

DRAFT

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

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

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

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## **LIST OF ACRONYMS**

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

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





## **1.0 BACKGROUND AND PURPOSE**

### **1.1 BACKGROUND**

In 2004, Amendment 10 introduced rotational area management and changed the way that the Scallop FMP allocates fishing effort for limited access scallop vessels. Instead of allocating an annual pool of DAS for limited access vessels to fish in any area, vessels are now authorized a specific number of trips to fish in controlled access areas defined by the plan or exchange them with another vessel to fish in a different controlled access area. Vessels can fish their open area DAS in any area that is not designated a controlled access area or closed area. Amendment 10 set up this program with a biennial framework process, which means an action is required every two years to allocate fishing effort in both open and access areas. This framework action will set specifications for fishing years 2011 and 2012, as well as set default measures for the start of 2013 in case the action that would set the 2013 and 2014 measures is delayed past the start of the 2013 fishing year. Annual specifications also include the specifications for the various limited access general category permits including the overall allocation for limited access general category vessels with IFQ permits, the total hard TAC for the Northern Gulf of Maine, as well as the target TAC for vessels with limited access general category incidental permits.

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

In addition this framework is considering minor adjustments to aspects of vessel monitoring systems (VMS) and potentially modifying the possession limit of in-shell scallops for general category vessels seaward of the VMS demarcation line.

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

- Fishery specifications for FY2011 and FY2012 including setting of acceptable biological catch (ABC) as required by the reauthorized MSA and minimizing impacts of incidental take of sea turtles, as per the 2008 Biological Opinion to the Atlantic Sea Scallop FMP (first RPM and T/C). Default fishery specifications for the start of FY 2013, in case the subsequent framework action that would set the 2013 and 2014 measures is delayed past the start of the 2013 fishing year
- Area rotation adjustments (if necessary) including consideration of a new scallop access area on Georges Bank (only if high concentrations of biomass present in 2010 surveys and only if the area is either smaller and/or closed for a shorter period of time)
- Other measures including specific VMS restriction and potentially revisiting the possession limit of scallop seaward of the demarcation line.

## **1.2 PURPOSE AND NEED**

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

## **1.3 SCALLOP MANAGEMENT BACKGROUND**

*To be completed later*

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

Amendment 10 introduced area rotation: areas that contain beds of small scallops are closed before the scallops experience fishing mortality, then the areas re-open when scallops are larger, producing more yield-per-recruit. The details of which areas should close, for how long and at what level they should be fished were described and analyzed in Amendment 10. Except for the access areas within the groundfish closed areas on Georges Bank, all other scallop rotational areas should have flexible boundaries. Amendment 10 included a detailed set of criteria or guidelines that would be applied for closing and re-opening areas. Framework adjustments would then be used to actually implement the closures and allocate access in re-opened areas. 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.

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

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

## **2.0 MANAGEMENT ALTERNATIVES UNDER CONSIDERATION**

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

*To be completed after November Council meeting*

### **2.2 NO ACTION**

This section describes the No Action alternative as well as several other alternatives that are dependent on implementation of Amendment 15 and measures that would be in place if this action (Framework 22) were delayed.

#### **2.2.1 No Action**

In the alternatives for area rotation management and for open area DAS allocations, “No Action” is exactly what it implies: no additional action will be taken and so the measures and allocations that are specified in the present regulations (CFR §648, Sub-part D) are maintained. The scallop regulations state (paragraph 648.55(b)): “If the biennial framework action is not undertaken by the Council, or if a final rule resulting from a biennial framework is not published...with an effective date on or before March 1...the measures from the most recent fishing year shall continue, beginning March 1 of each year.”

Under “No Action” for FY 2011 and FY 2012, the overall ABC for each year would be identical to that of FY 2010 (29,578 mt; 65.2 M lb), resulting in an ABC for the fishery of 26,219 mt (57.8 M lb), after accounting for discards (3,363 mt; 7.4 M lb). The TACs for all areas would remain as specified in Framework 21. The total TAC, including all landings, set-asides, and incidental catch, would equate to 21,445 mt (47.3 M lb). Research and observer set-asides would remain the same as in FY 2010 for both open and access areas (Table 1). The total TAC, including applicable set-asides, is divided across the fleet with full-time, part-time, and occasional vessels receiving 94.5%, IFQ-only vessels receiving 5%, and full-time, part-time, and occasional vessels with IFQ permits receiving an additional (0.5%). The TAC would be allocated to the fishery as follows: the total target TAC for full-time, part-time, and occasional vessels would be 19,642 mt (43.3 M lb); the TAC for IFQ-only vessels would be 1,055 mt (2.3 M lb); the TAC for full-time, part-time, and occasional vessels with IFQ would be 106 mt (232,671 lb; applied to IFQ permit). In addition, the NGOM TAC would remain at 70,000 lb and the incidental target TAC would remain at 50,000 lbs

Under “No Action,” in open areas for both FY 2011 and FY 2012, full-time limited access scallop vessels would receive the same allocation as in FY2010: an allocation of 38 open area DAS. Part-time and occasional vessels would receive a pro-rata share of 40% and 1/12<sup>th</sup>, respectively, which is equivalent to 15 and 3 open area DAS, respectively (Table 2).

The FY 2010 trip allocations for access areas would also roll over into FYs 2011 and 2012. Full-time vessels would receive 2 Elephant Trunk Access Area (ETA) trips, one trip in Delmarva (DMV), and one trip in the Nantucket Lightship Access Area (NLA), part-time vessels would receive 2 access area trips to be taken in any of the areas (either both in the ETA; one in the ETA and one in DMV, one in the ETA or one in NLA, or one in DMV and one in NLA), and occasional vessels would receive one access area trip that could be taken in any one of these access areas (Table 3). LAGC IFQ vessels in FYs 2011 and 2012 would be allocated 714 fleet-wide trips in both the NLA and DMV, as well as 1,377 fleet-wide trips in the ETA. However, some of these access areas may not be accessible to vessels due to the access area rotational closure schedule (2 years open, 1 year closed) currently stated in the regulations, resulting in areas closing even though trips may have been allocated there in FY 2010 or areas opening but without allocations from FY 2010 (Table 4). Changes to the rotational closure schedule from FY 2010 to FY 2011 and FY 2012 are as follows:

- The NLA was open in FY 2010 and would remain open in FY 2011 but is scheduled to close in FY 2012 under “No Action”, resulting in full-time and LAGC IFQ being unable to fish their individual or fleetwide trips, respectively, in NLA in FY 2012. Part-time and occasional vessels would have other areas to fish their full trip allocation but those options may not be preferable over NLAA.
- Closed Area I (CAI) and Closed Area II (CAII) were closed in FY 2010 and are scheduled to open in FYs 2011 and 2012, but no trips would be allocated because none were allocated in FY 2010.
- The Hudson Canyon Access Area (HCA) would remain closed with no trips allocated.
- In addition, under “No Action”, DMV and the ETA would continue to be access areas in FYs 2011 and 2012 because, unlike the other scallop access areas, ETA and DMV do not have specific scheduled closure dates. According to the current regulations, these access areas would revert to open areas in FY 2011 (for DMV) and FY 2012 (for both ETA and

DMV). However, due to the rollover of FY 2010 access area allocations into FYs 2011 and 2012, vessels would still be allocated specific access area trip allocations, rather than being allocated individual DAS allocations that would be adjusted for the fact that the biomass in these areas now applies to open areas from which DAS are derived.

In summary, due to the rollover FY 2010 allocations and the access area rotational closure schedule stated in the regulations, full-time vessels would be able to use all three of their Mid-Atlantic access area trips in FY 2011 and FY 2012 and only use their one NLA access area trip in FY 2011, but not FY 2012. The NLA closure would affect part-time and occasional vessels in FY 2012, as they would be restricted to using their two trip allocations in DMV or ETA. Similarly, LAGC IFQ vessels would be able to use the fleet-wide trips in the ETA, NLA, and DMV in FY 2011 but would only be able to use their FY 2012 allocations in ETA and DMV. The FY 2010 access area management measures to minimize turtle interactions would also roll over under “No Action”, closing the ETA and DMV turtle closures in September and October and restricting the number of trips that can be fished in these Mid-Atlantic access areas during June 15 – August 31.

If the NLA access area closes due to yellowtail flounder catches in FY 2011 (when it is accessible to vessels), vessels would receive compensation for each access area trip not taken due to the closure based on the DAS conversion used in FY 2010 (1 trip equates to 5.8 DAS).

The “No Action” scenario outlined in this section assumes “No Action” for Amendment 15, which is being developed and finalized concurrently with Framework 22. The Council made its final decision on Amendment 15 management measures at its September 2010 meeting, with an implementation deadline of June 2011 – up to four months after the March 1 start of the 2011 fishing year. The “No Action” scenario for Amendment 15 has been outlined in Section 3.1 of that document and is not repeated here.

The various analyses of the alternatives in this document focus on the No Action scenario outlined in Section 1.1.1, because this represents the measures that would rollover if no action is taken on FW22 and is the most appropriate baseline for comparison according to NMFS guidelines. There are also some analyses comparing the scenarios to Status quo, and alternative that is similar to FY 2010 management measures.

**Table 2 – Research and observer set-aside TACs for FYs 2011 and 2012 under No Action. These values are identical to those of FY 2010.**

	Research Set-Aside	Observer Set-Aside
Open Area	269 DAS	135 DAS
ETA	227,060 lb	113,530 lb
Delmarva	117,700 lb	58,850 lb
NLS	117,820 lb	58,910 lb
CAI	N/A	N/A
CAII	N/A	N/A
HCA	N/A	N/A

**Table 2 – Open area DAS allocations under No Action. These values are identical to those of FY 2010.**

Full-Time		Part-Time		Occasional	
<u>2011</u>	<u>2012</u>	<u>2011</u>	<u>2012</u>	<u>2011</u>	<u>2012</u>
38	38	15	15	3	3

**Table 3 – Access area trip allocations under No Action.**

*These values are identical to those of FY 2010. However, the access area rotational schedule in Table 4 results in changes from FY 2010, which is particularly relevant to FY 2012 because full-time vessels cannot utilize the 1 trip allocation into NLAA since that area is scheduled to be closed under No Action.*

Area	<u>NLA</u>		<u>CAI***</u>		<u>CAII***</u>		<u>ETA</u>		<u>DMV</u>	
	<u>2011</u>	<u>2012**</u>	<u>2011</u>	<u>2012</u>	<u>2011</u>	<u>2012</u>	<u>2011</u>	<u>2012</u>	<u>2011</u>	<u>2012</u>
<b>Full-time</b>	1	0	0	0	0	0	2	2	1	1
<b>Part-time*</b>	Up to 1	0	0	0	0	0	Up to 2	Up to 2	Up to 1	Up to 1
<b>Occasional*</b>	Up to 1	0	0	0	0	0	Up to 1	Up to 1	Up to 1	Up to 1
<b>General Category</b>	714	0	0	0	0	0	1,377	1,377	714	714

\* Part-time and occasional scallop vessel owners could determine which areas to take their trips, up to the maximum number of trips specified in the table above

\*\* Scheduled to be closed in 2012, although FY2010 trip allocation would remain in place.

\*\*\*Scheduled to be open, but not trips allocated.

**Table 4 -Sea scallop access area allocation schedule under No Action, based on current area rotational schedule stated in the scallop regulations.**

	<b>2011</b>	<b>2012</b>
CAII	Open – but no allocation	Open – but no allocation
NLA	Open	Closed – trip allocations cannot be utilized (Full-time, LAGC IFQ vessels)
CAI	Open – but no allocation	Open – but no allocation
ETA	Open	Open
HCA	Closed	Closed
DMV	Open	Open

## **2.2.2 No Action for Framework 22; NMFS Approves Amendment 15**

Although Amendment 15, if approved, will set up a process for determining annual catch limits (ACLs) and accountability measures (AMs), the amendment does not include specific scallop fishery allocations for FY 2011 and beyond. Specific TACs would be set by Framework 22, based upon the process outlined in Amendment 15.

If Amendment 15 is implemented as the Council approved it, the measures below will be implemented mid-2011.

- *ACLs – ABC control rule, flowchart, management uncertainty buffers, AMs*
- *YT AM & monitoring changes*
- *Hybrid OFD*
- *GC measures*
- *EFH change*
- *RSA*
- *Third year default measures*

## **2.2.3 Measures that will be in effect March 1, 2011 until Framework 22 is implemented**

Because Council final action has been moved back to the November Council meeting, Framework 22 will not be implemented before the start of FY2011 and several measures implemented by Framework 21 will carry-over. For example, open area DAS allocations for limited access vessels would be the same at the start of FY 2011 as in FY2010 (38 DAS for full-time, 15 for part-time, and 3 for occasional vessels) and the ETA would be managed under the same regulations in place in 2010 (two trips for full-time vessels and a total of 1,377 general category trips). In addition, under No Action the Mid-Atlantic access area allocations would rollover. HCA would remain closed and vessels would get one trip in the DMV area and one trip in NLA. As a result of the delay in Framework 22 past the March 1 start of FY 2011, this action will have to assess impacts of the potential delay and consider measures to compensate.

