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New England Fishery Management Council

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DRAFT MEMORANDUM

DATE: December 10, 2013
TO: Habitat PDT
FROM: Scallop PDT
SUBJECT: Preliminary input on potential impacts of measures under consideration in Habitat Omnibus Amendment 2 on the scallop resource and fishery

The Scallop PDT has developed preliminary analyses to assess the potential impacts of measures under consideration in Omnibus Essential Fish Habitat Amendment 2 on the scallop resource and fishery. The information in this memo will be integrated into that DEIS before initial submission to NMFS, but has been kept separate for the December Council meeting. There is additional information in the economic impacts section of the DEIS about potential impacts on the scallop fishery. These analyses are based on VTR and VMS data and focus on currently fished areas.

Because the Scallop PDT uses a spatial model to forecast scallop biomass and catch it is possible to assess the impacts of area closures directly in terms of both short and longer term impacts. The Scallop PDT will continue to refine these analyses in the DEIS, but this memo is an initial summary of potential impacts.

The Scallop PDT initially focused on four aspects of the measures under consideration in relation to potential impacts on the scallop resource, fishery and management plan. Below is a list of the major aspects of OA2 that have been addressed and how the Scallop PDT assessed the potential impacts.

1. **What are the potential impacts of Habitat Management Area alternatives on the scallop resource and fishery?** This will be assessed two ways. First the long term potential yield from an area has been calculated as well as the short term yield based on recent survey results from 2013. Second, projections of biomass, catch, bottom area swept and other factors are being evaluated using the SAMS model (SAMS results are not included in this document but will be available at the December Council meeting). The PDT is evaluating several different scenarios for EFH closed areas to describe the potential impacts from the range of options under consideration, focused on alternatives in the Great South Channel and Northern Edge regions.
2. **What are the potential impacts of measures under consideration to improve groundfish spawning on the scallop resource and fishery?** This has primarily been assessed by evaluating differences in shell height/meat weight ratios by season from both

NMFS observer data and results from a Scallop RSA project that measured scallops in CA1 and CA2 during different seasons in 2011 and 2012.

3. **What are the potential impacts of alternatives to designate Dedicated Habitat Research Areas (DHRAs) on the scallop resource and fishery?** This has been assessed qualitatively related to the potential indirect impacts on the scallop resource and fishery from research that may be conducted in the various areas. In addition, some input has been provided about potential fishery displacement from these candidate research areas.
4. **Finally, how and when should the Scallop FMP be adjusted to address modifications potentially implemented by Habitat Omnibus Amendment 2?** The PDT recommends a potential approach for developing and implementing trailing issues (e.g. changes in access area boundaries) in the Scallop FMP that result from changes implemented in OA2.

The Scallop PDT did not have time to develop analyses of EFH alternatives in the GOM. The majority of the scallop resource and fishery are on GB and the MA, and not the GOM. The federal survey does not include the GOM, and the models that have been developed to assess the resource do not include that area either. Therefore, the potential impacts of these measures need to be assessed differently using different methods and data sources. The PDT is investigating if several surveys in the federal NGOM area can be used to assess the potential impacts of the EFH closures and habitat research areas under consideration in the GOM. If not, the potential impacts of these measures will be addressed more qualitatively.

