

This is a working draft for discussion at the  
December 2013 Council Meeting

This document has been updated based on  
Committee motions from November 14, 2013  
**New information is highlighted in YELLOW**

## Framework 25 to the Scallop FMP

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

### Council – Please consider Nov Committee Motions

1. Motion 1 – See new Specification Alternatives 4 and 5. Agree with PDT recommendation for Delmarva area? (Pages 19-21)
2. Motion 2a – Committee clarified Specification Alternative 3. (Pages 18-19)
3. Motion 3 – See new Specification Alternative 6 (Pages 21-22)
4. Motion 4 – Prohibit RSA compensation fishing in NL and Delmarva (Page 27)
5. Motion 5 – Include several measures to reduce mortality in Delmarva (Page 28)

Also, SSC met to review and approve updated OFL/ABC estimates. See SSC memo under Tab 12 and pages 15-17 for new recommended values.

*Initial Council Meeting: April 25, 2013*

*Final Council Meeting: ~~November 19-21, 2013~~ **January 28 – 30, 2014***

*Submission of Final EA: ~~December 2013~~ **February 2014***

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## Executive Summary

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**LIST OF ACRONYMS**

## **1.0 BACKGROUND AND PURPOSE**

### **1.1 BACKGROUND**

This framework to the Scallop Fishery Management Plan (FMP) sets fishery specifications for fishing year (FY) 2014 and default measures for FY 2015. The New England Fishery Management (Council) decided to develop a one-year action only, including default measures for Year 2 only (FY2015). This decision was made to get the management cycle back in-sync with the scallop assessment schedule. The scallop resource is scheduled for a benchmark assessment in the spring of 2014. Therefore, the status of the stock will be reviewed and more up to date information will be available in 2014 that can be used to set management measures for FY2015 and FY2016.

The list of measures required to be in a framework has increased over the years to include overall annual catch limits, specific allocations for both limited access and limited access general category vessels. Below is a list of the measures required as part of the scallop fishery specifications:

- Overfishing Limit (OFL) and Acceptable Biological Catch (ABC), which is approved by the SSC;
- Annual Catch Limits (ACL) (for both the limited access and limited access general category fisheries, and Annual Catch Target (ACT));
- Allocations for limited access vessels include DAS allocations, access area allocations with associated possession limits;
- Allocations for limited access general category vessels include an overall IFQ for both permit types, as well as a fleetwide, area-specific maximum number of access area trips available for the general category fishery;
- NGOM hard-TAC;
- Incidental catch target-TAC; and
- Set-aside of scallop catch for the industry funded observer program.

Through Framework 48 to the Multispecies FMP the Council allocated a sub-ACL of SNE/MA windowpane flounder to the scallop fishery. Since, all sub-ACLs require accountability measures (AMs) if exceeded, those measures will also be developed in this action. The sub-ACL for SNE/MA windowpane flounder was set at 36% of the total ABC for that stock. This percentage of the ABC would be used to determine the scallop fishery sub-ABC, and then this would be adjusted for management uncertainty to get the scallop fishery sub-ACL. This allocation is based on the 90<sup>th</sup> percentile of the scallop fishery catches from 2001-2010. For 2014 and 2015 the scallop fishery sub-ACL is 186 mt.

Finally, the Council identified one additional item to consider when Framework 25 was officially initiated in April 2013. Specifically, the Council requested that measures be developed to address Closed Area I access areas trips allocated in FY2013. Catch rates have declined rapidly in that area and measures will be considered in this action that would potentially allow vessels to use those trips in a future fishing year and/or area. At a subsequent Council meeting the consideration of unused 2012 Closed Area I trips was included as well.

## 1.2 PURPOSE AND NEED

The primary need of this action is to achieve the objectives of the Atlantic Sea Scallop FMP to prevent overfishing and improve yield-per-recruit from the fishery. The primary purpose for this action is to set specifications including: OFL, ABC, scallop ACLs and associated set-asides, day-at-sea (DAS) allocations, general category fishery allocations, and area rotation schedule and allocations for the 2014 fishing year, as well as default measures for FY2015 that are expected to be replaced by a subsequent action. Related to this primary need, the Council is developing measures to improve yield per recruit from Closed Area I. Specifically, this action will also consider measures to address Closed Area I access area trips allocated to a portion of the limited access scallop fishery in FY2013 and FY2012. Catch rates have declined rapidly in this area and measures were developed to reduce potentially negative environmental and disproportional economic impacts of these allocations.

Another purpose of this action is to establish accountability measures (AMs) for the SNE/MA windowpane flounder sub-ACL. These AMs are needed to help prevent overfishing and reduce catch of SNE/MA windowpane flounder if the scallop fishery exceeds their sub-ACL of this stock.

**Table 1 – Summary of the purpose and need for measures developed in Framework 25 including section number with specific alternatives**

Need	Purpose	Section # with specific alternatives
1. To achieve the objectives of the Atlantic Sea Scallop FMP to prevent overfishing and improve yield-per-recruit from the fishery	1. To set specifications for FY2014 and FY2015 (default): OFL, ABC, ACLs, ACT, DAS, general category allocations, and area rotation schedule and related allocations.  2. To address low catch rates in Closed Area I that may have negative impacts on the environment in that area as well as disproportional economic impacts.	Section 2.1  Section 2.1.2.4
2. To reduce bycatch of SNE/MA windowpane flounder if the scallop fishery exceeds their annual limit (sub-ACL)	To implement AMs for the SNE/MA windowpane flounder sub-ACL allocated to the scallop fishery	Section 2.2

## 1.3 SUMMARY OF SCALLOP FISHERY MANAGEMENT PLAN

The Atlantic Sea Scallop FMP management unit consists of the sea scallop *Placopecten magellanicus* (Gmelin) resource throughout its range in waters under the jurisdiction of the United States. This includes all populations of sea scallops from the shoreline to the outer boundary of the Exclusive Economic Zone (EEZ). While fishing for sea scallops within state



waters is not subject to regulation under the FMP except for vessels that hold a federal permit when fishing in state waters, the scallops in state waters are included in the overall management unit. The principal resource areas are the Northeast Peak of Georges Bank, westward to the Great South Channel, and southward along the continental shelf of the Mid-Atlantic.

The Council established the Scallop FMP in 1982. A number of Amendments and Framework Adjustments have been implemented since that time to adjust the original plan, and some Amendments and Framework Adjustments in other plans have impacted the fishery. This section will briefly summarize the major actions that have been taken to shape the current scallop resource and fishery, but a complete list of the measures as well as the actions themselves are available on the NEFMC website (<http://www.nefmc.org/scallops/index.html>).

Amendment 4 was implemented in 1994 and introduced major changes in scallop management, including a limited access program to stop the influx of new vessels. Qualifying vessels were assigned different day-at-sea (DAS) limits according to which permit category they qualified for: full-time, part-time or occasional. Some of the more notable measures included new gear regulations to improve size selection and reduce bycatch, a vessel monitoring system to track a vessel's fishing effort, and an open access general category scallop permit was created for vessels that did not qualify for a limited access permit. Also in 1994, Amendment 5 to the Northeast Multispecies FMP closed large areas on Georges Bank to scallop fishing over concerns of finfish bycatch and disruption of spawning aggregations (Closed Area I, Closed Area II, and the Nantucket Lightship Area - See Figure 1).

In 1998, the Council developed Amendment 7 to the Scallop FMP, which was needed to change the overfishing definition, the day-at-sea schedule, and measures to meet new lower mortality targets to comply with new requirement under the Magnuson-Stevens Act. In addition, Amendment 7 established two new scallop closed areas (Hudson Canyon and VA/NC Areas) in the Mid-Atlantic to protect concentrations of small scallops until they reached a larger size.

In 1999, Framework Adjustment 11 to the Scallop FMP allowed the first scallop fishing within portions of the Georges Bank groundfish closed areas since 1994 after resource surveys and experimental fishing activities had identified areas where scallop biomass was very high due to no fishing in the intervening years. This successful "experiment" with closing an area and reopening it for controlled scallop fishing further motivated the Council to shift overall scallop management to an area rotational system that would close areas and reopen them several years later to prevent overfishing and optimize yield.

In 2004, Amendment 10 to the Scallop FMP formally introduced rotational area management and changed the way that the FMP allocates fishing effort for limited access scallop vessels. Instead of allocating an annual pool of DAS for limited vessels to fish in any area, vessels had to use a portion of their total DAS allocation in the controlled access areas defined by the plan, or exchange them with another vessel to fish in a different controlled access area. The amendment also adopted several alternatives to minimize impacts on EFH, including designating EFH closed areas, which included portions of the groundfish mortality closed areas. See Section 1.3.1 below for a more detailed description of the rotational area management program implemented by Amendment 10.

As the scallop resource rebuilt under area rotation biomass increased inshore and fishing pressure increased by open access general category vessels starting in 2001. Landings went from an average of about 200,000 pounds from 1994-2000 to over one million pounds consistently from 2001-2003 and 3-7 million pounds each year from 2004-2006 (NEFMC, 2007). In June 2007 the Council approved Amendment 11 to the Scallop FMP and it was effective on June 1, 2008. The main objective of the action was to control capacity and mortality in the general category scallop fishery. Amendment 11 implemented a limited entry program for the general category fishery where each qualifying vessel received an individual allocation in pounds of scallop meat with a possession limit of 400 pounds. The fleet of qualifying vessels receives a total allocation of 5% of the total projected scallop catch each fishing year. This action also established separate limited entry programs for general category fishing in the Northern Gulf of Maine and an incidental catch permit category (up to 40 pounds of scallop meat per trip while fishing for other species).

More recently Amendment 15 to the Scallop FMP was implemented in 2011. This action brought the FMP in compliance with new requirements of the re-authorized MSA (namely ACLs and AMs) as well as a handful of other measures to improve the overall effectiveness of the FMP.

### **1.3.1 Detailed background on rotational area management**

Rotational area management is the cornerstone of scallop fisheries management. There are four types of areas in this system: 1) “open areas” where scallop fishing can occur using DAS or IFQ; 2) areas completely closed to scallop fishing year-round to reduce impacts on EFH and/or groundfish mortality; 3) areas temporarily closed to scallop vessels to protect small scallops until a future date; and 4) areas open to very restricted levels of scallop fishing called “access areas”. When scallop vessels are fishing in these areas they are limited in terms of total removal and sometimes season.

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 Table 2. 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.

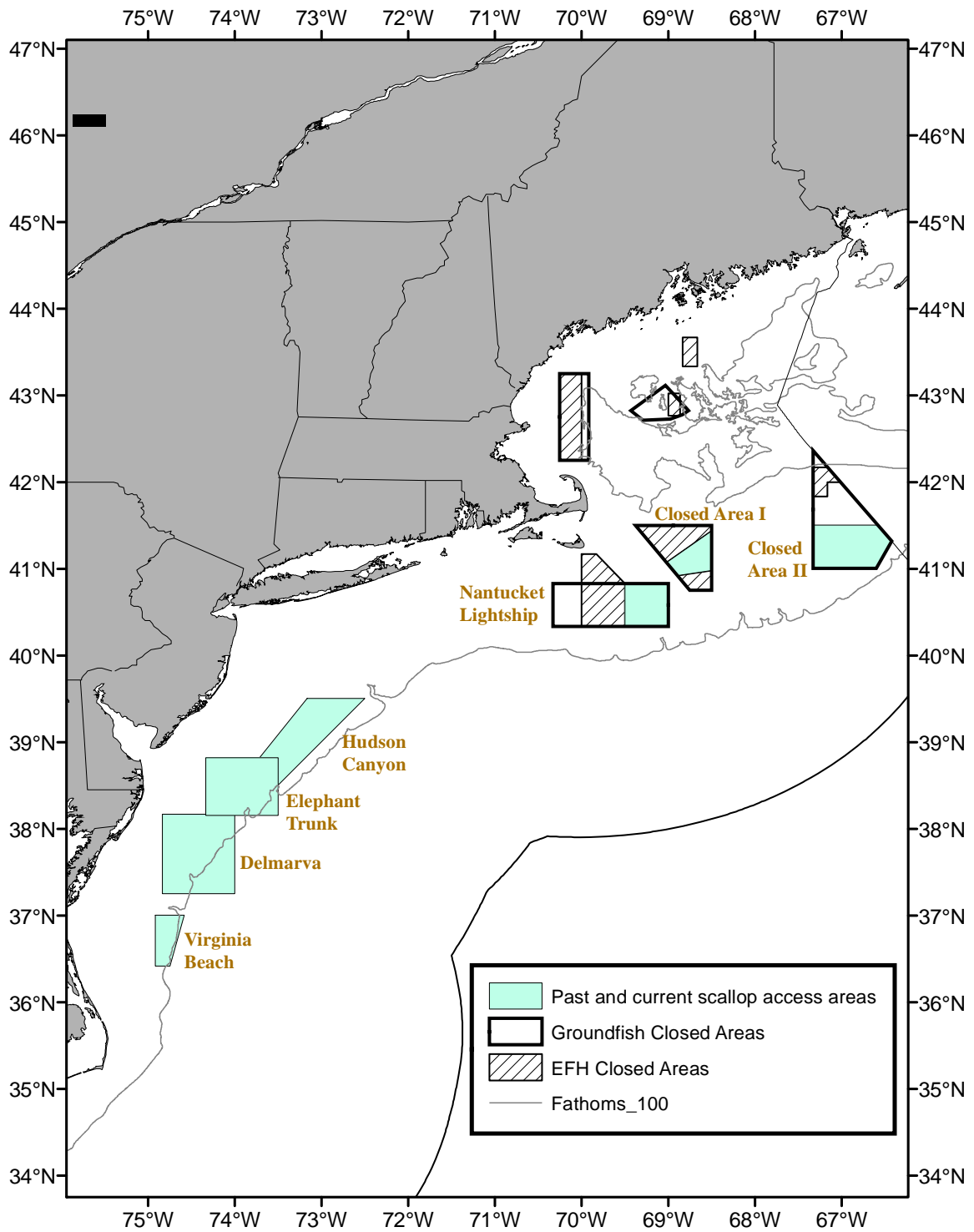
Figure 1 shows the boundaries of current and past scallop access areas (green shaded) on Georges Bank and in the Mid-Atlantic. Areas that are closed to the scallop fishery are indicated as well: groundfish mortality closed areas (hollow) and EFH closed areas (hatched). For the most part some of these areas are closed to the fishery if small scallops are present, some areas are open as access areas with a controlled level of fishing, and some may be “open areas” that may be fished using DAS, not access area trips. Each year limited access vessels are allocated a set number of trips with possession limits to fish in specific access areas. And general category vessels are awarded a fleetwide maximum of trips that can be taken per area.

The NEFMC is currently reviewing the EFH and groundfish mortality closed areas in this region in the EFH Omnibus Amendment. Based on the outcome of that action the current boundaries of these closed areas may change. Therefore, future scallop access areas may also be different, and current restrictions to fish in EFH closed areas may be different as well. Since this action is primarily limited to FY2014, and any of these potential changes will only be effective toward the very end of FY2014 (under the best case scenario); Framework 25 will only address specifications based on the current areas available to the scallop fishery – areas outside of EFH closed areas and areas within CA1, CA2, and NL that have been available to the scallop fishery in the past.

**Table 2- 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.

**Figure 1 – Scallop management areas (past and present)**



### **1.3.2 Detailed background on more recent requirements of the MSA**

Amendment 15 to the Scallop FMP was implemented in 2011 to bring the FMP in compliance with new requirements of the re-authorized MSA (namely ACLs and AMs).

*(Will include more info with flowcharts and tables like in the final regulations for all required terms, and summary of related AMs)*

## **1.4 SUMMARY OF FY2014 DEFAULT MEASURES APPROVED IN FRAMEWORK 24**

The Council routinely sets default measures for the fishing year following the intended length of an action in the event that subsequent actions are not in place at the start of the following fishing year. For example, the scallop fishing year starts on March 1, but complete management measures are not usually in place until May. This lag is primarily due to the fact that scallop specifications are set using the most up to date survey data collected the summer before the start of the fishing year. The results are typically available in August, a new ABC is reviewed by the SSC in September, and the PDT develops and analyzes specification alternatives in early fall before final Council action at the November meeting. Staff generally completes the submission package by the end of the year and the action is reviewed and implemented by NMFS typically in May.

