because they are not present in the ETA during the months of the proposed closure. Therefore, NFMS expects Alternative 2 would have negligible to low positive impacts on protected species compared to the No Action Alternative.

5.2.5 Impacts to Human Communities

Under Alternative 2, scallop vessels would no longer be able to utilize the ETA on open area DAS. The impacts of Alternative 2 would likely have some low short-term negative effects on human communities but also long-term positive effects. The short-term low negative effects would include fishermen having to redistribute DAS usage to other open areas. If members of the industry are choosing to fish in the ETA, it is likely because this is an area that can generate profits despite low catch rates and potentially longer trips. Some fishermen may prefer the immediate profits and risk the depletion of the small scallops. If this area were to close (Alternative 2), some fishermen would have to steam further away to find scallops. This would increase fuel costs and DAS usage. For instance, if a fisherman from New Jersey was targeting pockets of large scallops in the ETA, he is likely doing so because the cost of fuel and DAS to transit to another productive area would be too costly. Under Alternative 2, he would have to steam further costing him extra fuel and DAS while in transit.

The long-term positive effects would likely have a greater impact on human communities than the short-term negative impacts. Because of the epic recruitment in the ETA in 2012 (the 3rd highest since 1979), there is an enormous potential for a large increase in the productivity of the ETA in the next several years. The success of the entire scallop area rotation program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the Mid-Atlantic, where recruitment has been well below average for several years but has recently begun to rebound. If the smaller scallops are protected it would help promote the area rotation program and production in the ETA in the future. Eliminating fishing effort in the ETA could help ensure the overall success of the area rotation program.

The potential economic gains from protecting the ETA can be seen by the results of previous closures to this area. In 2003 and 2004, the ETA experienced its largest recruitment event on record. In 2004, the ETA was closed, and following its closure biomass increased steadily. Two very strong year classes were protected by the ETA closure, which contained over one-quarter of the total scallop biomass in 2007. The area was fished as a controlled access area for four years (2007-2010) and supported a total of 12 access area trips for full time vessels (around 72 million lb). The recruitment event in ETA in 2012 is about 1/3 the size of the 2003 recruitment and represents the 3rd highest recruitment event since 1979. If this recruitment is protected, the ETA has the potential to see large increases in biomass in the future. At this point the industry would be allocated access area trips in the ETA to harvest the projected high concentrations of adult scallops. Compared to the No Action Alternative, Alternative 2 protects this recruitment event from incidental mortality and helps promote this projected future harvest.

6.0 CUMMULATIVE EFFECTS ASSESSMENT

A cumulative effects assessment (CEA) is a required part of an EIS or EA according to the Council on Environmental Quality (CEQ) (40 CFR part 1508.7) and NOAA's agency policy and procedures for NEPA, found in NOAA Administrative Order 216-6. The purpose of the CEA is to integrate into the impact analyses, the combined effects of many actions over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective but rather, the intent is to focus on those effects that are truly meaningful. This section serves to examine the potential direct and indirect effects of the alternatives in this emergency action together with past, present, and reasonably foreseeable future actions that affect the sea scallop environment. It should also be noted that the predictions of potential synergistic effects from multiple actions, past, present and/or future will generally be qualitative in nature.

Valued Ecosystem Components (VEC)

As noted in Section 4.0 (Description of the Affected Environment), the VECs that exist within the Atlantic sea scallop fishery are identified and the basis for their selection is established. Those VECs were identified as follows:

1. Managed Resource - Atlantic sea scallop;
2. Non-target species (incidental catch and bycatch);
3. Physical Environment and EFH;
4. Protected Resources; and
5. Human Communities (includes economic and social effects on the fishery and fishing communities).

Temporal Scope of the VECs

While the effects of historical fisheries are considered, the temporal scope of past and present actions for sea scallops, non-target species, habitat, and human communities is primarily focused on actions that have taken place since the Atlantic sea scallop FMP was implemented in 1982, and particularly since 1994 when Amendment 4 to the FMP implemented the general category scallop permit. An assessment using this timeframe demonstrates the changes to resources and the human environment that have resulted through management under the Council process and through U.S. prosecution of the fishery. For endangered and other protected species, the context is largely focused on the 1980s and 1990s, when NMFS began generating stock assessments for marine mammals and turtles that inhabit waters of the U.S. EEZ. In terms of future actions, this analysis examines a one-year period between implementation of this amendment (approximately December 2012 through December 2013), the maximum amount of time an emergency action can be effective under provisions of the MSA.

Geographic Scope of the VECs

The geographic scope of the analysis of impacts to regulated sea scallops, non-target species and habitat for this action is the total range of these VECs in the Western Atlantic Ocean, as described in the Affected Environment Section 4.0 of Amendment 15. However, the analyses of impacts presented in this action focuses primarily on actions related to the harvest of the managed resources. The result is a more limited geographic area used to define the core geographic scope within which the majority of harvest effort for the managed resources occurs. For endangered and protected species, the geographic range is the total range of each species (See Section 4.4.1.7 in Amendment 15).

Because the potential exists for far-reaching sociological or economic impacts on U.S. citizens who may not be directly involved in fishing for the managed resources, the overall geographic

scope for human communities is defined as all U.S. human communities. Limitations on the availability of information needed to measure sociological and economic impacts at such a broad level necessitate the delineation of core boundaries for the human communities. Therefore, the geographic range for human communities is defined as those primary and secondary ports bordering the range of the scallop fishery (See Section 4.4.1.7 in Amendment 15) from the U.S.-Canada border to, and including, North Carolina.

Analysis of Total Cumulative Effects

A cumulative effects assessment ideally makes effect determinations based on the culmination of the following: (1) impacts from past, present and reasonably foreseeable future actions; PLUS (2) the baseline condition for resources and human communities; PLUS (3) impacts from the Proposed Action compared with the No Action Alternative/cumulative effects baseline.

A description of past, present and reasonably foreseeable future actions is summarized immediately below in Table 4 and more thoroughly in Framework 23 to the FMP. The baseline conditions of the resources and human communities are subsequently summarized, although it is important to note that beyond managed fisheries and protected species, quantitative metrics for the baseline conditions are not available. Finally, a brief summary of the incremental impacts from the alternatives contained in this EA is included. The culmination of all these factors is considered when making the cumulative effects assessment.