1.0 POTENTIAL IMPACTS OF EFH CLOSED AREA ALTERNATIVES

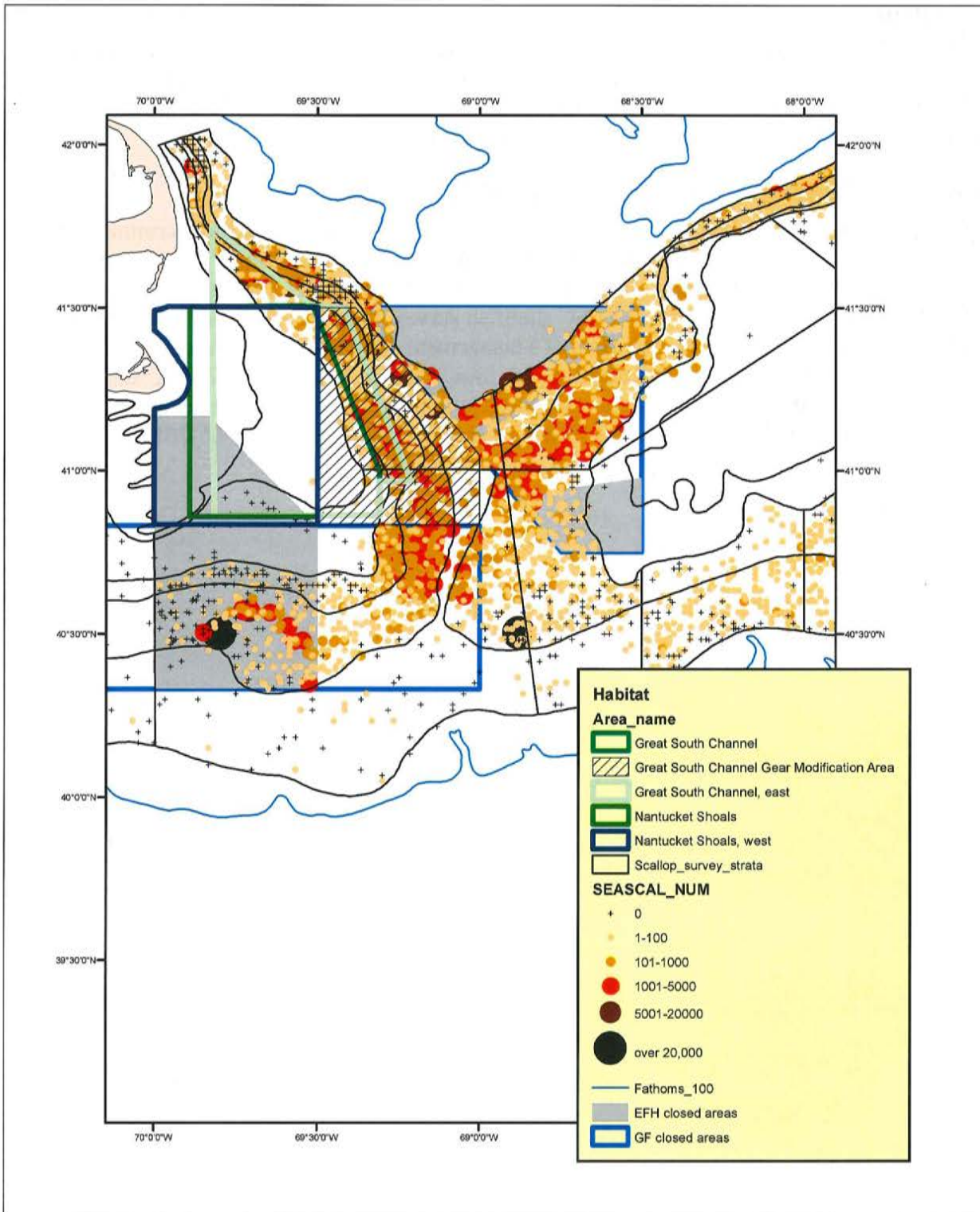
1.1 METHODS

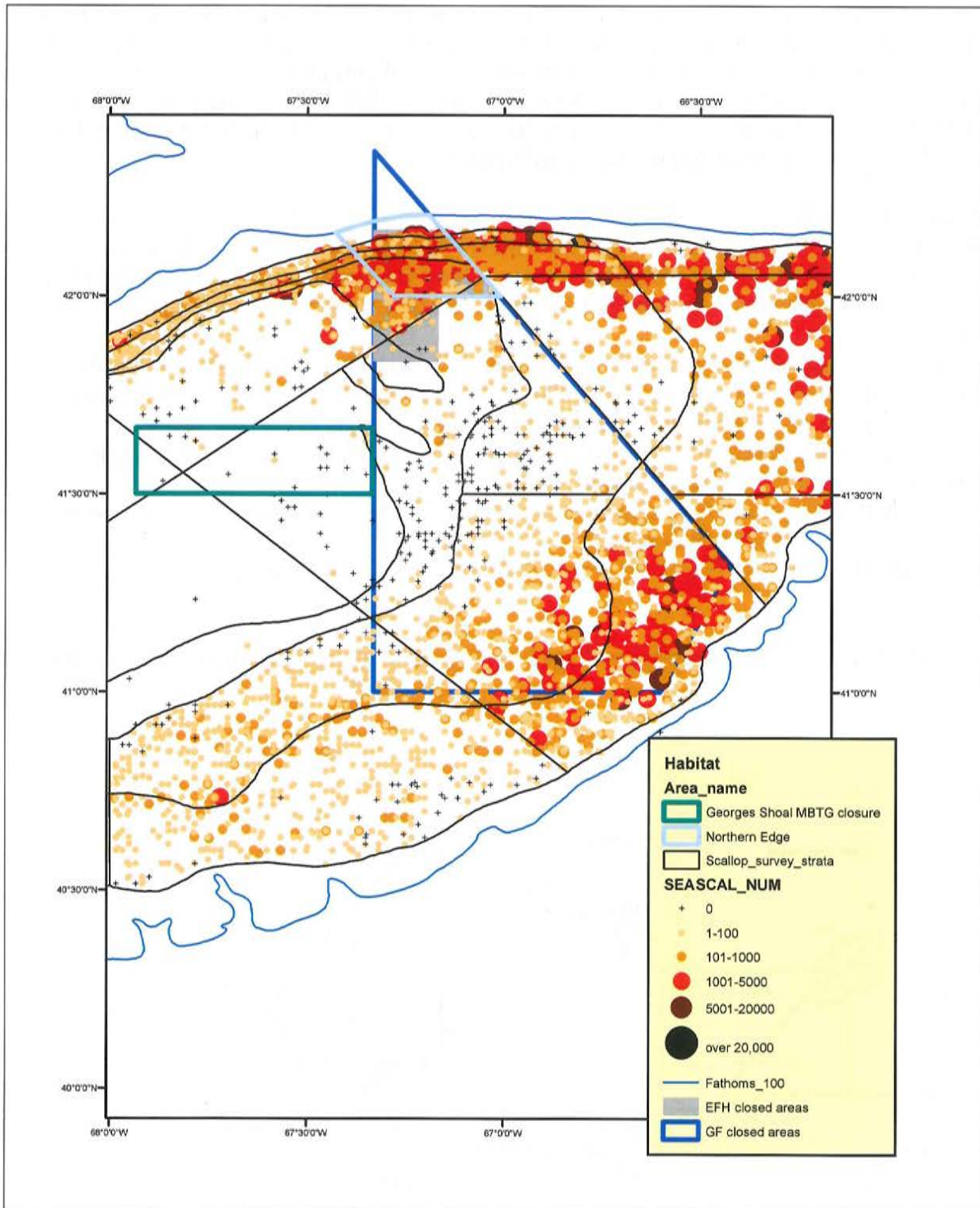
The Scallop PDT has assessed these potential impacts two major ways. First the long term potential yield from an area has been calculated as well as the short term yield based on recent survey results from 2013. Second, the SAMS model will be run for several scenarios to project the future short term and longer term biomass and scallop catches and associated impacts.

1.1.1 Estimates of long-term yield and short-term yield in relevant areas

The long term yield per Habitat Management Area was calculated by multiplying the recruitment in each area by the maximum yield per recruit. A stratified mean was calculated since yield per recruit varies in each stratum because of depth. First, the area (in nm²) of each EFH alternative was calculated, as well as the area within each NEFSC shellfish survey strata. This was done so that a stratified mean could be calculated for each Habitat Management Area since yield varies by depth and because all shellfish strata are not sampled equally over time. Figure 1 shows the NEFSC shellfish survey strata in and around habitat management alternatives in the Great South Channel and Northern Edge with the total number of scallops per tow from all survey years combined (1966-2013).

Figure 1 – NEFSC shellfish survey strata with EFH areas under consideration (GSC and NE) with scallop numbers from all survey years (1966-2013)





1.1.2 Projected impacts on scallop biomass and catch

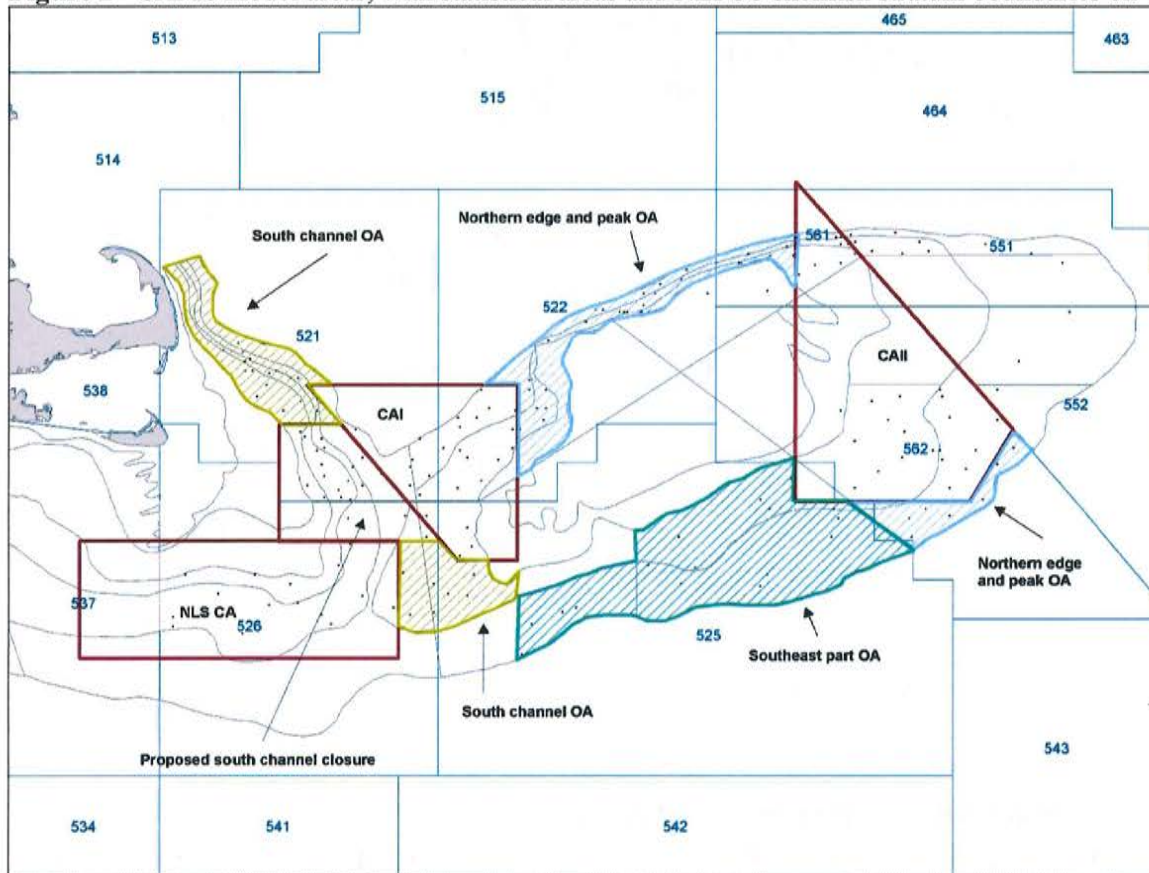
The projected impacts on scallop biomass and catch are based on results from an updated version of the SAMS (Scallop Area Management Simulator) model. This model has been used to project scallop biomass and catch to aid management decisions since 1999. SAMS is a size-structured model that

forecasts scallop populations in a number of areas. In this version of the model, the PDT modified the boundaries of the typical areas to include a handful of the alternatives under consideration (Figure 2). This allows the model to estimate the long term biomass inside and outside of various Habitat Management Areas. Modifying boundaries in the SAMS model is difficult and time consuming, so the PDT identified a feasible number of areas to assess, and did not run a separate SAMS projection for all groupings of Habitat Management Areas under consideration.

The final runs will include:

1. No Action – The EFH areas closed by Amendment 13 remain closed to the scallop fishery (grey areas in Figure 1. Note that for No Action – all of CA2 north is considered closed to the scallop fishery because the area north of 41° 30' is closed to the scallop fishery under the GF FMP.
2. No Habitat Management Area closures – Open all A13 EFH areas. The model run assumes that all existing EFH areas would be fished at a fishing mortality rate similar to an access area for several years, and then revert to open area F levels for the rest of the time period.
3. New Habitat Management Area closure on Northern Edge (GB Alt3, light blue outline in Figure 1) and other A13 EFH areas open
4. New Habitat Management Area closure area in Channel (GSC – Alt4, dark green outline area in Figure 1) and A13 EFH areas open
5. Combination of Northern Edge EFH area (GB Alt3) and GSC Alt4 closing

Figure 2 - SAMS model areas, with statistical areas and NEFSC shellfish stratum boundaries on Georges Bank



1.2 RESULTS AND FINDINGS

1.2.1 Estimate of long-term scallop yield potential and short-term yield

Table 1 is a summary of the long-term (LT) and short-term (ST) yield potential per area. The long-term yield values vary since the recruitment data is very variable; if there are one or two years with very high recruitment that really impacts the mean. The mean estimate is always higher and can be viewed as a potential upper bound, while the median is a more conservative estimate. Note that estimates have been provided for both the No Action CA2 North EFH area only, the cod HAPC area, as well as all of CA2 North (all areas north of 41 30) because under No Action both areas are closed to the scallop fishery.

