

DRAFT

## **Framework 22 to the Atlantic Sea Scallop FMP**

Including an Environmental Assessment, an Initial Regulatory Flexibility Analysis and Stock Assessment and Fishery Evaluation (SAFE) Report

Prepared by the New England Fishery Management Council, in consultation with the National Marine Fisheries Service and the Mid-Atlantic Fishery Management Council

*Initial Council Meeting: June 22-24, 2010*

*Final Council Meeting: November 16-18, 2010*

*Submission to NMFS: December 2010*

*Intentionally Blank*

**TABLE OF CONTENTS**

1.0 BACKGROUND AND PURPOSE ..... 7

    1.1 Background..... 7

    1.2 Purpose and Need ..... 8

    1.3 Scallop management background ..... 8

    1.4 Detailed background on rotational area management..... 8

2.0 MANAGEMENT ALTERNATIVES UNDER CONSIDERATION ..... 9

    2.1 Summary of the Proposed Action ..... 9

    2.2 No Action..... 9

        2.2.1 No Action..... 9

        2.2.2 No Action adjustments based on decisions in Amendment 15..... 9

        2.2.3 Measures that will be in effect March 1, 2010 until Framework 22 is implemented . 9

    2.3 Acceptable Biological Catch..... 10

    2.4 Summary of FW21 allocation scenarios ..... 10

    2.5 Measures for Limited Access Vessels ..... 14

        2.5.1.1 Adjustments when yellowtail flounder catches reach 10% TAC limit..... 14

    2.6 Measures for General Category Vessels ..... 14

        2.6.1 Allocation for Limited Access General Category IFQ Vessels ..... 14

        2.6.2 Northern Gulf of Maine (NGOM) Hard-TAC ..... 14

        2.6.3 Estimate of catch from LA incidental catch permits ..... 15

    2.7 TAC set-asides for observers (1%) and research (2%)..... 16

        2.7.1 Research priorities for 2011 and 2012 ..... 16

    2.8 Consideration of new rotational area in the Great South Channel (only if small scallops present and only if smaller and/or shorter than area proposed in fw19 and fw21)..... 18

    2.9 Efforts to minimize incidental take of sea turtles as per the march 14, 2008 scallop biological opinion ..... 19

        2.9.1 Alternatives to minimize impacts of incidental take of sea turtles ..... 21

        2.9.2 More than minor impact on the fishery..... 21

    2.10 Procedures to reduce fishing mortality in year two based on updated biomass estimates..... 22

    2.11 Overfishing definition modifications ..... 22

    2.12 Modifications to vessel monitoring systems ..... 22

        2.12.1 Change VMS positioning requirement for LAGC IFQ and LAGC incidental permits to once per hour ..... 22

        2.12.2 Allow a vessel to turn VMS unit off if it does not intend to land scallops..... 23

    2.13 Potential measures that may be included based on additional advisory panel input ... 23

        2.13.1 Delay the opening date of Mid-Atlantic access areas for general category vessels . ..... 23

        2.13.2 Revisit the possession limit of in-shell scallop seaward of the demarcation line. 23

        2.13.3 Split an incidental LAGC permit from other permits ..... 24

3.0 CONSIDERED AND REJECTED ALTERNATIVES ..... 24

    3.1 Extend exemption in GSC for LAGC IFQ vessels in April – June ..... 24

    3.2 Gear modifications to reduce yt bycatch ..... 24

    3.3 Revisit non-payment of observer provider issue ..... 25

4.0 DESCRIPTION OF AFFECTED ENVIRONMENT – SAFE REPORT ..... 26

5.0	ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES .....	26
6.0	COMPLIANCE WITH APPLICABLE LAW .....	26
7.0	GLOSSARY .....	26
8.0	LITERATURE CITED .....	26

**APPENDICIES**

**TABLE OF TABLES**

Table 1- General management structure for area rotation management as implemented by Amendment 10.....	9
--	---

**TABLE OF FIGURES**

Figure 1 - Boundaries of scallop access areas within Multispecies closed areas on Georges Bank .....	12
Figure 2 – Boundaries of scallop access areas in the Mid-Atlantic .....	13
Figure 3 – Scallop recruitment on Georges Bank from the 2009 federal survey (scallops less than 70mm) with potential boundaries for a scallop rotational area within the Great South Channel. 19	
Figure 4 – Area defined as the “Mid-Atlantic” in the 2008 biological opinion - waters south of the northern boundaries of statistical areas 612, 613, 533, 534, 541, 542, and 543. ....	21

## **LIST OF ACRONYMS**

A10 – Amendment 10 to the Atlantic Sea Scallop Fishery Management Plan  
A13 – Amendment 13 to the Northeast Multispecies Fishery Management Plan  
BMSY – Biomass Maximum Sustainable Yield  
BO – Biological opinion  
CEQ – Council on Environmental Quality  
CAI – Closed Area I  
CAII – Closed Area II  
CV – Coefficient of variation, a standard statistical measure of variation, expressed as a percentage of the mean. Lower CVs indicate more accuracy in the estimates and less variation in data.  
CWA – Cape Wind Associates  
DAS – Day-at-sea  
DMV – Delmarva  
DSEIS – Draft Supplemental Environmental Impact Statement  
EA – Environmental Assessment  
ESA – Endangered Species Act  
EFH – Essential Fish Habitat  
EFH designation life stages  
A – Adult life stage  
J – Juvenile life stage  
E – Egg life stage  
ETA – Elephant Trunk Area  
FMP – Fishery Management Plan  
FR – Federal Register  
FSEIS – Final supplemental environmental impact statement  
FW18 – Framework Adjustment 18 to the Atlantic Sea Scallop Fishery Management Plan  
GB – Georges Bank  
GC – General Category  
GOM – Gulf of Maine  
HAPC – Habitat Area of Particular Concern  
HC (L) (S) – Hudson Canyon (Large) (Small)  
LPUE – Landings per unit effort, usually a DAS in this document  
IRFA – Initial Regulatory Flexibility Analysis  
IVR – Interactive Voice Reporting  
LA – Limited access  
LIPA – Long Island Power Authority  
LNG = Liquefied Natural Gas  
MA – Mid-Atlantic  
MAFMC – Mid-Atlantic Fishery Management Council  
M-S Act – Magnuson Stevens Act  
NEFMC – New England Fishery Management Council  
NEFSC – Northeast Fisheries Science Center  
NEPA – National Environmental Policy Act  
NLSA/NL/NLA – Nantucket Lightship Area

NMFS – National Marine Fisheries Service  
NOAA – National Oceanographic Atmospheric Administration  
RIR – Regulatory Impact Review  
SAP – Special access program  
SARC – Stock Assessment Review Committee  
SAW – Stock assessment workshop  
SBNMS – Stellwagen Bank Marine Sanctuary  
SBRM – Standardized bycatch reporting methodology  
SCH – Great South Channel  
SEIS – Supplemental Environmental Impact Statement  
SMAST – School of Marine Science and Technology, University of Massachusetts  
Dartmouth  
SNE – Southern New England  
TAC – Total Allowable Catch. This includes discards for finfish species, but not for scallops which have a much lower discard mortality rate.  
PDT – Scallop Plan Development Team  
U10 – A classification for large scallops, less than 10 meats per pound.  
USGS – United States Geological Survey  
VEC – Valued Ecosystem Component  
VIMS – Virginia Institute of Marine Science  
VMS – Vessel Monitoring System  
VTR – Vessel Trip Reports  
YTF/YT – Yellowtail flounder