Past, Present and Reasonably Foreseeable Future Actions

Table 4 below and to a greater extent the EA prepared for Framework 23 to the FMP (available on the Council's web site at http://www.nefmc.org/scallops/index.html), summarize the combined effects of past, present, and reasonably foreseeable future actions that affect the VECs, i.e., actions other than those alternatives under development in this document.

Fishery-related Actions

Most of the actions effecting this action and considered in Table 4 come from fishery-related activities (e.g., Federal fishery management actions in the scallop and groundfish fisheries). As expected, these activities have fairly straightforward effects on environmental conditions, and were, are, or will be taken, in large part, to improve those conditions. The reason for this is the statutory basis for Federal fisheries management - the re-authorized Magnuson-Stevens Act. This legislation was enacted to promote long-term positive impacts on the environment in the context of fisheries activities. More specifically, the act stipulates that fisheries management comply with a set of National Standards that collectively serve to optimize the conditions of the human environment. Under this regulatory regime, the cumulative impacts of past, present, and future Federal fishery management actions on the VECs should be expected to result in positive long-term outcomes. Nevertheless, these actions are often associated with offsetting impacts. For example, constraining fishing effort frequently results in negative short-term socio-economic impacts for fishery participants. However, these impacts are usually necessary to bring about long-term sustainability of a given resource and as such, should, in the long-term, promote positive effects on human communities, especially those that are economically dependent upon the managed resource.

Non-fishing Actions

Non-fishing activities were also considered when determining the combined effects from past, present, and reasonably foreseeable future actions. Activities that have meaningful effects on the

VECs include the introduction of chemical pollutants, sewage, changes in salinity, dissolved oxygen, and suspended sediment into the marine environment. There is also increasing evidence that impacts resulting from climate change, such as ocean acidification and increased water temperature, could pose a substantial risk. These activities pose a threat to all of the identified VECs in the long-term. Other human induced non-fishing activities that affect the VECs under consideration in this document are those that tend to be concentrated in nearshore areas. Examples of these activities include, but are not limited to, agriculture, port maintenance, beach nourishment, coastal development, marine transportation, marine mining, dredging, and the disposal of dredged material. In addition, the introduction of invasive species, such as the tunicate observed growing over large portions of Georges Bank, may lead to negative impacts if it spreads to areas critical for the fishery. Wherever any of these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and, as such, may indirectly constrain the sustainability of the managed resources, non-target species, and protected resources. Decreased habitat suitability would tend to reduce the tolerance of these VECs to the impacts of fishing effort. Mitigation of this outcome through regulations that would reduce fishing effort could then negatively impact human communities.

Impact Definitions for Tables 4 & 5 below	
Managed Resource (Atlantic scallop), Non-target species, and Protected resources	Positive = actions that increase stock size
	Negative = actions that decrease stock size
Physical environment and EFH	Positive = actions that improve or reduce disturbance of habitat
	Negative = actions that degrade or increase disturbance of habitat
Human communities	Positive = actions that increase revenue and well-being of fishermen and/or associated businesses
	Negative = actions that decrease revenue and well-being of fishermen and/or associated businesses
All VECs	Mixed=both positive and negative

Table 4. Summary effects of past, present, and reasonably foreseeable future actions on the VECs identified for this emergency action (based on actions listed in, and including, Framework 23 to the FMP).

VEC	Past Actions	Present Actions	Reasonably Foreseeable Future Actions	Combined Effects of Past, Present, Future Actions
Managed Resource	**Positive** Combined effects of past actions have decreased effort to sustainable levels	**Positive** Current regulations continue to manage for sustainable stocks	**Positive** Future actions are anticipated to continue to maintain sustainable stocks	**Positive** Stocks are being managed to maintain a rebuilt status
Non-target Species	**Positive** The combination of past actions that decreased effort and gear/area restrictions have reduced impacts	**Positive** Current regulations continue to manage for sustainable stocks and maintain gear/area restrictions; thus, controlling effort on direct and incidental catch/bycatch species	**Positive** Future actions are anticipated to continue management for sustainable stocks	**Positive** Continued management of directed stocks in combination with gear/area restrictions controls incidental catch/bycatch
Physical Environment and EFH	**Mixed** Combined effects of effort reductions and better control of non-fishing activities have been positive, but fishing activities and non-fishing activities continue to reduce habitat quality	**Mixed** Effort reductions and better control of non-fishing activities have been positive, but fishing activities and non-fishing activities continue to reduce habitat quality	**Mixed** Future regulations will likely control effort and thus habitat impacts, but as stocks improve, effort will likely increase along with additional non-fishing activities	**Mixed** Continued fisheries management will likely control effort and thus, fishery-related habitat impacts but fishery and non-fishery related activities will continue to reduce habitat quality
Protected Resources	**Mixed** Combined effects of past fishery actions have reduced effort and implemented a gear modification to reduce turtle takes. However, interactions with turtles remain a concern	**Positive** Current regulations continue to control effort and maintain gear modifications. Proposed measures would also limit trips to areas at the time turtles are most likely to be present	**Mixed** Future regulations will likely control effort and maintain gear and area restrictions. However, if the scallop resource increases, effort will likely rise, possibly increasing interactions	**Mixed** Continued effort controls along with gear and area restrictions will likely stabilize protected species interactions, but over the long-term, interactions may increase if scallop effort rises
Human Communities	**Positive** Although initial management of the scallop resource had negative impacts, long-term sustainable management has supported profitable industries and communities	**Mixed** Fishery resources continue to support communities in the long-term, but vessels may forgo some yield as a result of this emergency action	**Positive** Continued sustainable management of the stock should support profitable industries and communities	**Positive** Sustainable resources should support viable communities and economies

Baseline Conditions for Resources and Human Communities

For the purposes of a cumulative effects assessment, the baseline conditions for resources and human communities are considered the present condition of the VECs plus the combined effects of the past, present, and reasonably foreseeable future actions. The following table (Table 5) summarizes the added effects of the condition of the VECs (i.e., status/trends from Section 4.4 of Amendment 15) and the sum effect of the past, present, and reasonably foreseeable future actions (from Table 4 above). The resulting CEA baseline for each VEC is exhibited in the last column (shaded). In general, straight-forward quantitative metrics of the baseline conditions are only available for managed resources, non-target species, and protected resources. The conditions of the habitat and human communities VECs are complex and varied. As such, refer to the characterizations given in Section 4.4 of Amendment 15 for more information. As mentioned above, this cumulative effects baseline is then used to assess cumulative effects of the proposed management actions below in Table 5.