Of the no action areas, CA2 North, which includes CA2 North EFH as well, has the highest LT yield potential (1,254 mt) followed by CA1N (601 mt) and NL EFH area (552 mt) based on the mean estimate of LT yield. CA1 South does not have much yield potential at all. Both CA2 North and CA1 North have substantial short term/2013 yield available. When all 4 EFH closures on GB are combined, the LT yield potential is about 2,400 mt (1217+601+29+552 mt). The estimated LY yield from the entire scallop resource in all areas, all open and closed areas on GB and the MA is about 25,000 mt per year. Therefore, about 10% of the total potential LT yield for the entire scallop resource is within the current EFH closed areas, using the mean LT yield estimates (2400/25000).

Table 1 – Long-term and short-term yield potential from current EFH closed areas and several new areas under consideration

Area	Status	LTYield(mean)	LTYield(med)	Bms13	STYield
CAII-N	Cur	1254	536	8630	2589
CAII-N (codHAPC)	Cur EFH only	1217	525	7853	2356
CAI-N	Cur	601	42	4841	1452
CAI-S	Cur	29	11	1658	497
NLS-Hab	Cur	552	3	93	28
No. Edge	Prop	1214	502	7433	2230
GSC	Prop	313	64	100	30
GSC East	Prop	4034	1101	4460	1338

The Northern Edge HMA area under consideration has similar long term yield potential (1,214 mt) as the No Action CA2 north area (all of CA2 north, 1,254 mt and CA2 north EFH, 1,217 mt). Note that the vast majority of LT yield in CA2 north is within the current EFH area; only about 37 mt is from areas within CA2 north but outside of the cod HAPC. Furthermore, the PDT noted that the majority of the yield potential in parts of the Northern Edge HMA not overlapping CA2-N comes from a very small “triangle” in shallower waters along the western boundary of CA2 within the new Northern Edge HMA (indicated by green arrow in Figure 3), and not the deeper waters along the northern part of the new area. Therefore, the potential impacts on the scallop resource and fishery from the Northern Edge HMA would likely be similar to the No Action CA2 EFH area on the Northern Edge.

Both the No Action CA2 North and the new Northern Edge HMA have a very high level of short-term yield potential as well, over 2,200-2,600 mt based on the mean estimate (Figure 4). In general, 2,500

mt is equivalent to about one 18,000 pound trip per vessel per year, or about 6 million pounds overall. The PDT discussed that the additional part of the new Northern Edge HMA, which is currently open to the scallop fishery (the area with green arrow in Figure 3), likely has higher LT yield potential than the southern part of the No Action EFH area, that would potentially open if the No Action EFH area is eliminated (area indicated by purple arrow in Figure 3). Specifically, in terms of LT yield potential, the additional area closed in the Northern Edge HMA is more productive than the area that would open in the southern part of the existing EFH closure on the northern edge.

Figure 3 – Scallop numbers per tow from NEFSC surveys (all years) with EFH areas on the Northern Edge of GB highlighting the area that would close under the new Northern Edge HMA (green arrow) compared to the area that would open if No Action CA2 EFH area were eliminated (purple arrow)

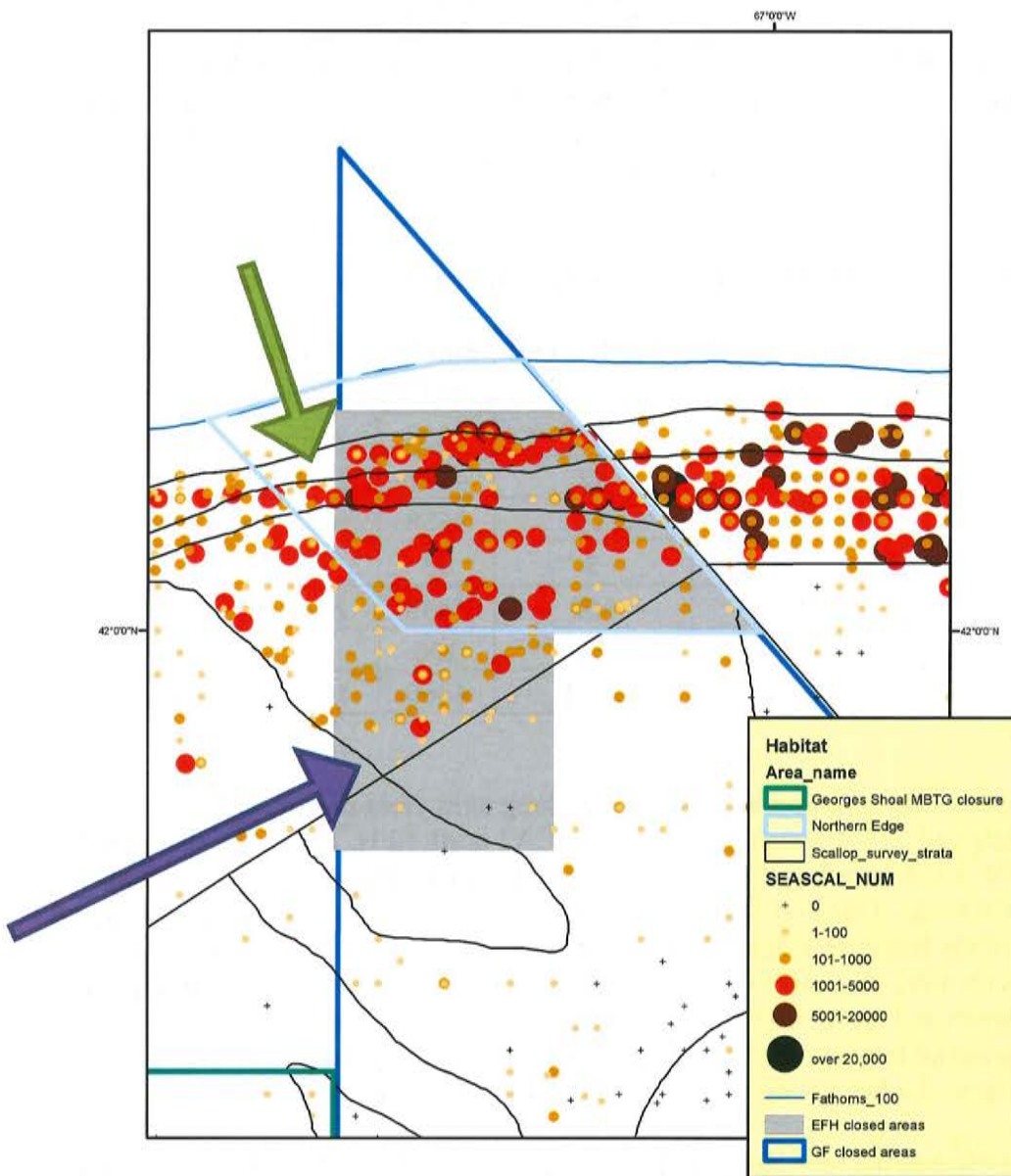
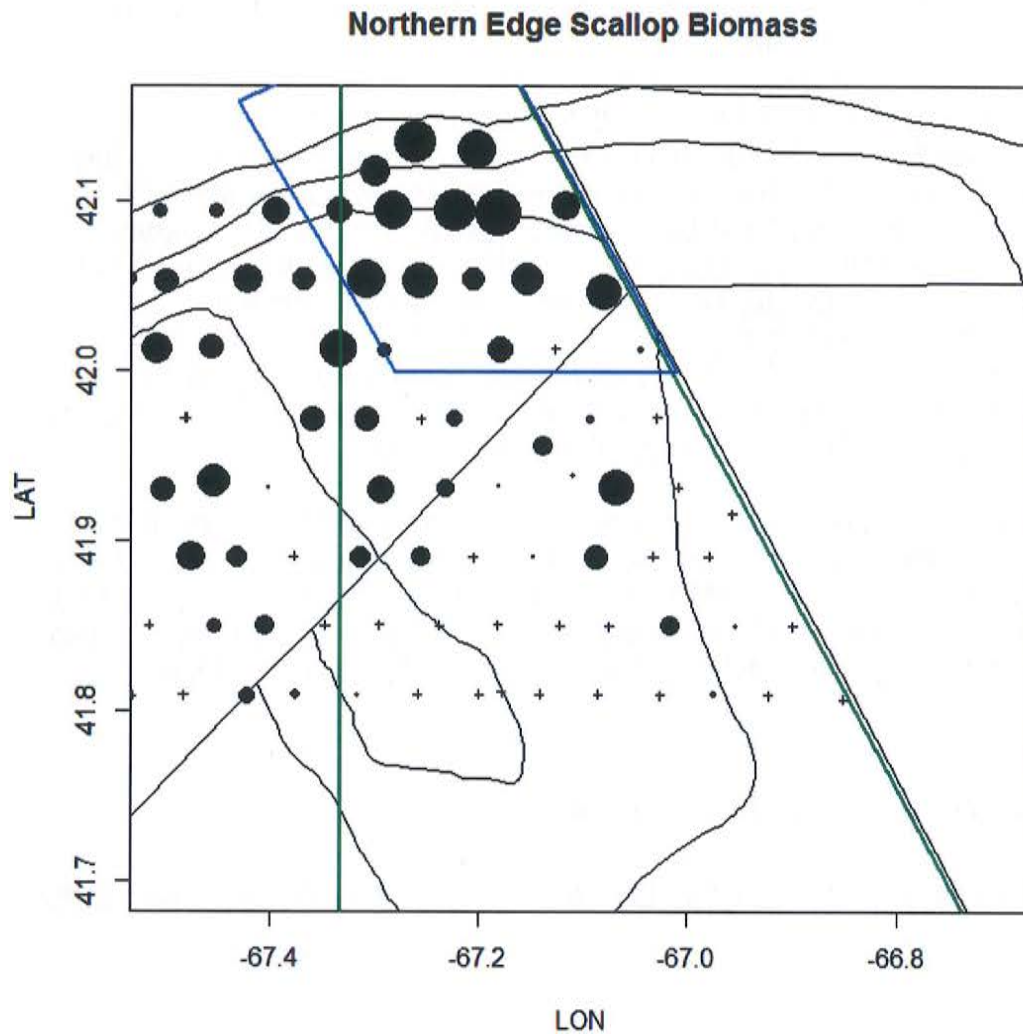