In the past, measures have been in place on March 1 that are inferior to measures proposed for implementation in a subsequent action using more updated information. Ultimate catch levels may be higher or lower depending on updated survey results, some areas with access area trips assigned may not be able to support that level of effort, or small scallops may show up in a new survey suggesting the area should be closed to protect new recruitment. In order to minimize the potentially negative impacts of having measures in place on March 1 that ultimately need to be changed, the Council more recently only allocated DAS to the limited access fishery as default measures for FY2014; no access area trips were assigned to limited access vessels or general category vessels.

Therefore, if Framework 25 is delayed past March 1, 2014, scallop vessels would be restricted to fishing in open areas until final FY 2014 specifications are implemented. However, vessels would be able to fish FY 2013 compensation trips in the access areas that were open in FY 2013 (e.g., HC, NLS, CA1, and CA2) for the first 60 days that those areas are open in FY 2014, or until Framework 25 is approved and implemented, whichever occurs first. In addition, the default DAS allocations were set at 75% of the projection to be precautionary. Therefore, vessels will receive a set number of DAS on March 1, 2014, and that may be different than the ultimate number of DAS awarded under FW25.

The default measures for 2014 also included the required ABC and ACL values, but they will likely be replaced by this action. The table below summarizes the default values that will be effective on March 1, 2014 until FW25 is implemented to replace them. Vessels with a LAGC IFQ permit will receive an allocation based on the contribution factor assuming the total LAGC IFQ is 2.5 million pounds. Their allocations for FY2014 may ultimately change based on the final sub-ACL approved in FW25. LAGC IFQ vessels are responsible to payback any overage

the following year if the ultimate IFQ for FY2014 is lower than the allocation under the default sub-ACL.

If FW25 is not adopted these allocations would remain in place for all of FY2014 and beyond until replaced by a subsequent action.

**Table 3 - ACL related values and allocations for 2014 (default measures approved in FW24)**

	<b>2014*</b>
OFL	31,110 mt (68,585,801 lb)
ABC	23,697 mt (52,242,952 lb)
incidental	22.7 mt (50,000 lb)
RSA	567 mt (1,250,000 lb)
OBS	237 mt (522,429 lb)
ACL after set-asides/incidental removed (= ABC-(incidental + RSA +OBS))	22,870.3 mt (50,420,523 lb)
LA sub-ACL (94.5% of ACL)	21,612 mt (47,647,385 lb)
IFQ-only (5% of ACL)= sub-ACL = ACT	1,144 mt (2,521,026 lb)
IFQ + LA (0.5% of ACL)=sub-ACL=ACT	114 mt (252,103 lb)

\* 2014 measures are default and expected to be adjusted based on FW25

**Table 4 – Summary of FY2014 default allocations for LA vessels (approved in FW24)**

	LA FT	LA PT	LA Occasional
<b>2014</b>	23	9	2

\* Default DAS is 75% of the total DAS projected for FY2014 (31 DAS)

## 2.0 MANAGEMENT ALTERNATIVES UNDER CONSIDERATION

### 2.1 FISHERY SPECIFICATIONS

#### 2.1.1 Overfishing Limit (OFL) and Acceptable Biological Catch (ABC)

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 was implemented in 2011.

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.

##### 2.1.1.1 No Action (Alternative 1)

Under “No Action”, the overall OFL and ABC would be equivalent to default 2014 values adopted in Framework 24 (Table 5). These would remain in place until a subsequent action replaced them. These values were selected based on the same control rules: 1) OFL is equivalent to the catch associated with an overall fishing mortality rate of 0.38; and 2) ABC is set with a 25% chance of exceeding OFL where risk is evaluated in terms of the probability of overfishing compared to the fraction loss to yield. The overall fishing mortality rate used for setting ABC is 0.32. These values include estimated discard mortality. Therefore, when the fishery specifications are set based on these limits, the estimate of discard mortality is removed first and allocations are based on the remaining ABC available (Table 5, column to the far right).

**Table 5 – Summary of OFL and ABC FY2014 (default) values approved by the SSC in Framework 24 (in metric tons)**

	OFL (including discards at OFL)	ABC (including discards)	Discards (at ABC)	ABC available to fishery (after discards removed)
2014 (default)	35,110	30,353	6,656	23,697

##### 2.1.1.2 Updated estimate of ABC for FY2014 and FY2015 (default) (Alternative 2)

The SSC first met on September 16, 2013 to review updated estimates of OFL and ABC for Framework 25. The PDT presented an update of stock status for 2012 as well as updated estimates of OFL and ABC for FY2014 and FY2015. Unfortunately, there was not a quorum at

the meeting. The SSC proceeded with the discussion and did accept the updated estimates; however, at the following September Council meeting it was decided that the SSC should review the same information again when a quorum was available.

SSC  
input  
from  
11/15/13  
Meeting

Therefore, the SSC met again on November 15, 2013. The SSC reviewed updated estimates of OFL and ABC based on revised PDT analyses. Several errors were discovered when the PDT prepared documents for the second SSC meeting. These errors were related to calculation mistakes and did not change the overall estimates of OFL or ABC substantially. The final values are very similar to the previous estimates; 2014 estimates are actually a bit higher (Table 6).

**Table 6 – Proposed OFL and ABC for FY2014 and 2015 (default) approved by the SSC**

Year	OFL	ABC (including discards)	Discards at ABC	ABC available to fishery = ACL (after discards removed)
2014	30,419	26,240	5,458	20,782
2015	34,247	29,683	5,701	23,982

The SSC did make several other recommendations at both meetings. The SSC highlighted three issues from their September meeting. The Council did not take any specific action related to these recommendations at the September Council meeting.

1. *The Terms of Reference for the next benchmark assessment should include provisions for both pooled and regional assessment outputs so that mortality rates and the general health of the population can be examined regionally and as a whole. These could also include biological reference points if applicable.*
2. *At the next benchmark, it may be useful to examine the process by which days at sea are calculated in the context of stock projections. LPUE appears to be underestimated and a review may highlight methods that are more robust to uncertainties in these estimates.*
3. *When no benchmark assessment has been done immediately prior to setting ABCs it is recommended that updates go through an operational assessment process for peer review prior to presentation to the SSC. In addition, providing documentation on any changes that have occurred since the previous ABC setting process (e.g. model settings, data inputs, or updated additional diagnostics) would improve understanding and increase transparency.*

When the SSC reviewed the updated estimates of OFL and ABC in November, the Council specifically requested they focus on the estimates of discard and incidental mortality. Finally, the SSC was also asked to review the draft Terms of Reference for the upcoming benchmark assessment scheduled for 2014. Related to these two requests the SSC had several recommendations. Please reference the SSC memo for the December Council meeting for the specifics.



From the draft SSC Memo from November 15, 2013

#### Summary of recommendations

1. OFLs for sea scallops are 30,419mt in 2014 and 34,247mt in 2015, and ABCs are 26,240mt in 2014 and 29,683mt in 2015.
2. Research and updated estimates of incidental mortality of sea scallops should be guided by sensitivity analyses. If warranted by those sensitivity analyses, attention should be paid to changes in estimates since earlier studies due to evolution of fishing gear, as well as size- and substrate-specific rates.
3. Comments on TORs for SAW/SARC59 include:
  - The sensitivity analyses recommended above can be addressed via TOR7.
  - TOR3 regarding ecological and environmental drivers of recruitment is a worthwhile inclusion that will help move toward ecosystem-based approaches.
  - TOR6 regarding consideration of a new model needs additional clarification of the type of model referred to and the basis for making major changes.
  - Pooled and regional assessment outputs should be developed so that mortality and the health of the populations can be examined on multiple scales.
  - The process by which days at sea are calculated in the context of stock projections should be examined.

### **2.1.2 Specifications for limited access vessels**

Specifications for the limited access fishery include DAS and access area trips. This action considered a wide range of alternative and a summary of the various allocations for the LA fishery are described in Table 7.

#### **2.1.2.1 Alternative 1 (No Action)**

Under No Action, the sub-ACL for the LA fishery would be 21,612 mt (47,647,385 lb). The specifications would include default measures approved in Framework 24 for FY2014 which are 75% of the projected DAS for that year. For full-time vessels that is equivalent to 23 DAS (75% of 31 DAS), 9 DAS for part-time vessels, and 2 DAS for occasional vessels. There are no access area allocations under No Action. These measures would remain in place until replaced by another action. Total projected catch for the No Action alternative from all sources of catch (including set-asides and LAGC catch) is 10,798 mt, or 23.8 million pounds.

#### **2.1.2.2 Alternative 2 (Basic run using OFD fishing mortality target principles – 23 DAS and 2 trips in either CA2, NL and Delmarva)**

This is the basic alternative the PDT generally begins with when identifying possible specification alternatives. Target catches in this fishery are driven by three principles developed as part of the “hybrid” overfishing definition approved in Amendment 15. The three main principles that are used in this FMP to set target catches for the limited access fishery are:

- 1) fishing mortality in open areas cannot exceed 0.38;
- 2) a spatially averaged fishing mortality target is limited to 0.28 for all areas combined (open and closed areas); and

3) fishing mortality targets for access areas are based on a time-averaged principle, higher F in some years followed by closures or limited fishing levels in other years.

When these principles are applied to the estimated biomass in each area for FY2014 the allocations for full-time LA vessels are:

- 23 DAS in open areas (when open area F is set at 0.38); and
- Two 12,000 pound access area trips per FT vessel. Each vessel would be allocated one trip in Delmarva and one trip in either NL or CA2, to be allocated by lottery. A target F of 0.4 per area would be applied in areas with sufficient exploitable biomass and lower growth potential.
- Part-time (PT) vessels would receive one access area trip at 9,200 lb and 9 DAS, while Occasional vessels would receive one access area trip at 1,920 lb and 2 DAS. PT and occasional vessels could fish their access trip in any one area open (i.e., Delmarva, CA2, or NL).
- Total projected catch for Alternative 2 from all sources of catch (including set-asides and LAGC catch) is 14,364 mt, or 31.7 million pounds.

The overall estimate of F in all areas combined from these specifications is 0.17, lower than the maximum of 0.28. Therefore, in this particular year the constraining element of the overfishing definition as it applies to setting catch limits in the fishery is the principle that limits open area F at 0.38.

### **2.1.2.3 Alternative 3 (Basic run using OFD fishing mortality target principles – 23 DAS and 2 trips in either CA2, NL and Delmarva, but flexibility to use open area DAS instead of Delmarva trip)**

This alternative is similar to Alternative 2, but flexibility has been added related to the Delmarva access area trip in an effort to provide additional conservation for that area. LA vessels will be given a choice to use one access area trip of 12,000 pounds in Delmarva, or five open area DAS.

See Cmte Motion #2a Does Council agree with changes?

The primary rationale for giving vessels a choice is to provide some potential for protection for Delmarva, while keeping total catch similar to Alternative 2. This flexibility could would allow some access, but if the area is not what is projected, vessels could fish in open areas instead, while would reduce negative impacts on smaller scallops in Delmarva. If scallops are of harvestable size in higher densities than open areas then vessels would be expected to fish there. But if projections are not correct, giving vessels a choice to fish in open areas instead may help reduce impacts on smaller scallops if catch rates and sizes are not what is projected. This flexibility may help self-regulate the area to better reflect the fishing condition in Delmarva, which is more uncertain that some of the other access areas due to the large proportion of smaller scallops and more uncertainty about natural mortality and growth.

There are other measures under consideration to further reduce mortality in Delmarva in Section 2.1.2.7 and 2.1.2.8.

When this alternative was first developed the idea was that DAS could be used in Delmarva rather than treating the area as an access area. However, as the PDT, AP and Committee worked on the details it became clear that modifying the status of the area even temporarily created more

issues and would be more difficult to implement. Therefore, at the November Committee meeting the Committee recommended modifying this alternative so that it remained an access area with a maximum allocation per vessel, but vessels could choose whether to fish in the area under the possession limit, or use open area DAS outside of Delmarva instead (Committee Motion 2).

The allocations related to this alternative are similar to Alternative 2, but fishing in Delmarva is voluntary.

- 23 DAS in open areas (when open area F is set at 0.38);
- Two 12,000 pound access area trips per FT vessel. Each vessel would be allocated one trip in Delmarva and one trip in either NL or CA2, to be allocated by lottery. A target F of 0.4 per area would be applied in areas with sufficient exploitable biomass and lower growth potential.
- The trip allocated for Delmarva is voluntary. FT vessels can either choose to use that access opportunity in Delmarva up to 12,000 pounds, or fish five additional DAS in open areas and no access in Delmarva. If the latter, a FT LA vessel would be allocated 28 DAS (23 DAS plus 5 DAS) and one access area trip in either NL or CA2.
- A FT vessel would be permitted to trade Delmarva trips. However, if a vessel traded in one Delmarva trip for a total of 2 Delmarva trips in 2014, it would only be permitted to convert one of those trips into open area DAS. No vessel could convert more than one Delmarva trip to DAS.
- Part-time (PT) vessels would receive one access area trip at 9,200 lb and 9 DAS, while Occasional vessels would receive one access area trip at 1,920 lb and 2 DAS. PT and occasional vessels could fish their access trip in any one area open (i.e., Delmarva, CA2, or NL). *The Committee did not clarify if these vessels could convert a Delmarva trip into open area DAS??*
- Total projected catch for Alternative 3 from all sources of catch (including set-asides and LAGC catch) is 14,407 mt, or 31.8 million pounds.

#### **2.1.2.4 Alternative 4 (Basic run but increase target F in open areas to bring total catch to 2013 level – 31 DAS and 2 trips in either CA2, NL and Delmarva, but flexibility to use open area DAS instead of Delmarva trip)**

This alternative is similar to Alternative 3, but open area F has been increased to bring total catch to projected FY2013 levels. This alternative was developed by the PDT based on a Scallop Committee Motion 1 from November 2013. *The Committee was not specific about how to treat Delmarva in this alternative – the PDT recommends it be treated the same as Alternative 3.*

Projected catch for FY2013 was 17,327 mt, or just over 38 million pounds. To attain that level of catch for 2014, open area DAS would need to increase to 31 DAS per FT vessel compared to 23 DAS. This increase in DAS has an associated increase in open area F of 0.52 overall (MA and GB open areas combined). Access area allocations for this alternative would remain the same as Alternative 3. If a FT vessel chose to use open area DAS instead of a Delmarva access area trip, their total DAS allocation for the year would be 36 DAS, and one access area trip in NL or CA2.

See Cmte Motion #1 Does Council agree to add?

This alternative would also modify a current principle used for setting target catch levels in this fishery. Specifically, as part of the hybrid overfishing definition approved in Amendment 15 there are three main principles used to set target catches: 1) fishing mortality in open areas cannot exceed 0.38; 2) a spatially averaged fishing mortality target is limited to 0.28 for all areas combined (open and closed areas); and 3) fishing mortality targets for access areas are based on a time-averaged principle, higher F in some years followed by closures or limited fishing levels in other years. This alternative would temporarily, just for FY2014, modify the first principle and allow open area F to exceed  $F_{\text{threshold}}$  (0.38). Open area F would increase to a level that provides projected catch levels similar to FY2013, but not to exceed an overall combined F of 0.28 for all areas, the second principle of setting target catch levels. The estimates of F for this alternative are 0.52 for open areas, and 0.21 overall for all areas combined.

Alternative 4 includes:

- 31 DAS in open areas (when open area F is increased to attain 2013 projected catch levels); and
- Two 12,000 pound access area trips per FT vessel. Each vessel would be allocated one trip in Delmarva and one trip in either NL or CA2, to be allocated by lottery. A target F of 0.4 per area would be applied in areas with sufficient exploitable biomass and lower growth potential.
- The trip allocated for Delmarva is voluntary. FT vessels can either choose to use that access opportunity in Delmarva up to 12,000 pounds, or fish five additional DAS in open areas and no access in Delmarva. If the latter, a FT LA vessel would be allocated 28 DAS (23 DAS plus 5 DAS) and one access area trip in either NL or CA2.
- A FT vessel would be permitted to trade Delmarva trips. However, if a vessel traded in one Delmarva trip for a total of 2 Delmarva trips in 2014, it would only be permitted to convert one of those trips into open area DAS. No vessel could convert more than one Delmarva trip to DAS.
- Part-time (PT) vessels would receive one access area trip at 9,200 lb and 9 DAS, while Occasional vessels would receive one access area trip at 1,920 lb and 2 DAS. PT and occasional vessels could fish their access trip in any one area open (i.e., Delmarva, CA2, or NL). *The Committee did not clarify if these vessels could convert a Delmarva trip into open area DAS??*
- Total projected catch for Alternative 4 from all sources of catch (including set-asides and LAGC catch) is 17,254 mt, or 38.0 million pounds.