The specific measures that are included in this alternative if this action is not implemented by March 1, 2011, are:

1. Any limited access open area DAS used in 2011 above the ultimate value allocated for 2011 will be reduced the following fishing year (2012).
2. IFQ-only vessels without a limited access part-time, full-time, or occasional scallop permit will receive an IFQ based on a TAC of 1,055 mt, which is 5% of 2010 projected catch value of 21,445 mt, after accounting for research and observer set-asides. IFQ vessels that have also been issued a limited access part-time, full-time, or occasional scallop permit will receive an IFQ based on a TAC of 106 mt, which is 0.5% of the 2010 projected catch value of 21,445 mt. If these TACs differ from 2011 final projected catch values, 2011 IFQs will be adjusted either up or down, depending on the difference in the projected catch. If the 2011 projected catch value is less than the 2010 projected catch value, and if a vessel exceeds its ultimate 2011 IFQ before the 2011 IFQs are adjusted, the vessel's 2012 IFQ will be deducted by the same amount. A vessel that increases its IFQ through a lease will use leased IFQ before using its own IFQ, and multiple leases of IFQ will be used in the order that it was leased by the vessel. IFQ for the 2012 fishing



year will be deducted from either the leased or the vessel's own IFQ that resulted in the excess catch.

3. Any landings from within the Northern Gulf of Maine (NGOM) area caught in fishing year 2011 above the ultimate TAC for 2011 will be reduced the following year.
4. The access area management measures to minimize turtle interactions applicable to the FY 2010 allocations would also roll over, closing the ETA and DMV in September and October and limiting the number of MA access area trips in the summer and fall to two trips.
5. *If final allocations vary from 2010 allocations in terms of number of access area trips and possession limits, it may be necessary to change possession limits for part-time and occasional vessels to maintain the allocation differences between permit categories. For example, part-time vessels are allocated 40% of a full-time permit; and with access areas that is a combination of access area trips and possession limit. So if a part-time vessel takes more trips and possession than the ultimate 2011 allocations, their possession limit for 2012 may need to be adjusted.*
6. *Any limited access full-time vessel that fishes an access area trip in the ETA will have those pounds converted to DAS and deducted from their open area DAS allocation in 2012. Unless that vessel already started part of that trip. Under current regulations a vessel can fish the remainder of a broken trip up to 60 DAS into the next fishing year. So a vessel can fish the remainder of a trip in ETA until May 1, but if the vessel did not start a trip before February 28, that trip will be deducted in equivalent DAS in 2012. For example, a full trip is 18,000 lbs, and according to the projections for the Option 1 scenario, the average meat count will be ???, implying that  $18,000 * ??? = ???$  scallops will be removed per trip. In the open areas, the average meat count will be ??? so that ??? scallops correspond to  $???/??? = ???$  pounds. The estimate of open area LPUE generated from the model for this scenario is ???, so it will take  $???/??? = ??$  DAS to land the same number of scallops, so those DAS would be subtracted from that vessels overall DAS allocation in FY2012. It should be noted that there is an alternative in this document that could make this provision moot. Alternative 2.13 is considering whether a vessel can use unused ETA trips through June 1, 2011. If that is selected, then all fishing in this area will be accounted for up to allocated 2012 amounts.*
7. *If a limited access vessel fishes in NL during FY2011 before FW22 is implemented any pounds caught would be deducted in FY2012 from that vessels' NL allocation should it be allocated to them, or from another access area to which that vessel has an allocation.*

### **2.3 ACCEPTABLE BIOLOGICAL CATCH**

The MSA was reauthorized in 2007. Section 104(a) (10) of the Act established new requirements to end and prevent overfishing, including annual catch limits (ACLs) and accountability measures (AMs). Section 303(a)(15) was added to the MSA to read as follows: “establish a mechanism for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.” ACLs and AMs are required by fishing year 2010 if overfishing is occurring in a fishery, and they are required for all other fisheries by fishing year 2011. The Council initiated Scallop Amendment 15 to comply with these new ACL requirements, and that action is expected to be implemented in June 2010,

just after the start of the 2011 fishing year. However, the Act also requires that an acceptable biological catch be set in each fishery, and that provision is required in actions that set specifications after the Act was implemented (January 2007). Therefore, FW21 implemented ABC for 2010; the value was 29,578 mt. (65.2 million pounds) for the overall fishery, including an estimated 3,363 mt. (7.4 million pounds) for non-yield fishing mortality (discards and incidental mortality). Therefore, the overall ABC for the fishery, excluding discards and incidental mortality was 26,219 mt. (57.8 million pounds).

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

Therefore, while the full ACL program will not be implemented in the Scallop FMP until 2011 under Amendment 15 (if approved), this action will include ABC for 2011, 2012, and 2013 as a default until a subsequent action sets measures for 2013 and 2014. The SSC reviewed an analysis prepared by the Scallop PDT on August 24-26, 2010. The ABC calculation is based on the same analyses used for setting ABC in FW21 that was developed for inclusion in Amendment 15; it was just updated with 2010 data.

The SSC reviewed the SAW50 and PDT analyses and concluded that they provide the information needed for ABC recommendations. The SSC endorses the SAW50 Review Panel recommendation to define overfishing on the basis direct estimates of  $F_{MSY}$ , as intended in the Magnuson-Stevens Fishery Conservation and Management Act. The transition from using  $F_{max}$  as a proxy for  $F_{MSY}$  is consistent with the October 2008 advice from the SSC: *“Although  $F_{max}$  may be a reasonable proxy for  $F_{MSY}$ , the SSC recommends more explicit consideration of long-term sustainable yield, rather than maximizing yield-per-recruit.”* The SSC considers the SAW50 estimate of  $F_{MSY}$  to be based upon best scientific information available for management of the scallop fishery.

While some uncertainties are not accounted for in the stochastic analysis (e.g. spatial heterogeneity in fishing mortality, uncertainty in the magnitude of total 2010 catch, spatial population structure, uncertainty in projected biomass, and minor retrospective inconsistencies), the SSC concludes that the PDT’s stochastic evaluation of current fishing mortality and  $F_{MSY}$  is a sufficient basis to derive ABC using the accepted control rule (i.e., 25% probability of overfishing). Note that the ‘yield’ in the PDT’s calculations and the ABC recommendation includes dead discards and incidental mortality. Therefore, the realized frequency of overfishing may be more or less than expected from the risk analysis.

**The SSC reported the following recommendations at the September 2010 Council meeting:**

- 1. The 50<sup>th</sup> Stock Assessment Workshop and Plan Development Team analyses provide the information needed for Acceptable Biological Catch recommendations. The new**

estimate of  $F_{MSY}$  is based upon the best scientific information available for management of the scallop fishery

2. **Acceptable Biological Catch for the scallop fishery is 31,279 mt in 2011 and 33,234 in 2012.**

Since ABC includes mortality from discards, the ABC available to the fishery is actually less. About nine million pounds of scallops are estimated to be killed each year due to discard and incidental catch mortality. After this source of mortality is removed, the ABC available to the fishery is 60.1 for 2011 and 63.8 for 2012.

**Table 3 – Summary of ABC approved by the SSC and Council for FW22 (shaded). ABC available to fishery after discards removed in BOLD**

	<b>Landings (ABC available to fishery after discards removed)</b>	Discards	Catch (ABC)	Exp.Biomass
2011	<b>60,117,237</b>	8,838,241	68,957,683	161,982,985
2012	<b>63,847,421</b>	9,420,256	73,267,676	184,291,332

#### 2.4 SUMMARY OF FW21 ALLOCATION SCENARIOS

The PDT is still exploring the most appropriate scenarios. However, the PDT expects 4 access area trips in each year. DAS allocations will be set at  $F = 0.38$  in open areas – the F rate equivalent to OFL to prevent overfishing. Under the hybrid overfishing definition selected in Amendment 15, the maximum level that open area fishing can be set is 0.38.

The PDT is exploring the possibility of allocating “split trips; half the fleet in one access area and half the fleet in another access area to optimize yield. There are several areas that cannot support a full trip each year for the entire fleet, so instead half the fleet would be allocated a full trip in one area, and half the fleet would be allocated a full trip in another area. Vessels would be permitted to trade trips with vessels in their permit category within the same fishing year. Trips will likely be allocated by some sort of lottery. *The PDT is still exploring the most effective way to administer this type of allocation, but currently the suggestion is to randomize scallop permit numbers and allocate trips randomly. The advisors may want to consider an additional provision that would allocate trips more regionally based on homeport etc. The PDT would support that but cautions that at first it may be easier to make the allocation process as simple as possible administratively.*

*The AP and Cmte also discussed the issue of how to allocate split trips and passed the motion below:*

*“Split fleet” trip allocation should occur randomly (not regionally-based; i.e. a lottery should be used) and transparently. A public posting of who received trips should be available to the fleet to increase ease of trading, and this lottery should be included in the publication of Framework 22 as trip allocation by vessel.*

### Option 1

The PDT discussed allocating a full trip to half the fleet in one area, and half the fleet in another area. In terms of allocating scallop fishing effort this scenario was designed to allocate as much effort through trip allocations in an area as possible. IN addition, this scenario is expected to be more beneficial in terms of YT bycatch because it allocated less effort in CA2 in 2012, which is part of the GB seasonal closure area proposed in Amendment 15. It is unclear yet if allocating half the fleet a trip in one area and half the fleet a trip in a different area will have issues; therefore, Scenario 2 was developed to allocated integer trips per area.

### Option 2

This alternative may be less favorable than Option 1 in terms of allocating as much scallop effort as possible per area because in some cases it allocated more than ideal, and in other cases less. For example, by allocating a full trip in Delmarva in 2012, there may not be enough biomass to support a full trip in Delmarva in 2013. Similarly, allocating a full trip in NL results in a higher fishing mortality for that area than Option 1. However, if there are issues with allocating trips in one area to half the fleet and trips in another area for the other half of the fleet, then this scenario would be more favorable than Option 1.

### Option 3

In addition, the PDT developed an option that would close an area in the Great South Channel for one year (2011) and reopen it in 2012 (Option 3). Allocation from Option 1 would be combined, except for CA1 schedule from Option 2, with a closure in the Channel. Growth rates are at 46% for scallops in the Channel, area rotation guidelines for closure is 30% according to the adaptive area rotation program considered in Amendment 10. Therefore, closing the area even for one year would increase yield from that area substantially. More information about this potential closure is included in Section 2.8.

*If Option 1 or 3 are selected the Council needs to clarify how split trips will be allocated.*

**Table 4 – Framework 22 scenarios under consideration**

	CA1	CA2	NL	HC	Del	ET	Total	Channel	OA DAS
Option 1									
2011	1.5	0.5	-	1	1	-	4	open	32
2012	0.5	1	0.5	1.5	0.5	-	4	open	34
Option 2									
2011	2	-	-	1	1	-	4	open	32
2012	-	1	1	1	1	-	4	open	34
Option 3									
2011	2	1	-	1	1	-	5	closed	22
2012	-	1	0.5	1.5	0.5	-	6	Open (2.5)	23
No Action									
2011	-	-	1	-	1	2*	4	open	38
2012	-	-	-	-	1	2*	3*	open	38
SQ - 2010									
2011	1.5	0.5	-	1	1	-	4	open	38
2012	0.5	1	0.5	1.5	0.5	-	4	open	38

\* Trips may be allocated to this area, but there is not sufficient biomass in this area to support that effort, so trips will not be complete and catch for the area will be substantially lower than 2 trips typically produce, closer to 5 million compared to 12 million pounds.

Based on Council decisions in Amendment 15, OFL is equivalent to  $F = 0.38$ , the ABC and ACL are equivalent to  $F = 0.32$ , and the sub-ACTs for the limited access and LAGC IFQ fleets are equivalent to  $F=0.28$  and  $F=0.32$ , respectively.

Before projections are run, 1% of the ABC is set aside for the observer set-aside program, 1.25 million pounds are set aside for the research set-aside program, and 5.5% of the ABC is allocated to the LAGC IFQ fishery (5% to the IFQ fleet; 0.5% to limited access vessels that also have IFQ permits). The LAGC IFQ fishery allocation is taken directly from the ABC because in Amendment 15 the Council recommended that there be no buffer for management uncertainty for this fishery. Therefore, under all three scenarios considered the allocations from observer set-aside, research set-asides and the general category allocation are the same.