Figure 4 – 2013 biomass and Northern edge alternative



The two areas evaluated by the Scallop PDT so far in the Channel have very different results in terms of LT and ST yield potential. The No Action NL EFH area has relatively low LT yield potential (552 mt based on the mean and 3 mt based on the median estimate) (Table 1). This large difference suggests that the yield potential from this area is dominated by a few years with high levels of observed recruitment, and most years with relatively low levels of recruitment. The GSC alternative has even less LT potential, 313 mt based on the mean and 64 based on the median.

However, “GSC East” HMA is a very productive scallop yield area. The LT and ST yield potential from this area is very high. Even though the boundary only extends slightly farther east than the GSC area, it includes scallop survey stratum 50 which is very productive. The estimated potential yield from this area is over 4,000 mt based on the mean. That is 16% of the total potential yield for the entire scallop fishery from all areas (total of 25,000 mt for all areas both open and closed on GB and MA). The percentage of total yield is lower, under 5%, using the median LT yield estimate (1,101 mt) instead of the mean, but both estimates are substantial considering the relatively small size of the area.

Furthermore, this area is roughly 2- 3+ times as productive as the Northern Edge HMA, depending on whether the LT median or LT mean is compared. The other Channel areas (Nantucket Shoals and Nantucket Shoals east) have not been evaluated for LT and ST impacts the same way. However, since they are shallower than the GSC alternative, the impacts on the scallop resource and fishery are expected to be lower than the GSC HMA alternative.

In summary, about 10% of the total LT yield for the scallop fishery is estimated to be within the No Action EFH closed areas, (2,400 mt/25,000 mt). If all No Action EFH areas are eliminated in this action the overall yield available to the scallop fishery could increase by about that amount long-term. If the No Action CA2 EFH area is replaced with the Northern Edge HMA in this action, similar impacts overall would be expected since the estimates of LT yield for the areas are very similar (1217 mt for No Action and 1214 for Northern Edge HMA). About 5% of the total estimated LT yield for the entire scallop resource is within both areas (About 1,200 mt / 25,000 mt), based on median estimates of LT yield. Therefore, roughly 5% of the total LT yield is estimated in the other EFH closures (CA1N, CA1S, and NL EFH areas). If these are opened under this action, about 5% more of total LT yield would be available to the fishery compared to current levels.

All of the HMAs under consideration in the GSC are currently open to the scallop fishery. If the "GSC HMA" is closed, about 1% of the total LT yield would no longer be available to the fishery (313 mt / 25,000 mt). On the other extreme, GSC East HMA contains about 16% of the total LY yield for the fishery. Therefore, if this action closes that Channel HMA, more LT yield would be closed compared to all existing No Action EFH areas which include about 10% (CA2 EFH, CA1N, CA1S, and NL).

1.2.2 Projected impacts on scallop biomass and catch

The second part of these analyses, SAMS runs, will be provided in a separate document for the Council meeting.

2.0 POTENTIAL IMPACTS OF ALTERNATIVES TO IMPROVE GROUND FISH SPAWNING PROTECTION

2.1 METHODS

The primary source of information used to assess the potential impacts of a seasonal closure to improve groundfish (GF) spawning protection is seasonal changes in scallop meat weights. Over the course of a year the scallop meat weights increase and decrease based on spawning and other factors. If a seasonal closure is during a time of year when meat weights are higher there could be negative impacts on the resource and fishery, but if the seasonal closure is when meat weights are lower there could be positive impacts.

Two sources of information were used to assess these potential impacts. First, shell height/meat weight data from observed trips were summarized for GB and the MA by month. Based on these data a model generated a predicted meat weight by month and region. Those estimates were compared to the month with the highest average meat weights on GB, June, to calculate a monthly meat weight anomaly.

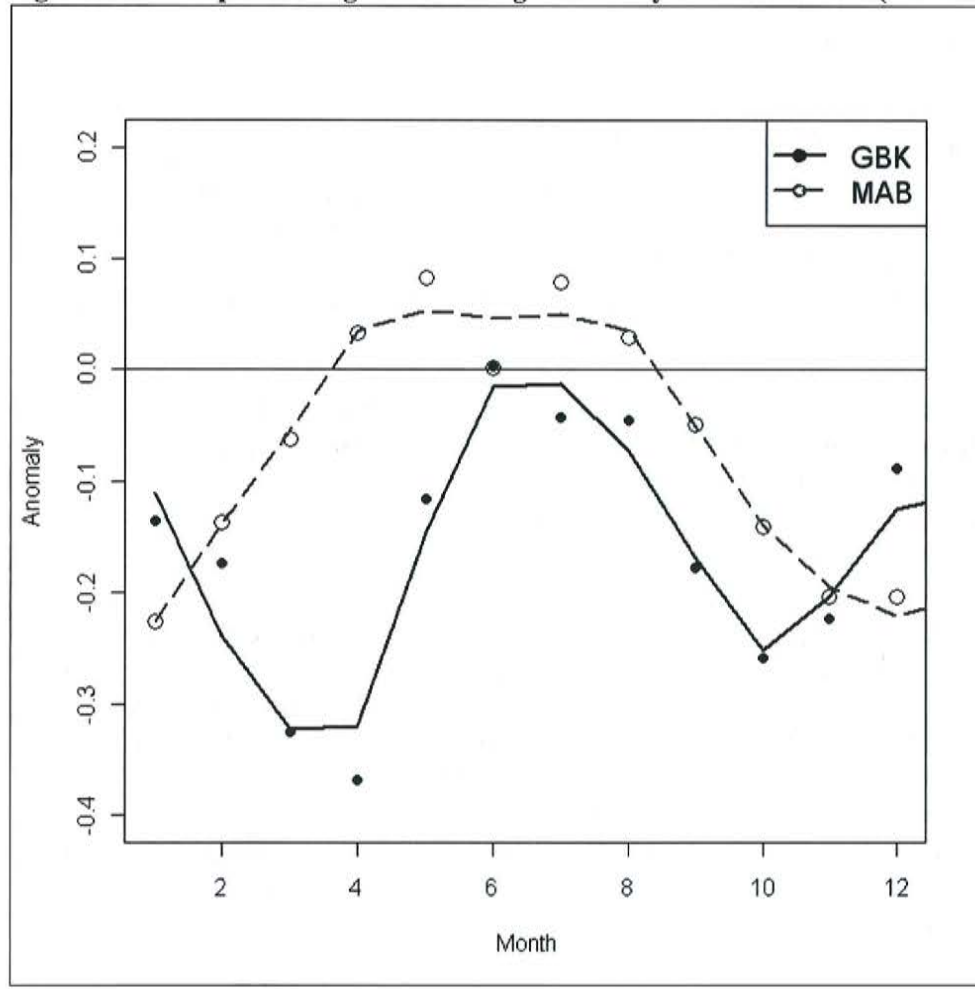
Second, a Research Set-Aside (RSA) project (CFF bycatch survey) has been evaluating the seasonal changes in bycatch rates in the scallop fishery in both Closed Area I and II for over two years. Shell Height:Meat Weight samples were collected during the monthly cruises. Data have been collected during most months since March 2012. In the first year of this study (2011) about 3,000 scallops were measured, and when all available data are combined for March 2011 through September 2013 almost 9,000 scallops have been measured to date. The meat weight model includes the following fixed effects: shell height, area (Eastern GB, Western GB), month and an interaction between month and area. Non-parametric smoothers were used to display annual and inter-annual trends in the relationship for the two areas analyzed and interpolate across any missing months.