**2.1.2.5 Alternative 5 (Basic run but increase target F in open areas so that open area DAS in 2015 are only reduced by one DAS to allow higher DAS in 2014 - 28 DAS and 2 trips in either CA2, NL and Delmarva, but flexibility to use open area DAS instead of Delmarva trip)**

This alternative is similar to Alternative 4, but open area F is limited so that projected 2015 DAS only reduce by one DAS. The Committee did not request this specific alternative; the PDT developed it in light of Motion 1 (Alternative 4). If the longer term costs of Alternative 4 are too high, the PDT explored this option that would increase catch above Alternative 2 and 3, but minimize the impact of increased DAS in 2014. *The Committee was not specific about how to treat Delmarva in this alternative – the PDT recommends it be treated the same as Alternative 3.*

PDT developed Alternative 5 based on Motion 1  
Does Council agree to add for consideration?

If open area F in 2014 is constrained to a level that only causes a reduction of one DAS in 2015 the total open area DAS allocation for FT LA vessels in 2014 is 28 DAS. This alternative has a total projected catch of 16,263 mt, or 35.9 million pounds. This increase in DAS has an associated increase in open area F of 0.47 overall (MA and GB open areas combined). Access area allocations for this alternative would remain the same as Alternative 3. If a FT vessel chose to use open area DAS instead of a Delmarva access area trip, their total DAS allocation for the year would be 33 DAS, and one access area trip in NL or CA2.

This alternative would also modify a current principle used for setting target catch levels in this fishery. Specifically, as part of the hybrid overfishing definition approved in Amendment 15 there are three main principles used to set target catches: 1) fishing mortality in open areas cannot exceed 0.38; 2) a spatially averaged fishing mortality target is limited to 0.28 for all areas combined (open and closed areas); and 3) fishing mortality targets for access areas are based on a time-averaged principle, higher F in some years followed by closures or limited fishing levels in other years. This alternative would temporarily, just for FY2014, modify the first principle and allow open area F to exceed  $F_{\text{threshold}}$  (0.38). Projected open area F would increase to 0.47; and overall F of 0.20 for all areas combined.

Alternative 5 includes:

- 28 DAS in open areas (when open area F is increased); and
- Two 12,000 pound access area trips per FT vessel. Each vessel would be allocated one trip in Delmarva and one trip in either NL or CA2, to be allocated by lottery. A target F of 0.4 per area would be applied in areas with sufficient exploitable biomass and lower growth potential.
- The trip allocated for Delmarva is voluntary. FT vessels can either choose to use that access opportunity in Delmarva up to 12,000 pounds, or fish five additional DAS in open areas and no access in Delmarva. If the latter, a FT LA vessel would be allocated 28 DAS (23 DAS plus 5 DAS) and one access area trip in either NL or CA2.
- A FT vessel would be permitted to trade Delmarva trips. However, if a vessel traded in one Delmarva trip for a total of 2 Delmarva trips in 2014, it would only be permitted to convert one of those trips into open area DAS. No vessel could convert more than one Delmarva trip to DAS.
- Part-time (PT) vessels would receive one access area trip at 9,200 lb and 9 DAS, while Occasional vessels would receive one access area trip at 1,920 lb and 2 DAS. PT and occasional vessels could fish their access trip in any one area open (i.e., Delmarva, CA2, or NL). *The Committee did not clarify if these vessels could convert a Delmarva trip into open area DAS??*
- Total projected catch for Alternative 5 from all sources of catch (including set-asides and LAGC catch) is 16,263 mt, or 35.9 million pounds.

**2.1.2.6 Alternative 6 (Increase target F in open areas to bring total catch to 2013 level AND keep Delmarva closed – 37 DAS and 1 trips in either CA2 or NL)**

This alternative is similar to Alternative 4 in terms of trying to maintain FY2013 catch levels for FY2014, but Delmarva remains closed in this alternative. The PDT developed this alternative based on Scallop Committee Motion 3.

See Cmte Motion #3 Does Council agree to add?

For this alternative Delmarva remains closed and open area F increases until catch is similar to projected catch levels in 2013. This alternative has a total projected catch of 17,201, or 37.9 million pounds. This increase in DAS has an associated increase in open area F of 0.63 overall (MA and GB open areas combined). Under this alternative, each vessel would receive one access area trip from NL or CA2; Delmarva would remain closed.

This alternative would also modify a current principle used for setting target catch levels in this fishery. Specifically, as part of the hybrid overfishing definition approved in Amendment 15 there are three main principles used to set target catches: 1) fishing mortality in open areas cannot exceed 0.38; 2) a spatially averaged fishing mortality target is limited to 0.28 for all areas combined (open and closed areas); and 3) fishing mortality targets for access areas are based on a time-averaged principle, higher F in some years followed by closures or limited fishing levels in other years. This alternative would temporarily, just for FY2014, modify the first principle and allow open area F to exceed  $F_{\text{threshold}}$  (0.38). Projected open area F would increase to 0.63; and overall F of 0.18 for all areas combined.

Alternative 6 includes:

- 37 DAS in open areas (when open area F is increased to attain 2013 projected catch levels and Delmarva remains closed); and
- One 12,000 pound access area trips per FT vessel from CA2 or NL (applying a target F of 0.4 per area in areas with sufficient exploitable biomass and lower growth potential). Each vessel would be allocated one trip by lottery.
- Part-time (PT) vessels would receive on access area trip at 4,800 lb and 15 DAS, while Occasional vessels would receive one access area trips at 960 pounds and 3 DAS. PT and occasional vessels could fish their access area trip in any one area open (CA2 or NL).
- Total projected catch for Alternative 6 from all sources of catch (including set-asides and LAGC catch) is 17,201 mt, or 37.9 million pounds.

**Table 7 – Summary of FW25 specification alternatives under consideration**

	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
<b>Description of Alternative</b>	No Action Default measures set in FW24	Basic run with OFD principles	Basic run with OFD principles - but choice for Delmarva	Basic run but increase target F in OA to bring catch to 2013 levels - choice for Delmarva	Basic run but increase target F in OA to limit 2015 DAS reduction - choice for Delmarva	Increase target F in OA to bring catch to 2013 levels - keep Delmarva closed
<b>FT LA DAS</b>	23 DAS	23 DAS (OA F=0.38)	23 DAS (OA F=0.38) Vessel Choice: 1) DEL trip or 2) 5 additional DAS (total of 28 DAS)	31 DAS (OA F=0.52) Vessel Choice: 1) DEL trip or 2) 5 additional DAS (total of 36 DAS)	28 DAS (OA F=0.47) Vessel Choice: 1) DEL trip or 2) 5 additional DAS (total of 33 DAS)	37 DAS (OA F=0.63)
<b># of AA trips</b>	0	2	2 or 1	2 or 1	2 or 1	2 or 1
<b>NL</b>	closed	open (632 mt) (12,000 FT Poss limit)	open (632 mt) (12,000 FT Poss limit)	open (632 mt) (12,000 FT Poss limit)	open (632 mt) (12,000 FT Poss limit)	open (632 mt) (12,000 FT Poss limit)
<b>CA2</b>	closed	open (1119 mt) (12,000 FT Poss limit)	open (1119 mt) (12,000 FT Poss limit)	open (1119 mt) (12,000 FT Poss limit)	open (1119 mt) (12,000 FT Poss limit)	open (1119 mt) (12,000 FT Poss limit)
<b>DEL</b>	closed	open (1993 mt) (12,000 FT Poss limit)	open but vessels have choice to fish there OR 5 OA DAS	open but vessels have choice to fish there OR 5 OA DAS	open but vessels have choice to fish there OR 5 OA DAS	closed
<b>Total AA (mt)</b>	0	3,744	1,751 - 3,744	1,751 - 3,744	1,751 - 3,744	1,751 - 3,744
<b>Gen Cat</b>	2.77 mil 1,258 mt	2.42 mil 1,099 mt	2.42 mil 1,099 mt	2.42 mil 1,099 mt	2.42 mil 1,099 mt	2.42 mil 1,099 mt
<b>Total catch</b>	23.8 10,798	31.7 14,364	31.8 14,407	38.0 17,254	35.9 16,263	37.9 17,201

### **2.1.2.7 Measures to protect recruitment within access areas potentially opening in 2014**

There were three options considered for this alternative. Option 1 would not restrict scallop access within any of the access areas open in 2014; Option 2 is related to Nantucket Lightship and Option 3 is related to Closed Area 2. The Committee did not include the option for Closed Area 2, so that has been moved to the considered and rejected section.

Based on 2013 survey results from several sources there is evidence of very large recruitment within and around NL, and to a lesser extent within CA2. The areas with recruitment are somewhat discrete and do not completely overlap areas with larger scallops. Therefore, the PDT has identified potential boundaries within NL and CA2 that could be closed to protect recruitment, but scallop fishing could take place in any area within the access area that is not included in these designated recruitment areas.

These alternatives are separate from the overall specifications alternatives 1-3. They could be selected separately in combination with any of the specification alternatives.

#### **2.1.2.7.1 Option 1 (No Action) – no restriction on fishing location within GB access areas**

LA and LAGC trips could take place throughout the open GB access areas, no sub-area defined to protect scallop recruitment.

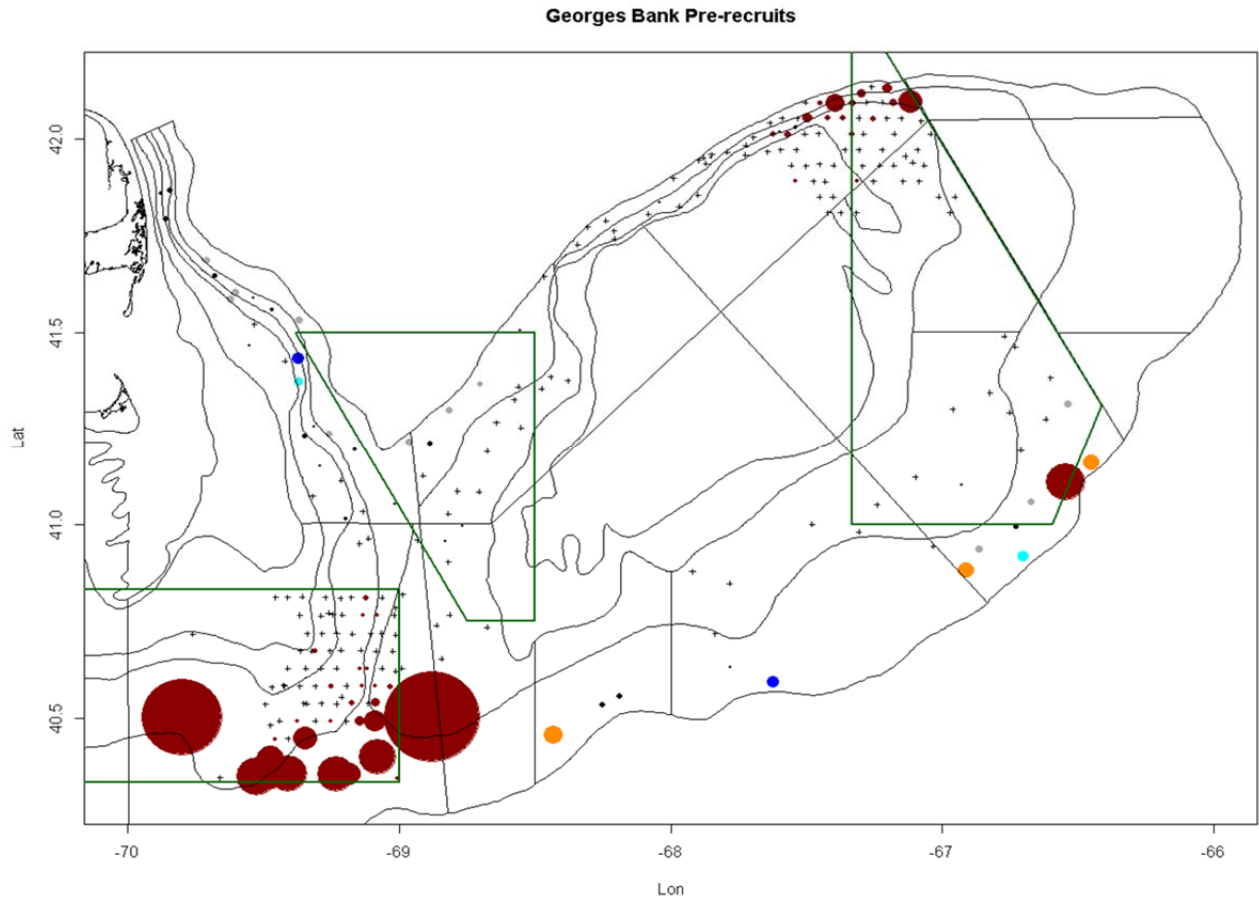
#### **2.1.2.7.2 Option 2 – Trips restricted to northern part of NL access area only**

The boundary for the NL access area would be temporarily modified to restrict access in the northern portion of the access area only. Vessels would not be permitted to fish NL access area trips south of 40.5° N Lat. This restriction would be also be applied to any RSA compensation fishing as well as compensation trips taken in the first 60 days of FY2015. This option is being considered to reduce impacts on the very large recruitment event that was observed in 2013 (Figure 2). The survivability of these scallops is uncertain, but limiting effort in this area could have beneficial impacts by reducing incidental mortality from scallop fishing.

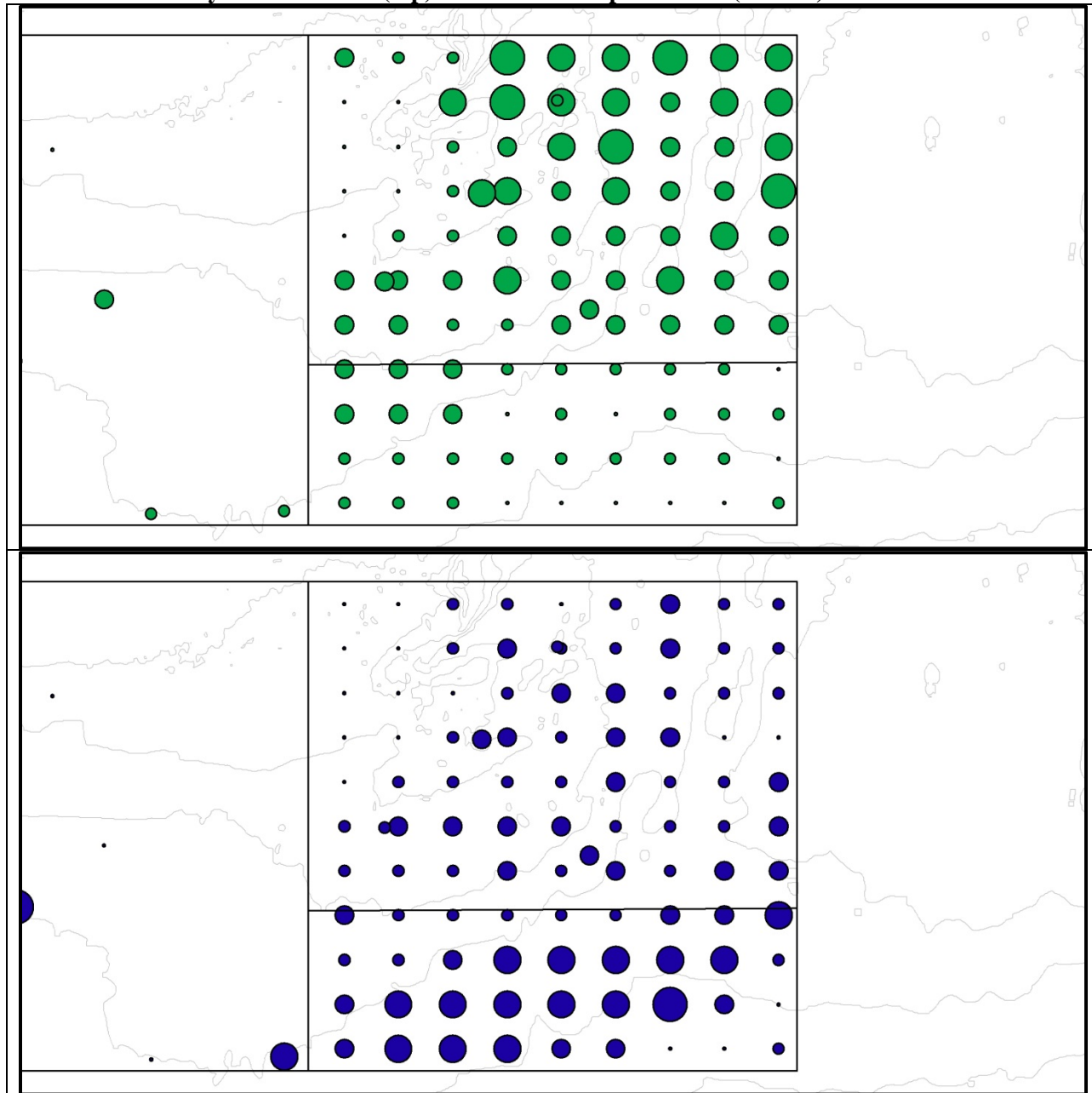
Using 2013 survey results from VIMS dredge tow locations in NL a boundary option was developed at 40.5° N. Lat (Figure 3). The PDT evaluated the proportion of large and small scallops within the boundary option. Less than 10% of small scallops (less than 80mm) are within the access area, over 90% in the protected area. And 96% of all adult scallops in NL are within the access area and only 4% in the protected area (Table 8). The length distribution of scallops observed in the VIMS survey are in Figure 4, and the majority of the small scallops are south of 40.5° Lat.