Table 5. Cumulative effects assessment baseline conditions of the VECs.

VEC		Status/Trends/Stresses	Combined Effects of Past, Present, and Reasonably Foreseeable Future Actions	Combined CEA Baseline Conditions
Managed Resource	**Atlantic Sea Scallop**	Stock size above biomass target, overfishing not occurring but mortality has been above F_{target} in recent years	**Positive** Stocks are being managed to maintain a rebuilt status	**Positive** - Sustainable stock size
Non-target Species (principal species listed in Section 4.2)	**Monkfish**	Not overfished and overfishing is not occurring.	**Long-term positive** Continued management of directed stocks in combination with gear/area restrictions control incidental catch/bycatch	**Positive** – Long-term reduced bycatch, improved bycatch accounting, improved habitat quality
	Skates	All managed species (with the exception of thorny skate) are not overfished and overfishing is not occurring. Thorny skate is not overfished but overfishing is occurring.		
	Windowpane Flounder	Northern windowpane is overfished and overfishing is occurring. Southern windowpane is not overfished and overfishing is not occurring.		
	Yellowtail Flounder	All stocks (GB, SNE/MA, and Cape Cod/GOM) are overfished, while overfishing is only occurring in the Cape Cod/GOM stock.		
Physical Environment and EFH		Fishing impacts are complex and variable and typically adverse; Non-fishing activities have historically negative but site-specific effects on habitat quality	**Mixed** Future regulations will likely control effort and thus, habitat impacts but as stocks improve, effort will likely increase along with additional non-fishing activities	**Mixed** - Reduced habitat disturbance by fishing gear associated with effort reductions, but non-fishing actions may increase over time
Protected Resources	Loggerhead Sea Turtle	Threatened	**Mixed** Continued effort controls along with gear and area restrictions will likely stabilize protected species interactions, but over the long-term, interactions may increase if scallop effort rises	**Mixed** – Although takes are likely to continue to be a problem, reduced gear encounters through effort reductions, gear and area restrictions, and Sea Turtle Strategy should reduce interactions between the scallop fishery and turtles
	Leatherback Sea Turtle	Endangered		
	Kemp's Ridley Sea Turtle	Endangered		
	Green Sea Turtle	Endangered		
	Atlantic Sturgeon	Endangered/Threatened	**Mixed** Continued effort controls along with gear and area restrictions will likely stabilize Atlantic sturgeon interactions.	**Mixed** Takes are not likely to be a problem. Atlantic sturgeon is not known to be caught in scallop dredges and interactions with trawl gear are rare.
Human Communities		Complex and variable. Generally, economic trends have been positive in recent years.	**Positive** Sustainable resources should support viable communities and economies	**Long-term positive** Sustainable resources should support viable communities and economies

Summary Effects of the Proposed Action

As previously analyzed in Section 5.0, a summary of the direct and indirect impacts on each of the VECs expected is presented below. For the scallop resource, the impacts of closing ETA for the remainder of FY 2012 and the beginning of FY 2013 are expected to be positive relative to the No Action Alternative. The Proposed Action would protect recruitment in the ETA and Mid-Atlantic, which is essential for the future success of area rotation to maximize scallop yield over the long term. The Proposed Action would have negligible to low positive impacts on non-target species, the physical environment and protected species compared with the No Action Alternative. Impacts on these VECs expected to be negligible to low positive because it is probable that catch rates will be similar or higher in other open areas. Higher catch rates would result in shorter fishing trips, lower area swept and subsequently less potential interact with the physical environment, non-target species, and protected species. Finally, the Proposed Action would have short-term low negative but long term positive impacts on human communities. The short-term negative effects would include the cost associated with fishermen having to redistribute DAS usage to other open areas. The long-term positive effects would likely have a greater impact on human communities than the short-term negative impacts. The Proposed Action would protect the large recruitment event from incidental mortality, help promote this projected future harvest and ensure the overall success of the area rotation program. None of the direct and indirect effects of the Proposed Action Alternative are expected to be significant.

Cumulative Effects Assessment

To determine the magnitude and extent of cumulative impacts of the Proposed Action, the incremental impacts of the direct and indirect impacts discussed herein should be considered, on a VEC-by-VEC basis, in addition to the effects of all actions (i.e., those effects identified and discussed relative to the past, present, and reasonably foreseeable future actions of both fishing and non-fishing actions).

Managed Resource

In terms of past, present, and reasonably foreseeable future actions, such as FW 21, and Amendments 10 and 11, there have been positive impacts on the scallop resource, and this trend is expected to continue with future management actions. The Proposed Action would continue to support the goals of the FMP and is expected to have positive impacts on this resource relative to the No Action Alternative/baseline by maintaining sustainable stocks. Therefore, the Proposed Action, when combined with other past, present and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts to the managed resource.

Non-Target Species

Because this action would continue to support the goals of the FMP, and is not expected to threaten the mortality objectives of the non-target species, these species should continue rebuilding and strive to maintain sustainable stocks. In terms of past, present, and reasonably foreseeable future actions, such as the Council's Standardized Bycatch Reporting Methodology and ACLs, there have been positive impacts on non-target species. Further, the primary species taken as incidental catch in the scallop fishery are all being managed sustainably under the Magnuson-Stevens Act, and this is expected to continue into the future. The Proposed Action is expected to have negligible to low positive impacts on this resource relative to the No

Action/baseline. Therefore, the Proposed Action, when combined with other past, present and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts to the non-target species.

Physical Environment and EFH

In terms of past, present, and reasonably foreseeable future actions, there have been positive and negative impacts on the physical environment and EFH. This is due to effort reductions and better control of non-fishing activities being positive; however, fishing activities and non-fishing activities continue to reduce habitat quality. The Proposed Action is expected to have negligible to low positive impacts on this resource relative to the No Action Alternative/baseline. Therefore, the Proposed Action, when combined with other past, present and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts to the physical environment and EFH.