2.2 RESULTS AND FINDINGS

2.2.1 Meat weight anomaly on observed trips

Based on the meat weight anomaly figure, the month with the highest meat weights on GB is typically June, and the lowest is October (Figure 5). The average meat weights are about 20% greater in June than in October. There seems to be a bimodal pattern on GB for meat weights, with peaks in December and June, and lower meat weights in April and October (Hennen and Hart, 2012). One source of uncertainty with these data is that the number of observed trips is very low on GB for the months under consideration for the spawning closure (Feb-April). Most fishing activity on GB during those months is in the Channel, not CA1 and CA2. The access areas on GB were closed from Feb1-June14 for most of the years in this data set. Therefore, there are fewer data for these months as compared to the months with higher fishing levels and when CA1 and CA2 were open (June15-Jan31).

Figure 5 – Scallop shell height: meat weight anomaly for GB and MA (Hennen and Hart, 2012)



2.2.2 Spatial and Temporal trends in SH:MW relationship on Georges Bank based on samples collected during the CFF Bycatch survey 2011-2013.

The graphs display trends for the two areas together as well as each area separately with the proposed temporal closures specific to each resource area. Results graphically depict the relative position of temporal closures with respect to observed patterns in meat weight maxima and minima.

Overall, it seems that CA1 has higher meat weights than CA2, at least for the first year of the study. This could be related to depth differences between the stations since scallops have different growth rates at different depths. But for these analyses depth was not considered separately. In general, the spawning season seems to overlap when scallops on GB are ascending to their max weight in June/July.

For these data it is important to keep in mind that this data set is only 2.5 years long. The spring cycle of scallop growth does vary from year to year based on a variety of factors, so the monthly meat weight variation may not match up precisely with the observer data analyses presented above, which is from a larger area (all of GB) and longer time series.

Figure 6 – Model generated estimate of meat weights for scallops larger than 125mm for Eastern and Western GB (based on scallops measured in CFF bycatch survey)

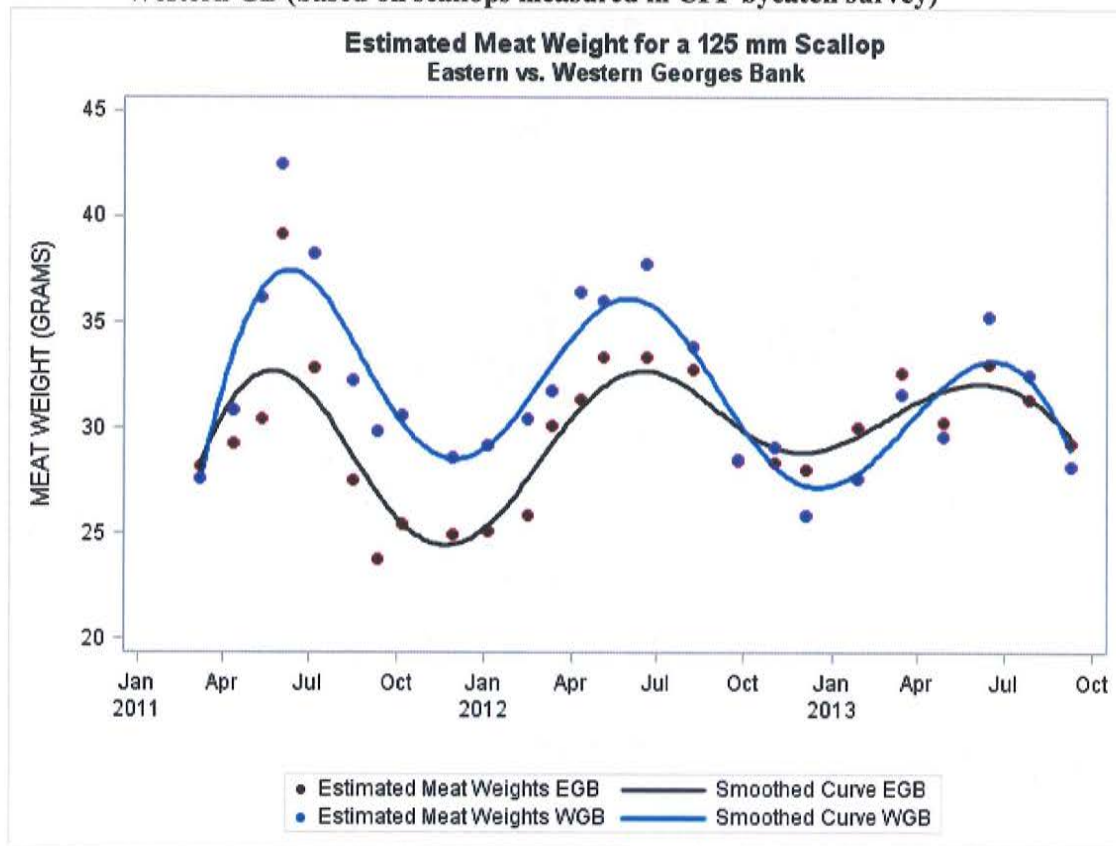
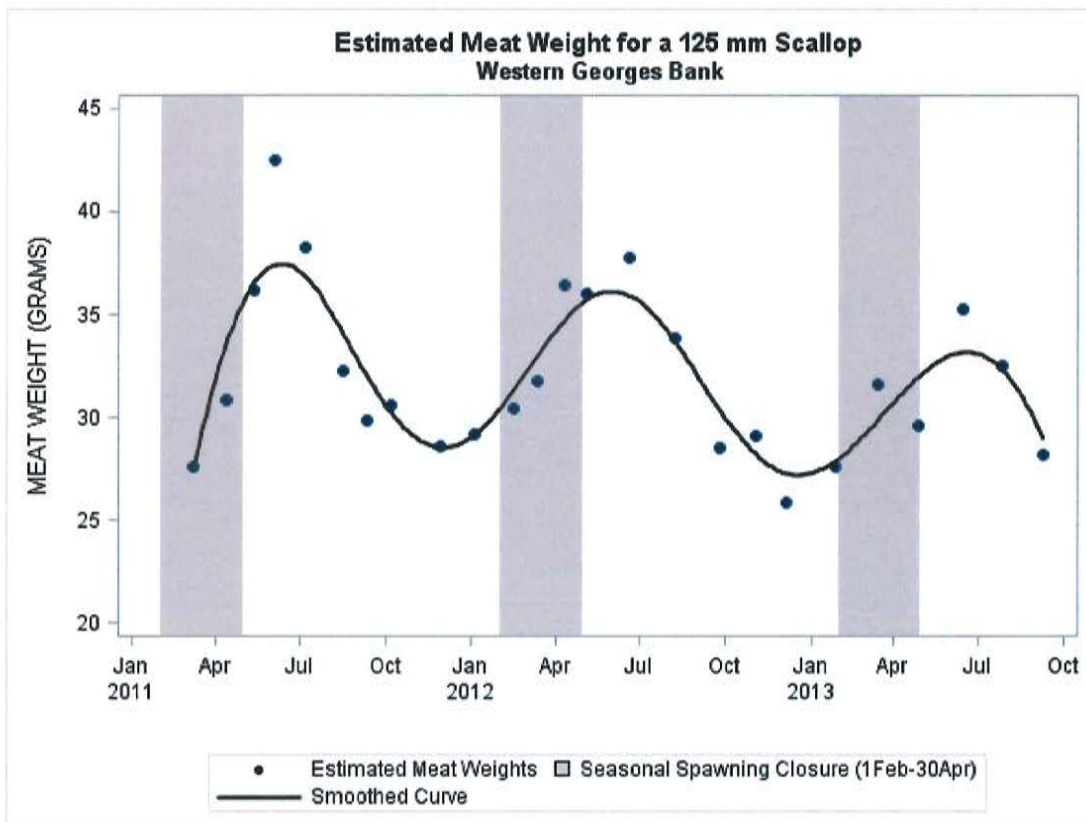
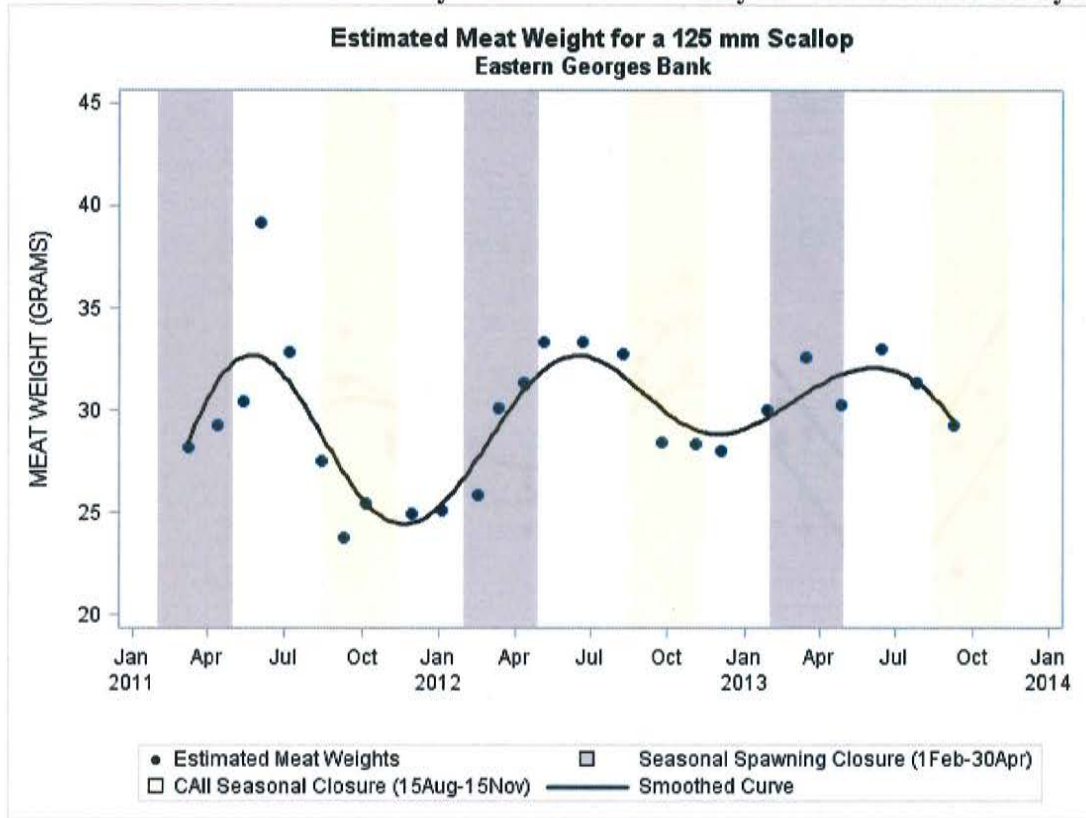