**Figure 2 – Abundance of 2013 pre-recruits on GB from NEFSC and VIMS dredge tows combined (less than 40 mm)**



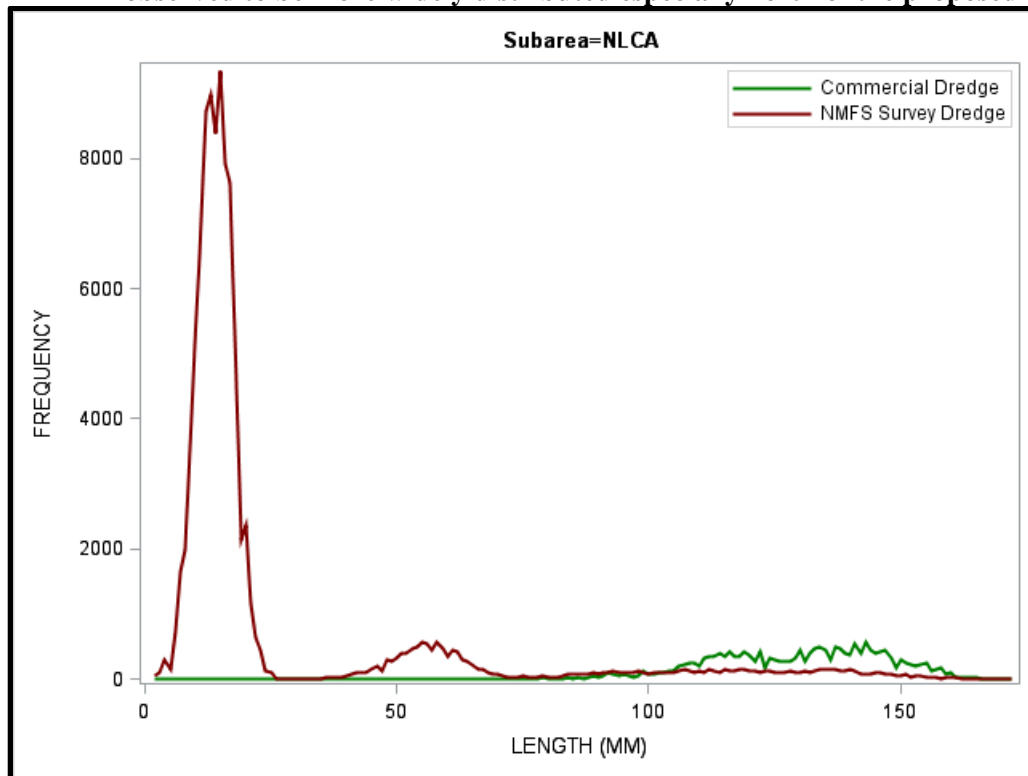
**Figure 3 – Spatial distribution of adult scallops >80mm shell height relative to a potential closure boundary at 40.5° N Lat (top) and small scallops <80 mm (bottom)**



**Table 8 – Percentage of scallops by category (adults >80mm) observed to fall in either the open or closed areas as delineated by a boundary like at 40.5 N**

	recruits	adults
open	9%	96%
closed	91%	4%

**Figure 4 - Length frequency distribution of scallops observed during the VIMS survey of NLCA during June of 2013. The majority of recruit scallops are spatially distributed south of 40.5 degrees N. A less abundant occurrence of 2 year old scallops (~60 mm) were observed to be more widely distributed especially north of the proposed closure line.**



#### **2.1.2.8 Additional measures to reduce mortality on smaller scallops in NL and/or Delmarva**

##### **2.1.2.8.1 No Action – No additional measures to reduce mortality on smaller scallops in NL and Delmarva (Alternative 1)**

No specific measures in addition to area rotation would be implemented to further reduce mortality on smaller scallops in NL or Delmarva. Under current regulations RSA compensation fishing can occur in any area that is open to the fishery, including open areas and any access area open that year. For example, under Specification Alternative 2 in this action RSA compensation fishing could occur in open areas, Delmarva, Nantucket Lightship, or Closed Area II. The total set-aside for RSA is equivalent to 1.25 million pounds.

##### **2.1.2.8.2 Alternative 2 – Prohibit 2014 RSA compensation fishing from occurring in NL**

This alternative would prohibit RSA fishing in Nantucket Lightship in 2014. In recent years a substantial proportion of RSA catch has come out of Nantucket Lightship and it is increasing the fishing mortality in that area limiting the amount of access for the fishery overall. For example, in FY2012 the LA fishery was allocated about 2.94 million pounds and the LAGC fishery was

allocated 296 trips. About ?? percent of all RSA fishing took place in that area, so ... In 2013, the LA fishery was allocated about 1.5 M pounds and the LAGC fishery was allocated 206 trips. Need RSA values from NERO

#### **2.1.2.8.3 Alternative 3 – Prohibit 2014 RSA compensation fishing from occurring in Delmarva**

This alternative would prohibit RSA fishing in Delmarva in 2014. This access area is relatively close to shore and could be an attractive area for vessels in the south to harvest RSA compensation. Prohibiting RSA fishing in this area would improve overall yield from the area in 2015 and beyond.

NERO - When Delmarva was open in the past what % of RSA from that area?

#### **2.1.2.8.4 Alternative 4 – Limit fishing in Delmarva access area from June 1 – August 31, or three months after implementation of FW25**

The Scallop PDT recommended that access not be granted in Delmarva until June to allow scallops in that area one last growth spurt in May. The Scallop AP went further and recommended a two-month window of time between June 1 and July 31 to reduce overall mortality in that area. The Committee rounded the opening to three months to provide vessels time to access the area, but recommend closing the area before September 1 when MA scallop meat yields decline in the fall. Because projections are more uncertain in this area and there are smaller scallops in the area this alternative would reduce overall mortality from fishing in the area by compressing effort during the season with highest yields.

#### **2.1.2.8.5 Alternative 5 – Restrict crew limits in Delmarva access area to be consistent with open area limits**

Limited access scallop vessels have crew size limits when fishing in open areas, but there are no crew size limits when fishing in access areas since there is a possession limit. However, because scallops are projected to be smaller in Delmarva if the area opens under this action, a crew limit would help reduce highgrading and associated mortality on smaller scallops.

### **2.1.2.9 Measures to address unused Closed Area 1 access area trips**

#### **2.1.2.9.1 No Action – No rollover of FY2012 or FY2013 access area allocation (Alternative 1)**

Vessels with unused FY2013 Closed Area I allocation will be permitted to fish those trips until the end of the 2013 fishing year. Consistent with current regulations, if a vessel breaks a trip in the last 60 days of the 2013 fishing year, the vessel can fish the remainder of that trip during the first 60 days of the next fishing year, but only if that access area is open.

Based on the current condition of scallop biomass in Closed Area I, the area is not expected to be open under the rotational management program in FY2014. Therefore, under No Action vessels

would likely need to fish all 2013 CA1 allocation before February 28, 2014, since the area is not expected to be open as an access area in FY2014. Unused trips would expire after that date if Closed Area I is not an access area in FY2014.

Under No Action, there is no opportunity left for vessels with unused FY2012 CA1 trips. Those trips expired at the end of FY2012. And if a vessel broke a trip within the last 60 days of that fishing year it could have fished the remaining possession limit within the first 60 days the area opened in FY2013, which was between May 20-July 20. Since that date has passed these trips are completely expired under No Action.

#### **2.1.2.9.2 Alternative 2 – Allow rollover of unused Closed Area I allocation to future fishing year**

This alternative would extend the deadline to use Closed Area I access area trips. This alternative has two options in terms of 2012 trips and/or 2013 trips, as well as three sub-options in terms of the length of time trips can rollover (Table 9). Option 1 for FY2013 trips only with three sub-options to extend the trips through FY2014, FY2015, or until CA1 reopens. Option 2 is for FY2012 CA1 trips with the same three sub-options for the length of the extension. For this alternative, both Option 1 (2013 trips) and Option 2 (2012 trips) can be selected.

The Committee also clarified that if CA1 trips are permitted to rollover in this action, the trips could be taken within the existing CA1 access area, or a revised CA1 access area if modified by the EFH Omnibus Amendment. Specifically, if the EFH closed area within Closed Area I is modified or removed by that action, a subsequent scallop action could modify the access area boundaries to extend farther north. If that happens unused CA1 trips from 2012 and/or 2013 could be fished in the expanded area if an alternative in this section is selected.

##### **2.1.2.9.2.1 Option 1 – Allow rollover of unused FY2013 Closed Area I allocation**

Vessels would be permitted to fish unused 2013 Closed Area I for a specified period of time. The PDT estimates that the unused FY2013 allocation is equivalent to approximately ??? pounds. Need values from NERO

- Sub-option A – unused allocation could be fished through February 28, 2015, the end the 2014 fishing year
- Sub-option B - unused allocation could be fished through February 28, 2016, the end the 2015 fishing year
- Sub-option C - unused allocation could be fished the fishing year that CA1 reopens as an access area under a future action

##### **2.1.2.9.2.2 Option 2 – Allow rollover of unused FY2012 Closed Area I allocation**

Vessels would be permitted to fish unused 2012 Closed Area I for a specified period of time. The PDT estimates that there is about 10% of 2012 trips are unused. This is equivalent to about ????. Need values from NERO

- Sub-option A – unused allocation could be fished through February 28, 2015, the end the 2014 fishing year

- Sub-option B - unused allocation could be fished through February 28, 2016, the end the 2015 fishing year
- Sub-option C - unused allocation could be fished the fishing year that CA1 reopens as an access area under a future action

**2.1.2.9.3 Alternative 3 – Unused Closed Area I allocation could be fished in open areas**

This alternative would convert unused Closed Area I allocation into access in open areas instead. There are two options being considered for when access would be granted: FY2014 or some in FY2014 and some in FY2015 (Table 9). The PDT is also exploring two sub-options for how access would be allocated. Sub-option A would directly convert unused Closed Area I allocation into open area allocation in terms of pounds. Sub-option B would convert unused Closed Area I allocation into DAS. It needs to be specified for this alternative if it applies to unused FY2012 and/or FY2013 Closed Area I allocation.

**2.1.2.9.3.1 Option 1 – Unused Closed Area I allocation could be fished in open areas through FY2014**

Vessels would have until the end of FY2014 to fish unused CA1 allocation in open areas. Allocation will be granted in pounds or DAS based on the sub-options below.

- Sub-option A – unused allocation would be allocated in pounds. Vessels would receive an LOA to fish unused allocation in open areas
- Sub-option B - unused allocation would be allocated in DAS. The PDT will provide a conversion factor for NMFS to use to assign DAS allocations for unused allocation. *DAS conversion would need to be conservative to prevent unintended consequences on the resource in open areas as well as other segments of the fishery. Concerns raised about vessels having different capacities in open areas.*

**2.1.2.9.3.2 Option 2 – Unused Closed Area I allocation would be divided with 40% available in FY2014 and 60% in FY2015.**

Vessels with unused CA1 allocation will be allowed to fish that allocation in either FY2014 or FY2015. All vessels with unused allocation would be placed in a lottery. Forty percent of the unused allocation would be granted access in FY2014 and 60% of unused allocation would be granted access in FY2015. This was recommended as a way to spread catch over two years to reduce impacts of additional catch on other limited access vessels. The catch from this rollover will need to be considered under the LA sub-ACL for each fishing year. Allocation will be granted in pounds or DAS based on the sub-options below.

- Sub-option A – unused allocation would be allocated in pounds. Vessels would receive an LOA to fish unused allocation in open areas
- Sub-option B - unused allocation would be allocated in DAS. The PDT will provide a conversion factor for NMFS to use to assign DAS allocations for unused allocation. *DAS conversion would need to be conservative to prevent unintended consequences on the resource in open areas as well as other segments of the fishery. Concerns raised about vessels having different capacities in open areas.*

**Table 9 – Summary of alternatives under consideration for unused Closed Area I alternatives**

<b>ALTERNATIVE</b>	<b>DESCRIPTION</b>
No Action (Alt 1)	No rollover of 2012 or 2013 trips
Alternative 2	<b>Allow rollover in CA1 access area</b> (or a revised CA1 access area if modified by the EFH omnibus action)
Option 1	2013 trips only
Sub-Option A	Through FY2014
Sub-Option B	Through FY2015
Sub-Option C	When CA1 reopens
Option 2	2012 trips only
Sub-Option A	Through FY2014
Sub-Option B	Through FY2015
Sub-Option C	When CA1 reopens
Alternative 3	<b>Allow rollover in open areas</b> <i>Council needs to specify if that includes 2012 and/or 2013 trips</i>
Option 1	Unused trips could be fished through FY2014
Sub-Option A	Allocation in pounds
Sub-Option B	Allocation in DAS conversion
Option 2	Unused allocation divided by FY (40% in FY2014 and 60% in FY2015) by lottery
Sub-Option A	Allocation in pounds
Sub-Option B	Allocation in DAS conversion

### 2.1.3 Specifications for limited access general category IFQ vessels

Specifications for the LAGC fishery include an overall IFQ allocation for vessels with LAGC IFQ permits, a hard TAC for vessels with a LAGC NGOM permit, and a target TAC for vessels with a LAGC incidental catch permit (40 pound permit).

#### 2.1.3.1 No Action LAGC IFQ specifications (Alternative 1)

Under FY2014 default measures the LAGC IFQ allocation is 1,258 mt for vessels with a LAGC IFQ permit as well as LA vessels with a LAGC IFQ permit. This allocation is equivalent to 5.5% of the ACL projected for FY2014 from FW24. This total is higher than the total IFQ allocated in FY2013, and higher than the projected sub-ACL under this action. Therefore, on March 1, 2013 LAGC vessels will be allocated a higher IFQ based on default measures than what LAGC IFQ vessels will likely ultimately be allocated under FW25. (NMFS do we want to add more text to explain to industry that we are in the same situation as last year?)

#### 2.1.3.2 Updated LAGC IFQ for FY2014 and FY2015 (default) (Alternative 2)

The total sub-ACL for the LAGC fishery is the same regardless of the allocation scenario selected (Alternative 1-3). The LAGC IFQ fishery is allocated 5.5% of the total ACL for the fishery. A portion of LAGC IFQ is reserved for LA vessels with LAGC IFQ permits (0.5%) and the remaining catch is available for vessels with LAGC IFQ permits (Table 10). For FY2014 the total LAGC IFQ is equivalent to about 1099 mt. The default 2015 IFQ allocation is about ?? million pounds.