## 1.0 BACKGROUND AND PURPOSE

### 1.1 BACKGROUND

In 2004, Amendment 10 introduced rotational area management and changed the way that the Scallop FMP allocates fishing effort for limited access scallop vessels. Instead of allocating an annual pool of DAS for limited access vessels to fish in any area, vessels are now authorized a specific number of trips to fish in controlled access areas defined by the plan or exchange them with another vessel to fish in a different controlled access area. Vessels can fish their open area DAS in any area that is not designated a controlled access area or closed area. Amendment 10 set up this program with a biennial framework process, which means an action is required every two years to allocate fishing effort in both open and access areas. This framework action will set specifications for fishing years 2011 and 2012. Annual specifications also include the specifications for the various limited access general category permits including the overall allocation for limited access general category vessels with IFQ permits, the total hard TAC for the Northern Gulf of Maine, as well as the target TAC for vessels with limited access general category incidental permits.

There are also several other issues that have been included for consideration in this framework that are not directly related to fishery specifications for FY2010. Foremost, in 2008 NMFS published a biological opinion, pursuant to section 7 of the Endangered Species Act (ESA) that considered the effects of the continued authorization of the Atlantic sea scallop fishery on ESA-listed species. That biological opinion included a specific Reasonable and Prudent Measure (RPM) and accompanying Term and Condition (T/C) to limit the amount of allocated scallop fishing effort by limited access scallop vessels that can be used in the area and during the time of year when sea turtle distribution overlaps with scallop fishing activity. This limit is required to be considered in every specification package in the scallop fishery unless the RPM is modified in a future biological opinion.

In addition this framework is considering minor adjustments to aspects of vessel monitoring systems (VMS) and potentially several other issues the Committee has forwarded to the Advisory Panel to determine if they are still necessary. First, should the opening date for Mid-Atlantic access areas be pushed further back in the year for general category vessels? Second, should a vessel be allowed to split an incidental LAGC permit from other permits? And finally, does the general category possession limit of 100 bushels seaward of the VMS demarcation line need to be reconsidered?

In summary, this framework adjustment will address several primary management issues:

- Fishery specifications for FY2011 and FY2012 including setting of acceptable biological catch as required by the reauthorized MSA and compliance with the first RPM and T/C required in the recent biological opinion
- Area rotation adjustments (if necessary) including consideration of a new scallop access area on Georges Bank (*only if high concentrations of biomass present in 2010 surveys and only if the area is either smaller and/or closed for a shorter period of time*)
- Other measures including specific VMS restrictions, delaying the opening date of Mid-Atlantic access areas for general category vessels, and potentially revisiting the

possession limit of scallop seaward of the demarcation line. *[Note: these measures may not be included in the framework if input from the AP suggests they are not critical issues to address at this time – Committee is going to revisit]*

## **1.2 PURPOSE AND NEED**

The purpose of this action is to achieve the objectives of the Atlantic Sea Scallop Fishery Management Plan (FMP) to prevent overfishing and improve yield-per-recruit from the fishery. The primary need for this action is to set specifications to adjust the day-at-sea (DAS) allocations, general category fishery allocations and area rotation schedule for the 2011 and 2012 fishing years. In addition, the scallop fishery is subject to requirements of the 2008 Atlantic Sea Scallop FMP Biological Opinion, so this action will also include specific measures to minimize impacts of incidental take of sea turtles.

## **1.3 SCALLOP MANAGEMENT BACKGROUND**

*To be completed later*

## **1.4 DETAILED BACKGROUND ON ROTATIONAL AREA MANAGEMENT**

Amendment 10 introduced area rotation: areas that contain beds of small scallops are closed before the scallops experience fishing mortality, then the areas re-open when scallops are larger, producing more yield-per-recruit. The details of which areas should close, for how long and at what level they should be fished were described and analyzed in Amendment 10. Except for the access areas within the groundfish closed areas on Georges Bank, all other scallop rotational areas should have flexible boundaries. Amendment 10 included a detailed set of criteria or guidelines that would be applied for closing and re-opening areas. Framework adjustments would then be used to actually implement the closures and allocate access in re-opened areas. The general management structure for area rotation management is described in 1.4. An area would close when the expected increase in exploitable biomass in the absence of fishing mortality exceeds 30% per year, and re-open to fishing when the annual increase in the absence of fishing mortality is less than 15% per year. Area rotation allows for differences in fishing mortality targets to catch scallops at higher than normal rates by using a time averaged fishing mortality so the average for an area since the beginning of the last closure is equal to the resource-wide fishing mortality target (80% of  $F_{max}$ , estimated to be  $F = 0.23$ ).

**Table 1- General management structure for area rotation management as implemented by Amendment 10**

<b>Area type</b>	<b>Criteria for rotation area management consideration</b>	<b>General management rules</b>	<b>Who may fish</b>
Closed rotation	Rate of biomass growth exceeds 30% per year if closed.	No scallop fishing allowed Scallop limited access and general category vessels may transit closed rotation areas provided fishing gear is properly stowed. Scallop bycatch must be returned intact to the water in the general location of capture.	Any vessel may fish with gear other than a scallop dredge or scallop trawl Zero scallop possession limit
Re-opened controlled access	A previously closed rotation area where the rate of biomass growth is less than 15% per year if closure continues.  Status expires when time averaged mortality increases to average the resource-wide target, i.e. as defined by the Council by setting the annual mortality targets for a re-opened area.	Fishing mortality target set by framework adjustment subject to guidelines determined by time averaging since the beginning of the most recent closure. Maximum number of limited access trips will be determined from permit activity, scallop possession limits, and TACs associated with the time-average annual fishing mortality target. Transfers of scallops at sea would be prohibited	Limited access vessels may fish for scallops only on authorized trips. Vessels with general category permits will be allowed to target scallops or retain scallop incidental catch, with a 400 pounds scallop possession limit in accordance with general category rules.
Open	Scallop resource does not meet criteria to be classified as a closed rotation or re-opened controlled access area	Limited access vessels may target scallops on an open area day-at-sea General category vessels may target sea scallops with dredges or trawls under existing rules. Transfers of scallops at sea would be prohibited	All vessels may fish for scallops and other species under applicable rules.

## **2.0 MANAGEMENT ALTERNATIVES UNDER CONSIDERATION**

### **2.1 SUMMARY OF THE PROPOSED ACTION**

#### **2.2 NO ACTION**

This section describes the No Action alternative as well as several other alternatives that are dependent on full implementation of the IFQ program for limited access general category qualifies approved under Amendment 11 and measures that would be in place if this action (Framework 21) were delayed.

##### **2.2.1 No Action**

##### **2.2.2 No Action adjustments based on decisions in Amendment 15**

*Will also need to reference decisions made about EFH areas based on Phase II of Omnibus Amendment.*

##### **2.2.3 Measures that will be in effect March 1, 2010 until Framework 22 is implemented**

PDT will need to develop specific measures that prevent overfishing in FY2011 since FW22 will be implemented after March 1, 2011.