Figure 7 – Model generated estimates of meat weights for scallops larger than 125mm for Eastern (top) and Western GB (bottom) with potential seasonal closures included. Grey is spawning closure under consideration and yellow is in effect already for CA2 to reduce YT bycatch



2.2.3 PDT Finding

In general, the overall impacts of seasonal closures are difficult to assess because vessels shift effort differently as a result of a seasonal closure. The closed season will dictate when fishing will not occur in that area, but it could impact fishing patterns in other areas, i.e. open area fishing. Therefore, while a seasonal closure could benefit the scallop resource in that particular area, it could cause effort patterns in other areas to change by season, impacting overall scallop mortality.

Since there is a possession limit (number of pounds per trip) for access area trips, the greater the meat weight per animal the fewer scallops will be harvested. This reduces fishing time compared to fishing when scallop meat weights are less. This translates into less potential bycatch and lower scallop fishing mortality compared to months with lower scallop meat weights in the fall and winter. Because the season under consideration, Feb-April, which includes several months with lower scallop meat weights, there may be beneficial impacts on the scallop resource and fishery in those areas. In particular, the months of February and March are lower meat weight months, so preventing scallop effort in access areas during these months would potentially shift effort to months with higher meat weights. April is not as clear, meat weights are approaching higher levels in April based on the RSA monthly bycatch data.

It is important to consider this seasonal restriction in combination with one that is already in place for Closed Area II. Since FW24, CA2 south is closed to the scallop fishery from Aug15 - Nov15 to reduce YT bycatch. If the two seasonal restrictions are implemented, the area would only be open to the scallop fishery for 6 months of the year, May 1 – Aug 14 and again from Nov 15 - Jan31. Having both seasonal restrictions could shift more effort into the winter when scallop meat weights are lower, having negative impacts on the resource and fishery. However, seasonal closures tend to shift effort right before or after a closure, so if effort is mostly concentrated in May, impacts on the resource could be positive. Finally, six months is generally enough time for a vessel to make a trip or two in CA2 if allocated access, but it does reduce flexibility for the fishery, which can have potentially negative impacts.

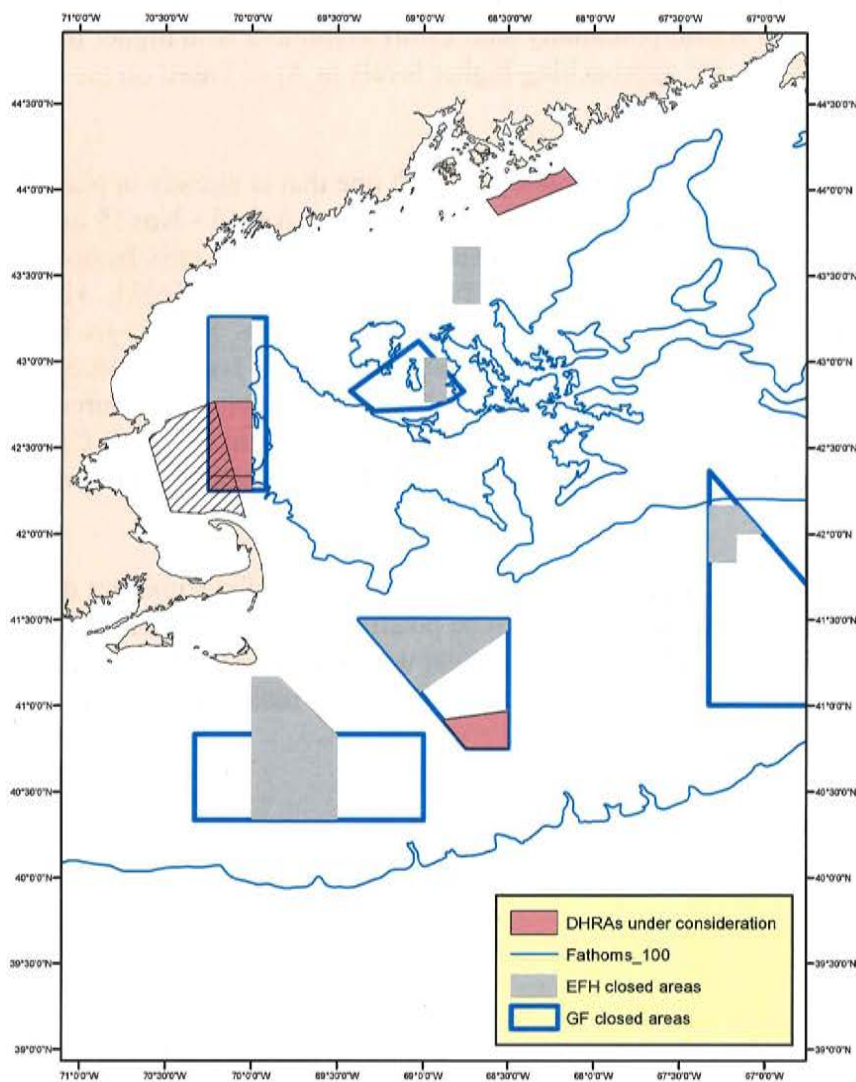
Overall, seasonal closures have tradeoffs: limiting flexibility for the fishery, but if closures are during periods of time when scallop meat weights are lower, there can be positive impacts on the resource by maximizing yield. Since this closure season is primarily when meat weights are lower, the overall impacts are expected to be positive on the resource and fishery by potentially maximizing yield.