Once the set-asides and LAGC allocation are taken out, all three scenarios for limited access scallop vessels would be set at an overall  $F$  of 0.28 – the  $F$  rate associated with 25% chance of exceeding ABC. Because there is management uncertainty associated with DAS management and other issues such as carryover DAS and vessel upgrading, a buffer of about 8% is the management uncertainty associated with setting a target  $F$ , or ACT, at the  $F$  rate with a 25% chance of exceeding ABC.

In addition to the three specific scenarios considered for FW22 this action will analyze the No Action scenario as well as a status quo scenario. No Action is described in detail in Section 2.2.1. For this action Status quo is equivalent to 2010 measures since No Action is actually not the same as 2010 allocations because of the way the access area program is implemented. Specifically, the main difference between No Action and Status Quo is that under No Action trips need to be allocated to specific areas that are scheduled to be open, but there is not sufficient biomass in those areas, so estimated catch from those trips is limited to the biomass available. For example, instead of roughly 6 million pounds being landed from one ETA trip, only 2.5 million pounds are expected because that area does not have enough biomass to support a full trip. In addition, in 2012 only three access area trips are allocated under No Action compared to four that are allocated under each of the scenarios considered in FW22.

Status Quo or 2010 allocations, is a scenario that is not a viable alternative on the table but has been analyzed to show the impacts of allocating 2010 measures in 2011 and 2012. This scenario includes 38 days and 4 access trips for both years to show short-term and long-term consequences of SQ allocations. If allocations were the same for both years fishing mortality rates would be higher than the ones considered in this action. This alternative has been included in the analyses because when the proposed alternatives (Options 1, 2, and 3) are compared to no action, they will look artificially better since No Action is actually lower than 2010 allocations (status quo) because it is constrained by available biomass and only three trips are allocated in 2012. Comparing the impacts of Status quo to the proposed alternatives will reflect the impacts of FW22 compared to 2010 conditions when the allocations are kept at the same levels. The Magnuson Act requires that alternatives be compared to No Action, so this document will do that primarily. But it will also compare the results of the three scenarios to status quo to provide additional information about impacts compared to the most recent fishing year, 2010.

It should be noted that Amendment 15 also included a measure to set specifications for three years rather than two. This was selected as a measure to address the fact that scallop specifications are implemented after the start of the fishing year so that more recent resource survey results can be incorporated. Therefore, specifications will be set for the third year as a default, and will be replaced with measures set in the next framework. But they will be there to rollover if a framework is late, rather than the previous year, as it works currently. This action is also considering an alternative to remove the access area schedule in the regulations for Georges Bank, Alternative 2.14. Having a specific schedule set in the regulations has complicated matters when an action is implemented late. Now third year specifications will be identified in a framework and will be in place until replaced by a subsequent action; therefore, the need for a default schedule is not necessary.

The Committee discussed the 2013 projected specifications of 4 access area trips and 35 open area DAS. When the Committee reviewed this, they suggested that DAS should be 75% of the projection to be precautionary (See Committee Motion). Estimates are less certain the further out they are and it is easier to allocate more DAS in the subsequent framework that will be implemented after the fishing year starts, compared to taking DAS away.

**Table 5 – Summary of 2013 allocations suggested by the Committee for Scenario 1. The original projection included 35 open area DAS**

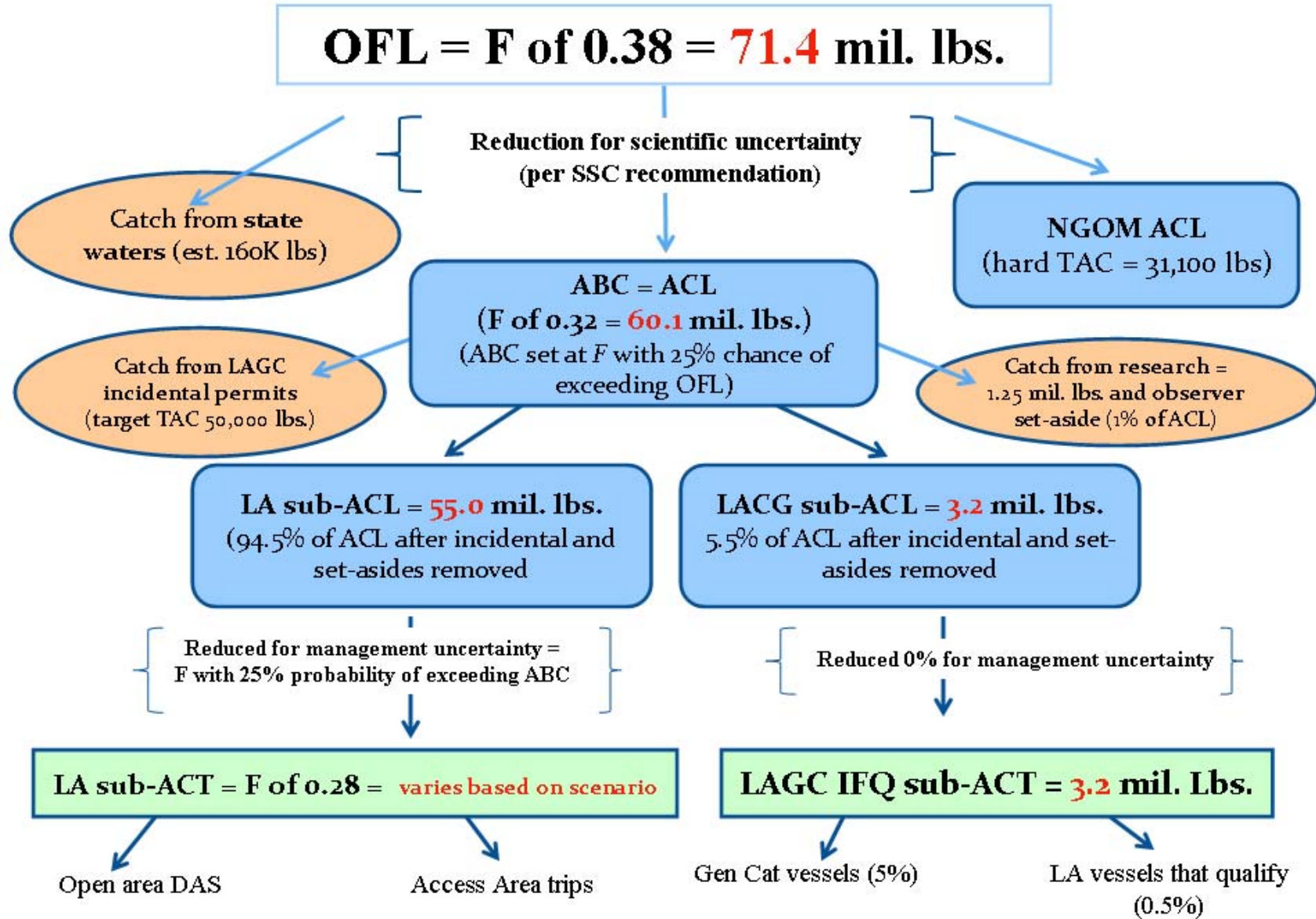
	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
<b>2013</b>	-	1	1	1.5	0.5	-	4	open	26

The flowchart on the next page is the ACL approach adopted by the Council in Amendment 15. Assuming this approach is approved, Figure 1 reflects the various allocations related to Option 1 for 2011 as an example. Table 6 summarizes the ACL related values for this framework including OFL, ABC, various ACLs, and ACTs.

**Table 6 - ACL related values and allocations for 2011 and 2012, rounded from ABCs approved by SSC**

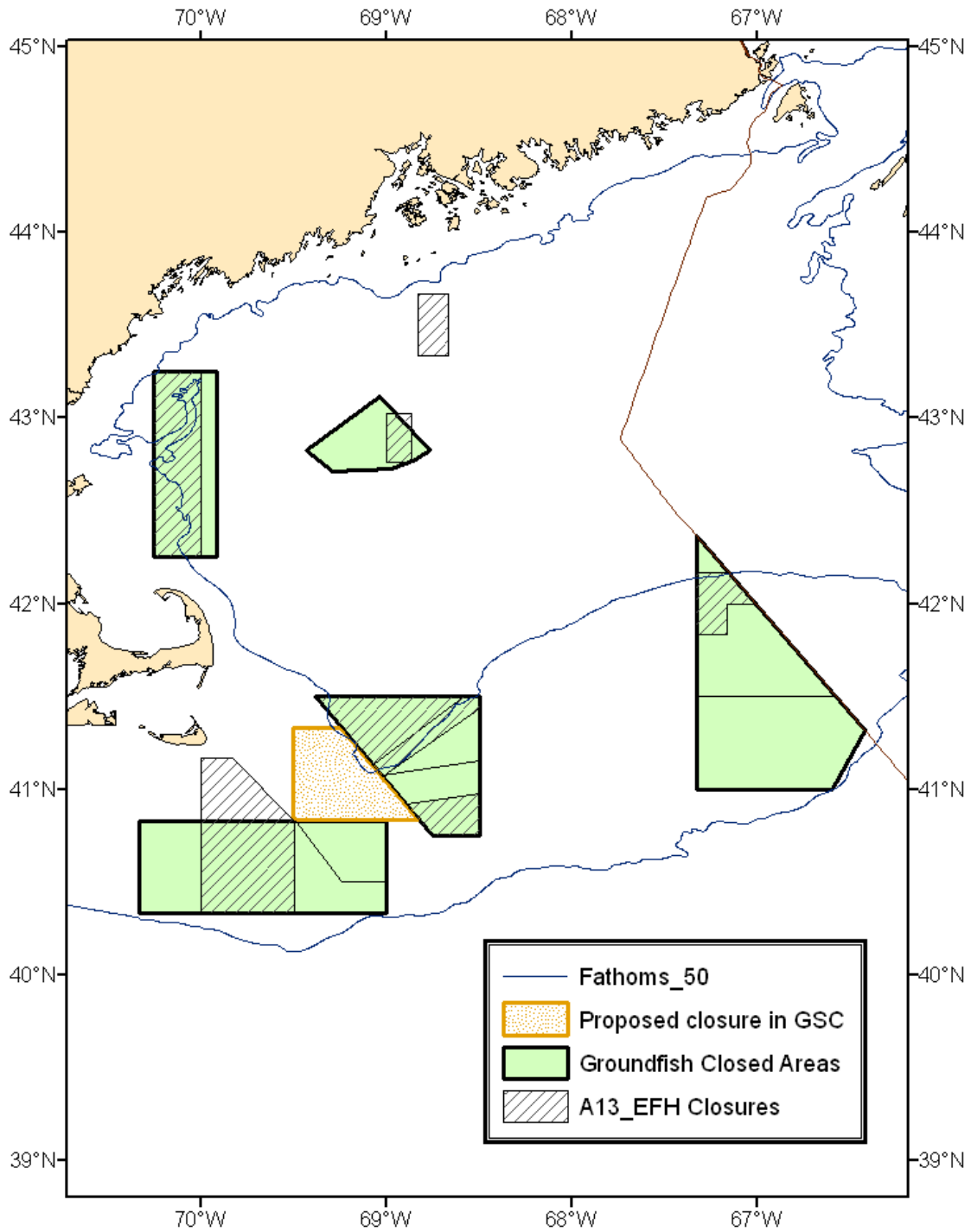
	2011	2012
OFL	71,400,000	75,800,000
ABC	60,100,000	63,800,000
incidental	50,000	50,000
RSA	1,250,000	1,250,000
OBS	601,000	638,000
ACL after set-asides/incidental removed (= ABC-(incidental + RSA +OBS))	58,199,000	61,862,000
LA sub-ACL (94.5% of ACL)	54,998,055	58,459,590
IFQ-only (5% of ACL)= sub-ACL = ACT	2,909,950	3,093,100
IFQ + LA (0.5% of ACL)=sub-ACL=ACT	290,995	309,310
LA sub-ACT (after management buffer applied)	<i>Varies based on scenario</i>	<i>Varies based on scenario</i>

Figure 1 – Summary of allocations for the scallop fishery under Framework 22 (2011) based on ACL structure approved in Amendment 15