### **2.3 ACCEPTABLE BIOLOGICAL CATCH**

The MSA was reauthorized in 2007. Section 104(a) (10) of the Act established new requirements to end and prevent overfishing, including annual catch limits (ACLs) and accountability measures (AMs). Section 303(a)(15) was added to the MSA to read as follows: “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.” ACLs and AMs are required by fishing year 2010 if overfishing is occurring in a fishery, and they are required for all other fisheries by fishing year 2011. The Council initiated Scallop Amendment 15 to comply with these new ACL requirements, and that action is expected to be implemented in June 2010, just after the start of the 2011 fishing year. However, the Act also requires that an acceptable biological catch be set in each fishery, and that provision is required in actions that set specifications after the Act was implemented (January 2007).

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. The determination of ABC will consider scientific uncertainty and the Council may not exceed the fishing level recommendations of its Science and Statistical Committee (SSC) in setting ACLs (Section 302(h)(6)). The MSA enhanced the role of the SSCs, mandating that they shall provide ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch (MSA 302(g)(1)(B)). This requirement for an SSC recommendation for ABC was effective in January 2007.

Therefore, while the full ACL program will not be implemented in the Scallop FMP until 2011 under Amendment 15 (if approved), this action is still required to include an ABC recommendation by the SSC, and the Council may not set management measures so that catch exceeds that amount. The SSC identified reviewed an analysis prepared by the Scallop PDT

The PDT plans to update the same ABC control rule that was developed in Amendment 15 and used for setting ABC in Framework 21 (FY2010). More recent survey and fishery data will be used through 2010 to set the ABC for FY2011 and 2012 in Framework 22.

The ABC control rule from Amendment 15 is based on analyses prepared by the Scallop PDT that would set ABC at the fishing mortality rate estimated to have 25% chance of exceeding OFL. In summary, Monte-Carlo simulations were used to determine the distribution around the model parameters such as growth, natural mortality, discard mortality etc. The probability of overfishing was plotted alongside the fraction loss of YPR to search for a best risk scenario. The details of these analyses and the SSC final recommendations are included in Amendment 15.

### **2.4 SUMMARY OF FW21 ALLOCATION SCENARIOS**

The PDT is still exploring the most appropriate scenarios.

The PDT expects 4 or 5 AA trips in each year depending on the resource availability in Mid-Atlantic access areas.

The PDT needs to wait until the results from the surveys this summer are completed, but some scenarios discussed so far are:

2011: 1 Del, 1 ETA, 2 HC and 1 CAI = 5 total

2012: 2 Del, 2 HC, 1 CA2 = 5 total

Or with no access area in ETA for 2011:

2011: 2 Del, 2 HC, and 1 CA1 = 5 total

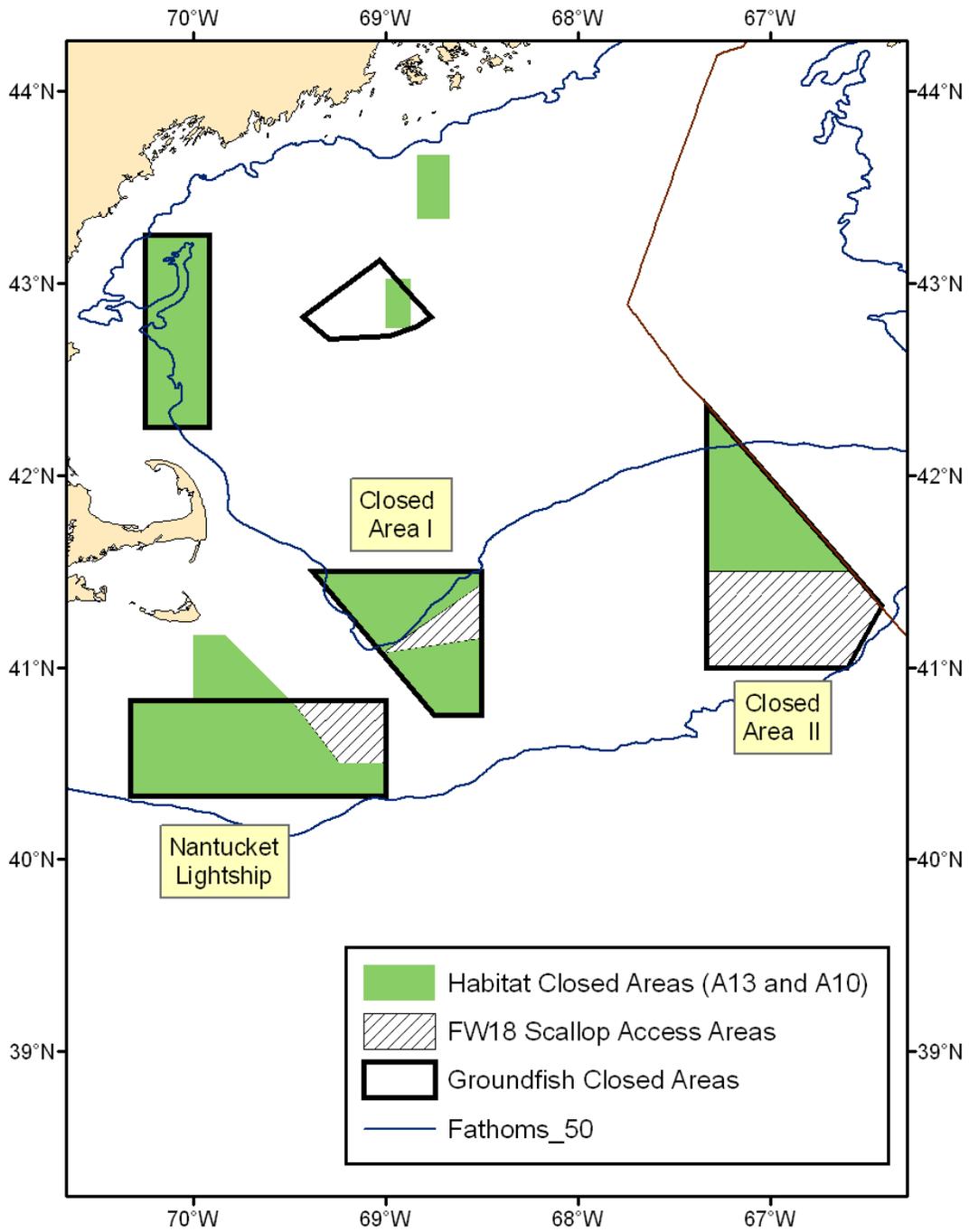
2012: 2 Del, 2 HC, and 1 CA2 = 5 total

*There is some concern among the PDT that projected AA effort in the MA may be higher than the area can support, results from the surveys this summer will be critical to see if the MA AAs can support 4 trips. Biomass in ETA may not support a trip in 2011.*