Protected Resources

In terms of past, present, and reasonably foreseeable future actions, there have been positive and negative impacts on protected resources. This is due to effort controls and gear modifications being positive; however, fishing gear interactions with protected species remain a concern. The Proposed Action is expected to have negligible to low positive impacts relative to the No Action Alternative/baseline by continuing to reduce fisheries interactions with protected resources. Therefore, the Proposed Action, when combined with other past, present and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts to protected resources.

Human Communities

In terms of past, present, and reasonably foreseeable future actions, there have been positive impacts on human communities over the long-term, which is evident by fisheries management being able to support profitable industries and communities. The Proposed Action is expected to continue this trend and have low negative short-term impacts and long-term positive impacts on this VEC relative to the No Action Alternative/baseline. Therefore, the Proposed Action, when combined with other past, present and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts to human communities.

7.0 COMPLIANCE WITH APPLICABLE LAWS (INCLUDING FONSI STATEMENT)

This section describes NMFS' compliance with applicable laws and executive orders in regards to this emergency action.

7.1 Magnuson-Stevens Fishery Conservation and Management Act (MSA)

National Standards

Section 301 of the Magnuson-Stevens Fishery Conservation and Management Act requires that fishery management plans (FMPs) contain conservation and management measures that are consistent with the ten National Standards:

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

This emergency action would protect the growth of scallop biomass to be later harvested in the future. By taking action in FY 2012, and not delaying addressing this issue in FY 2013 through the development of Framework 24, this action increases the likelihood that the small scallops present in the ETA will not be subject to incidental or fishing mortality. This action is intended to enhance the achievement of optimum yield by protecting scallop recruitment for future harvest, while also reducing impacts on EFH and bycatch. In addition, this action ensures that the rotational area management program for 2012 and beyond is not undermined by allowing effort into an area with low adult scallop biomass but strong scallop recruitment, thereby jeopardizing the cornerstone of scallop fishery management.

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

This document uses information of known quality from sources acceptable to the relevant scientific and technical communities. Several sources of data were used in the development of this document. These data sources include, but are not limited to: 2012 survey data (NEFSC and SMAST survey data from their 2012 ETA scallop resource surveys indicated that the abundance of very small scallops (which represents future recruitment for the fishery) in the ETA is extremely high compared to recent years); landings data from the dealer weigh-out purchase report; and fishing effort information through VMS declarations and reports. Although there are some limitations to the data used in the analysis, these data are considered to be the best available.

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

Under the Atlantic Sea Scallop FMP, the target fishing mortality rate and stock biomass are applied to the scallop resource from NC to the US/Canada boundary. This encompasses the entire range of scallop stocks under Federal jurisdiction.

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

The management measures in this action do not discriminate between residents of different states, as it would close an access area to all scallop vessels. All DAS effort would be redistributed to other open areas. This action minimizes potential inequity across the limited access scallop fleet.

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

This emergency action should promote efficiency in the utilization of fishery resources by closing an area that has evidence of unexpectedly high recruitment that was not anticipated under

Framework 22, which set the FY 2011 and FY 2012 specifications. In general, area rotation intends to maximize yield and reduce fishing impacts by allocating effort in areas with higher concentrations of harvestable scallops and protecting recruitment. This action supports the success of the scallop access area rotation program.

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

This emergency action takes into account variations among and contingencies in fisheries, fishery resources, and catches. This action enhances the ability of the FMP to adapt to changing resource conditions. This action was made at the request of the Council, with the support of some industry participants, in order to protect scallop resources in the ETA for future years so that the industry can maintain consistent landings from year to year. Variations in annual catch and allocations are still to be expected under the Scallop FMP's area rotation and this action ensures that these variations are not will be beyond the scope of management uncertainty, a system that is designed to optimize yield from variable recruitment patterns by area and year.

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

NMFS considered the costs and benefits associated with this closure when developing this action. This emergency action does not introduce any new measures that duplicate measures already in place, but rather supports the area rotation program to achieve the annual mortality targets and protect scallop recruitment. The increase in the average size of scallops landed in both open areas and access areas continues to be a major factor that minimizes harvesting costs. By closing the ETA and enabling vessels to take trips in other, open areas with less recruitment this action minimized costs to the scallop fleet.

(8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), 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.

This emergency action is not expected to jeopardize the sustained participation of fishing communities that have depended on the scallop resource and is at the request of some industry participants. The closure of the ETA is expected to continue to ensure a healthy resource that will be able to support historical levels of participation by fishing communities. Although this action would not enable vessels to fish in ETA in the short-term, scallop vessels will have access to other open areas, allowing for maintaining higher revenues in the long-term than could be possible under No Action.

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

The scallop FMP has measures in place to reduce bycatch to the extent practicable that are not affected by this proposed action. By closing the ETA, this emergency action would minimize interactions of bycatch (non-target species and protected species) in the Mid-Atlantic. Most of the biomass in the ETA is small scallops. Therefore, vessels may have to increase fishing time

to catch adult scallops in the area should it remain open. Although effort would likely be redistributed into other areas, by closing the ETA, this action would minimize as much as possible the impacts on bycatch and bycatch mortality.

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

This emergency action would close an access area that has higher-than-anticipated recruitment in ETA, resulting in more efficient catch of scallops in the future. By closing the ETA, this action promotes the safety of human life at sea because shorter trips shorter more efficient trips are expected to increase safety relative to the long trips that would be expected if the ETA remains open.

Other Required Provisions of the M-S Act

Section 303 of the Magnuson-Stevens Fishery Conservation and Management Act contains 14 additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, shall:

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

Since the domestic scallop fishery is capable of catching and processing the allowable biological catch (ABC), there is no total allowable level of foreign fishing (TALFF) and foreign fishing on sea scallops is not permissible at this time.

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

The fishery and fishery participants are described in detail in Section 4.4 of Amendment 15 to the Scallop FMP. Section 4.4 of Framework 23 describes the scallop permits by category as well as the active scallop vessels by permit type that could be affected by this action. Potential costs and revenues for Framework 22 FY 2011 specifications are outlined in Section 6.11 of that document. Similar information pertaining specifically to this emergency action is outlined in Section 4.5 of this document.