3.0 POTENTIAL IMPACTS OF ALTERNATIVES TO DESIGNATE DEDICATED HABITAT RESEARCH AREAS

3.1 METHODS

These analyses are primarily qualitative. The PDT considered the scallop resource and level of fishing activity in each dedicated habitat research area alternative. For the area in Closed Area I the NEFSC dredge survey was used to get a sense of the scallop biomass within that alternative. For the areas in the GOM, results from a 2012 RSA project were used. Sampling was not very dense in this survey. In addition, VTR data for the scallop fishery were plotted to get a sense of the level of LA and LAGC fishing activity inside these areas.

Figure 8 – Dedicated Habitat Research Areas under consideration



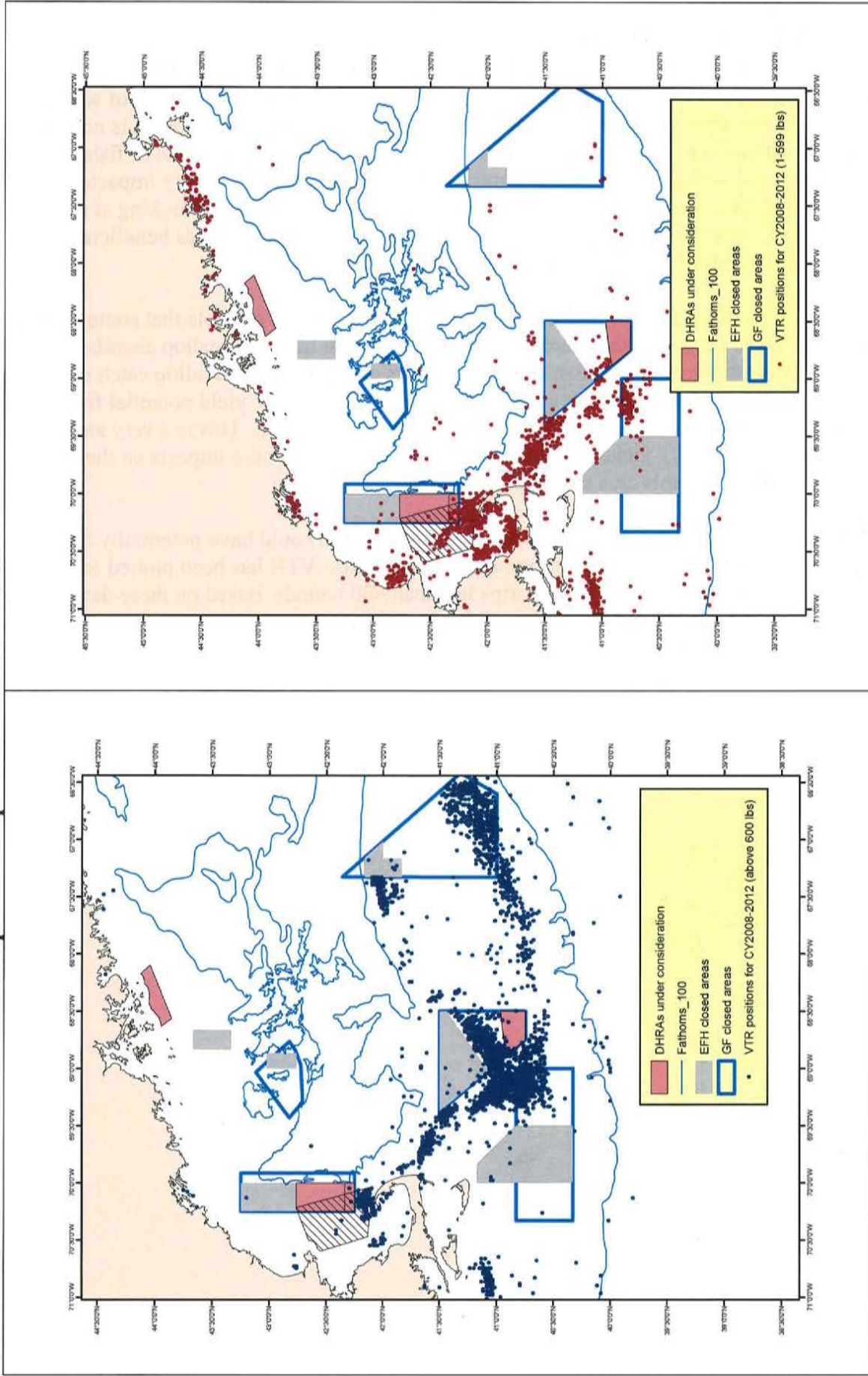
3.2 RESULTS AND FINDINGS

In general, the dedicated habitat research areas are not expected to have major impacts on the scallop resource or fishery because none of the proposed areas overlap major concentrations of scallop biomass. Two of the areas are within current EFH closed areas and the one in GOM is not a major area for scallop abundance. There may be indirect benefits to the scallop resource or fishery if research is conducted in these areas, which improves the understanding of fishery impacts on EFH etc. There is one study already proposed for the area in Closed Area I south that is looking at scallop recruitment. To the extent this designation would help support research that has beneficial impacts on the scallop resource or fishery, these areas could be beneficial.

If the EFH action modifies EFH closed areas in CA1 and WGOM it is possible that some scallop vessels would want to prosecute those areas. Again, they are not in major scallop abundance areas, but closing the areas for research could have negative impacts on the fishery if scallop catch rates are higher in those areas compared to other areas. Table 1 estimated the LT yield potential from CA1 South to be 29 mt using the mean, and 11 mt using the median estimate. This is a very small proportion of total scallop LT yield (about 0.1%). Therefore, the potential impacts on the scallop fishery for a designation in this area are minimal overall.

The Stellwagen and Eastern Maine DHRAs are closer to shore so could have potentially higher impacts on smaller vessels that are homeported near these areas. VTR has been plotted for trips over 600 pounds to represent LA trips as well as trips less than 600 pounds. Based on these data there has been very little scallop fishing activity in any of the three DHRAs; however, two of the three areas have been closed to scallop vessels during this time period. Any activity in WGOM or CA1 south are likely misreported fishing areas.

Figure 9 – VTR effort for LA scallop fishery (blue on left) and LAGC scallop fishery (red on right). VTR catch 600 pounds and less considered LAGC effort and trips above 600 pounds considered LA effort



4.0 POTENTIAL APPROACH TO ADJUSTING SCALLOP FMP BASED ON MEASURES IMPLEMENTED UNDER OA2

4.1 BACKGROUND ABOUT ISSUE

OA2 is currently expected to be implemented in February 2015 if the public hearings, final Council decision, submission, and NMFS review stay on track. That is the last month of the 2014 scallop fishing year. Therefore, it is not practical that areas would be open to the scallop fishery in FY2014, especially if any newly opened areas would be managed as scallop access areas.

The Executive Committee and Scallop Committee are recommending to the Council that within FW26, the scallop specification package for FY2015, specific measures be included that would address scallop area management changes based on the potential modifications in OA2. Specifically, if areas that are currently closed to the scallop fishery as EFH closures are eliminated, those areas could revert to open areas, or be managed under area rotation as an access area. Similarly, OA2 is also considering changes/removals of GF mortality closed areas. It is possible that the GF mortality closed areas (CA1, CA2, NL, WGOM, and Cashes Ledge) would be removed or modified. A subset of these areas might remain as habitat management areas (WGOM, Cashes, and CA2), or portions of the areas could remain as seasonal closures to protect groundfish spawning (WGOM, CA1 CA2). The various habitat management and groundfish spawning management action alternatives contemplate removal of the NL groundfish closure.

With so many boundary changes being proposed at once, scallop area rotation on GB for FY2015 could look very different. Because implementation timing is uncertain, and new or modified scallop access areas may need to be considered in FW26, it may be appropriate to delay scallop fishing in any EFH areas that are potentially reopened until FW26 is implemented.