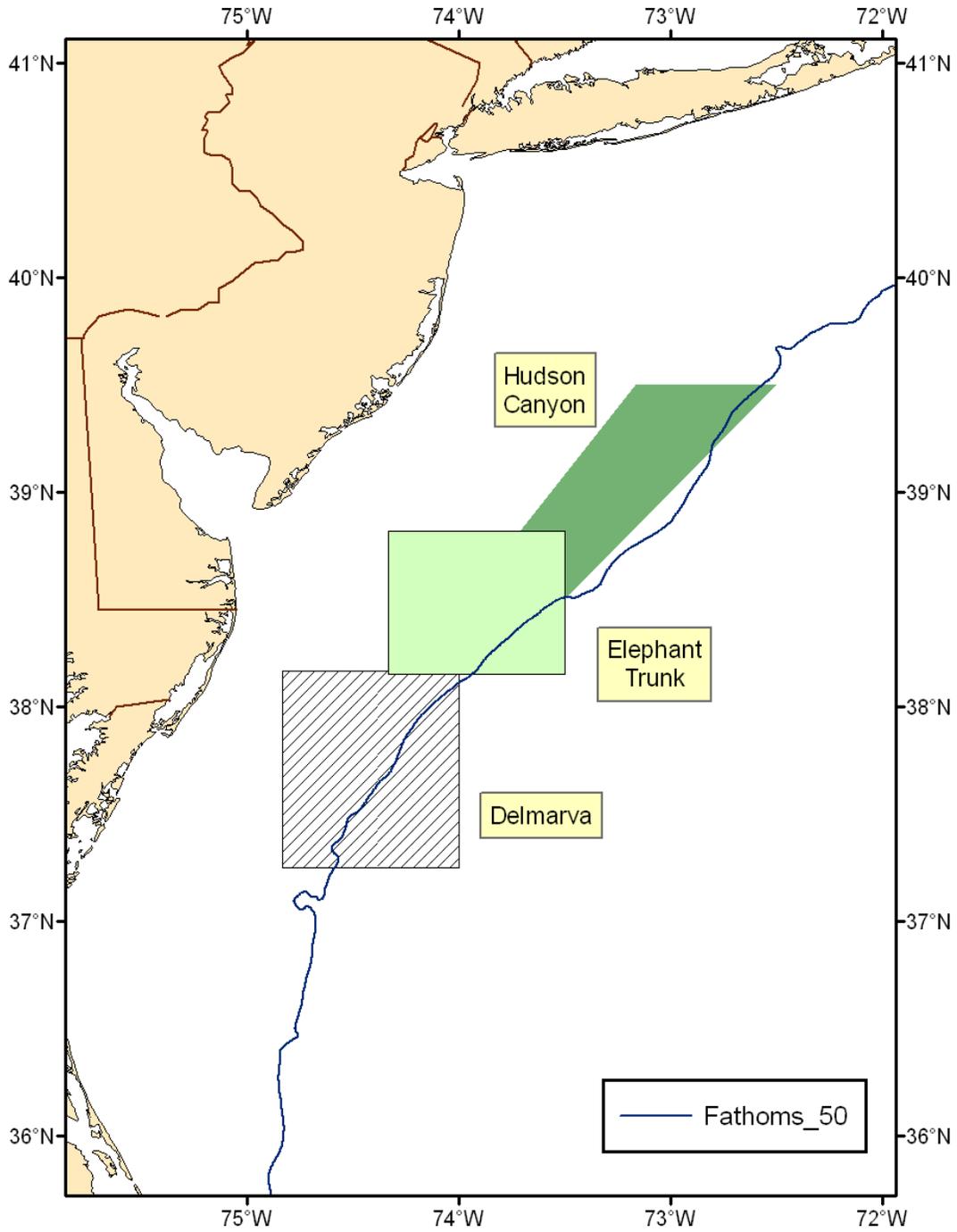
*In addition, the PDT discussed that FW22 may want to consider access in more parts of CA2 in 2012 (not just the existing access area in the south of that area). The PDT recommends that the committee may want to consider a scenario that would allow access in the area to the north of the cod HAPC, as well as all of CA2 so that the impacts could be compared. The PDT is not sure if there is enough biomass north of the cod HAPC to warrant access, but is generally supportive of verifying that. It was added that different parts of CA2 could be opened at different times of the year to further reduce YT bycatch.*

***The Committee agreed that the PDT should explore additional options in CA2 for access in this action.*** *If there is sufficient biomass in other portions of CA2 the PDT will have to work with the GF PDT to assess impacts on bycatch. The PDT and Committee discussed that there is less YT in the area in the north and providing more access there could reduce pressure on YT in the southern area as well as open areas if more access is provided as a result of opening the northern part of CA2. If more access is granted, this FW may have to become a joint action.*

Figure 1 - Boundaries of scallop access areas within Multispecies closed areas on Georges Bank



**Figure 2 – Boundaries of scallop access areas in the Mid-Atlantic**



## **2.5 MEASURES FOR LIMITED ACCESS VESSELS**

Under current regulations (CFR §648.60), limited access vessels are authorized to take a certain amount of trips to each controlled access area during a fishing year. Each full-time vessel has been authorized to land 18,000 pounds of scallop meat per trip (40% of that for part-time vessels and 8.33% for occasional vessels). Fishing in controlled access areas may be subject to other limits such as seasons or potential closures due to TACs for yellowtail flounder. The maximum number of trips per area will be considered in this action for FY2011 and FY2012 to prevent overfishing and optimize yield. Access areas include areas within the Multispecies closed areas (Closed Area I, Closed Area II, and Nantucket Lightship), as well as areas specifically closed as scallop rotational closed areas (Hudson Canyon, Elephant Trunk, and Delmarva) (See Figure 1 and Figure 2).

Limited access vessels are also allocated a specific number of open area DAS in biennial frameworks to achieve optimum yield at the current target fishing mortality of XXX for the total scallop resource. The open area DAS allocations depend on what controlled access areas are available and the number of trips the Council recommends to allocate per area, as well as allocations made to the general category fishery. The open area allocations are also based on the assumption that a part-time vessel receives 40% of a full-time allocation, and an occasional vessel receives 8.33% of a full-time vessel.

### **2.5.1.1 Adjustments when yellowtail flounder catches reach 10% TAC limit**

If the 10% yellowtail flounder (YT) bycatch TAC is reached and the Georges Bank access areas close, additional open area DAS are allocated for each trip not taken before the area closes, but at a prorated value of DAS. The prorated amount is calculated to achieve an equal amount of scallop mortality per DAS. This calculation takes into account the expected average landings per DAS based on relative biomass and scallop size in the open areas, compared to the GB access areas.

*The PDT also plans to consider a different compensation for vessels if an area closes early due to the YT bycatch cap being reached for that area. For example, the PDT may examine if unused trips could be used in other access areas instead, provided there are areas with sufficient resource for additional effort.*

## **2.6 MEASURES FOR GENERAL CATEGORY VESSELS**

### **2.6.1 Allocation for Limited Access General Category IFQ Vessels**

*Total poundage and number of AA trips*

### **2.6.2 Northern Gulf of Maine (NGOM) Hard-TAC**

The Council approved a separate limited entry program for the NGOM with a hard-TAC. Framework 21 will need to consider a separate hard TAC for this area for 2010. Individuals qualified for a permit if their vessel had a general category permit when the control date was implemented (November 1, 2004). There is no landings qualification for this permit. Vessels

would be restricted to fish in this area under a 200 pound possession limit until the overall hard-TAC was reached. Currently there are approximately over 100 vessels that qualified for this permit.

Amendment 11 specifies that the Scallop PDT will recommend a hard-TAC for the federal portion of the scallop resource in the NGOM. The amendment recommends that the hard-TAC be determined using historical landings until funding is secured to undertake a NGOM stock assessment. The hard TAC for 2010 was 70,000 pounds. The recent stock assessment included a biomass estimate for the NGOM based on a survey that was conducted in that area in 2009. Appendix XXX includes the results of the NGOM resource survey.