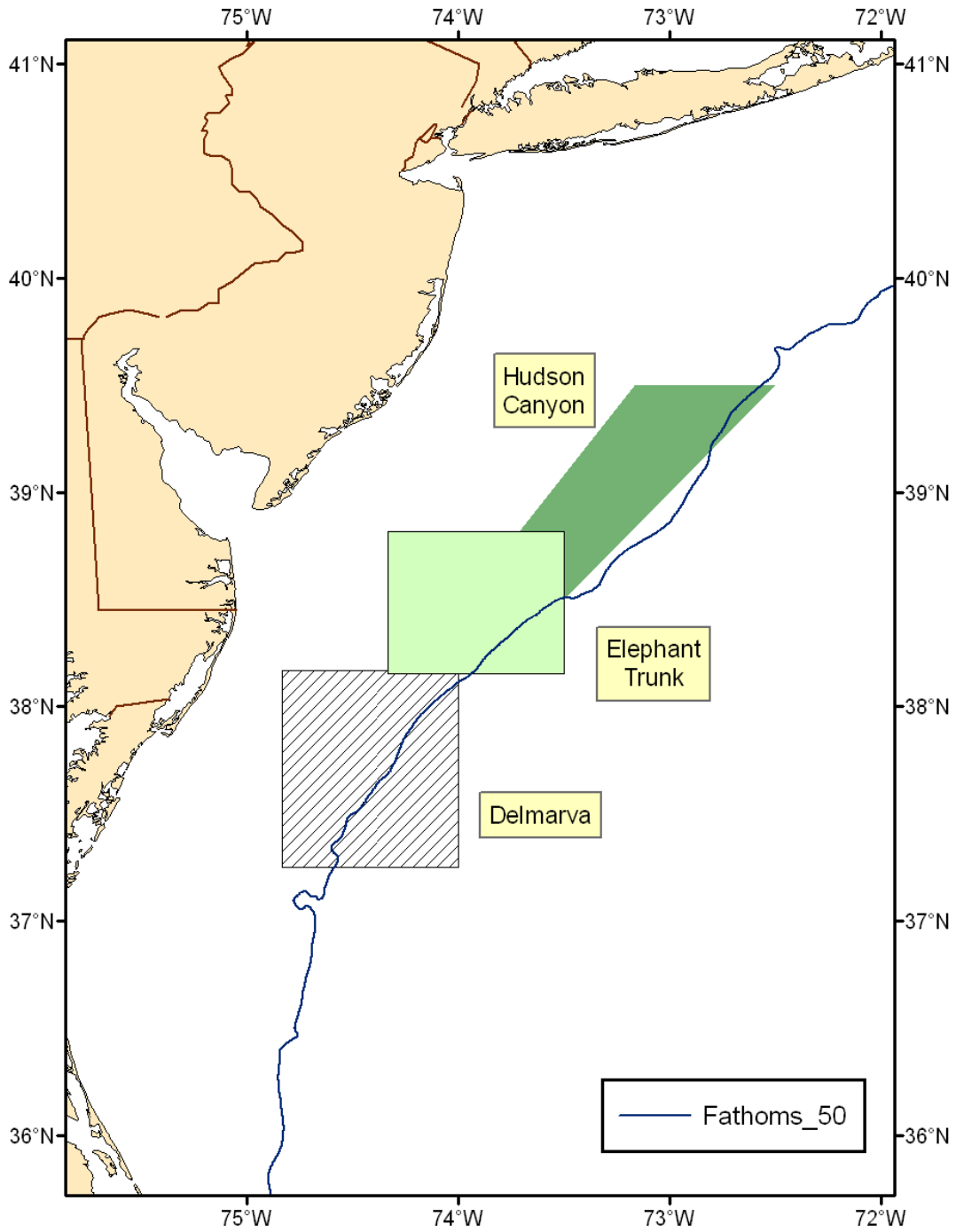




**Figure 2 - Boundaries of scallop access areas within Multispecies closed areas on Georges Bank**



**Figure 3 – Boundaries of scallop access areas in the Mid-Atlantic**



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

Under current regulations (CFR §648.60), limited access vessels are authorized to take a certain amount of trips to each controlled access area during a fishing year. Each full-time vessel has been authorized to land 18,000 pounds of scallop meat per trip (40% of that for part-time vessels and 8.33% for occasional vessels). Fishing in controlled access areas may be subject to other limits such as seasons or potential closures due to TACs for yellowtail flounder. The maximum number of trips per area will be considered in this action for FY2011 and FY2012 to prevent overfishing and optimize yield. Access areas include areas within the Multispecies closed areas (Closed Area I, Closed Area II, and Nantucket Lightship), as well as areas specifically closed as scallop rotational closed areas (Hudson Canyon, Elephant Trunk, and Delmarva) (See Figure 2 and Figure 3).

Limited access vessels are also allocated a specific number of open area DAS in biennial frameworks to achieve optimum yield at the current target fishing mortality of 0.28 for the total scallop resource. The open area DAS allocations depend on what controlled access areas are available and the number of trips the Council recommends to allocate per area, as well as allocations made to the general category fishery. The open area allocations are also based on the assumption that a part-time vessel receives 40% of a full-time allocation, and an occasional vessel receives 8.33% of a full-time vessel.

### **2.5.1.1 Adjustments when yellowtail flounder catches reach TAC (based on 10% allocation limit)**

If the 10% yellowtail flounder (YT) bycatch TAC is reached and the Georges Bank access areas close, additional open area DAS are allocated for each trip not taken before the area closes, but at a prorated value of DAS. The prorated amount is calculated to achieve an equal amount of scallop mortality per DAS. This calculation takes into account the expected average landings per DAS based on relative biomass and scallop size in the open areas, compared to the GB access areas. The PDT did look into an idea that would provide compensation in other access areas instead of open areas, but it was determined that it would be too complicated to develop in the time allotted for this action. The PDT would have to identify how many trips could be taken in other areas upfront and would have to develop a process for how that would be administered in terms of which vessels get to fish in which areas, etc.

In 2011 the GB YT subACL for the scallop fishery is ???, and ??? for 2012. This is a stockwide sub-ACL. The scallop fishery is also subject to a maximum of YT in GB access areas, equivalent to 10% of the total YT TAC. The TACs for GB access areas for 2011 and 2012 are ???, and ??? respectively.

In order to calculate the compensation that will be used for limited access trips that have not been taken if the YT bycatch TAC is reached in an access area, an estimate is made about the number of days in the open areas required to remove the same number of scallops that would have been taken in the closed areas. For example, in Closed Area 1, a full trip is 18,000 lbs, and according to the projections for the Option 1 scenario, the average meat count will be ???, implying that  $18,000 * ??? = ???$  scallops will be removed per trip. In the open areas, the average meat count will be ??? so that  $??? \text{ scallops correspond to } ???/??? = ???$  pounds. The estimate of

open area LPUE generated from the model for this scenario is ???, so it will take ???/??? = ?? DAS to land the same number of scallops, resulting in compensation of ??? DAS.

The proposed action includes an allocation of ???

**Table 7 – Open area DAS Compensations for unused GB access area trips**

	GB Access Area	Open Area Compensation
2011		
2012		

## 2.6 MEASURES FOR GENERAL CATEGORY VESSELS

### 2.6.1 Allocation for limited access general category IFQ vessels

*Total poundage and number of AA trips – to be filled in later – assuming 600 pound trips*

**Table 8 – General category allocations under the proposed action**

2011	Option 1
Total TAC (5%)	2,909,950 lbs
LA with LAGC IFQ TAC (0.5%)	290,995 lbs
CA1	*
CA2	None
HC	*
Delmarva	*
NGOM hard TAC	Section 2.6.2
Incidental target TAC	Section 2.6.3
2012	Option 1
Total TAC (5%)	3,093,100 lbs
LA with LAGC IFQ TAC (0.5%)	309,310lbs
CA1	*
CA2	None
NL	*
HC	*
Delmarva	*
NGOM hard TAC	Section 2.6.2
Incidental target TAC	Section 2.6.3

\* Allocated as a fleetwide number of trips based on 600 pound trips

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

The Council approved a separate limited entry program for the NGOM with a hard-TAC. Framework 22 will need to consider a separate hard TAC for this area for 2011 and 2012. 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 2010, 127 vessels qualified for a NGOM permit; 112 were

issued, and 15 are permits in CPH. Most vessels are either from Massachusetts (58 vessels) or Maine (31 vessels).

Amendment 11 specifies that the Scallop PDT will recommend a hard-TAC for the federal portion of the scallop resource in the NGOM. The amendment recommends that the hard-TAC be determined using historical landings until funding is secured to undertake a NGOM stock assessment. The hard TAC for 2010 was 70,000 pounds. The recent stock assessment (SAW 50) included a biomass estimate for the NGOM based on a survey that was conducted in that area in 2009. Appendix **XXX** includes the results of the NGOM resource survey. Based on these results the PDT concludes that the hard-TAC for the NGOM should be 31,100 pounds. A summary of the PDT analyses related to setting this TAC are below.

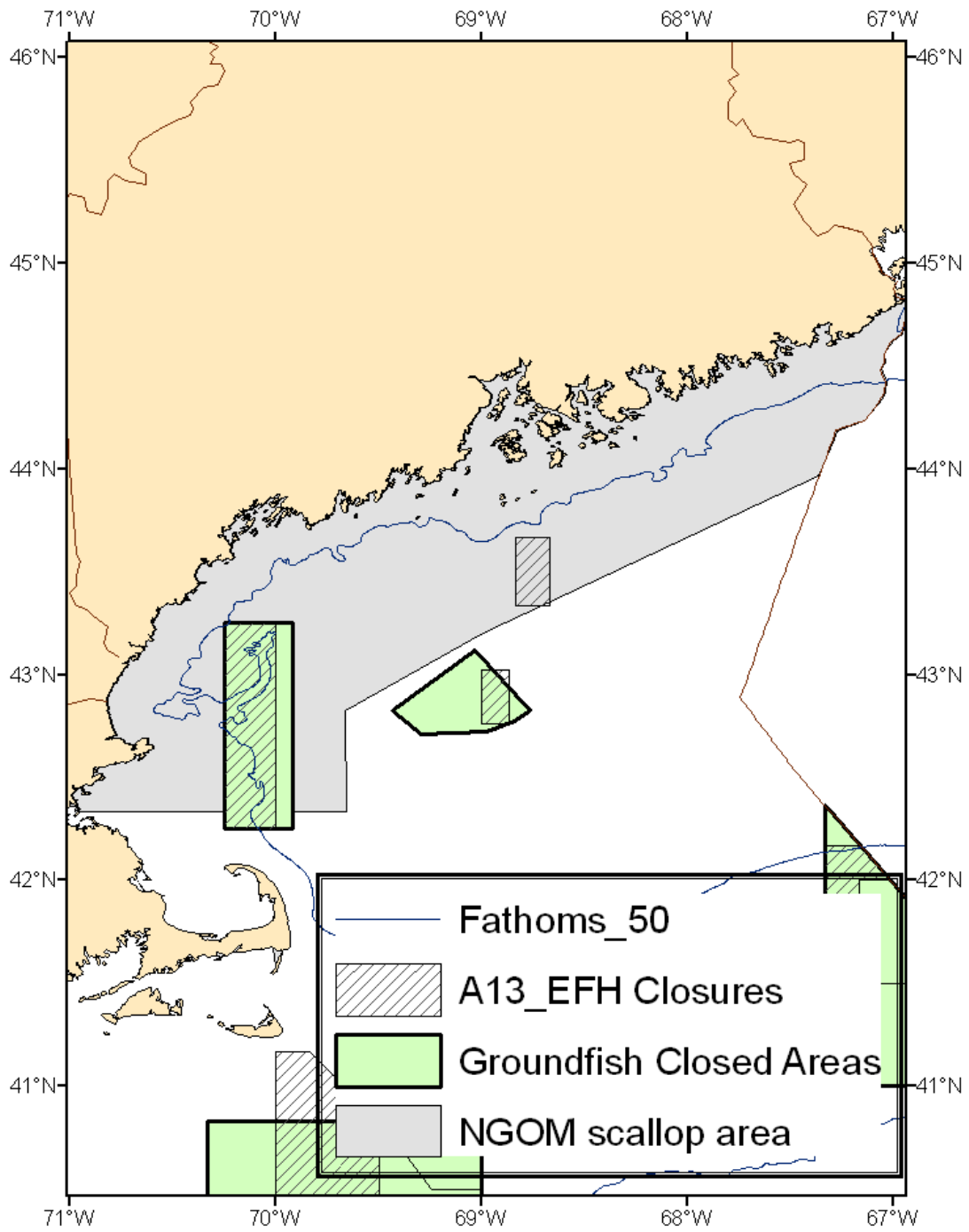
#### **2.6.2.1 No Action**

Hard TAC would remain at 70,000 pounds.

#### **2.6.2.2 TAC based on recent NGOM biomass estimate of federal waters**

Hard TAC would be 31,100 pounds.