Table 2 is a summary of the current timelines for both OA2 and Scallop FW26. Due primarily to the federal shutdown in October and other reasons, final Council action for OA2 is now June 2014 and implementation in February 2015. The Executive Committee and Scallop Committee recommend that the Council include measures in FW26 to adjust the area rotation program as appropriate based on final Council action on OA2 in June. Final action for FW26 would be in November 2014, and recommendations would be contingent on approval of OA2. Thus FW26 may need to be more complex than usual in order to consider and approve scallop allocation measures as if OA2 is approved, and as if it is not. The Scallop PDT could start working on these analyses after the final action meeting on OA2, scheduled for June 2014.

Although FW26 may be the most appropriate vehicle to consider possible changes to area rotation, there will likely be a 2-3 month lag in implementation given the typical schedule for scallop frameworks (Feb 2015 for OA2 and May 2015 for FW26). Should new measures to minimize impacts on EFH and GF in OA2 be effective right away? Or should implementation be delayed until a subsequent scallop action is in place?

Table 2 – Updated timelines for OA2 and Scallop FMP

	Scallop FMP (Required)	EFH Omnibus	Other Scallop Related Work	Notes
Nov-13	Final action on FW25 ↓ (Federal shutdown)	Council approves DEIS ↓	Scallop PDT assist with GF FW51 and EFH OA2 analyses	Decision for 2014 Priorities - 1) initiate new action to provide new access/catch for end of FY2014; OR 2) wait to include new access until FY2015 in specs for FY2015 and FY2016 (default); OR 3) wait for 2016 specs action
Dec-13	Final action on FW25 ↓ (Dec to Jan (New FW25 alts added))	Council approves DEIS	Review of 2014 RSA proposals	
Jan-14				Executive Cmte and Scallop Cmte Recommend #2
Feb-14			On or about Jan 15, the 2013 YT catch projection will occur	
Mar-14	FY2014 begins (default FW24)			The 2015 specs package could include access into EFH areas - work on that could begin after June Council meeting
Apr-14	Council initiate action for specs FW26 (FY2015-2016)	Council Final Action ↓ (Federal shutdown)		
May-14	FW25 implemented ↓ (New FW25 alts added)	Council Final Action	NEFSC - Sea Scallop Benchmark Assessment	Scallop action will be more complicated than usual because document will have to consider access to existing EFH areas, and no access
Jun-14	FW25 implemented	Council Final Action		
Jul-14				
Aug-14				
Sep-14				
Oct-14				
Nov-14	Final Action Specs FW26 (2015-2016)			
Dec-14		Target Implementation ↓ (Federal shutdown)		
Jan-15		Implementation	On or about Jan 15, the 2013 YT catch projection will occur	
Feb-15				
Mar-15	FY2015 begins (default FW25)			
Apr-15				
May-15	2015 specs implemented (FW26)			

4.2 PDT RECOMMENDATION

The PDT has discussed the issue of timing and synchronization of EFH and scallop management several times over the last few years. The PDT recommends that all No Action EFH closed areas, and any areas within GF mortality closed areas that are not scallop access areas, should remain closed to the scallop fishery until a subsequent framework under the Scallop FMP could be developed that would adjust relevant boundaries and allocations (i.e. FW26). The PDT believes this would be the most rational way to transition any new areas that may open for scallop fishing as a result of OA2. Long term scallop yield in newly opened areas could be maximized if managed under area rotation, compared to reverting to an open area. There are other issues such as bycatch and gear conflicts that need to be considered, and those potential impacts may be better address under area rotation, compared to open area fishing. Furthermore, it may be more effective in terms of maximizing scallop yield overall to modify current scallop access area boundaries if existing EFH and GF closures change.

Overall, if more areas open on GB that have been closed as GF and EFH closed areas, the entire area rotation system on GB may be modified to better maximize overall yield from the area. To date, scallop area rotation on GB has been limited by closures for other purposes. If those closures are removed/modified it may be more beneficial to adjust the scallop access area boundaries to maximize scallop yield overall. In addition, there have also been more recent discussions about using area rotation to better stabilize catches from year to year. If that becomes a larger component of the area rotation strategy, boundaries and principles may be adjusted after OA2 regardless of what areas are modified.

Each area has a unique situation, and it will take time to consider and assess all the potential impacts of changes to area management related to each area.

- Nantucket Lightship

Except for No Action, OA2 does not have any closure alternatives within the NL groundfish closure. Proposed HMAs overlap slightly with the northern part of the existing NL EFH closure. In 2013 very small scallops were observed in the southern part of the existing NL EFH area, as well as the southern half of the existing scallop access area in NL, and the open area just to the west of the NL closed area. Therefore, it may be advantageous to create a new NL access area boundary that spans all three of these areas (NL EFH, NL access, and open area west of NL). FW26 could consider a modification of the NL access area, or a new separate access area distinct from the original NL access area in the northeast corner of the NL GF closed area.

- Closed Area 1

A Dedicated Habitat Research Area is being considered for the southern part of CA1 in OA2. If selected it is unlikely that the scallop fishery would access that part of the closed area in the near future. But this is not a typically productive area for scallops. OA2 is also considering a seasonal spawning closure from Feb-April for the entire CA1 GF closed area. If selected the GF mortality closed area boundaries would remain in place, and be closed to all bottom mobile tending gear for those three months, but the area would be akin to an open area for the rest of the year.

However, the central portion of CA1 would still remain a scallop access area; therefore, would remain closed to the scallop fishery except under access area fishing provisions. If the northern part of CA1, currently an EFH closed area, opens as a results of OA2, it may be advantageous to expand the CA1 scallop access area farther north to maximize scallop yield from that area as well. There is a strip of

rather productive scallop grounds just north of the current access area that could be further maximized if fished under area rotation, compared to open area management (Figure 1).

- Closed Area 2

OA2 is considering a handful of new EFH closed areas within and around CA2. If the existing EFH closed area is removed, it would be advantageous to consider a new scallop access area in and around the current EFH closed area (same boundaries as the cod HAPC). If this area is reopened the analyses suggest a large short-term gain in scallop yield, over 2,200 mt the first year. Area rotation would help maximize the long-term yield from that area, and balance potential impacts on bycatch and gear conflicts, compared to more uncertain levels of effort under DAS. The boundaries of a possible new scallop access area on the Northern Edge would depend on any new HMAs proposed.

OA2 is also considering a seasonal spawning closure from Feb-April for the entire CA2 GF closed area. If selected the GF mortality closed area boundaries would remain in place, and be closed to all bottom mobile tending gear for those three months, but the area would be akin to an open area for the rest of the year. However, the southern portion of CA2 would still remain a scallop access area; therefore, would remain closed to the scallop fishery except under access area fishing provisions. A set of smaller scallops were observed in the southwest corner of CA2 south; therefore FW26 may consider an alternative boundary for access within CA2.

- Great South Channel, Cox Ledge, GOM

OA2 is considering several new EFH closed areas that are currently managed as “open areas” in the Scallop FMP (Great South Channel, Cox Ledge, and various areas within the GOM). Scallop biomass is relatively low in the GOM and Cox Ledge. Therefore, closing these areas after DAS have been allocated for the fishing year should not have substantial impacts on the scallop resource in other areas, due to effort shifts. There is a relatively small amount of general category effort in Cox Ledge and some of the areas under consideration in the GOM. These potential impacts will be further evaluated in the DEIS.

However, OA2 is considering a handful of new EFH closed areas in the Great South Channel, and depending on the alternative, the impacts and potential effort shifts that could occur are more substantial for some of the options under consideration. If an area closes under OA2 to all mobile bottom tending gear, scallop fishing would be prohibited when the action is implemented, current target of February 2015. While a new closure in the Channel could cause effort shifts when OA2 is implemented, the target effective date is at the very end of a scallop fishing year. Therefore, most DAS will likely be fished by that time. Thus, allocating DAS in FY2014 based on the assumption that the GSC is open should not be a major issue. Most effort would likely have taken place by February, and if not, vessels could still use DAS in other areas, or carry up to 10 DAS into the next fishing year.

The Scallop PDT has developed several options in the past for a scallop access area within the Channel. Those alternatives have not been given serious consideration by the industry or Council in the past, primarily because several other areas with high concentrations of scallop biomass were closed on GB already. If OA2 changes closures substantially on GB it is possible that a scallop access area in the Channel would be reconsidered more seriously.