*The PDT will use the biomass estimate prepared by SAW50 and calculate an appropriate hard TAC for 2011 and 2012.*

### **2.6.3 Estimate of catch from LA incidental catch permits**

Amendment 11 includes a provision that the Scallop FMP should consider the level of mortality from incidental catch and remove that from the projected total catch before allocations are made. The amendment requires the PDT to develop an estimate of mortality from incidental catch and remove that from the total. This section includes a summary of the PDT estimate and the value that was removed from the total projected catch before allocations to the limited access and general category fisheries were made. In 2010, just under 300 vessels are expected to qualify for incidental permits.

In Framework 19 the PDT reviewed incidental landings from previous years (<40 pounds per trip) to estimate what level of projected catch should be removed in future years. According to the dealer database, approximately 10,000 to 27,000 pounds of scallops have been landed on trips with less than 40 pounds. According to the VTR database, closer to 30,000 pounds have been caught in previous years in increments less than 40 pounds. The PDT discussed that it is more appropriate to use the VTR data as a starting point for this estimate since incidental catch is not always sold to a dealer (i.e., it is consumed for personal use). The PDT also recommended that the average landings from the VTR database should be increased to some degree to account for an expected increase in scallop landings by incidental catch permits. Since some vessels are not going to qualify for a limited entry general category IFQ permit under Amendment 11, landing scallops under incidental catch may be the only other alternative for some vessels (assuming the vessels had a general category permit before the control date).

Therefore in FW21, the PDT recommended taking VTR landings analyzed in FW19 as a starting point for an estimate of mortality from incidental catch and increasing that to 50,000 pounds to account for an expected increase due to measures implemented by Amendment 11. This amount will be removed from the total projected catch before allocations to the LA and LAGC fisheries.

*PDT will update this section using landings information from the relatively new LAGC incidental permit.*

## **2.7 TAC SET-ASIDES FOR OBSERVERS (1%) AND RESEARCH (2%)**

One-percent of the TAC for each access area and open area DAS will be set-aside to help fund observers. In addition, 2% of the TAC for each access area and open area DAS will be set-aside to fund scallop-related research. The percent of the TAC and total DAS set aside for observers and research will be removed before allocations are set for limited access and general category fisheries.

### **2.7.1 Research priorities for 2011 and 2012**

The RSA announcement for federal funding came out earlier than in previous years in an attempt to expedite the process. Before 2010 the announcement came out after final decision on the Framework when final allocations were known. This resulted in delayed responses and made it very difficult for researchers to complete all compensation for research before the end of the fishing year. In 2010 the announcement for available funding came out in June 2009; it did not include the precise amounts of RSA available and did not require applicants to apply for a certain amount of RSA compensation in DAS and/or access area pounds. Instead, applicants included an estimate of what their research and compensation needs were in dollar values.

The Scallop Committee approved research priorities in May 2010 for the 2011 and 2012 fishing years so that the announcement for funding could be available earlier again, June 2010. The list below includes the research priorities approved by the Scallop Committee on May 19, 2010. As suggested by the PDT, the Committee supported moving two research issues from the “other” category to “medium” to recognize that they are more important research issues for management. Specifically, the recent assessment (SAW50) identified that there are several critical aspects of scallop biology that are still relatively uncertain: incidental gear mortality, discard mortality and seasonal growth. In addition, recent fishery data and industry input suggests that there is additional scallop biomass outside of the current survey strata, so specific surveys of these areas could help better define the total scallop biomass. These two modifications have been underlined below; all other research priorities are the same from the 2010 RSA program.

HIGHEST PRIORITIES (not listed in order of importance):

- An intensive industry-based survey of each of the access areas (access areas in Georges Bank including Closed Area I, Closed Area II, and Nantucket Lightship, as well as Elephant Trunk, Delmarva, and Hudson Canyon). These surveys can then be used to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August 2010.
- Identification and evaluation of methods to reduce bycatch of all managed species (i.e., gear research).

MEDIUM PRIORITY (not listed in order of importance):

- Identification of sources of sea turtle interactions and/or identification of ways to minimize interactions with sea turtles. Two priority topics identified include evaluation and analysis of factors affecting bycatch rates of sea turtles and development of scallop dredge and trawl operations that would reduce or eliminate the threat or harm of sea turtle interactions. Other issues related to sea turtle research include, but are not limited to: gear modifications or fishing techniques that may be used to reduce or eliminate the

threat of sea turtle interactions without unacceptable reduction in scallop retention, using available and appropriate technology to quantify the extent that chain mats reduce turtle mortalities, comparison and analysis of turtle capture rates of similar gear in other fisheries, and turtle behavior.

- Scallop biology, specifically studies aimed at understanding incidental gear mortality, discard mortality and seasonal growth.
- Other surveys, including areas not surveyed by the annual NMFS survey (i.e., federal waters in the Northern Gulf of Maine management area and Southern New England).

OTHER PRIORITIES (not listed in order of importance):

- Scallop biology, including studies aimed at understanding recruitment processes (reproduction, larval and early post-settlement stages), growth, and natural mortality (including predation and disease).
- Identification and evaluation of methods to reduce habitat impacts, including, but not limited to: broader investigation of variability in dredging efficiency across habitats, times, areas, and gear designs; and research on habitat effects from scallop fishing and development of practicable methods to minimize or mitigate those impacts.
- Habitat characterization research including, but not limited to: video and/or photo transects of the bottom within scallop access areas and within closed scallop areas and in comparable fished areas that are both subject and not subject to scallop fishing before and after scallop fishing commences; development of high resolution sediment mapping of scallop fishing areas using Canadian sea scallop industry mapping efforts as an example process; identification of nursery and over-wintering habitats of species that are vulnerable to habitat alteration by scallop fishing; and other research that relates to habitats affected by scallop fishing, including, but not limited to, long-term or chronic effects of scallop fishing on marine resource productivity, other ecosystem effects, habitat recovery potential, and fine scale fishing effort in relation to fine scale habitat distribution. In particular, projects that directly support evaluation of present and candidate EFH closures and HAPCs to assess whether these areas are accomplishing their stated purposes and to assist better definition of the complex ecosystem processes that occur in these areas.
- Improved information concerning scallop abundance and evaluation of the distribution, size composition, and density of scallops, including but not limited to: efforts to develop a cooperative industry-based resource survey, high resolution surveys that include distribution, biomass of exploitable size scallops, recruitment, mortality, and growth rate information, research that provides more detailed scallop life history information (especially on age and area specific natural mortality and growth) and to identify stock-recruitment relationships, intensive sampling on both sides of access boundaries for fishing year 2007 and in subsequent years to gauge the short-and long-terms effects of fishing on the resource.
- Scallop and area management research, including but not limited to: evaluation of ways to control predation on scallops; research to actively manage spat collection and seeding of sea scallops; social and economic impacts and consequences of closing areas to enhance productivity and improve yield of sea scallops and other species; and estimation of factors affecting fishing power for each limited access vessel.

- Research projects that would help calibrate the transition of the federal dredge survey, or projects that compare various survey techniques and methods that would assist with the current transition period of the federal scallop dredge survey.