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

The present and probable future condition of the resource and estimates of Maximum Sustainable Yield (MSY) and Optimum Yield (OY) are given in Section 8.2.2.2 of Amendment 10 to the Scallop FMP. The SSC reviewed the most recent work on assessing this resource during Framework 22 development and determined that acceptable biological catch be set at 33,243 mt in 2012 (73.3 million pounds), including an approximate 4,100 mt (9 million pounds) for non-yield fishing mortality (discards and incidental mortality). Therefore, the overall ABC for the fishery, excluding discards and incidental mortality is 28,968 mt in 2012 (63.9 million pounds). Acceptable Biological Catch (ABC) is defined as the maximum catch that is recommended for harvest, consistent with meeting the biological objectives of the management plan (Section 5.6 of Framework 22).

This level was recommended by the Science and Statistical Committee (SSC) and various sources of scientific uncertainty were considered when setting this value. ABC calculations were based on the updated hybrid overfishing alternative specified in Amendment 15. Under this OFD, the overfishing threshold remains as status quo (spatially averaged $F = 0.38$). The fishing mortality target in the open areas is set at no higher than the overfishing threshold in the open areas (currently $F = 0.38$). In access areas, it is set no higher than that given by the time-averaging principle (so that F may be higher than the overfishing threshold in access areas that had been closed). The spatially combined target fishing mortality must be no higher than that which gives a 25 percent probability of exceeding the ABC fishing mortality. Target fishing mortalities can be set below these limits but not above them.

Current domestic landings and processing capabilities are around 50 million lbs. Total landings have been above that level in some years since 2004, and are expected to be close to 55 million pounds for 2010 and slightly greater for 2011. Landings for FY 2010, as specified by Framework 22, are expected to be in a similar range, i.e., 57 million pounds. This emergency action would support the FY 2012 landings specified by Framework 22.

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

The US fishery is expected to harvest 100 percent of OY and domestic processors are expected to be able to process 100 percent of OY.

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

The FMP and existing regulations specify the type of reports and information that scallop vessel owners and scallop dealers must submit to NMFS. These data include, but are not limited to, the weight of target species and incidental catch which is landed, characteristics about the vessel and gear in use, the number of crew aboard the vessel, when and where the vessel fished, and other pertinent information about a scallop fishing trip. Dealers must report the weight of species

landed by the vessel, the date of landing, and the ex-vessel price for each species and/or size grade. Important information about vessel characteristics, ownership, and location of operation is also required on scallop permit applications. Dealers are also surveyed for information about their processing capabilities.

All limited access scallop vessels and LAGC vessels are required to operate VMS equipment to record the location of the vessel for monitoring compliance with scallop regulations. An at-sea observer is also placed on scallop vessels at random to record more detailed information about the catch, including size frequency data, the quantity of discards by species, detailed gear data, and interactions with protected species.

There is no distinct recreational or charter sector of the scallop fishery since a limited access permit with associated reporting requirements is required to harvest any amount of scallops in Federal waters.

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

This emergency action does not alter any adjustments made in the Scallop FMP that address opportunities for vessels that would otherwise be prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fisheries. No consultation with the Coast Guard is required relative to this issue.

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

Essential fish habitat was defined in earlier scallop actions. This action does not further address or modify those EFH definitions. There are no additional impacts to the physical environment or EFH expected from this emergency action because the effects of effort displacement from the ETA realative to overall fishing effort should be negligible.

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

Data and research needs relative to the Atlantic sea scallop and its associated fisheries are described in Section 5.1.8 of Amendment 10 and Section 4.1 of Amendment 15. Other data already collected include fishery dependent data described in Section 6.2.4 of Amendment 10 and Section 4.4 of Amendment 15, and fishery-independent resource surveys that provide an index of scallop abundance and biomass.

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

measures on-- (A) participants in the fisheries and fishing communities affected by the plan or amendment; (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants; and (C) the safety of human life at sea, including weather and to what extend such measures may affect the safety of participants in the fishery;

The impacts of the scallop management program in general have been analyzed in previous scallop actions (Amendment 10, Amendment 11, Amendment 15, Framework 16, Framework 18, Framework 19, Framework 21, Framework 22, and Framework 23 (proposed)). Any additional impacts from the ETA closure proposed in this emergency action on fishery participants are summarized in Section 5.2.5. Safety in the scallop fishery was described in Section 8.1.5.6 of Amendment 10 and nothing proposed in this action will affect safety of human life at sea.

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

Overfishing reference points describing targets and thresholds for biomass and fishing mortality were updated in 2010 and are presented and explained in Sections 4.1.1 and 4.1.3 of Amendment 15. Under this OFD, the overfishing threshold remains as status quo (spatially averaged F = 0.38). The FY 2012 specifications set by Framework 22 are designed to meet the fishing mortality target that has a 25 percent chance of exceeding the OFL. This emergency action would support the Framework 22 specifications designed to stay within the scallop fishery's catch limits.

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

This emergency action does not include changes to the current bycatch methodology used to assess bycatch occurring in the scallop fishery. The scallop fishery also has an industry funded observer set-aside program that provides additional funding (portion of total scallop catch set-aside) to put observers on scallop vessels. A summary of the extent of observer coverage in this fishery can be found in Section 4.5.3 of Framework 22. Overall, this emergency action is expected to lower bycatch in the scallop fishery by moving fishing effort with less small scallops and more adult scallops, which would result in lower area swept for those trips.

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

This emergency action does not address recreational fishing regulations. There are no substantial recreational or charter fishing sections in the scallop fishery. Any recreational scallop fishing is likely conducted by diving, and harvest is by hand, maximizing the survival of released scallops.

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

A detailed description of the scallop fishery is included in Section 7.1 of Amendment 10, Section 4.4 in Amendment 11, Section 4.4 of Amendment 15, Section 4.4 of Framework 22, and Section 4.4 of Framework 23. These sections provide information relative to scallop vessels, processors, and dealers.

(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate, taking into consideration the economic impact of the harvest restrictions or recovery benefits on the fishery participants in each sector, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery; and

This emergency action does not propose a reduction in total catch in the scallop fishery compared to recent years. The ETA closure is expected to have long-term benefits for participating vessels, and the economic impacts on various sectors of the fishery have been considered. Protection of the large recruitment event in the ETA will ensure equitability across the fleet. Section 5.2.5 is an examination of the expected economic impacts of this action. Harvest from the Atlantic sea scallop fishery will continue to be reviewed, established, and analyzed through the biennial framework process. Recreational fishing for sea scallops is minimal and does not affect the success of the FMP.