**Figure 4 – NGOM scallop management area**



### 2.6.2.3 Summary of NGOM resource survey

A cooperative survey of the sea scallop resource within federal waters of the Northern Gulf of Maine (NGOM) scallop management area was carried out by the Maine Department of Marine Resources (DMR) and the University of Maine (UM) in June-July 2009. The survey was focused within five (5) major portions of NGOM federal waters which historically have produced scallops (northern Stellwagen Bank, Cape Ann, Platts Bank, Mt. Desert Rock and Machias Seal Is.). An adaptive random stratified survey design was followed. One hundred and ninety-six (196) stations were sampled in total. Tows lasted either five (5) or seven (7) minutes depending on the bottom type and amount of fixed fishing gear in the area. The survey dredge was a 7 ft. New Bedford style drag with 2 in. rings, 1.75 in. head bale, 3.5 in. twine top, 10 in. pressure plate and rock chains. The dredge was unlined.

Harvestable ( $\geq 4$  in. shell height (SH)) scallop biomass was estimated by applying the shell height to meat weight (SHMW) relationships determined for the eastern and western NGOM to the scallop density by size estimated for each area. Given an exploitation rate of 0.25 and assuming a survey dredge efficiency of 0.5, the median estimated NGOM total allowable catch (TAC) was 44.2 thousand lbs. (Table 9). Bootstrapped biomass confidence interval estimates (50%, 75%, 90%) were calculated. (Although dredge efficiency was not directly estimated in this study, previous work has indicated that a similar dredge used in Cobscook Bay, Maine had an efficiency of 0.436 for  $\geq 3.5$  in. SH scallops (Kelly 2007), and NMFS has reported that the efficiency of an unlined dredge on hard bottom was 0.54 (Dvora Hart, NMFS/NEFSC, pers. comm.)). Using the bounds of the 90% confidence interval, an estimated range for the TAC was 26.0-80.4 thousand lbs. (Table 9). Under a 50% confidence interval, the range was 38.2 – 60.3 thousand lbs.

The PDT discussed using a TAC that would be the lower 25<sup>th</sup> percentile at a 0.25 exploitation rate and 0.5 dredge efficiency (31.1 thousand lbs.), if only landings from federal waters were applied to the TAC. Using the lower 25% percentile was supported 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.

Since landings from state waters by federally-permitted NGOM vessels are also applied to the quota, however, the Council could consider a higher number which would account for the landings that occur within state waters of the NGOM (currently only data from federal waters are used to develop the TAC). Of the total 9.9 thousand lbs. reported landed by limited access general category (LAGC) NGOM vessels in FY 2008, 57.4% (or 5.7 thousand lbs.) appeared to have been from ME state waters (source: NMFS VTR).

DMR conducts an annual dredge-based survey within ME state waters and produces a harvestable biomass estimate for the largest portion of its state waters fishery (Cobscook Bay). The most recent (2009) estimate of harvestable biomass in Cobscook Bay was 196.5 thousand lbs (Kevin Kelly, DMR, unpublished data). Since landings of LAGC NGOM vessels from this and other state waters areas of ME, NH and MA are applied to the NGOM quota it may be possible for state waters landings to potentially cause the federal waters quota to be reached during the year and lead to a premature closure of the state waters fishery to LAGC NGOM vessels.

However, landings from vessels with a NGOM permit have been substantially lower than the current TAC of 70,000 pounds. In 2008 the fishery landed 9,939 pounds (14% of TAC), in 2009 catch was 15,534 (22% of TAC), and to date for 2010 catch is at 3,869 through September. Therefore, a lower TAC does not seem to be a major concern since recent catch levels are between 10-15,000 pounds. Since there is great variability in the biomass estimates for this area it may be more justified to reduce the TAC in this framework and re-evaluate in the future.



Table 9 - Estimated mean and median NGOM TAC (lbs., bottom row) with associated confidence intervals of 50%, 75% and 90%, based on 2009 DMR/UM survey.

0.25 exploitation rate						NGOMarea 2721						
Dredge Efficiency	0.5											
Associated CI Interval	95%	90%	80%	75%	50%			50%	75%	80%	90%	
CI percentile (per sqkm)	2.5 (α=0.05)	5 (α=0.1)	10 (α=0.2)	12.5 (α=.25)	25 (α=0.5)	mean	median	75 (α=0.5)	87.5 (α=.25)	90 (α=0.2)	95 (α=0.1)	
unc_BIO	7.992	8.68	9.797	10.38	12.73	15.33	14.72	20.12	23.29	24.127	26.82	
BIO	21746.232	23618.28	26657.637	28243.98	34638.33	41712.93	40053.12	54746.52	63372.09	65649.567	72977.22	
TAC(kg)	43492.464	47236.56	53315.274	56487.96	69276.66	83425.86	80106.24	109493.04	126744.18	131299.134	145954.44	
TAC(lbs)	10873.116	11809.14	13328.8185	14121.99	17319.165	20856.465	20026.56	27373.26	31686.045	32824.7835	36488.61	
	<b>23971.12069</b>	<b>26084.70065</b>	<b>29385.01863</b>	<b>31133.66276</b>	<b>38182.22802</b>	<b>45980.64066</b>	<b>44151.01308</b>	<b>60347.71625</b>	<b>69855.78088</b>	<b>72366.26987</b>	<b>80443.62573</b>	

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

Amendment 11 includes a provision that the Scallop FMP should consider the level of mortality from incidental catch and remove that from the projected total catch before allocations are made. The amendment requires the PDT to develop an estimate of mortality from incidental catch and remove that from the total. This section includes a summary of the PDT estimate and the value that was removed from the total projected catch before allocations to the limited access and general category fisheries were made. In 2010, 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 Framework 19 the PDT reviewed incidental landings from previous years (<40 pounds per trip) to estimate what level of projected catch should be removed in future years. According to the dealer database, approximately 10,000 to 27,000 pounds of scallops have been landed on trips with less than 40 pounds. According to the VTR database, closer to 30,000 pounds have been caught in previous years in increments less than 40 pounds. The PDT discussed that it is more appropriate to use the VTR data as a starting point for this estimate since incidental catch is not always sold to a dealer (i.e., it is consumed for personal use). The PDT also recommended that the average landings from the VTR database should be increased to some degree to account for an expected increase in scallop landings by incidental catch permits. Since some vessels did not qualify for a limited entry general category IFQ permit under Amendment 11, landing scallops under incidental catch may be the only other alternative for some vessels (assuming the vessels had a general category permit before the control date).

In Framework 21, the PDT recommended taking VTR landings analyzed in FW19 as a starting point for an estimate of mortality from incidental catch and increasing that to 50,000 pounds to account for an expected increase due to measures implemented by Amendment 11. This amount was removed from the total projected catch before allocations to the LA and LAGC fisheries.

During the summer in 2010 the PDT updated these analyses and summarized the number of trips and total catch by general category vessels less than 40 pounds per trip. Permit category C, shaded columns in Table 10 and Table 11 is the permit type that is restricted by this target TAC. Note that prior to 2008 there was only one general category permit type. The landings numbers shown correspond to the permit types classified according to Amendment 11 which was implemented starting June 1, 2008.

While catch is substantially lower than the target TAC of 50,000 pounds, the PDT discussed that there may be some level of reporting uncertainty so it may be worth keeping the TAC at 50,000 pounds for now and re-evaluating it in the next framework. There have not been too many years of data to consider since the permit was implemented in the middle of fishing year 2008.

**Table 10. Number of trips by general category vessels with less than 40lbs of scallop catch**

Fishyear	IFQ (A)	NGOM (B)	Incidental (C)	Grand Total
2007	651	40	409	1100
2008	631	21	409	1061
2009	976	28	594	1598
2010	298	12	210	520

Source: Dealer and permit databases 2010: March to June

**Table 11. Scallop landings by general category vessels from trips with less than 40lbs of scallop catch**

Fishyear	IFQ (A)	NGOM (B)	Incidental (C)	Grand Total
2004				26856
2005				33641
2006				36313
2007	16066	924	9366	26356
2008	17096	509	10293	27898
2009	26260	521	18972	45753
2010	7207	296	6691	14194

Source: Dealer and permit databases 2010: March to June

## **2.7 TAC SET-ASIDES FOR OBSERVERS (1%) AND RESEARCH (1.25 MILLION POUNDS)**

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. IN the past, set-asides were taken out from the allocation level, what is now known as the ACT, whereas now set asides will be removed from the total ACL level (See Figure 1).

One-percent of the ACL will be set-aside to help fund observers in access areas for both limited access and general category fisheries and in open areas for limited access vessels. In Amendment 15 the Council modified the RSA program so that a fixed poundage be removed from the fishery instead of 2% of access area TAC and 2% of open area DAS. A fixed amount of 1.25 million pounds was identified. Therefore, starting with the 2012 RSA program, 1.25 million pounds of projected catch will be set-aside for research before allocations are made to the limited access and general category fisheries. Table 2 summarizes the set-aside values.

**Table 12 – Summary of 2010 RSA awards**

	<b>Project/Title</b>
1	Real-Time Electronic Bycatch Reporting Pilot Project
2	Loggerhead Sea Turtle Ecology on the Sea Scallop Grounds
3	Testing of Modifications to the Cfarm Turtle Excluder Dredge for Bycatch Reduction
4	Tracking a Large Sea Scallop Recruitment Event with High-Resolution Video Survey in the Gulf of Maine
5	High-Resolution Video Survey of the Sea Scallop Resource, Recruitment Patterns, and Habitat of the Hudson Canyon and Delmarva Closed Area
6	An Assessment of Sea Scallop Abundance and Distribution in Selected Closed Areas: Hudson Canyon Closed Area
7	An Assessment of Sea Scallop Abundance and Distribution in Selected Closed Areas: Georges Bank Closed Area 1
8	Scallop, Yellowtail Flounder, and Substrate Distribution in the Closed Area II Scallop Access Area and the Western Side of the Great South Channel

### **2.7.1 Research priorities for 2011**

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

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

HIGHEST PRIORITIES (not listed in order of importance):

- An intensive industry-based survey of each of the access areas (access areas in Georges Bank including Closed Area I, Closed Area II, and Nantucket Lightship, as well as

Elephant Trunk, Delmarva, and Hudson Canyon). These surveys can then be used to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August 2010.

- Identification and evaluation of methods to reduce bycatch of all managed species (i.e., gear research).

MEDIUM PRIORITY (not listed in order of importance):

- Identification of sources of sea turtle interactions and/or identification of ways to minimize interactions with sea turtles. Two priority topics identified include evaluation and analysis of factors affecting bycatch rates of sea turtles and development of scallop dredge and trawl operations that would reduce or eliminate the threat or harm of sea turtle interactions. Other issues related to sea turtle research include, but are not limited to: gear modifications or fishing techniques that may be used to reduce or eliminate the threat of sea turtle interactions without unacceptable reduction in scallop retention, using available and appropriate technology to quantify the extent that chain mats reduce turtle mortalities, comparison and analysis of turtle capture rates of similar gear in other fisheries, and turtle behavior.
- Scallop biology, specifically studies aimed at understanding incidental gear mortality, discard mortality and seasonal growth.
- Other surveys, including areas not surveyed by the annual NMFS survey (i.e., federal waters in the Northern Gulf of Maine management area and Southern New England).

OTHER PRIORITIES (not listed in order of importance):

- Scallop biology, including studies aimed at understanding recruitment processes (reproduction, larval and early post-settlement stages), growth, and natural mortality (including predation and disease).
- Identification and evaluation of methods to reduce habitat impacts, including, but not limited to: broader investigation of variability in dredging efficiency across habitats, times, areas, and gear designs; and research on habitat effects from scallop fishing and development of practicable methods to minimize or mitigate those impacts.
- Habitat characterization research including, but not limited to: video and/or photo transects of the bottom within scallop access areas and within closed scallop areas and in comparable fished areas that are both subject and not subject to scallop fishing before and after scallop fishing commences; development of high resolution sediment mapping of scallop fishing areas using Canadian sea scallop industry mapping efforts as an example process; identification of nursery and over-wintering habitats of species that are vulnerable to habitat alteration by scallop fishing; and other research that relates to habitats affected by scallop fishing, including, but not limited to, long-term or chronic effects of scallop fishing on marine resource productivity, other ecosystem effects, habitat recovery potential, and fine scale fishing effort in relation to fine scale habitat distribution. In particular, projects that directly support evaluation of present and candidate EFH closures and HAPCs to assess whether these areas are accomplishing their stated purposes and to assist better definition of the complex ecosystem processes that occur in these areas.
- Improved information concerning scallop abundance and evaluation of the distribution, size composition, and density of scallops, including but not limited to: efforts to develop

a cooperative industry-based resource survey, high resolution surveys that include distribution, biomass of exploitable size scallops, recruitment, mortality, and growth rate information, research that provides more detailed scallop life history information (especially on age and area specific natural mortality and growth) and to identify stock-recruitment relationships, intensive sampling on both sides of access boundaries for fishing year 2007 and in subsequent years to gauge the short-and long-terms effects of fishing on the resource.