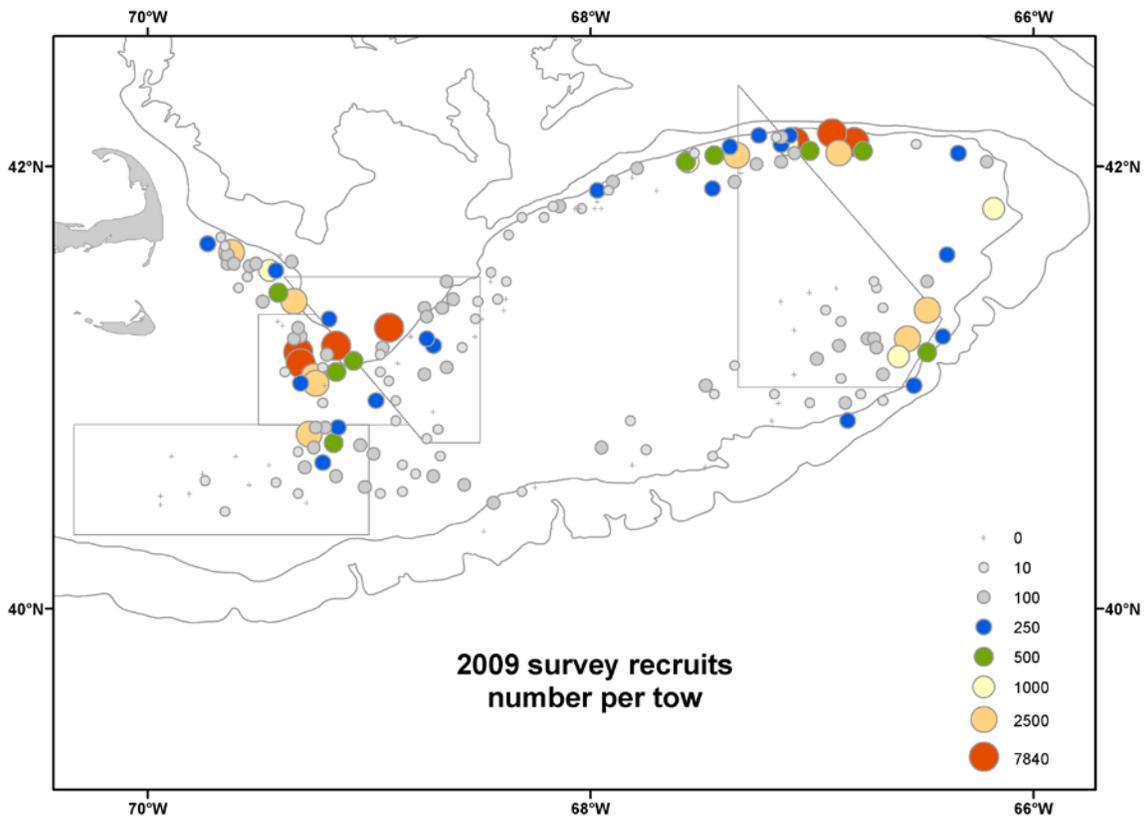
## **2.8 CONSIDERATION OF NEW ROTATIONAL AREA IN THE GREAT SOUTH CHANNEL (ONLY IF SMALL SCALLOPS PRESENT AND ONLY IF SMALLER AND/OR SHORTER THAN AREA PROPOSED IN FW19 AND FW21)**

Amendment 10 defines the criteria for closing an area to protect young scallops. Under adaptive area rotation, an area would close when the expected increase in exploitable biomass in the absence of fishing mortality exceeds 30% per year and re-open to fishing when the annual increase in the absence of fishing mortality is less than 15% per year. Identification of areas would be based on a combination of the NEFSC dredge survey and available industry-based surveys. The boundaries are to be based on the distribution and abundance of scallops at size; ten-minute squares are the basis for evaluating continuous blocks that may be closed. The guidelines are intended to keep the size of the areas large enough and regular in shape to be effective, while allow a degree of flexibility. The Council and NMFS are not bound to closing an area that meets the criteria and the Council and NMFS may deviate from the guidelines to achieve optimum yield.

If any areas qualify, the area would close to all scallop vessels and vessels would not be permitted in that area until a later date when biomass estimates project higher yields. The Council is not required to implement these rotational closed areas just because they meet the criteria recommended in Amendment 10 for new closures, but they should be considered.

*The PDT and Committee discussed that if large concentrations of small scallops are seen in the Channel area again it may not be advantageous to consider the same area in FW22. The Council chose not to close that area in both FW19 and FW21 for a handful of reasons that still exist. However, the Committee is supportive of the PDT exploring slightly different alternatives that may not maximize yield in that area, but increase it compared to leaving the area open. For example, a smaller or similar area could close in 2011 only and reopen in 2012, rather than closing the area for three years. That would protect the large year classes that were seen in that area in 2008 and 2009 for one more year increasing yield for an opening in 2012.*

**Figure 3 – Scallop recruitment on Georges Bank from the 2009 federal survey (scallops less than 70mm) with potential boundaries for a scallop rotational area within the Great South Channel**



### **2.9 EFFORTS TO MINIMIZE INCIDENTAL TAKE OF SEA TURTLES AS PER THE MARCH 14, 2008 SCALLOP BIOLOGICAL OPINION**

On March 14, 2008, NMFS completed an ESA Section 7 Consultation on the Atlantic Sea Scallop Fishery Management Plan.<sup>1</sup> Under the ESA, each Federal agency is required to ensure its actions are not likely to jeopardize the continued existence of any listed species or critical habitat. If a Federal action is likely to adversely affect a listed species, formal consultation is necessary. Five formal Section 7 consultations, with resulting biological opinions, have been completed on the Atlantic sea scallop fishery to date. All five have had the same conclusion: the continued authorization of the scallop fishery may adversely affect, but is not likely to jeopardize the continued existence of four sea turtles (loggerheads, green, Kemp’s ridley, and leatherback).

In the accompanying Incidental Take Statement, NMFS is required to identify and implement non-discretionary reasonable and prudent measures (RPMs) necessary or appropriate to minimize the impacts of any incidental take, as well as Terms and Conditions (T/C) for

<sup>1</sup> The full biological opinion can be found at [http://www.nero.noaa.gov/prot\\_res/section7/](http://www.nero.noaa.gov/prot_res/section7/).

implementing each RPM. RPMs and T/C cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes. Five RPMs and T/Cs were identified in the March 2008 biological opinion. One RPM requires a limit of effort in the Mid-Atlantic during times when sea turtle distribution is expected to overlap with fishing activity; the other four are related to ongoing research needs and identification of measures to reduce interactions and/or the severity of such interactions.