(15) establish a mechanism for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.

Amendment 15 specified the mechanism for establishing ACLs and AMs to bring the Scallop FMP in compliance with annual catch limits required under the reauthorized Magnuson-Stevens Act. Framework 22 used the ACL process outlined in Amendment 15 and set catch limits for certain sectors of the scallop fishery, as well as effort controls for the rest of the fishery that is not under a direct TAC or quota for FYs 2011- 2013, with default measures for 2013 which will be updated and superseded by Framework 24 (under development). This emergency action would ensure that those catch limits set forth in Framework 22 for FY 2012 are not compromised.

7.2 National Environmental Policy Act (NEPA)

NEPA provides a mechanism for identifying and evaluating the full spectrum of environmental issues associated with Federal actions, and for considering a reasonable range of alternatives to avoid or minimize adverse environmental impacts. This document is designed to meet the requirements of both the MSA and NEPA. The Council on Environmental Quality (CEQ) has issued regulations specifying the requirements for NEPA documents (40 CFR 1500 – 1508). All of those requirements are addressed in this document, as referenced below.

7.2.1 Environmental Assessment

The required elements of an Environmental Assessment (EA) are specified in 40 CFR 1508.9(b). They are included in this document as follows:

- The need for this action is described in Section 2.0;
- The alternatives that were considered are described in Section 3.0 (alternatives including the proposed action and No Action);
- The environmental impacts of the proposed action are described in Section 5.0;
- A determination of significance is in Section 7.2; and,
- The agencies and persons consulted on this action are listed in Section 8.0.

7.2.2 Finding of No Significant Impact

National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. On July 22, 2005, NOAA published a Policy Directive with guidelines for the preparation of a Finding of No Significant Impact (FONSI). In addition, the Council on Environmental Quality (CEQ) regulations at 40 CFR 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant in making a finding of significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria, the recent Policy Directive from NOAA, and CEQ's context and intensity criteria. These include:

(1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?
Response: No, the proposed action is not reasonably expected to jeopardize the sustainability of the sea scallop resource. The temporary closure of the ETA would not cause increases in fishing mortality above the overfishing threshold that would jeopardize the sustainability of the scallop resource. This action is designed to have positive impacts to the scallop resource by protecting recruitment in the Mid-Atlantic. A general description of the target species is summarized in Section 4.1. Section 5.2.1 summarizes the overall impacts of this action on the scallop resource.

(2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?
Response: No, the proposed action is not reasonably expected to jeopardize the sustainability of any non-target species. A general description of the non-target species is summarized in Section 4.2, and a complete bycatch analysis of the scallop fishery was completed in Amendment 15. Section 5.2.2 summarizes the overall impacts of this action on non-target species. In general, this action does not increase overall fishing effort above levels assessed in Amendment 15; thus, there is no indication that impacts on non-target species will be different.

(3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in FMPs?
Response: No, the proposed action is not reasonably expected to cause substantial damage to the ocean and coastal habitats and/or EFH. There would not be a substantial change in the amount of fishing effort overall. It is probable that catch rates will be similar or higher in other open areas. Higher catch rates could result in shorter fishing trips, lower area swept and subsequently less impact on the physical environment and EFH. A general description of the

physical environment and EFH is summarized in Section 4.3. Section 5.2.3 summarizes the overall impacts of this action on habitat.

(4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?
Response: No, the proposed action is not reasonably expected to have substantial adverse impacts on public health or safety. This action does not modify the primary measures used to manage the fishery and is not expected to change fishing behavior in any substantial way to adversely impact safety.

(5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?
Response: No, the proposed action is not reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. There would not be a substantial change in the amount of fishing effort overall. It is probable that catch rates will be similar or higher in other open areas. Higher catch rates could result in shorter fishing trips, lower area swept and subsequently less potential for protected species interactions. Section 4.4 describes the endangered or threatened species that are found in the affected area. Section 5.2.4 summarizes the impacts of the proposed action on endangered and threatened species.

(6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?
Response: The proposed action is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area because there would not be a substantial change in the amount of fishing effort overall. Section 4.3 describes the physical environment of the affected area including the benthic environment and biological parameters of the scallop resource.

(7) Are significant social or economic impacts interrelated with natural or physical environmental effects?
Response: No, this action does not propose any significant social or economic impacts interrelated with significant natural or physical environmental effects. The proposed action temporarily closes the ETA to fishing. Since this was not anticipated to have significant social or economic impacts interrelated with significant natural or physical environmental effects in Framework 22, none are expected to result from the proposed action.

(8) Are the effects on the quality of the human environment likely to be highly controversial?
Response: No, the effects on the quality of the human environment are not likely to be highly controversial and the proposed action is based on the best available science. Section 5.2.5 assesses the expected impacts of the proposed action on the human environment, and Section 6.0 describes the potential cumulative effects of this action on the human environment.

(9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?
Response: The proposed action would open a close the ETA to scallop harvesting. Other types of commercial fishing already occur in this area and although it is possible that historic or cultural resources such as shipwrecks could be present, vessels try to avoid fishing too close to wrecks due to the possible loss or entanglement of fishing gear. The proposed action would not

provide vessels any incentive to fish on historic or cultural resources. Therefore, it is not likely that the proposed action would result in substantial impacts to unique areas.

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

Response: No, the effects on the human environment are not likely to be highly uncertain or involve unique or unknown risks. This action primarily proposes closing the ETA to fishing as part of the existing rotational area management program. The risks and impacts of area rotation on the human environment have been discussed and analyzed in previous actions. Therefore, the likely effects on the human environment are well understood.

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

Response: No, the proposed action is not related to other actions with individually insignificant but cumulatively significant impacts. Section 6.0 describes fishing and non-fishing past, present and reasonably foreseeable future actions that occurred or are expected to occur in the affected area. In summary, the sea scallop resource, non-target species, EFH, protected species, and the human communities have been impacted by past and present actions in the area and are likely to continue to be impacted by these actions in the future, but no significant impacts are expected as a result of the proposed action.

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

Response: Although there are shipwrecks present in areas where scallop fishing occurs, including some registered on the National Register of Historic Places, vessels try to avoid fishing too close to wrecks due to the possible loss or entanglement of fishing gear. The proposed action would not provide vessels any incentive to fish on historic or cultural resources. Therefore, it is not likely that the proposed action would adversely affect the historic resources.