**Table 10 – Summary of LAGC IFQ allocations under consideration in FW25 (same for all allocation scenarios)**

<b>LAGC Allocations</b>	<b>2014</b>	<b>2015 (default)</b>
IFQ-only (5% of ACL)= sub-ACL = ACT	999 mt	
IFQ + LA (0.5% of ACL)=sub-ACL=ACT	100 mt	

#### 2.1.3.3 Allocation of fleetwide access area trip allocations for LAGC fishery

This action is considering two options for allocating fleetwide trips to the LAGC IFQ fishery. Option 1 is to allocate 5.5% of the total 2014 access area TAC for every area open in a particular year. And Option 2 is to take the 5.5% from CA2 and prorate those trips proportionally among the remaining areas open in a particular year. As with the limited access scallop fleet, no access area trips would be allocated for the 2015 default LAGC IFQ measures. If final specifications are not in place before the start of the 2015 fishing year vessels with LAGC IFQ would be permitted to fish their 2015 default quota allocations from open areas only. Once a subsequent action is implemented to set final 2015 measures, LAGC IFQ vessels would be permitted to fish their quota from access areas with available LAGC trips.



**2.1.3.3.1 Option 1 - Allocate 5.5% of each access area TAC to the LAGC IFQ fishery**

This alternative would allocate 5.5% of the access area TAC per area to the LAGC fishery in the form of fleetwide trips. Vessels would still be restricted to the possession limit of 600 pounds. Once the fleetwide max is projected to be fished, NMFS would close that access area to LAGC IFQ vessels for the remainder of the 2014 fishing year. See Table 11 for a summary of the trips that would be available to the LAGC fishery.

**2.1.3.3.2 Option 2 - Allocate 5.5% of the total access area TAC available and prorate LAGC IFQ trips proportionally in all areas open that year excluding CA2**

This alternative would allocate 5.5% of the 2014 access area TAC per area to the LAGC fishery in the form of fleetwide trips. However, the trips available from CA2 would be shifted to other access areas closer to shore. All CA2 trips would be divided equally among the other areas open that year. For example, under Specification Alternative 2 the LAGC fishery would be allocated ??? trips in CA2 in 2014 under Option 1. Under this option those trips would be shifted to NL and Delmarva proportionally, adding about ?? additional trips per area. This alternative would provide 5.5% of total access area effort to the LAGC fishery, regardless of which areas are open.

Vessels would still be restricted to the possession limit of 600 pounds. Once the fleetwide max is projected to be fished, NMFS would close that access area to LAGC IFQ vessels for the remainder of the fishing year. See Table 11 for a summary of the trips that would be available to the LAGC fishery.

**Table 11 – Summary of alternatives for LAGC fleetwide trips per access area for FY2014**

2014		Del	CA2	NL	Total TAC and # trips
No Action (Alt 1)	AA TAC				
	LAGC TAC				
	# LAGC trips (Option 1)				
	# LAGC trips (Option 2 - no CA2)				
Alt 2a and 2b	AA TAC				
	LAGC TAC				
	# LAGC trips (Option 1)				
	# LAGC trips (Option 2 - no CA2)				
Alt 3	AA TAC				
	LAGC TAC				
	# LAGC trips (Option 1)				
	# LAGC trips (Option 2 - no CA2)				

**2.1.4 Specifications for limited access general category NGOM vessels**

The Council approved a separate limited entry program for the NGOM with a hard-TAC. Framework 25 is considered a separate hard TAC for this area for 2014 and 2015(default).

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. In 2011, 110 vessels were issued a LAGC NGOM scallop permit during all of or part of the year and 164 other vessels were issued a LAGC permit in CPH. The majority of the 110 NGOM permits in 2011 were from MA (53 vessels) and 35 from Maine. Ten vessels are homeported in NH, and the rest are from NC, NJ, RI and NY.

Amendment 11 specified that the Scallop PDT will recommend a hard-TAC for the federal portion of the scallop resource in the NGOM. The amendment recommended 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 based on historical catch records. The Council considered the TAC in FW23 again because that action also considered allowing NGOM vessels to declare state only trips, and that catch would not count against the federal TAC. While that measure was approved, the Council decided not to lower the NGOM TAC because catch from LAGC IFQ vessels that fish in the NGOM will still count against the TAC. Therefore, the TAC was set at 70,000 pounds for 2012 as well.

FW24 considered a lower TAC of 58,000 pounds based on a resource survey of the NGOM management unit (See Section 2.1.5.2 of FW24). However, the Council selected 70,000 pounds in FW24 for FY2013 as well.

#### **2.1.4.1 No Action NGOM hard-TAC (Alternative 1 - 70,000 pounds)**

The NGOM hard TAC would remain at 70,000 pounds until changed by a future scallop action.

#### **2.1.4.2 Updated NGOM hard-TAC (Alternative 2 – 58,000 pounds)**

A scallop resource survey was conducted in 2012 to estimate the scallop biomass in the federal portion of the NGOM management area. This project was funded by a 2011 RSA award, and updated the first survey of this area that was conducted in 2009. About 200 stations were completed in the 2012 survey in five overall survey areas. Overall the biomass was very patchy and some areas had poor meat conditions (smaller meats on Platt's and Fippennies Banks compared to shell heights).

The PDT reviewed the results of this survey in FW24 and recommend that the TAC for that action be set using the same assumptions developed in Framework 22. See Section 2.6.3.2.1 of Framework 22 for more information about survey methods and biomass estimate analyses. Very briefly, the PDT recommended using the lower 25<sup>th</sup> percentile because there is substantial variability in the federal water biomass estimate in this region and it is a generally accepted principle that data poor/high uncertainty stocks require more precaution. Therefore, the PDT recommended the TAC be set at the 25<sup>th</sup> percentile at an exploitation rate of 0.25 and dredge efficiency of 0.50. Using updated values, that equals a hard TAC of 58,000 pounds. Since there is no new information the PDT recommends considering the same value in this action.

#### **2.1.5 Specifications for limited access general category incidental catch vessels**

Amendment 15 included 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

to the directed fisheries. 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, 294 vessels qualified for an incidental catch permit; 275 were issued on vessels and 19 in CPH. The majority of permits are on vessels homeported in Massachusetts (113 vessels) followed by New Jersey, Rhode Island, North Carolina and New York. In 2011 total catch from these vessels was 38,700 pounds, about 77% of the target TAC. Finally, in the NMFS yearend report for FY2012 the total catch from vessels was estimated at 61,869 pounds, about 24% above the 50,000 pound target TAC. The PDT discussed if a higher value should be considered in this action but recommended it be left at 50,000 pounds for now. This level of catch is very small and will not have impacts on the overall resource, and 2012 is the first time it has exceeded the target. The PDT will continue to monitor this source of mortality and recommend a higher TAC in a future action if necessary.

#### **2.1.6 No Action Incidental target TAC (Alternative 1 - 50,000 pounds)**

TAC would remain at 50,000 pounds until modified by a future action. This catch is removed before ACLs are allocated to the limited access and limited access general category vessels.

## **2.2 ACCOUNTABILITY MEASURES FOR THE SNE/MA WINDOWPANE FLOUNDER SUB-ACL ALLOCATED TO THE SCALLOP FISHERY**

### **2.2.1 No Action SNE/MA Windowpane flounder AM (Alternative 1)**

Under No Action, the sub-ACL for SNE/MA windowpane flounder would not have accountability measures specific to the scallop fishery. If the scallop fishery exceeds their sub-ACL, no measures would be triggered to limit or reduce future windowpane catch in the scallop fishery. This is not in compliance with NMFS regulation and guidance on ACL management, which requires an AM for every ACL and sub-ACL.

In terms of when AMs trigger in general, under No Action, if the scallop fishery is below their sub-ACL, and the GF fishery is over their sub-ACL, but the sum of all catch is below the total ACL, then no AMs would trigger in the groundfish fishery. In the reverse, if the scallop fishery exceeds their sub-ACL, but the total ACL is not exceeded because other components of the fishery were under their sub-ACLs, then AMs would NOT trigger for the scallop fishery. The program for SNE/MA windowpane flounder was designed so that each component of the fishery is accountable, but the trigger to implement AMs only occurs if the total ACL is exceeded, not just one particular sub-ACL.

However, under No Action, if the overage by the scallop fishery is substantial causing the overall ACL to be exceeded, AMs would trigger for the groundfish fishery because there are currently no AMs specific to the scallop fishery. If No Action is adopted in Scallop Framework 25, it would be likely that the next groundfish action would consider an AM for the scallop fishery to address this issue. The sub-ACL management strategy used by the Council for other species is

that each fishery is accountable, and an overage that causes the total ACL to be exceeded should not impact a fishery that did not cause the overage.

## 2.2.2 Reactive AM - Seasonal Area Closure (Alternative 2)

This alternative would close a specified area for a period of time with higher bycatch rates of SNE/MA windowpane flounder. This AM would apply to all scallop vessels, LA and LAGC IFQ vessels. The PDT used a variety of sources of information to identify which areas should be included in this AM alternative. Appendix 1 is a detailed summary of the data sources and methods used by the PDT for development of WP AM alternatives. In general, a statistical model was created (GAM model) that estimates scallop and WP catch rates independently based on observer data from FY2006-2012. Data were binned into ten minute squares by month. A mean D:K ratio was calculated across years and a target decrease in WP bycatch of 20% was used to help identify candidate AM areas.

The main source of information used to identify the season of the AM alternative was also observer data. A separate GAM model was developed that predicts bycatch by month and depth using all observed scallop trips from 1999-2011. Analyses were broken out by depth as well as month. During most months, bycatch is highest at 20 fathoms. However, during the fall, bycatch seems to be higher at 30 fathoms. Based on these results the PDT supports potential adoption of a season for either an area closure of gear restricted AM for windowpane, i.e July-October. Furthermore, it may be possible to further refine the AM by depth so that the AM area could include more shallow waters in July and August when bycatch rates at that depth are higher, and then expanded to the full area during September and October when windowpane move deeper.

The PDT also discussed that may be an argument to have a smaller area for the closure option and a larger AM area for the gear restricted area – since impacts of latter are likely less.

*Length of time or size could vary based on overage – could have 2 tiers (maybe 10% and 50%)  
Do we want to expand the area if overage higher, or expand the season?  
What would be more effective for this stock?*

**Figure 5 – Proposed AM area if SNE/MA WP AM is triggered**  
**Still Under development**

**Table 12 – Proposed season for SNE/MA WP AM**  
**Still Under development**

### **2.2.3 Reactive AM - Seasonal gear restricted area (Alternative 3)**

This alternative would implement a gear restricted area for a specified period of time with higher bycatch rates of SNE/MA windowpane flounder. The specific gear modification has two elements: 1) shorter apron in the dredge bag; and 2) reduced twine top hanging ratio. Figure 6 is a drawing of typical scallop dredge gear. The two gear elements involved with this gear modified area are highlighted in the margin of the figure. See Appendix 1 for a summary of the research used by the PDT to complete analyses related to this gear modification alternative.

First, the maximum number of rows allowed in the apron of the topside of the dredge would be five rows. A vessel could fish with fewer rows of rings, but the maximum number of rows would be restricted to five. Second, the maximum hanging ratio for the dredge would be 1.5:1 overall; that is an average of 1.5 meshes per ring for the width of the twine top. The twine top is usually connected to the topside of the dredge frame by several rows of rings called the skirt. Individual meshes of the twine top are connected to each ring across the skirt of the dredge. Some vessels use a hanging ratio of 2:1, which means 2 meshes per ring. Some vessels fish with a lower hanging ratio, and some with a greater ratio of 3:1 or even 5:1. An overall hanging ratio of 1.5:1 means that the twine top is hung alternating 2 meshes per ring and 1 mesh per ring, for an overall average of 1.5 meshes per ring for the entire width of the twine top.

A dredge would be in compliance if the ratio did not exceed 1.5 based on the total number meshes in the twine top (counted at the bottom where the twine top connects to the apron) divided by the total number of rings that the twine top is connected to in the apron. For example, an apron that is 40 meshes wide (not including any ring in the side pieces) would only be able to use a twine top with 60 or fewer meshes so that the overall ratio of meshes to rings did not exceed 1.5 ( $60 \text{ meshes} / 40 \text{ rings} = 1.5$ ). The regulation would not be based on the number of meshes across the top of the twine top connected to the skirt of the dredge, because some vessels connect the twine top to the frame with chain instead of rings.

This AM would apply to all scallop vessels, LA and LAGC IFQ vessels.

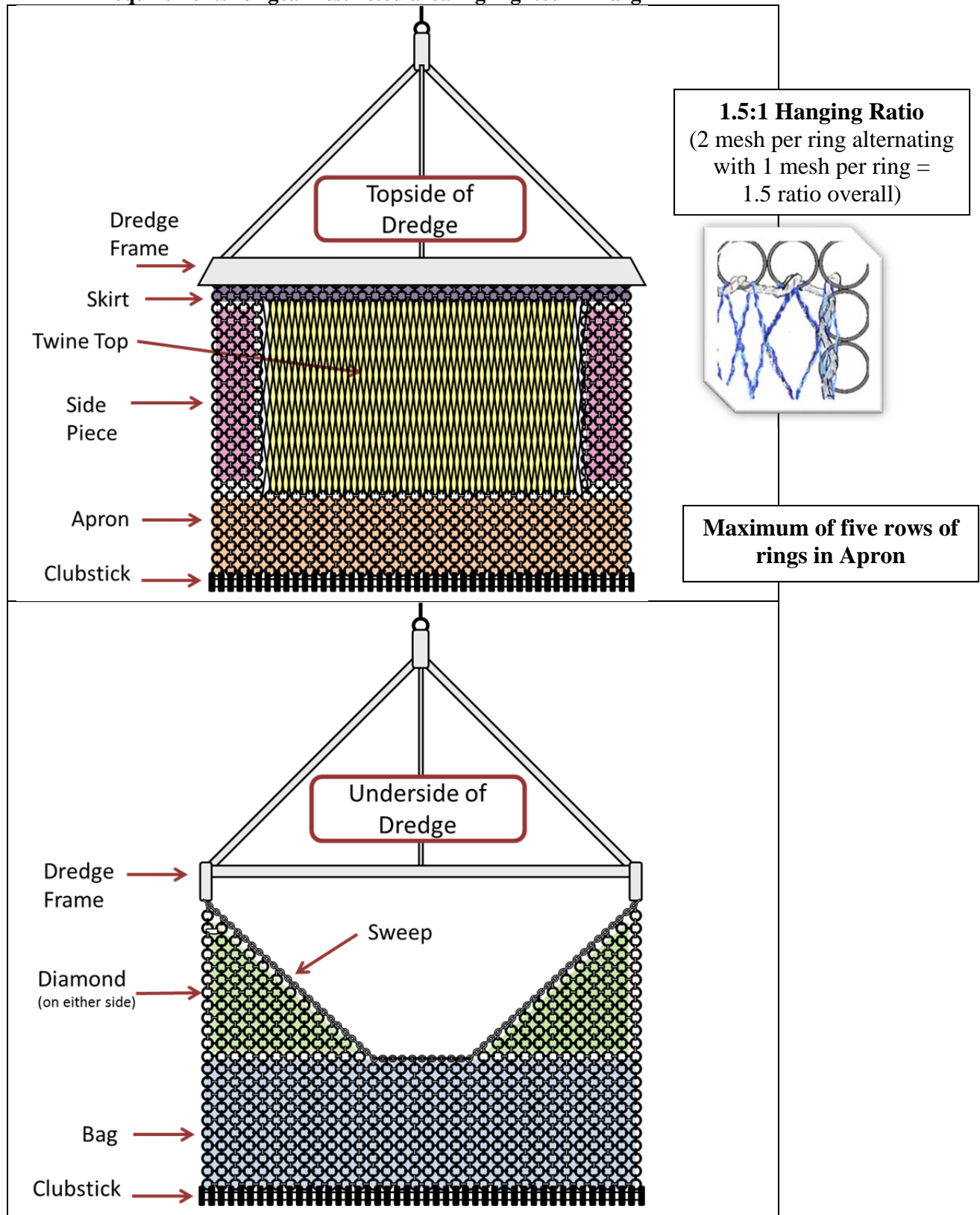
#### **2.2.3.1 Option 1 – Trawl vessels would not be affected by this AM**

This Option would not include scallop trawl vessels; these vessels would be exempt from this potential gear restricted area AM.