The language of the first RPM and term and condition are below:

***Reasonable and Prudent Measures***

*NMFS has determined that the following reasonable and prudent measures are necessary or appropriate to minimize impacts of incidental take of sea turtles:*

*NMFS must limit the amount of allocated scallop fishing effort by “Limited access scallop vessels” as such vessels are defined in the regulations (50 CFR 648.2), that can be used in the area and during the time of year when sea turtle distribution overlaps with scallop fishing activity (amended February 5, 2009).*

***Terms and Conditions***

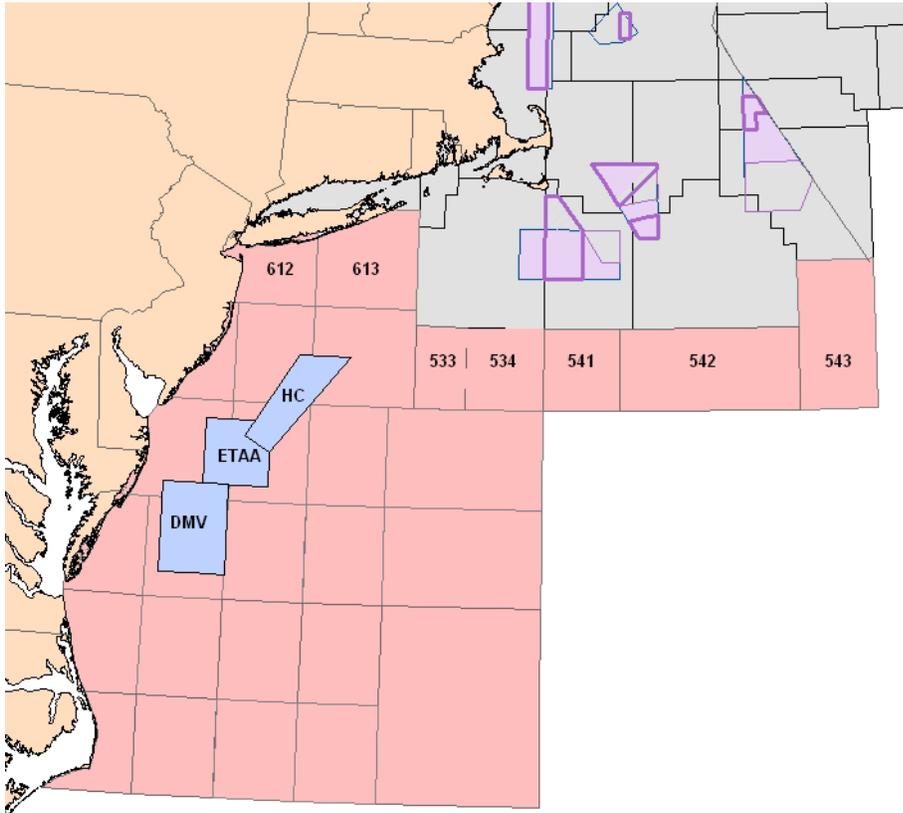
*In order to be exempt from the prohibitions of section 9 of the ESA, and regulations issued pursuant to section 4(d), NMFS must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.*

*To comply with 1 above, no later than the 2010 scallop fishing year, NMFS must limit the amount of allocated limited access scallop fishing effort that can be used in waters south of the northern boundaries of statistical areas 612, 613, 533, 534, 541-543 during the periods in which turtle takes have occurred. Restrictions on fishing effort described above shall be limited to a level that will not result in more than a minor impact on the fishery. (Amended February 5, 2009)*

Framework 21 was the first action that implemented fishery specifications after this biological opinion took effect. The Council considered a range of options to comply with these requirements and ultimately selected a combination of measures that limited the number of trips each limited access vessel can take in Mid-Atlantic access areas between June 15 and October 31, as well as a seasonal closure in both Delmarva and Elephant Trunk from September 1 through October 31.

The alternatives in this section have been developed to comply with the RPM and T/C above. The figure below depicts the area that is referenced in the first Term and Condition. It is referenced as the “Mid-Atlantic” within this document.

**Figure 4 – Area defined as the “Mid-Atlantic” in the 2008 biological opinion - waters south of the northern boundaries of statistical areas 612, 613, 533, 534, 541, 542, and 543.**



### **2.9.1 Alternatives to minimize impacts of incidental take of sea turtles**

*The PDT is still developing specific measures for this section, but they will likely be similar to what was considered in FW21. The PDT is going to pursue development of an alternative that would limit open area DAS as well as access area effort. In addition, the PDT may also explore if a specific measure within ETA is viable if that area reverts to an open area.*

### **2.9.2 More than minor impact on the fishery**

During review of the biological opinion and development of Framework 21 the PDT developed a method to identify a threshold for a more than minor impact on the fishery. The more than minor analysis evaluates the percent change in effort shift caused by a specific limitation on effort, and the resulting impact that shift would have on overall fishing mortality imposed by the RPM and Term and Condition. A model was developed that estimated changes in  $F$ , effort shifts and impacts on revenue when limitations are placed on the scallop fishery by season and/or area. The PDT used this approach for Framework 21 in terms of assessing which measures meet the requirements of an RPM in terms of whether they have more than a minor impact on the fishery.

*The PDT plans to use a similar approach for assessing the alternatives considered in this action and whether they are expected to cause a more than minor change on the fishery based on projected effort patterns for 2011 and 2012.*

## **2.10 PROCEDURES TO REDUCE FISHING MORTALITY IN YEAR TWO BASED ON UPDATED BIOMASS ESTIMATES**

*The PDT is still exploring which specific “notice action” alternatives should be considered. In the past biennial actions have included measures that automatically reduce effort in year two if updated survey results suggest that biomass is much lower than predicted, or overall  $F$  is higher. The FW must include all the specific conditions and actions that would be taken by the RA in year 2.*

*The possible measures the PDT is discussing for this section are: reduced trips in Delmarva and/or Hudson Canyon in 2012 if the survey results in 2011 are much lower than projected. Second, if the survey in 2011 sees a large concentration of small biomass in ETA the area could close for 2012. Concerns about this were raised and the PDT may not continue to pursue, especially since the scallops will be small and the area could be considered in 2013 under FW23.*

## **2.11 OVERFISHING DEFINITION MODIFICATIONS**

SAW50 reviewed and updated the stock assessment of the sea scallop resource. The assessment summary report is not available yet, but the assessment committee approved several new reference points. These new reference points will need to be integrated in the existing overfishing definition.

*Potentially the current  $F_{max}$  will be replaced with a new estimate of  $F_{msy}$  and there are new biomass thresholds for when the stock is overfished as well. After the assessment is final these will be integrated into FW22.*

## **2.12 MODIFICATIONS TO VESSEL MONITORING SYSTEMS**

Two specific requests about VMS were raised to the Committee for consideration in FW22. As the Committee reviewed these restrictions it was discussed that more changes to the VMS program may be needed to make the program as consistent and cost effective as possible.

### **2.12.1 Change VMS positioning requirement for LAGC IFQ and LAGC incidental permits to once per hour**

From a letter of correspondence it was explained that it costs \$50 a month (\$600 annually) to have 30 minute polling. And for an incidental LAGC permit 50 pounds a trip will not recoup that cost. Some permit types can power down, but this permit can't. This issue was raised during development of FW21 and was delayed until FW22 because it was raised too late in the process.

NMFS did comment that Enforcement prefers 30 minute polling to help enforce fishing near closure boundaries. OLE requests that they be given the ability to increase polling frequency for

vessels fishing near closed areas. It is unclear whether cost of increased polling is borne by the vessels or OLE, and it is also unclear how automatic this would be. **The Committee requested staff to investigate the issue further and get more input from OLE about possible modifications to the program that would help reduce costs for all permit types.**

#### **2.12.2 Allow a vessel to turn VMS unit off if it does not intend to land scallops**

If a vessel does not intend to land scallops it would not have to have an active VMS unit.