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

Response: No, the proposed action is not reasonably expected to result in the introduction or spread of a nonindigenous species. The only nonindigenous species known to occur in any significant amount within the fishery areas is the colonial sea squirt (*Didemnum sp*.). The tunicate occurs on pebble gravel habitat, and does not occur on moving sand. NMFS and the WHOI HabCam have surveyed the area and studies are underway to monitor *Didemnum*'s growth and effect on scallops and their habitat. At this time, there is no evidence that fishing spreads this species more than it would spread naturally.

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

Response: No, the proposed action is not likely to establish a precedent for future action with significant effects, and it does not represent a decision in principle about future consideration. This action modifies an existing rotational area management program that is designed to be reviewed and adjusted every two years. Area rotation was established under Amendment 10, which was an EIS that assessed the long-term impacts of area rotation.

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

Response: No, the proposed action is not reasonably expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. This action does not propose any changes that would provide incentive for environmental laws to be broken.

(16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?
Response: No, the proposed action is not reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species. Both target and non-target species have been identified and assessed in this document (Sections 4.1 and 4.2 and 5.2.1 and 5.2.2). In general, this action will modify the rotational area management program, which will have insignificant positive impacts on both target and non-target species.

FONSI DETERMINATION
In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the Elephant Trunk Area Closure, and in the FEIS for Amendment 15 and the EA for Framework 22 to the Sea Scallop Fishery Management Plan, it is hereby determined that this action will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an EIS for this action is not necessary.

for JOHN BULLARD 11/23/12
Regional Administrator, Northeast Region, NMFS Date

7.3 Endangered Species Act (ESA)

Section 4.4 of this action contains a description of threatened and endangered species potentially affected by the Scallop Fishery and sections 5.1.4 and 5.2.4, provide summaries of the impacts of the No Action and Proposed Action, respectively. A final determination of consistency with the ESA will be made by the agency when the action is implemented.

7.4 Marine Mammal Protection Act (MMPA)

Section 4.4 of this action contains a description of marine mammals potentially affected by the Scallop Fishery and 5.1.4 and 5.2.4, provide summaries of the impacts of the No Action and Proposed Action, respectively. It is noted that according to the 2011 List of Fisheries, there have been no documented marine mammal species interactions with either the sea scallop dredge fishery or the Atlantic shellfish bottom trawl fishery; therefore, the scallop fishery is considered a Category III fishery under the MMPA (i.e., a remote likelihood or no known incidental mortality and serious injuries of marine mammals). A final determination of consistency with the MMPA will be made by the agency when the action is implemented.

7.5 Administrative Procedure Act (APA)

The need to implement these measures in an expedited manner in order to ensure equity across the scallop fleet and avoid jeopardizing the overall and long-term success of the Scallop FMP constitutes good cause under authority contained in 5 U.S.C. 553(b)(B) of the Administrative Procedure Act that it is impracticable and contrary to the public interest to provide for prior notice and opportunity for the public to comment. The reasons justifying this action on an

emergency basis make solicitation of public comment contrary to the public interest. Specifically, by closing the ETA, this action avoids jeopardizing the success of the access area program in future years by protecting scallop recruitment in the Mid-Atlantic. It is also important to note that this action was undertaken at the request of the Council with the support of the Fisheries Survival Fund (FSF), an organization that represents a large portion of the scallop industry, and that is an active participant in the development of scallop fishery management measures. FSF and the Council urged that we implement this action as soon as possible.

Pursuant to 5 U.S.C. 553(d)(3), the Assistant Administrator finds good cause to waive the full 30-day delay in effectiveness for this rule. This action is undertaken at the request of the Council. The Council, FSF, urged that we implement this action quickly in order to minimize any fishing effort in the ETA. We do not expect this closure to adversely impact the scallop fleet, because these vessels have flexibility to fish in other areas on days-at-sea. Moreover, it would be contrary to the public interest if this rule does not become effective immediately because even an additional 30 days of fishing in the area could lead to increased mortality of small scallops in the ETA. This could have negative impacts on recruitment in the short and medium term, and could reduce the long term biomass and yield from the ETA and the overall Mid-Atlantic. For these reasons, there is good cause to waive the requirement for delayed effectiveness.

7.6 Paperwork Reduction Act (PRA)

The purpose of the Paperwork Reduction Act is to minimize paperwork burden for individuals, small businesses, nonprofit institutions, and other persons resulting from the collection of information by or for the Federal Government. It also ensures that the Government is not overly burdening the public with requests for information. This action does not have any new collection of information requirements subject to the PRA.

7.7 Information Quality Act (IQA)

Utility of Information Product
The proposed document includes: A description of the management issues, a description of the alternatives considered, and the reasons for selecting the preferred management measures, to the extent that this has been done. These actions propose modifications to the existing FMP. These proposed modifications implement the FMP's conservation and management goals consistent with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) as well as all other existing applicable laws.

The Federal Register notice that announces the emergency rule and the implementing regulations will be made available in printed publication and on the website of the Northeast Regional Office. The notice provides metric conversions for all measurements.

Integrity of Information Product
The information product meets the standards for integrity under the following types of documents:

Other/Discussion (e.g., Confidentiality of Statistics of the Magnuson-Stevens Fishery Conservation and Management Act; NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics; 50 CFR 229.11, Confidentiality of information collected under the Marine Mammal Protection Act.)

Objectivity of Information Product
The category of information product that applies for this product is "Natural Resource Plans."

NMFS must comply with the requirements of the Magnuson-Stevens Act, the National Environmental Policy Act, the Administrative Procedure Act, the Paperwork Reduction Act, the Coastal Zone Management Act, the Endangered Species Act, the Marine Mammal Protection Act, the Information Quality Act, and Executive Order 13132 (Federalism).

This action is being developed to comply with all applicable National Standards, including National Standard 2. National Standard 2 states that the FMP's conservation and management measures shall be based upon the best scientific information available. Despite current data limitations, the conservation and management measures proposed to be implemented under this emergency action are based upon the best scientific information available.

The policy choices (i.e., management measures) proposed to be implemented by this document are supported by the available information. The management measures contained in the document are designed to meet the conservation goals and objectives of the FMP.