#### **2.2.3.2 Option 2 – Scallop trawl gear would be prohibited within the seasonal gear restricted area for the time of year the AM is effective**

If triggered, a vessel with trawl gear would be prohibited from fishing for scallops within the gear restricted area while the AM is effective.

**Figure 6 – Typical Scallop dredge gear (topside of gear on top and underside on bottom) Gear requirements for gear restricted area highlighted in margin**



Source: Goff, K. D. 2002. Ring diameter and closed area scallop fisheries. Masters thesis, Virginia Institute of Marine Science, College of William and Mary. (Note: labels and colors added to original figure).  
 Insert figure of hanging ratio courtesy of Coonamessett Farm Foundation.

#### **2.2.4 Proactive AM – Modify gear regulations to include a maximum of seven rings in the apron of a dredge in all areas (Alternative 4)**

Within the current twine top restrictions in Section 648.51 of the scallop regulations it states that a dredge greater than 8 feet in width, must have at least seven rows of rings between the terminus of the dredge (clubstick) and the twine top. Framework 5 implemented this regulation in 1995 to protect against the overharvest of small scallops. At that time some vessels were running twine top along the topside of the dredge all the way down to the clubstick. Since the mesh used for twine top was much smaller than it is today this practice essentially turned the dredge bag into a net, which has higher mortality on small scallops.

Now that twine top mesh is a required to be a minimum of 10 inches there is less incentive to run it back to the terminus of the dredge. However, recent gear research has shown that a shorter apron, for example 5 rows of rings from the clubstick, may reduce flatfish bycatch. This action is considering a seasonal gear restriction AM that would require vessels to use a shorter apron, but that will only be implemented if an AM is triggered, and would only be required in the specified AM area and season. In contrast, this measure would modify the current requirement to have at least a seven row apron, and instead require vessels to have a maximum of seven rows. This measure may reduce flatfish bycatch by enabling vessels to voluntarily fish with a shorter apron, less than seven rings, to proactively reduce flatfish bycatch in any area or season. This measure would apply to all scallop vessels (LA and LAGC IFQ) in all areas (access and open areas).

This gear restriction is outdated and is no longer necessary with larger mesh size restrictions. In addition, it is counter to innovations that could help reduce flatfish bycatch. Therefore, modifying this dated regulation is a proactive AM. The combination of a shorter apron and lower hanging ratio has been shown to be more selective for larger scallops.



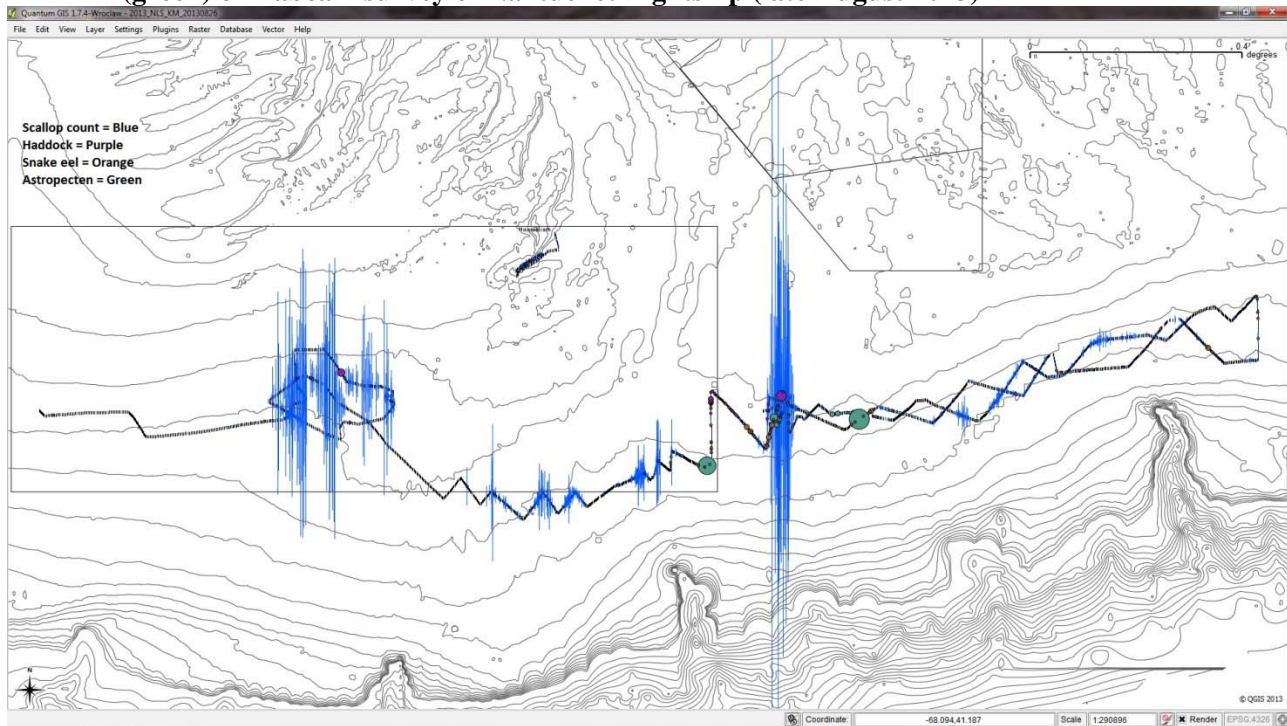
## 2.3 CONSIDERED AND REJECTED ALTERNATIVES

### 2.3.1 New scallop access area closure in and around NL

Based on the results of 2013 scallop surveys there seems to be a very large year class of small scallops in and around the current NL access area. The PDT discussed that an alternative could be developed that would encompass these small scallops in a new access area. The area would remain closed for several years and then reopen as a scallop access area. The precise boundaries were not defined, but the idea discussed was that it would include the southern part of the access area as well as portions of the existing EFH closed area in NL and some area to the east that is currently open to the scallop fishery. The average size of scallops observed was 17mm.

Following the PDT meeting in August 2013 when this area was first discussed Arnie's Fisheries surveyed the general area to help delineate how widespread the recruitment was. Habcam was towed for five days in and around NL and large densities were observed within a depth of 60-70 fathoms within the EFH closed area in NL and around 80 fathoms in the NL access area and waters to the east in open areas (Figure 7).

**Figure 7 – Abundance of scallops (blue), haddock (purple), snake eel (orange) and astropecten (green) on habcam survey of Nantucket Lightship (late August 2013)**



**Rationale for Rejection:** It is very difficult to assess scallops that are very small. There is higher predation and mortality on these scallops and they are in deeper waters than typical. Therefore, their survivability is more uncertain. These small scallops are in an area that is not heavily fished by the scallop fishery, so incidental impacts should be limited. The average size is 17mm; therefore these small scallops will go through commercial gear. There are some larger scallops mixed in these areas and it may be better to access the exploitable scallops now before the smaller scallops grow larger and incidental impacts may be greater. Closing more open area now



to be part of a future access area will potentially reduce DAS further for FY2014, and the allocation for 2014 DAS will likely be lower than 2013 already; therefore, timing of this closure is not preferred. The Council can revisit this area as a potential closed area next year and decisions can be made based on more information after another survey season.

**2.3.2 Option 3 – Scallop access area trips prohibited in southeast corner of CA2 access area**

Small scallops were also observed in the surveys of CA2 (SMAST and NEFSC survey). Length frequency of all measured scallops on SMAST survey of CA2 in Figure 8. Number of scallops less than and larger than 100 mm displayed in Figure 9. The PDT developed a range of potential boundary options for a recruitment protection area within CA2 south (Figure ???).

**Figure 8 – Number of scallops by shell height (5mm bins) from 2013 SMAST survey of CA2 south**

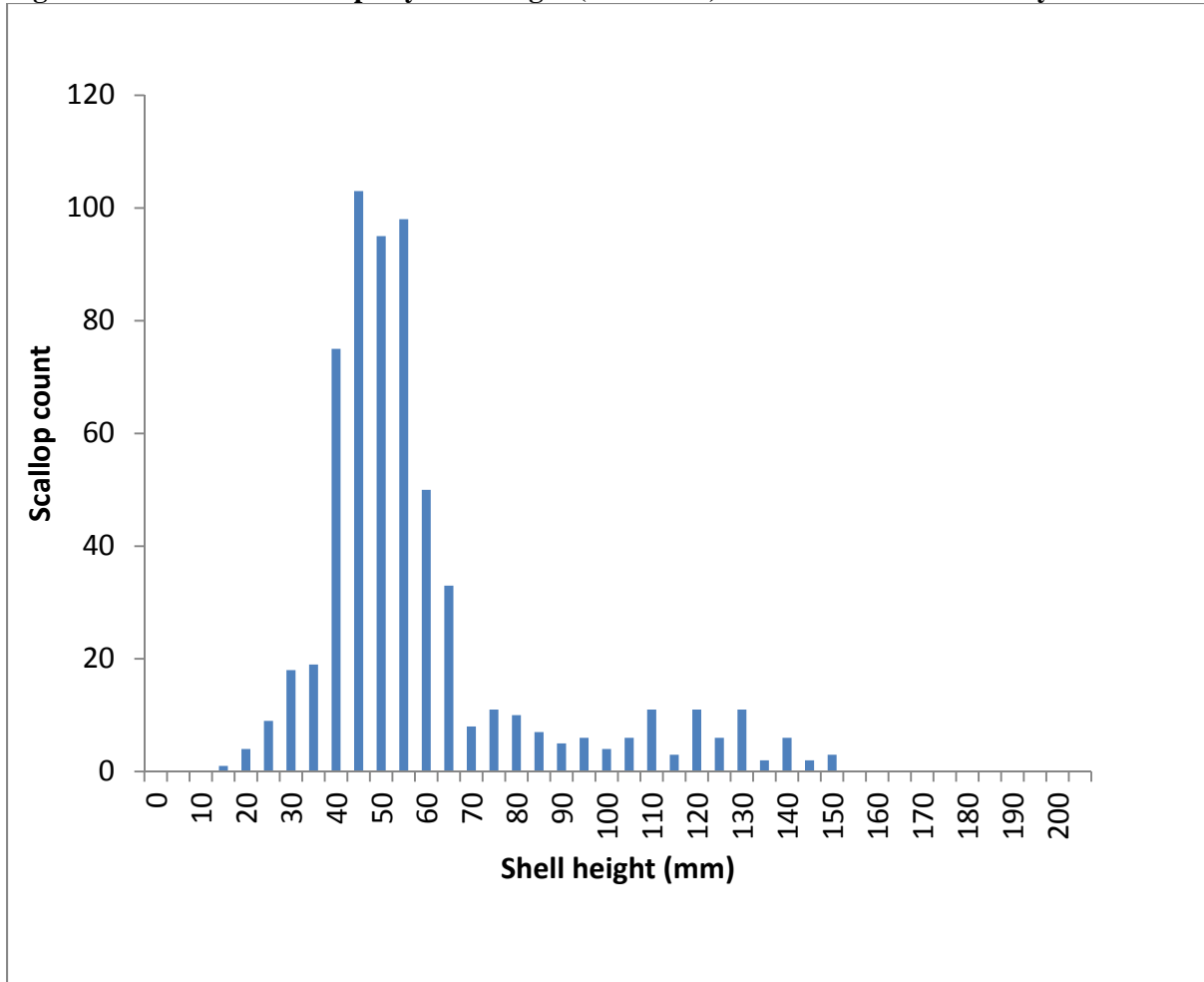
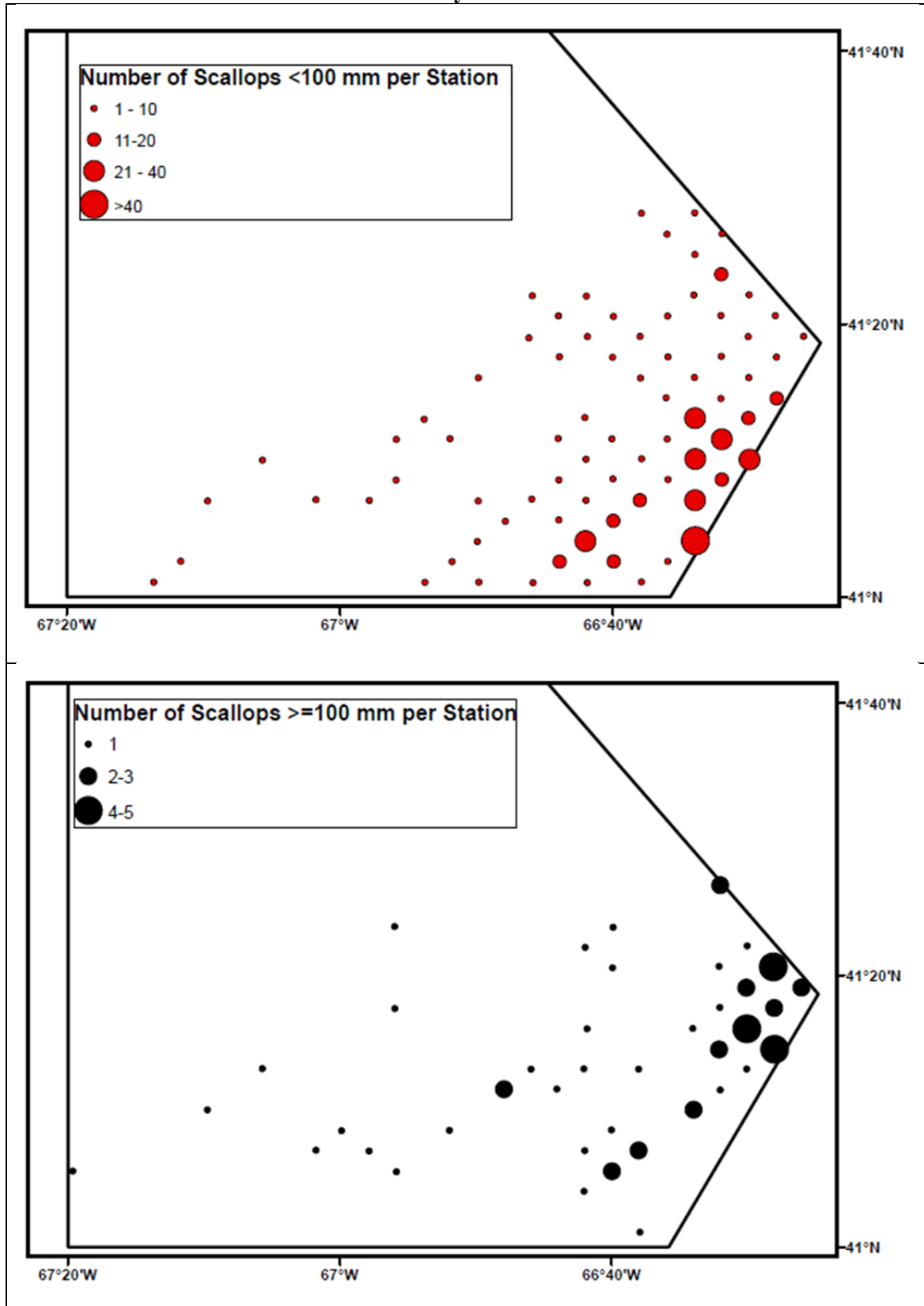
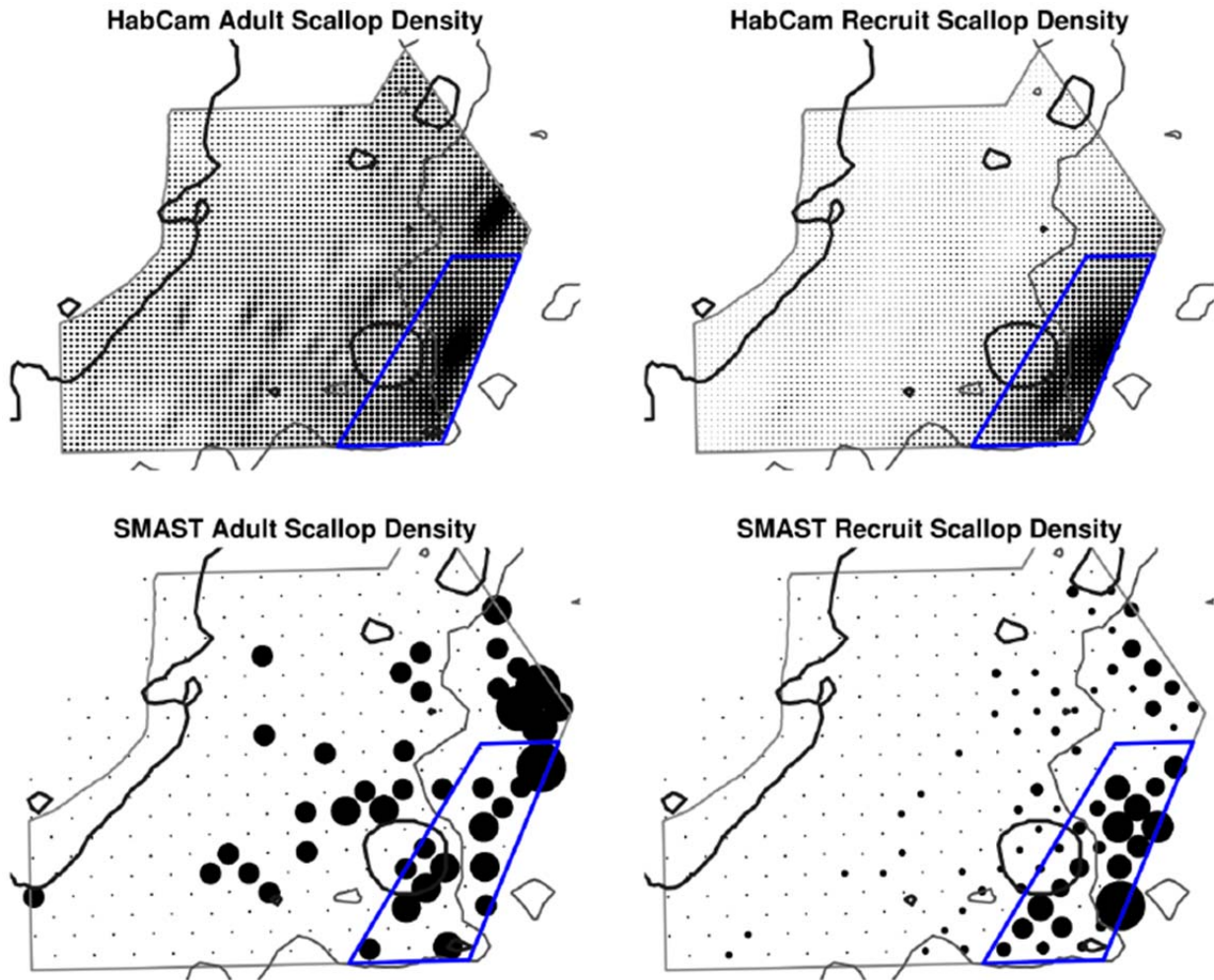