When this alternative was reviewed by OLE, their initial response was that the provision requires that the vessel should be rendered “incapable from scallop fishing” for the remainder of the fishing year. Furthermore, the name and location of the vessel(s) removing said units have to be reported by the owners to OLE immediately.

**The Committee decided that the FW should allow vessels to turn off their VMS if they do not intend to land scallops if they render their vessels incapable of landing scallops (remove dredge, wire, and main block). More OLE and AP input and background will be needed for this alternative. Overall, the Committee is supportive of considering measures that will make VMS as cost effective as possible but not compromise enforcement capabilities.**

### **2.13 POTENTIAL MEASURES THAT MAY BE INCLUDED BASED ON ADDITIONAL ADVISORY PANEL INPUT**

The Committee is not sure yet if the measures below will remain in FW22 or not. They forwarded these items to the Advisory Panel to seek additional input. Some of these issues may not be as critical as they were before the IFQ program was fully implemented, and some may not be widespread issues that need to be addressed in this action.

#### **2.13.1 Delay the opening date of Mid-Atlantic access areas for general category vessels**

Mid-Atlantic access areas would open on May 1 rather than March 1 for general category vessels only.

*PDT discussed that moving the opening date for MA access areas has come up in the past and is a reasonable idea to promote fishing in better weather and months with higher meat weights, but may not be as necessary anymore. ETA is ending soon as an access area, derby fishing seems to be slowing down, and pushing the start date too far back could be problematic with current RPM measures to reduce impacts on sea turtles. **The Committee felt that this was not a high priority for this action and if it requires too much development will have to be dropped later. The Committee suggested the issue be forwarded to the AP so they could comment more on how necessary this measure is to consider in FW22.***

#### **2.13.2 Revisit the possession limit of in-shell scallop seaward of the demarcation line**

This alternative would reduce the possession limit seaward of the VMS demarcation line from 100 bu. to something less (i.e. 65 or 75 bu.). NMFS Enforcement agents have voiced concerns

that the regulations allow for LAGC vessels to possess up to 100 bu of scallops seaward of the VMS Demarcation Line, but prohibit vessels from possessing more than 50 bu when shoreward of the VMS Demarcation Line has influenced fishing behavior. There are reports that vessels are targeting more scallops and buoying them off to be landed the next day.

*The PDT discussed that this activity did not seem to be illegal, but agreed that 100 bushels may be excessive. The additional bushels were permitted through Amendment 11 to acknowledge that there is seasonal and spatial variation in meat yield, so some flexibility is warranted, but 100 bushels may be too high. The PDT is not sure how prevalent this activity is and if there are any quality and mortality issues. **The Committee decided to forward this issue to the AP to see how widespread this issue is and to ask the PDT if this is a significant problem or not and to consider what a more appropriate bushel equivalent would be to account for meat weight variations.***

### **2.13.3 Split an incidental LAGC permit from other permits**

This alternative would allow a vessel to sell their incidental LAGC permit to another vessel that does not have one.

*PDT did not have strong opinions about this but voiced some concern about conflicts with intent of Amendment 11 and consistency with general permit splitting provisions. **The Committee felt that this was not a high priority for this action and if it requires too much development will have to be dropped later. The Committee suggested the issue be forwarded to the AP so they could comment more on how necessary this measure is to consider in FW22.***

## **3.0 CONSIDERED AND REJECTED ALTERNATIVES**

### **3.1 EXTEND EXEMPTION IN GSC FOR LAGC IFQ VESSELS IN APRIL – JUNE**

This alternative would extend exemption in the GSC area in April-June for LAGC IFQ permit holders if data support it. This issue was raised during development of FW21 but was delayed until FW22 because there was not time to make FW21 a joint action and there was insufficient time to analyze it.

***Rationale for rejection:*** In April 2010 the Council passed a motion to include this alternative in Framework 45 to the Multispecies FMP. That is the appropriate FMP to implement this exemption. Final action on that framework is expected in November 2010, the same as FW22.

### **3.2 GEAR MODIFICATIONS TO REDUCE YT BYCATCH**

The specific gear restrictions discussed were modifications to twine top regulations (reduce the hanging ratio and institute a minimum twine top length - i.e. maximum of seven rings up from the club stick) and require all vessels to use the “turtle dredge”. The twine top issues seem straight forward, but the only research available is a master’s thesis. These modifications are not expected to have major impacts on reducing bycatch, but small adjustments could help the larger issue. It was discussed that the wording would have to be very specific so it can be enforced

correctly. For example, not more than 2:1 ratio, or a range, or specify that the hanging ratio can't exceed 2.5 ratio. It was also discussed that the industry should consider doing this voluntarily to avoid complicated gear regulations. The PDT will explore the status of these reports and determine if they can even be used to support a Council action; specifically, do they meet the RSC standards.

As for the turtle dredge it was explained that many vessels are currently using this dredge already and while there is some analyses available, more is going to be done this summer. The PDT requested that the Observer Office provide some data on scallop gear so we have a better idea of what vessels are currently doing now. For example, what is the average number of rings, number of mesh on the side, hanging ratio, how many vessels are already using the turtle dredge and in what areas.

***Rationale for rejection:*** The Committee decided not to consider gear modifications in this action due to the complexity of gear regulations and the time and analysis the alternatives would take. In addition, research is planned for this topic and it would be more beneficial to wait to include the results.

### **3.3 REVISIT NON-PAYMENT OF OBSERVER PROVIDER ISSUE**

In Framework 21 the Council considered an alternative to discourage vessel owners from not paying deployed observers by not reissuing permits to vessels that hadn't paid observer providers for fees. Ultimately, the Council decided not to pursue this alternative due to the fact that the NMFS Office of General Counsel (OGC) and Office of Enforcement (OLE) was concurrently developing a process to address observer non-payment issues based on a permit sanction provision currently in the MSA. After further review of the current permit sanction by OLE and OGC, NMFS has determined that an adjustment to the regulations would be necessary in order to impose permit sanctions on vessels that have not paid for observers. Specifically, NMFS has identified that the lack of clear definitions of what constitutes a payment (*i.e., does it include interest on unpaid payments?*) and when it is determined to be overdue (*i.e., did the customer have knowledge of when the provider required payment?*) have made it difficult to impose a permit sanction due to non-payment violations.

NMFS has determined that this can be resolved by adding provider reporting requirements to §648.11(h)(vii) that would require the providers to define dates of when payments are considered overdue and define what constitutes an "unpaid payment" within their operations plans.

***Rationale for rejection:*** The Scallop Committee did not support including this in FW22 because some did not support that permit sanctions should automatically be linked to payment issues. Furthermore, NMFS has determined that this action of updating the provider reporting requirements does not require Council action, as it is a provision that would allow OLE an avenue to investigate, pursue, and, if ultimately necessary, enforce the permit sanction provisions at §308(g) in the MSA as it pertains to unpaid observer services.

## **4.0 DESCRIPTION OF AFFECTED ENVIRONMENT – SAFE REPORT**

## **5.0 ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES**

## **6.0 COMPLIANCE WITH APPLICABLE LAW**

## **7.0 GLOSSARY**

## **8.0 LITERATURE CITED**