The supporting materials and analyses used to develop the measures in the document are contained in the document and to some degree in previous amendments, frameworks, and/or FMPs as specified in this document.

The review process for this document involves the Northeast Regional Office and NMFS headquarters. The document was prepared by staff of the Northeast Regional Office with expertise in scallop resource issues, habitat issues, economics, and social sciences. Review by staff at the Regional Office and NMFS headquarters is conducted by those with expertise in fisheries management and policy, habitat conservation, protected species, and compliance with the applicable law. Final approval of the document and clearance of the rule is conducted by staff at NOAA Fisheries Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget.

7.8 Coastal Zone Management Act (CZMA)

Section 307 of the Coastal Zone Management Act (CZMA) is known as the Federal consistency provision. Federal Consistency review requires that "federal actions, occurring inside or outside of a state's coastal zone, that have a reasonable potential to affect the coastal resources or uses of that state's coastal zone, to be consistent with that state's enforceable coastal policies, to the maximum extent practicable." The Council previously made determinations that the FMP was consistent with each state's coastal zone management plan and policies, and each coastal state concurred in these consistency determinations (in Scallop FMP). Since the proposed action does not propose any substantive changes from the FMP, NMFS has determined that this action is consistent with the coastal zone management plan and policies of the coastal states in this region. NMFS will notify CZM state agencies directly.

7.9 Executive Order 12866 (Regulatory Impact Review)

7.9.1 Introduction

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

The RIR also serves as a basis for determining whether any proposed regulations are a "significant regulatory action" under the criteria provided in Executive Order 12866 and whether the proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act of 2180 (RFA). This rule is exempt from the procedures of the RFA to prepare a regulatory flexibility analysis because the rule is issued without opportunity for prior public comment.

This RIR summarizes the effects of the ETA closure considered in this emergency action. The emergency action document contains all the elements of the RIR, and the relevant sections are identified by reference to the document.

The purpose of and the need for action are described in Section 0. Descriptions of the considered alternatives are provided in Section 3.0.

7.9.2 Summary of Regulatory Impacts

The economic impacts of the proposed action on scallop fishery are analyzed in Section 5.2.5 of this document.

Summary of the impacts of the proposed action alternative

The proposed action would not allow access into the ETA to protect scallop recruitment in the area. The impacts of the proposed action would likely have some short-term negative effects on human communities but also medium to high long-term positive effects, as described in Section 5.2.5. The long-term positive effects would likely have a greater impact on human communities than the short-term positive impacts. Because of the epic recruitment in the ETA in 2012 (the 3rd highest since 1979), there is an enormous potential for a large increase in the productivity of the ETA in the next several years. The success of the entire scallop area rotation program depends on timely openings and closing of access areas in order to protect scallop recruitment and optimize yield. This is particularly true in the Mid-Atlantic, where recruitment has been well below average for several years but has recently begun to rebound. If the smaller scallops are protected it would help promote the area rotation program and production in the ETA in the future. Eliminating fishing effort in the ETA could help ensure the overall success of the area rotation program.

Overall, the proposed action, which does not reduce FY 2012 catch and moves fishing effort to other open areas where recruitment does not need protection, is expected to result in higher gross and net revenues than No Action. Because this action will protect scallop recruitment in the Mid-Atlantic, the scallop industry is expected to benefit from the FY 2012 ETA closure over the long term.

7.9.3 Enforcement Costs

The enforcement costs and benefits of the proposed action are within the range of impacts addressed in Section 8.9 of Amendment 10 FSEIS and Section 5.4.22 and Section 5.6.3 of Amendment 11. The proposed action is very similar to the existing measures in terms of the enforcement requirements, since it would entail enforcing a specific scallop area closure. The costs of implementing and enforcing the proposed action are not expected to compromise the effectiveness of implementation and enforcement of this action. Furthermore, there are several mechanisms and systems, such as VMS monitoring and data processing, already in place that will aid in monitoring and enforcement of this action. Therefore, the overall enforcement costs are not expected to change significantly from the levels necessary to enforce measures under the no action regulations.

7.9.4 Determination of Significant Action

This action is not significant under Executive Order 12866 because it would not do any of the following: (1) Have an economic effect of $100 million per year on a continuing basis or adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) represent novel policy issues that may generate an increased level of controversy; (3) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; or (4) materially alter the budgetary impact of entitlements, grants, user fees or loan programs or the rights and obligations of recipients thereof.

As outlined in the summary of impacts above, the proposed action would not allow access into ETA to protect scallop recruitment in the area. Under the proposed action, the total scallop catch specified for FY 2012 will remain the same (i.e., no reduction in catch compared to what was allocated through Framework 22). However, some vessels may have to transit further to different open areas to target scallops. Therefore, the total economic impact is expected to be neutral to low negative over the short term. Because this action will protect scallop recruitment in the Mid-Atlantic, the scallop industry is expected to benefit from this closure over the long term. Thus, the proposed action will not have either a short-term or a long-term negative annual impact on the economy by $100 million or more compared to No Action.

Additionally, this action would not raise novel legal and policy issues, other than those that were already addressed and analyzed in Amendment 10, as well as addressed in Amendment 15 and Framework 22. The proposed action will not adversely affect in a material way the economy, productivity, competition, public health or safety, jobs or state, local, or tribal governments or communities in the long run. The proposed action also does not interfere with an action planned by another agency, since no other agency regulates the level of scallop harvest, nor does it materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligations of recipients.

7.10 Executive Order 13132 (Federalism)

The E.O. on federalism establishes nine fundamental federalism principles for Federal agencies to follow when developing and implementing actions with federalism implications. Previous scallop actions have already described how the management plan is in compliance with this E.O. Furthermore, this action does not contain policies with Federalism implications; thus, preparation of an assessment under E.O. 13132 is not warranted.

8.0 PERSONS & AGENCIES CONSULTED/ HOW TO OBTAIN A COPY OF THIS DOCUMENT

This Environmental Assessment was prepared and evaluated by the National Marine Fisheries Service.

The following persons aided in the preparation of this document: Jennifer Anderson, Peter Christopher, Travis Ford, Emily Gilbert, Brian Hooper, Dvora Hart, Deirdre Boelke (NEFMC), and Demet Hasker (NEFMC). No other agencies or persons were consulted in preparation of this EA.

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