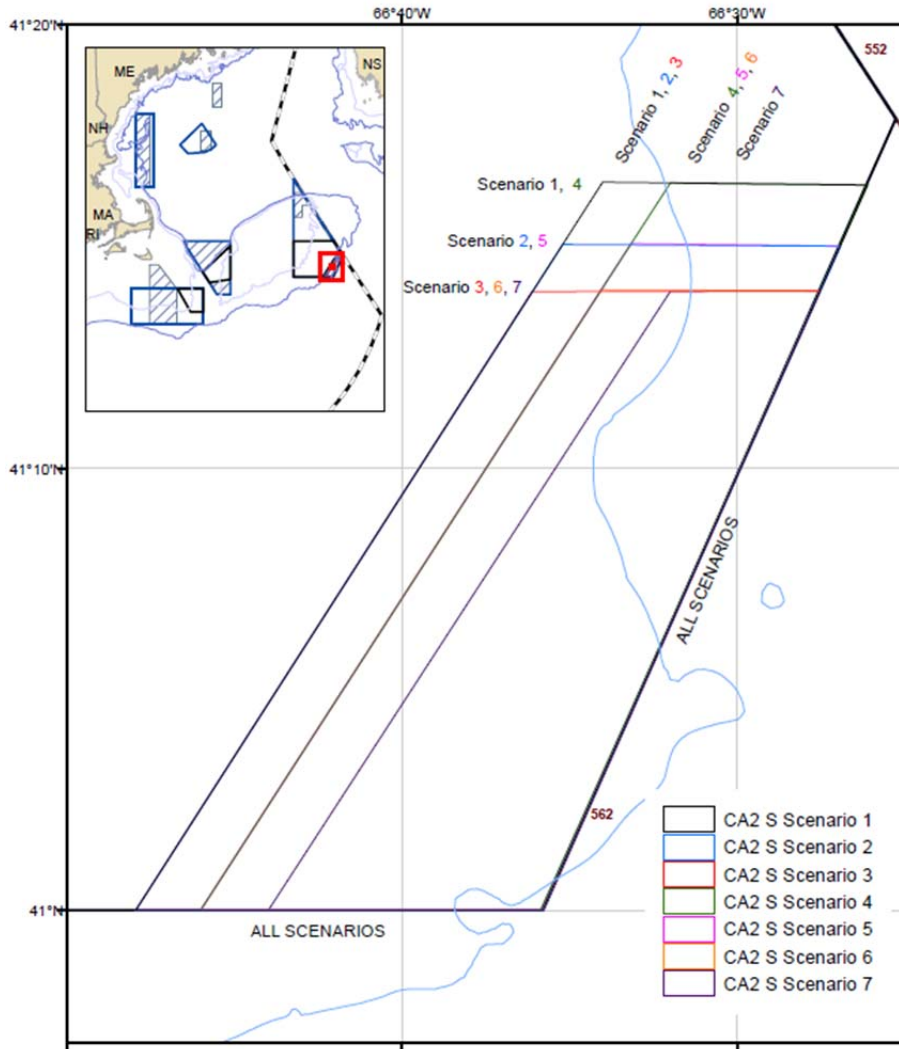
Figure 9 – Number of scallops less than 100 mm (TOP) and larger than 100 mm (BELOW) measures from SMAST 2013 survey of CA2 south



**Figure 10 – Adult (left) and recruit (right) scallop biomass from two surveys (2013). Possible closure area in southeast corner highlighted in blue**



**Figure 11 – Several possible scenarios developed by the PDT for consideration for boundaries within CA2 south to protect recruitment in southeast corner of access area**



**Table 13 – Estimate of the percentage of scallop recruitment and adult biomass within and outside of possible boundaries within CA2 south.**

Scenario	HABCAM		SMAST	
	%Recruits Included	% Adults Included	%Recruits Included	% Adults Included
1	73	28	79.7	37.9
2	70.6	26.6	79.7	37.9
3	67.7	25.2	76.2	28.8
4	65.8	24.2	73.6	33.3
5	64	23.2	73.6	33.3
6	61.7	22.1	70.1	24.2
7	51.8	18	54.5	13.6

**Rationale for Rejection:** The Scallop AP and Committee reviewed this proposal from the PDT and decided not to include it for consideration at this time. There is a substantial amount of larger scallops mixed within the area that has smaller scallops. There are concerns that scallops are not dense in this area and the fleet will need access to more of the adult population. More importantly, the southeast portion of CA2 is generally a low YT bycatch region, and since the YT allocation for 2014 is very small, the fleet may need to concentrate in that area to avoid YT. The AP also commented that CA2 may not be open in 2015 so it would be important to harvest larger scallops now if the area is not open for several years.

### **2.3.3 Alternatives for unused Closed Area I access areas – Allow vessels with unused FY2013 Closed Area I catch to fish that allocation in a different access area**

This alternative would allow a vessel with an unused FY2013 trip to harvest that catch from a different access area. Two options are being considered in terms of the deadline vessels would need to complete unused Closed Area I trips: Option 1 is through FY2014; and Option 2 is through FY2015. The PDT will identify the appropriate access area in this action, or in a future scallop action, particularly if Option 2 is selected.

**Rationale for Rejection:** There are no access areas available in FY2014 that can support additional catch. All available catch is already being allocated for FY2014 access.

### **2.3.4 Proactive AM – Include a maximum twine top hanging ratio of 1.5:1 for all areas (Alternative 5)**

Currently there is no limit on the number of meshes a scallop dredge vessel can use in the twine top of their dredge, so long as the opening is at least 10 inches. The more meshes that are used, the tighter the meshes pull together when fished. For example, many vessels fish with 60 meshes across a 15 ft. dredge, but some fish with as many as 80 or 90 meshes across. As meshes pull tighter there is less space for scallops and fish to escape the gear.

Twine top mesh is connected to the topside of the dredge frame by either rings or chains. In the case of rings, the number of meshes per ring is referred to as the hanging ratio. Some vessels fish a 2:1 hanging ratio which means 2 meshes per ring. Some vessels fish a lower ratio than this (fewer mesh per ring), and other vessels fish a higher ratio (more meshes per ring).

The most effective way to regulate the gear so that the twine top is fished as it was intended to with greater openings for escapement of finfish is to restrict the hanging ratio. Research has shown that lower hanging ratios increase finfish escapement. This alternative would require a maximum hanging ratio of 1.5 meshes per ring, on average for the entire width of the twine top. This measure would apply to all scallop vessels (LA and LAGC IFQ) in all areas (access and open areas).

**Rationale for Rejection:** The Committee decided not to include this alternatives as a proactive AMs at this time based on a recommendation from the Advisory Panel. It was argued that scallop vessels are now required to use turtle deflector dredges in the Mid-Atlantic and the potential benefits of that new gear requirement are still uncertain. It is possible the TDD gear modification will reduce windowpane bycatch levels substantially. Therefore, the Advisory

Panel argued that before more proactive gear modifications are required more time and resources should be spent evaluating the impacts of current gear requirements. There was also concern voiced that reducing bycatch of other flatfish before sub-ACLs are assigned could have negative impacts on the scallop fishery in terms of future allocations.

### **2.3.5 Proactive AM – Maximum of five rows of rings in the apron of dredge gear in all newly opened access areas on GB (NL, CA1, and CA2) (Alternative 6)**

This alternative would require a maximum of five rows in the apron of dredge gear on all scallop vessels (LA and LAGC IFQ) in all access areas on GB, including NL, CA1, and CA2. If new scallop access areas are developed on GB and this measure is adopted, this gear restriction should be considered for new access areas as well. Vessels would not be subject to this proactive AM when fishing in open areas.

***Rationale for Rejection:*** The Committee decided not to include this alternatives as a proactive AMs at this time based on a recommendation from the Advisory Panel. It was argued that scallop vessels are now required to use turtle deflector dredges in the Mid-Atlantic and the potential benefits of that new gear requirement are still uncertain. It is possible the TDD gear modification will reduce windowpane bycatch levels substantially. Therefore, the Advisory Panel argued that before more proactive gear modifications are required more time and resources should be spent evaluating the impacts of current gear requirements. There was also concern voiced that reducing bycatch of other flatfish before sub-ACLs are assigned could have negative impacts on the scallop fishery in terms of future allocations.

### **2.3.6 Proactive AM – Maximum twine top hanging ratio of 1.5:1 in all newly opened access areas on GB (NL, CA1, and CA2) (Alternative 7)**

This alternative would require a maximum hanging ratio of 1.5 meshes per ring, on average for the entire width of the twine top. All vessels (LA and ALGC IFQ) would be required to fish with this hanging ratio, or less, in all access areas on GB, including NL, CA1, and CA2. If new scallop access areas are developed on GB and this measure is adopted, this gear restriction should be considered for new access as well. Vessels would not be subject to this proactive AM when fishing in open areas.

***Rationale for Rejection:*** The Committee decided not to include this alternatives as a proactive AMs at this time based on a recommendation from the Advisory Panel. It was argued that scallop vessels are now required to use turtle deflector dredges in the Mid-Atlantic and the potential benefits of that new gear requirement are still uncertain. It is possible the TDD gear modification will reduce windowpane bycatch levels substantially. Therefore, the Advisory Panel argued that before more proactive gear modifications are required more time and resources should be spent evaluating the impacts of current gear requirements. There was also concern voiced that reducing bycatch of other flatfish before sub-ACLs are assigned could have negative impacts on the scallop fishery in terms of future allocations.

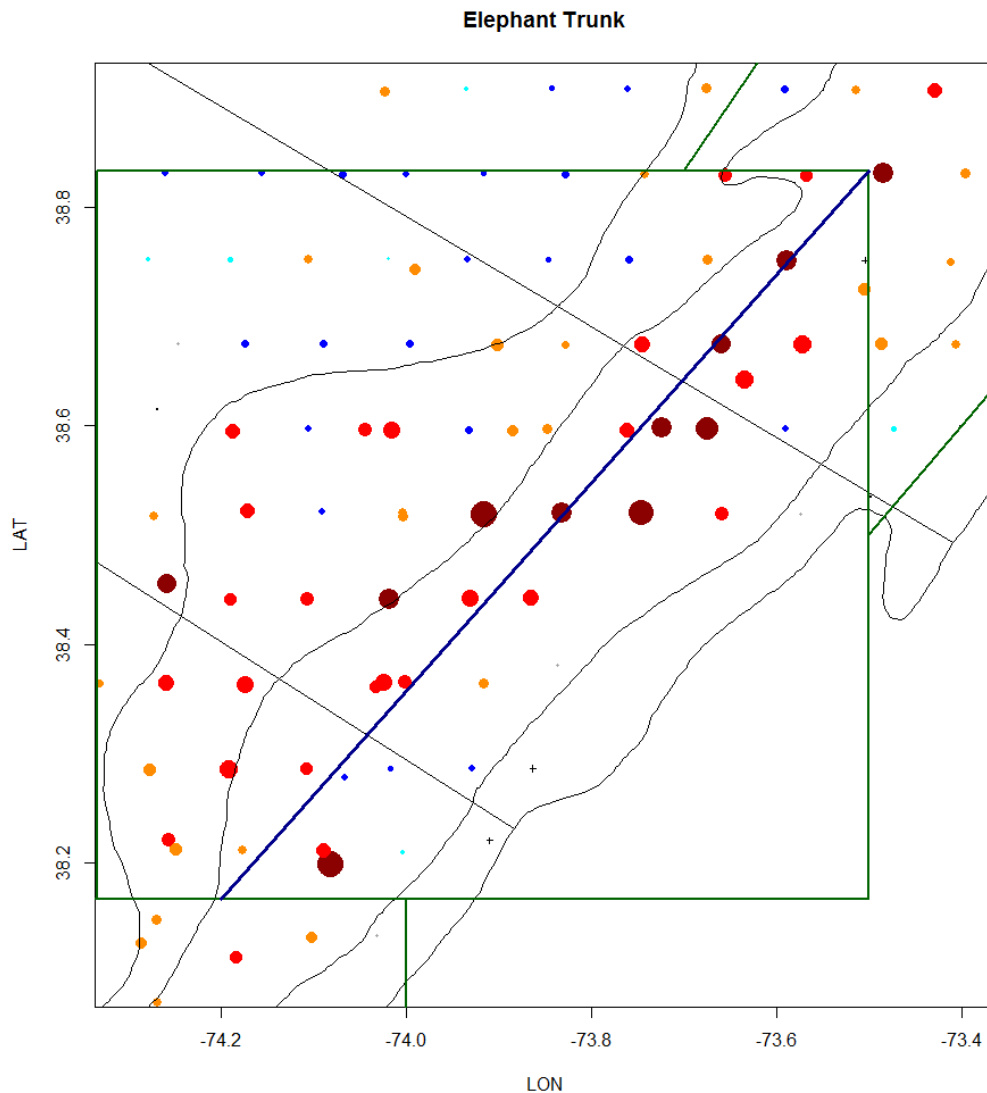
#### **2.3.6.1.1 Alternative 4 – Allow unused Closed Area I allocation to be fished in deeper waters of ET in FY2014**

ET is not ready to be an access area for the directed fishery. However, if this action is looking for a place to fish unused CA1 trips and not impact the open areas it may be possible to send this

effort into the deeper waters of ET. The PDT is not comfortable opening all of ET for this effort because the risk of negative impacts on scallops in that area is too high. Scallops do not grow as large in deeper waters so the growth potential in that area is not as great as the shallower portions of ET.