- Scallop and area management research, including but not limited to: evaluation of ways to control predation on scallops; research to actively manage spat collection and seeding of sea scallops; social and economic impacts and consequences of closing areas to enhance productivity and improve yield of sea scallops and other species; and estimation of factors affecting fishing power for each limited access vessel.
- Research projects that would help calibrate the transition of the federal dredge survey, or projects that compare various survey techniques and methods that would assist with the current transition period of the federal scallop dredge survey.

## 2.7.2 Research priorities for 2012 and 2013

The announcement for available funds for the 2012 RSA program will likely be announced in the summer of 2011. In order to identify research recommendations before that time the PDT, AP and Committee will review the priorities approved for the 2011 program and make recommendations for the Council to approve in Framework 22. After Framework 22 is approved in November the priorities below will be submitted to NMFS to publish in the 2012 and 2013 RSA announcement.

PDT Recommendations in red

AP Recommendations in Blue

Committee approved both and moved priority of turtle related research to high from medium.

The following changes were suggested (deletions in ~~striketrough~~, additions in red (PDT) and in blue (AP), with notes as to changes in priority in *italics*):

HIGHEST PRIORITIES (not listed in order of importance):

- An intensive industry-based survey of each of the access areas (access areas in Georges Bank including Closed Area I, Closed Area II, and Nantucket Lightship, as well as ~~Elephant Trunk~~, Delmarva, Hudson Canyon, **and Great South Channel, if approved**). These surveys can then be used to estimate total allowable catches (TACs) under the rotational area management program if the data from these surveys are available by August of the prior fishing year.
- Identification and evaluation of methods to reduce bycatch of all managed species including projects that determine seasonal bycatch rates of yellowtail, and other key bycatch species (e.g., gear research).
- Research to support the assessment of the loggerhead turtle population in the Mid-Atlantic (i.e. satellite tagging and investigation of seasonal movements, etc.); identification of sources of sea turtle interactions and/or identification of ways to

minimize interactions with sea turtles. ~~Two~~ Priority topics identified include ~~evaluation and analysis of factors affecting bycatch rates of sea turtles~~ development and monitoring of scallop dredge and trawl operations that would reduce or eliminate the threat or harm of sea turtle interactions. Other issues related to sea turtle research include, but are not limited to: gear modifications or fishing techniques that may be used to reduce or eliminate the threat of sea turtle interactions without unacceptable reduction in scallop retention, using available and appropriate technology to quantify the extent that ~~chain mats~~ gear modifications reduce turtle mortalities, ~~comparison and analysis of turtle capture rates of similar gear in other fisheries,~~ and turtle behavior.

MEDIUM PRIORITY (not listed in order of importance):

- ~~Other resource surveys, including areas not surveyed or under-surveyed by the annual NMFS survey to expand and/or enhance the NMFS annual dredge survey including open areas and determine NMFS survey dredge efficiency in those other resource areas (i.e., federal waters in the Northern Gulf of Maine management area and Southern New England);~~
- Scallop biology, specifically studies aimed at understanding incidental gear mortality, discard mortality and seasonal growth.

OTHER PRIORITIES (not listed in order of importance):

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

(especially on age and area specific natural mortality and growth) and to identify stock-recruitment relationships, intensive sampling on both sides of access boundaries for fishing year 2007 and in subsequent years to gauge the short-and long-terms effects of fishing on the resource.

- Scallop and area management research, including but not limited to: evaluation of ways to control predation on scallops; research to actively manage spat collection and seeding of sea scallops; social and economic impacts and consequences of closing areas to enhance productivity and improve yield of sea scallops and other species; and estimation of factors affecting fishing power for each limited access vessel.
- ~~Research projects that would help calibrate the transition of the federal dredge survey, or projects that compare various survey techniques and methods that would assist with the current transition period of the federal scallop dredge survey.~~
- [If a habitat research area is identified in a future action, allow RSA funds to be used for projects to enhance scallop production using rotational strategies.](#)
- [Develop methodologies for the scallop fleet to collect and analyze catch data on a near real-time basis \(i.e. meat weight, bycatch, etc. “Study fleet” concept\).](#)
- [Continue scallop dredge environmental impact studies.](#)

### 2.7.3 Research and Observer Set-Asides

Table 13 is a summary of the observer and research set-aside values associated with each scenario under consideration. Observer set-aside is based on 1% of projected TAC in access areas and 1% of DAS in open areas. Observer set-aside can be applied to all trips in access areas and limited access trips in open areas. General category trips in open areas are funded directly by the Northeast Observer Program and no this set-aside program. The exact poundage or DAS compensation that vessels receive if they are required to carry an observer is set by NMFS after FW22 is approved.

**Table 13 – Set-asides under consideration for observer and research set-aside programs (in million pounds)**

<b>2011</b>	<b>Option 1</b>
Observer set-aside	601000
Research set-aside	1.25
<b>2012</b>	<b>Option 1</b>
Observer set-aside	638000
Research set-aside	1.25

## 2.8 CONSIDERATION OF NEW ROTATIONAL AREA IN THE GREAT SOUTH CHANNEL

Amendment 10 defines the criteria for closing an area to protect young scallops. Under adaptive area rotation, an area would close when the expected increase in exploitable biomass in the absence of fishing mortality exceeds 30% per year and re-open to fishing when the annual increase in the absence of fishing mortality is less than 15% per year. Identification of areas



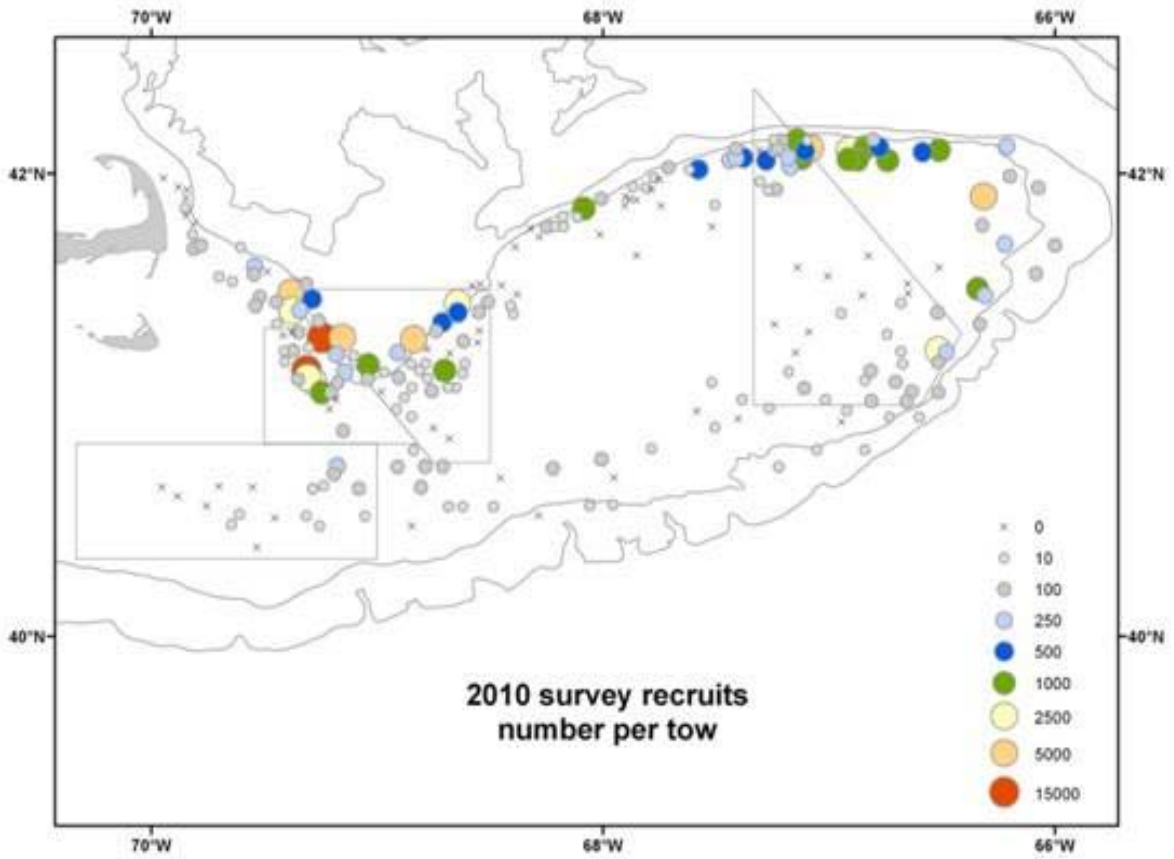
would be based on a combination of the NEFSC dredge survey and available industry-based surveys. The boundaries are to be based on the distribution and abundance of scallops at size; ten-minute squares are the basis for evaluating continuous blocks that may be closed. The guidelines are intended to keep the size of the areas large enough and regular in shape to be effective, while allow a degree of flexibility. The Council and NMFS are not bound to closing an area that meets the criteria and the Council and NMFS may deviate from the guidelines to achieve optimum yield.

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

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

The PDT reviewed updated biomass estimated for that area and growth estimates are about 45%, which is well above the 30% threshold suggested in the adaptive area rotation program. The PDT explored a scenario (Option C) that would close the channel for one year (2011) and it would reopen as an access area with controlled effort in 2012. After 2012 the area would continue as an access area until growth rates slow down and it reverts back to an access area. Vessels would be allocated 2.5 trips in 2012.

Figure 5 – Scallop recruitment on Georges Bank from the 2010 federal survey (scallops less than 70mm) with potential boundaries for a scallop rotational area within the Great South Channel



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

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

In the accompanying Incidental Take Statement, NMFS is required to identify and implement non-discretionary reasonable and prudent measures (RPMs) necessary or appropriate to minimize the impacts of any incidental take, as well as Terms and Conditions (T/C) for implementing each RPM. RPMs and T/C cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes. Five RPMs and T/Cs were identified in the March 2008 biological opinion. One RPM requires a limit of effort in the Mid-Atlantic during times when sea turtle distribution is expected to overlap with fishing activity; the other four are related to ongoing research needs and identification of measures to reduce interactions and/or the severity of such interactions.

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

### ***Reasonable and Prudent Measures***

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

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

### ***Terms and Conditions***

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

*To comply with 1 above, no later than the 2010 scallop fishing year, NMFS must limit the amount of allocated limited access scallop fishing effort that can be used in waters south of the northern boundaries of statistical areas 612, 613, 533, 534, 541-543 during the periods in which*

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

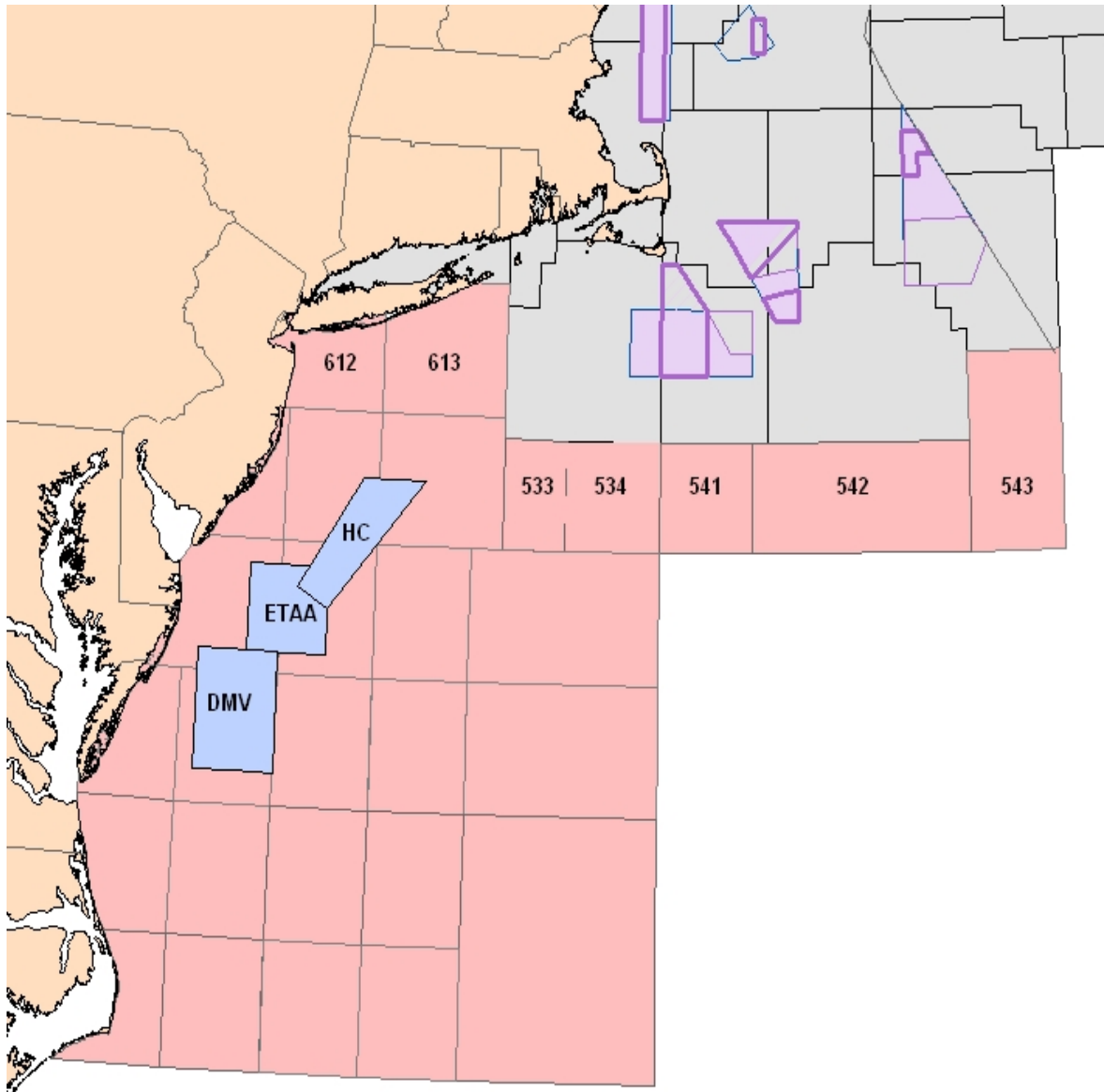
*turtle takes have occurred. Restrictions on fishing effort described above shall be limited to a level that will not result in more than a minor impact on the fishery. (Amended February 5, 2009)*