The PDT is still working on a more refined boundary for this alternative. If this is included in FW25 a more specific boundary will be developed.

**Figure 12 – Proposed boundary for potential deep-water access in ET in 2014 for unused CA1 trips**



**Rationale for Rejection:** The PDT developed this alternative to find a place to send unused trip in 2014. The Scallop AP and Committee reviewed this idea but expressed concern that the future of the fishery for the next few years is in ETA, and accessing that area too early could be very risky. Therefore, this option was not included in the document for further consideration.

### **3.0 REFERENCE INFORMATION RELATED TO FISHERY SPECIFICATIONS (COUNCIL ACTION AND ANALYSES NOT REQUIRED)**

This section does not include any alternatives under consideration in this action. Rather, the information presented in this section only summarizes reference material related to fishery specifications or supporting analyses. For example, there are various set-asides that are automatically set based on overall catch limits set in this fishery so Section 3.1 and 3.2 have been included here to help clarify the various components of the fishery that are more automatic. These set-asides do not require Council action or analysis, as the processes that set these specific allocations have already been analyzed in previous scallop actions or they are specified through other fishery actions.

Similarly, the Council approves specific research priorities relative to the RSA set-aside program in the Scallop FMP, Section 3.2.1. Finally, the PDT estimates YT and WP projected catch for the various fishery specification alternatives under consideration. Even though the GF FMP now allocated a set percentage of the available ACL to the scallop fishery, these analyses are still completed to evaluate potential impacts. They have been included in a separate section primarily for future reference.

### **3.1 SUMMARY OF ACLS AND OTHER REFERENCE TERMS**

Paragraph about table

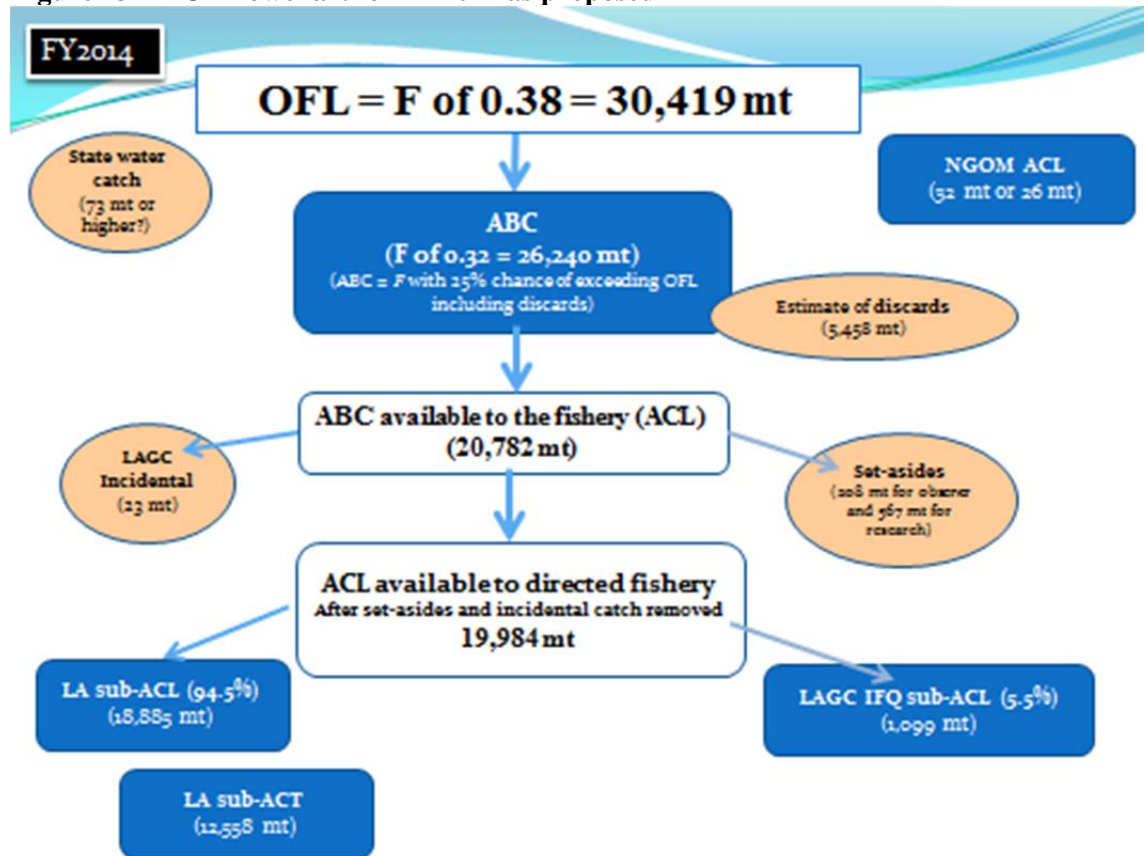
Paragraph about flowchart



**Table 14 – Summary of ACL related terms for Framework 25 (FY2014 and FY2015(default))**

	<b>2014</b>	<b>2015</b>	
OFL	65,803,576		lb
	29,848		mt
ABC (after discards removed)	42,961,481		lb
	19,487		mt
incidental	50,000		lb
	22.7		mt
RSA	1,250,000		lb
	567		mt
OBS	429,615		lb
	195		mt
ABC/ACL (after removing set-asides and incidental)	41,231,821		lb
	18,702		mt
LA sub-ACL (94.5% of ACL after set asides and incidental removed)	38,964,071		lb
	17,674		mt
LA sub-ACT	27,685,651		lb
	12,558		mt
IFQ-only (5% of ACL)= sub-ACL = ACT	2,061,591		lb
	935		mt
IFQ + LA (0.5% of ACL)=sub-ACL=ACT	206,159		lb
	94		mt

Figure 13 – ACL flowchart for FY2014 as proposed



### 3.2 TAC SET-ASIDES FOR OBSERVERS AND RESEARCH

In Amendment 15 the Council recommended that set-asides for research and observers should be removed from the overall ACL, rather than percentages of open area DAS and access area TACs. More set-aside is actually available when this change is made because it is removed before buffers for management uncertainty are factored in. Prior to Amendment 15 set-asides were taken out from the allocation level, what is now known as the ACT, whereas now set asides are removed from the total ACL level.

The ultimate values that are set-aside for the observer and research programs are not a decision the Council has to make in each Framework. Amendment 15 changed the research set-aside from a percent to projected catch to a set poundage of 1.25 million pounds, or 567 mt. Therefore, there are no alternative research set-aside allocations under consideration in this action. While modifying the amount of research set-aside is a frameworkable item, this action is not considering different values; thus the set-aside for the research program will be 1.25 million pounds in 2014, as well as 2015 unless changed in a subsequent action.

The observer set-aside is still based on a percent of catch, not a set poundage, but it is a percent of the total ACL before buffers for management uncertainty are factored in. The total set-aside for observers in FY2014 is ???, and ??? for FY2015(default), equivalent to 1% of the

ABC=ACL. Because the compensation rates are based on pounds-per-area, the observer set-aside is divided proportionally (Table 15).

NMFS could use the proportional breakdown of the total set-aside by area below to set the initial set-aside compensation rates by area (open and access) (Table 15). However, since FW24 the observer set-aside is no longer area specific. NMFS can adjust set-aside per area to provide more compensation being used in one area and less in another.

**Table 15 – Summary of 2013 observer set-aside by area.**

Area	% of TAC by area	OBS set-aside (lb)
HC		33,298
NLS		18,393
CAI		18,710
CAII		28,858
Total AA	21%	99,260
Open areas	79%	363,799
All Areas	100%	463,059

*Note: This table presents the observer set-aside broken out by area (applied proportionally based on the total TAC by area)*

### 3.2.1 Research priorities (Approved by the Council in April 2013)

The research priorities used for the RSA set-aside are defined by the Council. In April 2013 the Council approved research priorities to be used in the next funding announcement, usually June 2013 for the 2014 fishing year. These priorities were set for two years, but they may get revisited and adjusted in the next scallop action for a possible announcement in 2014.

#### Scallop research priorities approved by the Council for 2013 and 2014

HIGHEST PRIORITIES (not listed in order of importance):

- An intensive industry-based survey of each of relevant scallop access areas (Closed Area I, Closed Area II, Nantucket Lightship, Delmarva, Elephant Trunk, and Hudson Canyon). The primary deliverable of these surveys would be to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August of the prior fishing year. Areas scheduled to be open in the following fishing year generally have a higher priority than other areas.
- Identification and evaluation of methods to reduce the impact of the scallop fishery with respect to bycatch. This would include projects that determine seasonal bycatch rates, characterize spatial and temporal distributional patterns as well as the associated discard mortality rates of yellowtail flounder, and other key bycatch species.
- An intensive industry-based survey of areas that may be candidate access areas in the future (i.e. open areas with high scallop recruitment or closed areas that may open to fishing in the future such as groundfish mortality closed areas or current habitat closed areas).

- Broad, resource wide industry-based survey of entire scallop resource area.

MEDIUM PRIORITY (not listed in order of importance):

- Other resource surveys, to expand and/or enhance survey coverage in areas that have the potential to be important resource areas, but currently have a lack of comprehensive survey coverage.
- Research to support the investigation of the loggerhead turtle behavior in the Mid-Atlantic (via satellite tagging or other means) to understand their seasonal movements, vertical habitat utilization, and how and where interactions with dredge gear are occurring. This priority topic also includes monitoring of scallop dredge and trawl operations, and the development of further gear modifications if monitoring should indicate current designs are not eliminating the threat or harm to sea turtles or are resulting in unacceptable scallop catch loss.
- Studies aimed at addressing issues that were identified as research priorities at the latest assessment: i.e. incidental gear mortality, discard mortality, mortality from predation (i.e. starfish, dogfish, etc.), and seasonal growth of scallops.
- Research aimed at describing the occurrence as well as understanding the mechanisms of processes that affect scallop product quality and marketability (i.e. grey meats, diseases). Related to that, research that would evaluate the potential magnitude of impacts on scallop mortality from “scallop quality” discarding (while shucking).
- Research aimed at the effects of chemicals, water quality, and other environmental stressors on reproduction and growth of scallops (i.e. jet fuel, pesticides, ocean acidification, etc.).

OTHER PRIORITIES (not listed in order of importance):

- Other scallop biology projects, including studies aimed at understanding recruitment processes (reproduction, larval and early post-settlement stages), growth, and natural mortality (including predation and disease).
- Investigation of variability in dredging efficiency across habitats, times, areas, and gear designs to allow for more accurate quantitative estimates of scallop dredge impacts on the seabed 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 (BACI or before after control impact dredge impact studies); 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 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.
- 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.

- Develop methodologies or alternative ways for the scallop fleet to collect and analyze catch and bycatch data on a near real-time basis (i.e. collection of scallop meat weight and quality data, specific bycatch information, etc. Potential ideas include but are not limited to: concepts like a “Study fleet”, electronic monitoring, dockside monitors, bag tags, etc.).

### 3.3 UPDATED PROJECTIONS OF FLATFISH BYCATCH (YT AND WINDOWPANE)

This section includes a summary of the updated YT and windowpane flounder bycatch projections based on FW25 allocations. The Groundfish FMP is the plan that sets the YT and WP flounder sub-ACLs for the scallop fishery. Framework 48 recently changed the allocation method to a fixed percentage of the total ACL for GB YT (16% of the US ABC). The sub-ACL for SNE/MA YT is not based on a method that is set in the regulations like it is for GB YT. Most recently the Council set the sub-ACL at 90% of the high estimate of scallop fishery catch of SNE/Mid-Atlantic yellowtail flounder for 2013-2015. But this method could vary. Modifying the 2014 allocation of SNE/MA YT for the scallop fishery sub-ACL is not currently under consideration in Framework 51.

Finally, for SNE/MA windowpane the sub-ACL allocation method is set in the GF regulations at 36% of the total ACL. The sub-ACL values were recommended and analyzed in a separate action (Framework 48 to the Multispecies FMP) but has been referenced here to help keep track of decisions being taken in other actions related to the scallop fishery.

**Table 16 – Summary of sub-ACLs allocated to the scallop fishery under the Multispecies FMP**

	2014	2015
GB YT	50.9	Not available
SNE/MA YT	66	64
SNE/MA WP	183	183

The final estimates of projected YT catch by the scallop fishery for 2014 and 2015 are summarized below (Table 18) and the associated bycatch rates used to generate these projections are summarized in Table 17. Similarly, the bycatch rates for WP are in Table 19, and the projected catch of WP in 2014 and 2015 are in Table 20.

**Table 17 – 2014 estimated bycatch rates by area based on both 2012 and 2013 observer data**

	GBC2	GBOp	SNEOp	Maop	NLS
<b>2012 Y:S</b>	0.0675	0.0125	0.0059	0.0073	0.0065
<b>2014 Y:S</b>	0.0626	0.0104	0.0041	0.0083	0.0145
<b>2013 Y:S</b>	0.0298	0.0092	0.0044	0.0076	0.0098
<b>2014 Y:S</b>	0.0321	0.0088	0.0044	0.0077	0.0106

**Table 18 – 2014 estimated YT catches based on both 2012 and 2013 observer data**

Alternative		GBC2	GBOp	GB	MASNEOp	NLS	MA/SNE
NA	2014 YT (from 2012)	0.0	26.6	<b>26.6</b>	45.6	0.0	<b>45.6</b>
NA	2014 YT (from 2013)	0.0	22.4	<b>22.4</b>	42.4	0.0	<b>42.4</b>
Alt2 (23 DAS)	2014 YT (from 2012)	70.0	26.6	<b>96.6</b>	45.6	9.2	<b>54.8</b>
Alt2 (23 DAS)	2014 YT (from 2013)	35.9	22.4	<b>58.2</b>	42.4	6.7	<b>49.1</b>
Alt3 (23 DAS Del flex)	2014 YT (from 2012)	70.0	27.7	<b>97.7</b>	47.5	9.2	<b>56.7</b>
Alt3 (23 DAS Del flex)	2014 YT (from 2013)	35.9	23.3	<b>59.2</b>	44.3	6.7	<b>50.9</b>
Alt 4 (31DAS)	2014 YT (from 2012)	70.0	33.7	<b>103.7</b>	58.5	9.2	<b>67.7</b>
Alt 4 (31DAS)	2014 YT (from 2013)	35.9	28.4	<b>64.2</b>	54.5	6.7	<b>61.1</b>
Alt 5 (28DAS)	2014 YT (from 2012)	70.0	31.3	<b>101.3</b>	54.0	9.2	<b>63.2</b>
Alt 5 (28DAS)	2014 YT (from 2013)	35.9	26.3	<b>62.2</b>	50.3	6.7	<b>57.0</b>
Alt 6 (37DAS/DmvCl)	2014 YT (from 2012)	70.0	38.5	<b>108.5</b>	67.3	9.2	<b>76.5</b>
Alt 6 (37DAS/DmvCl)	2014 YT (from 2013)	35.9	32.4	<b>68.2</b>	62.7	6.7	<b>69.3</b>

**Table 19 - 2014 estimated bycatch rates by area, as well as observed bycatch rates from 2012 and 2013 observer data**

	2012	2013	2014
maop	0.011	0.014	0.012
sneop		0.001	0.001
dmv			3.50E-05
nls	0.042	0.063	0.066

**Table 20 – 2014 estimated WP catches based on 2012 observer data**

	maop	sne	nls	dmv	Total
Alt 1 NoAction	21.3	3.9	0	0	25.2
Alt 2 - 23DAS	21.3	3.9	41.9	0.1	67.2
Alt3	23.4	4	41.9	0.1	69.4
Alt4 - 31DAS	27.4	5	41.9	0.1	74.4
Alt 5 - 28DAS	25.2	4.6	41.9	0.1	71.8
Alt 6 - 37 DAS nodmv	31.4	5.8	41.9	0	79.1