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

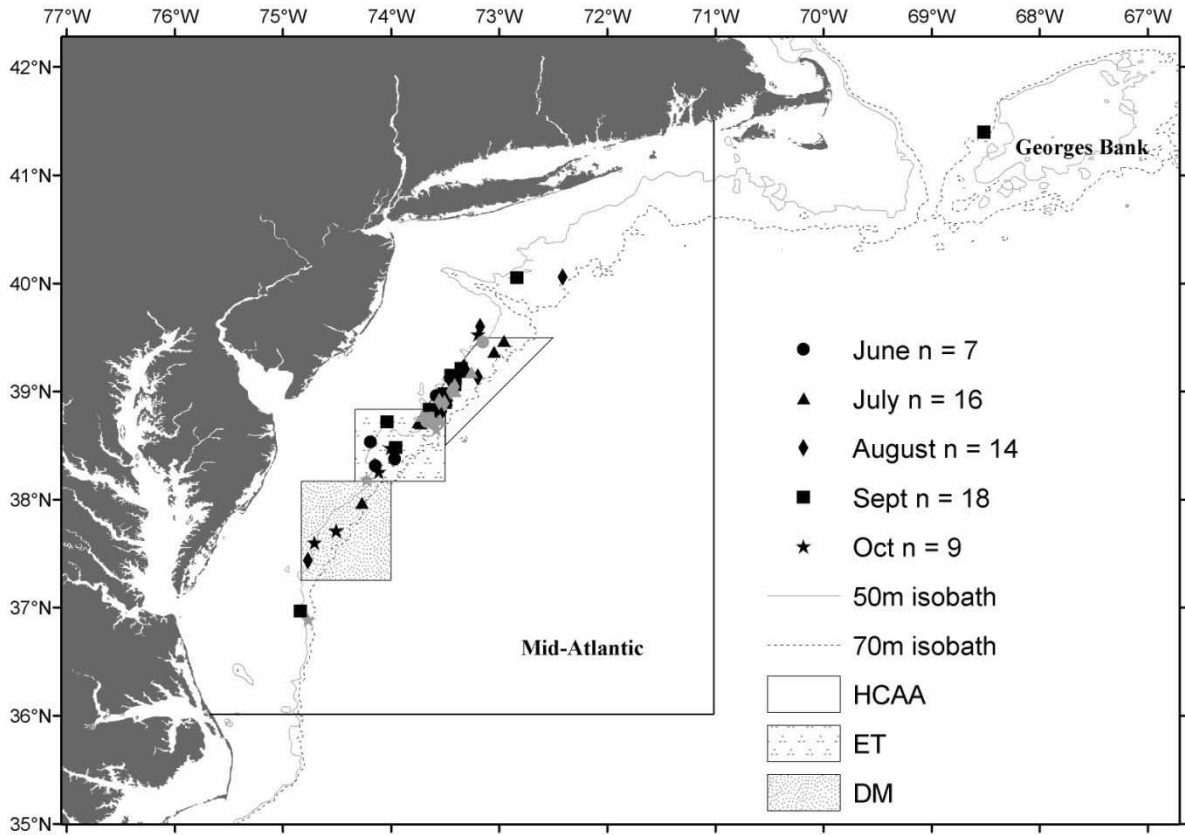
The alternatives in this section have been developed to comply with the RPM and T/C above. The figure below depicts the area that is referenced in the first Term and Condition. It is referenced as the “Mid-Atlantic” within this document.

Interactions between sea turtles and dredge gear occurred from June to October (Figure 7; Murray, in press). Estimated interactions rates were higher from July through October compared to other months (Figure 8; Murray, in press). These figures were used to help identify the months for the seasonal closure RPM alternatives in Delmarva and Hudson Canyon.

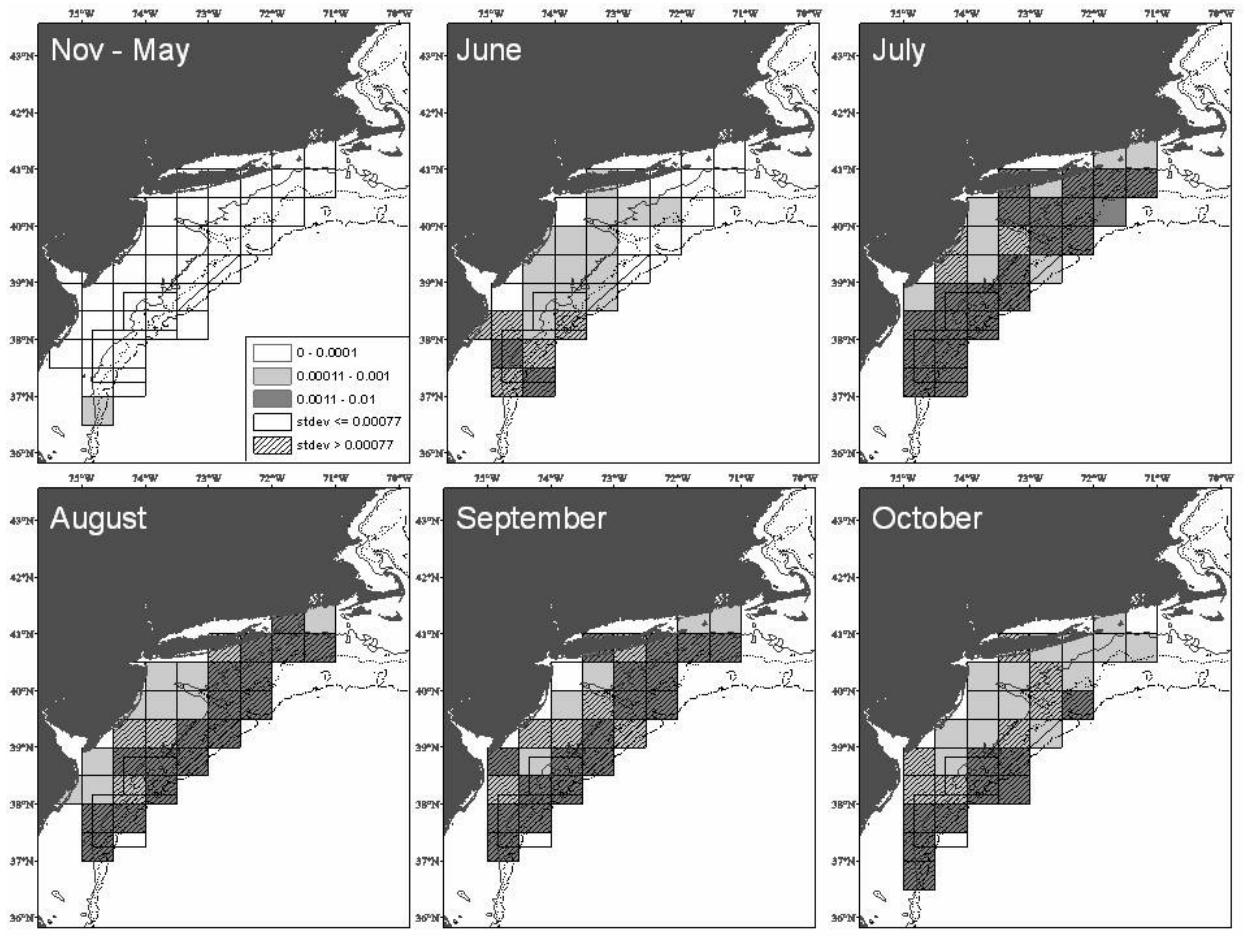
**Figure 6 – Area defined as the “Mid-Atlantic” in the 2008 biological opinion - waters south of the northern boundaries of statistical areas 612, 613, 533, 534, 541, 542, and 543.**



**Figure 7 - Distribution of observed sea turtles in scallop dredge gear during on-watch hauls 2001-2008, showing boundaries of Mid-Atlantic study area and Mid-Atlantic scallop fishery management areas. Unidentified turtle species are in gray, and the turtle outside of the study area is a Kemp's ridley. HCAA = Hudson Canyon Access Areas, ET = Elephant Trunk, DM = Delmarva.**



**Figure 8 - Distribution over 30' squares of average predicted interaction rates without chain mats on VTR dredge trips, 2001-2008. Squares with fewer than 10 VTR trips have been excluded. The 50m,70m, and 200m bathymetry lines are shown. From north to south, the Hudson Canyon Access Area, Elephant Trunk, and Delmarva scallop management areas are represented by the black rectangles. Median standard deviation around rates over all months = 0.00077.**



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

### 2.9.1.1 No Action

There would be no specific measures in FW22 to comply with RPM1. The RPMs implemented under FW21 expire with that action.

### 2.9.1.2 Restrict the number of open area DAS a vessel can use between July and September in the Mid-Atlantic

This alternative would set a maximum on the number of allocated open area DAS each limited access vessel can use in the area defined as the Mid-Atlantic from July 1 through September 30.

The maximum number of DAS that can be used will be identified as the maximum number of DAS before any less DAS would have “more than a minor impact” on the fishery as defined by the PDT analyses in Section 2.9.2. Measures to comply with a reasonable and prudent measure cannot have more than a minor impact on the fishery.

### **2.9.1.3 Restrict the number of access area trips in the MA that can be used between June 15-Oct 31**

This alternative would restrict the number of allocated access area trips that can be taken in the Mid-Atlantic between June 15 and October 31. In both 2011 and 2012 a total of two trips are allocated to Mid-Atlantic access areas. This alternative would restrict when those trips can be taken in terms of placing a maximum on the number that can be taken during June 15 – October 31. The maximum number of trips that can be taken in this window of time will be identified as the maximum number of trips before any fewer trips would have “more than a minor impact” on the fishery as defined by the PDT analyses in Section 2.9.2. Measures to comply with a reasonable and prudent measure cannot have more than a minor impact on the fishery. This restriction would not change any seasonal closures under consideration for Delmarva or Hudson Canyon.

*The Committee passed the motion below, which identifies this alternative as preferred with an additional caveat.*

*The Committee would support a RPM of one access area trip maximum in the Mid-Atlantic (Measure C for 2011 and F for 2012) with no seasonal closures. In addition, a caveat should be included that if someone traded in two additional Mid-Atlantic access area trips (to have four total), he would be limited to taking two during the turtle window instead of one.*

### **2.9.1.4 Seasonal closure for Delmarva**

This alternative would consider a seasonal closure of the entire access area to both general category and limited access scallop vessels. While the RPM only specifies that these measures need to limit effort for the limited access fishery, the PDT recommends this restriction for both fleets to be consistent with the previous seasonal closure in Elephant Trunk and to further minimize impacts on turtles. Measures to comply with a reasonable and prudent measure cannot have more than a minor impact on the fishery.

#### **2.9.1.4.1 September through October**

This is the range of time the area was closed in 2010 under FW21. Some of the observed takes in Delmarva were during this window of time and could be expected in this area as turtles migrate (Figure 7). Furthermore, the impacts on fishery expected to be minimal since this overlaps with a warm season when meat weights are lower and quality is below average when scallops are post-spawning.

#### **2.9.1.4.2 July through October**

The PDT added this alternative in FW22 to extend the seasonal closure to encompass months with high estimated turtle interaction rates within the Delmarva area. It was recognized that this length of time may be too long in terms of having more than minor impacts on the fishery, but it



was recommended to see if analyses found it to be too burdensome. July and August typically have higher scallop meat weights than September and October and the more than minor analyses should show that.

#### **2.9.1.5 Seasonal closure in Hudson Canyon for 2012 and 2013 only**

This alternative would consider a seasonal closure of the entire access area to both general category and limited access scallop vessels. While the RPM only specifies that these measures need to limit effort for the limited access fishery, the PDT recommends this restriction for both fleets to be consistent with the previous seasonal closure in Elephant Trunk and to further minimize impacts on turtles. Measures to comply with a reasonable and prudent measure cannot have more than a minor impact on the fishery. The PDT does not recommend a seasonal closure for Hudson Canyon in 2011 because it will likely not open until June, when FW22 is in place. Therefore, both of these alternatives are for 2012 and 2013 only. For example, if a seasonal closure was implemented in FY2011 from July through September in 2011 it would therefore shift all the effort into Hudson Canon during October - February, when meat weights are poor. Since the FW will not be implemented before June 2011, the area will continue to be closed to all scallop fishing until that time.

##### **2.9.1.5.1 August through September**

This time period was identified as the season when most observed turtle takes occurred balanced with the months when scallop meat weights are lower. August does have higher meat weights, but that is a month when more turtles may be in that area since it is further north compared to other access areas further south.

##### **2.9.1.5.2 July through September**

The PDT added this alternative in FW22 to encompass months with high estimated turtle interaction rates in the HC area. It was recognized that this length of time may be too long in terms of more than minor impacts on the fishery, but it was recommended to see if analyses found it to be too burdensome. July and August typically have higher scallop meat weights than September and October and the more than minor analyses should show that.

#### **2.9.1.6 Combined measures – only if stand alone ones do not have more than minor impact**

*Based on results of stand alone measures, the PDT will identify whether combined measures are warranted, and which ones.*

#### **2.9.1.7 Require modified turtle excluder dredge in MA (move to Considered and Rejected section)**

The PDT discussed that there would be conservation benefits to requiring the modified turtle excluder dredge in the MA. However, it is not ready for prime time. The PDT identified several issues that would need to be clarified first before it could be made standardized. While the PDT supports considering this measure, there is not sufficient time for this action. Instead, the PDT recommends that the Committee write a letter to NMFS arguing that RPM be modified to be gear

based rather than effort based, and support including this in FW23. *See separate document on RPMs.*

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

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

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

*Preliminary Results – see separate document*

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

The PDT discussed that the only measure necessary to be considered here is a reduction of trips for the Channel, if Option 3 is selected. If updated biomass in 2011 shows that biomass in the Channel area is lower than projected the number of allocated trips in 2012 will be reduced. Similarly, if updated biomass estimates in 2012 find that biomass is lower than projected, allocated trips in 2013 will be reduced. The table below describes the biomass levels that would warrant a reduction in trips.

*This section is not needed based on preferred recommendation of Committee to support Option 1.*

## **2.11 MODIFICATIONS TO VESSEL MONITORING SYSTEMS**

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

### **2.11.1 No Action**

Current provisions for power down options available to the fleet to reduce cost of VMS.

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

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

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

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

### **Enforcement Committee Meeting – September 10**

The VMS/Enforcement Committee discussed the Scallop Committee motion, regarding section 2.12.2 of Framework 22 for LAGC vessels, to “allow vessels to turn off their VMS if they do not intend to land scallops [and] if they render their vessels incapable of landing scallops”. They want to fish without VMS. The LAGC fleet currently may power down their VMS while at the dock (after sending the power down declaration), as long as they do not hold more restrictive permits requiring the VMS to be on 24/7. These vessels want to engage in other fisheries, such as lobster, without the VMS powered up, which they cannot do now. This is viewed as a cost-saving method. The VMS/Enforcement Committee strongly believes that VMS should stay on when the vessel is away from the dock, and that owners may continue to take advantage of the power-down rules when in port.

### **PDT input – October 21 Meeting**

PDT recommends this be moved to the considered and rejected section. Additional correspondence with NMFS OLE concludes that this would be difficult to develop and there are already power down provisions that vessels can take advantage of. There are other FMPs that would still require VMS, and allowing vessels to turn off their VMS units while at sea could compromise enforcement. PDT did not think adequate time could be spent on this issue in FW22.

## **2.12 REVISIT THE POSSESSION LIMIT OF IN-SHELL SCALLOPS SEAWARD OF THE DEMARCATION LINE**

This alternative would reduce the possession limit seaward of the VMS demarcation line from 100 bu to something less (i.e. 65 or 75bu). NMFS Enforcement agents have voiced concerns that the regulations allow for LAGC vessels to possess up to 100 bu of scallops seaward of the VMS Demarcation Line, but prohibit vessels from possessing more than 50 bu when shoreward of the VMS Demarcation Line has influenced fishing behavior. There are reports that vessels are targeting more scallops and buoying them off to be landed the next day.

The PDT discussed that this activity did not seem to be illegal, but agreed that 100 bushels may be excessive for a 400 pound of scallop meat limit. The additional bushels were permitted through Amendment 11 to acknowledge that there is seasonal and spatial variation in meat yield,

so some flexibility is warranted, but 100 bushels may be too high. The PDT is not sure how prevalent this activity is and if there are any quality and mortality issues.

The Committee decided to forward this issue to the AP to see how widespread this issue is and to ask the PDT if this is a significant problem or not and to consider what a more appropriate bushel equivalent would be to account for meat weight variations.

Additional AP and Cmte input:

The AP made a motion to change the bushel possession limit seaward of the demarcation line to 75 bu (2.13.2) but the motion failed. At the last Committee meeting the Committee sought guidance from the PDT about the severity of this problem and alternative possession limit alternatives; the PDT has gotten observer data that can look into this. One Committee member pointed out that the activity is not illegal, and we are unsure whether there are mortality issues associated with this behavior. There is no real problem here and so he is willing to leave it alone. Many advisors were surprised that this behavior was occurring and there was not a real consensus that it is a widespread problem, though some AP members from the Mid-Atlantic did acknowledge that it is happening. Much of the Committee was unsure how to treat this issue since it is still unclear how widespread it is, but was unwilling to devote a lot of PDT time. **After discussion it was determined that the PDT should review the data available to analyze what the possession limit should be and what impacts on mortality may be and continue from there.**

Additional PDT Input – October 21 Meeting

The PDT reviewed seasonal/area meat weight data from the observer program for this alternative. Analyses support that a lower possession limit is warranted, but in light of the recent decision to increase the possession limit to 600 pounds, the PDT recommends that the possession limit stay at 100 bushels. This amount should provide some flexibility to account for seasonal and temporal changes in meat weight, but not high enough to increase incentive to shell stock or change fishing behavior.

**2.12.1 No Action**

Possession limit seaward of the demarcation line would remain at 100 bu. even with increased possession limit of 600 pounds.

**2.12.2 Reduce possession limit of in-shell scallops seaward of the VMS demarcation line**

This alternative is moot based on decision in Amendment 15 to increase the possession limit from 400 pounds to 600 pounds.

**2.13 EXTENSION OF UNUSED ELEPHANT TRUNK ACCESS AREA TRIPS THROUGH MAY 31, 2011**

This alternative would allow full-time vessels to use any unused FY 2010 ETA trips through May 30, 2011. Since catch rates are low in the ETA this extension would hopefully reduce negative impacts on the scallop resource by shifting trips that would be taken between now and

February 28, 2010 until the spring of 2010 before May 30 when scallop meat weights are larger. This would reduce fishing mortality of remaining trips that have not been taken. To date, 6.9 million pounds of scallops have been harvested out of ETA through mid-October, leaving about 5 million pounds. In 2009, about 80% of catch in ETA was harvested at this point in the fishing year, assuming the same trend for 2010, would mean that about 1.7 million pounds will be harvested before the end of FY2010, about 96 trips. This could even be an overestimate of the number of trips potentially left since some trips are partial trips and those would not be allowed to be extended beyond the end of the 2010 fishing year. This extension would only apply to vessels that have one or two fully unused trip(s) at the end of 2010.

Because each full-time vessel will be allocated 2 trips as the start of FY 2011 until Framework 22 is implemented under No Action, they would be able to use one trip or two trips, depending on how many full trips they had remaining from FY 2010, without any payback measures applied once Framework 22 is implemented. This alternative is only applicable to FY 2010 allocated trips that were not used or declared during FY 2010, as compensation trips from ETA trips that were declared and broken during FY 2010 can be used up to 60 days into FY2011 (May 1, 2011) or until Framework 22 is implemented and the ETA reverts to an open area, whichever occurs first.

#### **2.13.1 No Action**

Unused 2010 ETA trips expire on February 28, 2011.

#### **2.13.2 Extension of unused 2010 ETA trips through May 31, 2011**

If adopted, any unused trips could be fished before May 31, 2011.

### **2.14 ELIMINATE SCHEDULE OF GEORGES BANK ACCESS AREAS IN REGULATIONS**

Time and time again, the default schedule of access areas on GB has created confusion of regulatory inconsistencies. The schedule was added to the regulations when Amendment 10 implemented area rotation. In some instances, access areas on Georges Bank do follow the schedule outlined in the regulations of one year open, two years closed, but that is not always the case. Openings should be based primarily on scallop resource and other factors like YT bycatch available, and not a default schedule that may not match current schedules and biological constraints.

Therefore, this alternative would eliminate any reference to the three-year schedule of access areas on GB.

#### **2.14.1 No Action**

#### **2.14.2 Eliminate reference to GB access area schedule in the regulations**

### **3.0 CONSIDERED AND REJECTED ALTERNATIVES**

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

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

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

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

The specific gear restrictions discussed were modifications to twine top regulations (reduce the hanging ratio and institute a minimum twine top length - i.e. maximum of seven rings up from the club stick) and require all vessels to use the “turtle dredge”. The twine top issues seem straight forward, but the only research available is a master’s thesis. These modifications are not expected to have major impacts on reducing bycatch, but small adjustments could help the larger issue. It was discussed that the wording would have to be very specific so it can be enforced correctly. For example, not more than 2:1 ratio, or a range, or specify that the hanging ratio can’t exceed 2.5 ratio. It was also discussed that the industry should consider doing this voluntarily to avoid complicated gear regulations. The PDT will explore the status of these reports and determine if they can even be used to support a Council action; specifically, do they meet the RSC standards.

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

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

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

In Framework 21 the Council considered an alternative to discourage vessel owners from not paying deployed observers by not reissuing permits to vessels that hadn’t paid observer providers for fees. Ultimately, the Council decided not to pursue this alternative due to the fact that the NMFS Office of General Counsel (OGC) and Office of Enforcement (OLE) was concurrently developing a process to address observer non-payment issues based on a permit sanction provision currently in the MSA. After further review of the current permit sanction by OLE and OGC, NMFS has determined that an adjustment to the regulations would be necessary in order to impose permit sanctions on vessels that have not paid for observers. Specifically, NMFS has

identified that the lack of clear definitions of what constitutes a payment (*i.e., does it include interest on unpaid payments?*) and when it is determined to be overdue (*i.e., did the customer have knowledge of when the provider required payment?*) have made it difficult to impose a permit sanction due to non-payment violations.

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

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

### **3.4 CHANGE VMS POSITIONING REQUIREMENT FOR LAGC IFQ AND LAGC INCIDENTAL PERMITS TO ONCE PER HOUR**

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

***Rationale for rejection:*** Comments argued that VMS system is working and the Council should not be spending too much time on a minor issue. Savings from this proposed change are not that high, especially if they compromise enforcement capability. The scallop advisors felt that polling every 30 minutes works for existing closed area boundaries and any longer time between polling could leave room for violation.

### **3.5 DELAY THE OPENING DATE OF MID-ATLANTIC ACCESS AREAS FOR GENERAL CATEGORY VESSELS**

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

***Rationale for rejection:*** There was concern about this change combined with any turtle measures creating too small a window for the gen cat fleet to access these areas. The PDT added that this issue has come up in the past to promote fishing in better weather and months with higher meat weights, but may not be as necessary anymore. ETA is ending soon as an access area, derby fishing seems to be slowing down, and pushing the start date too far back could be problematic with current RPM measures to reduce impacts on sea turtles.

### **3.6 SPLIT AN INCIDENTAL LAGC PERMIT FROM OTHER PERMITS**

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

***Rationale for rejection:*** It was raised that this alternative may require a joint action and there were some concerns that it would conflict with intent of Amendment 11 and consistency with general permit splitting provisions.

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

### **5.0 ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES**

*See separate document*

### **6.0 COMPLIANCE WITH APPLICABLE LAW**

### **7.0 GLOSSARY**

### **8.0 LITERATURE CITED**