

**ISSUE**

Biomass in Delmarva is lower than originally estimated based on results from three different 2011 resource surveys in that area. There are concerns about the 2012 allocations for that area.

**COMMITTEE REQUEST**

- **Motion 5: Dempsey/Ramsden**

Committee recommends that the Council request that NMFS implement an emergency action for FY2012 to convert Delmarva access area trips into either open area DAS to be used in FY2012 or into Hudson Canyon access area trips in FY2012.

Vote: 7:0:2, carries

- **Rationale**

The Committee received correspondence from the Fisheries Survival Fund prior to their January 19, 2012 Committee meeting requesting that the Committee consider an action to address this issue in 2012, or in 2013 in Framework 24. The Committee discussed that delaying this issue could have overall impacts on allocations for FW24 and complications related to annual ACL accounting, so preferred the issue be addressed in 2012. In addition, the Committee expressed that this does warrant an Emergency Action because it was unforeseen and will potentially have unintended consequences. Biomass in an access area is expected to reduce over time due to fishing effort and natural mortality, but the biomass in Delmarva has reduced much faster than expected. Due to new information from three 2011 surveys in the area the Committee argues that trips allocated to half the fleet in 2012 should either be directed to another access area that can withstand more effort, or to open areas.

Committee members explained that an Emergency Action is justified primarily because: 1) 2012 effort in that area would have unforeseen harm to the resource in Delmarva, particularly the new recruitment that was observed in all three 2011 surveys; 2) there are potentially uneven economic hardships on vessels since only half of the fleet will be allocated a trip in this area; and 3) since catch rates are expected to be lower with increased area swept compared to typical access area trips, there is potential for increased impacts on the ecosystem, most notably sea turtles which are known to overlap the scallop fishery in that area.

When split trips were implemented the intent was to provide as much access to the resource to optimize yield without over or under allocating trips under the traditional system of full trip allocations. While there are variations in catch rates per area and season, the anticipated

difference between a HC and a Delmarva trip for example was not anticipated when FW22 implemented split trip allocations. The intent of area rotation is that all allocated trips can be harvested, and there is uncertainty that all 2012 Delmarva trips will be used without unacceptable increases in area swept and distributional economic impacts.

- **Specific PDT request**

Consider the suggestions made by the Committee related to how 2012 Delmarva trips could be converted and provide input on which strategy would have the least impact on the resource and ecosystem. Brainstorm other ideas if a different measure would be more feasible.

## **BACKGROUND**

The Scallop PDT met on January 5, 2011 and reviewed survey information for all scallop resource surveys conducted in 2011. The Delmarva access area was surveyed by the SMAST video survey in May, the federal dredge survey in June, and the VIMS dredge survey in October, which is a paired tow survey that uses both a survey dredge and a commercial turtle deflector dredge. All three surveys saw a clear decline in biomass compared to 2010 surveys. THE SMAST survey reported total biomass in that area to be 5,939 mt or about 13 million pounds, of which 10 million pounds were exploitable size. This survey was conducted in May when some 2012 fishing had already occurred, but more expected during the remainder of the year. In June, the federal dredge surveyed the area with a total biomass estimate of 7.2 million pounds. Finally, the VIMS dredge surveyed the area in October, after the vast majority of 2011 trips were taken and their estimate is 3.7 to 4.2 million pounds of exploitable biomass, depending on which survey dredge and SH:MW conversion is used.

In 2010 the PDT reviewed the 2010 survey info at a meeting in August in Mansfield, MA. The biomass estimate of the resource in Delmarva from the federal dredge survey was 8,687 mt (about 19 million pounds) and 13,920 mt from the SMAST survey (about 30.7 million pounds, 20 million pounds exploitable biomass). The combined estimate from these surveys was 10,873 mt, or about 24 million pounds. VIMS did not survey Delmarva in 2010. The PDT discussed at that time for FW22 (specs for 2011 and 2012) that one full trip could be allocated to Delmarva in each year based on those biomass estimates, but there were concerns doing that because experience has shown that biomass in the Mid-Atlantic is not always in subsequent years as expected.

The concern about lower biomass in Mid-Atlantic access areas in the second year of a specification package is the primary reason why the PDT explored “split trips”, only allocating half the fleet an access area trip in one area, and the other half a trip in an alternative area.

That way less effort would be allocated into Delmarva in the second year of the action in the event that biomass was lower than expected. The PDT did not discuss setting up an automatic measure in FW22 that would further reduce or move Delmarva trips in 2012 since the PDT had already recommended reducing effort from 1 full trip to a split trip in the event biomass was not sufficient in 2012.

The PDT expressed concerns at the recent PDT meeting about the recent 2011 Delmarva surveys as well as industry reports of reduced catch levels as the fishery progressed. The tables below show the number of trips, average catch and average LPUE by month for full-time limited access vessels. It is also interesting that most LAGC trips allocated to this area were not used in 2011, potentially indicating that catch rates were not worth making the steam to Delmarva for a 600 pound access area trip. In 2011 LAGC vessels were allocated a total of 593 trips and as of mid-January 2012 only 55 trips, or 9% have been used. Conversely, in 2010 a total of 714 trips were allocated and that area was closed in January 2011 because all trips were expected to be taken (over 600 were taken by August). There may have been other reasons LAGC vessels did not take trips into Delmarva in 2011, but reduced catch rates is a likely reason.

**Table 1. LPUE from FT trips (All trips >1200 lb., includes compensation trips)**

Month	Number of trips	Scallop lb.	Average lb./trip	Average LPUE
3	167	2516653	15070	2028
4	81	1218452	15043	1812
5	53	740866	13979	1714
6	26	288308	11089	1403
7	9	114967	12774	1390
9	8	41475	5184	1082
11	7	108819	15546	1254
12	6	65777	10963	950
<b>Grand Total</b>	<b>361</b>	<b>5130861</b>	<b>14213</b>	<b>1812</b>

**Table 2. LPUE from FT trips by category (All trips >1200 lb., includes compensation trips)**

Category	Month	Number of trips	Scallop lb.	Average lb./trip	Average LPUE
<b>FT DR</b>	3	124	1957478	15786	2112
	4	62	955015	15403	1897
	5	42	616906	14688	1803
	6	21	245106	11672	1530
	7	7	100038	14291	1563
	9	7	39619	5660	1148
	11	7	108819	15546	1254
	12	6	65777	10963	950
<b>FT DR Total</b>		<b>280</b>	<b>4124302</b>	<b>14730</b>	<b>1880</b>
<b>FT SMD</b>	3	32	418557	13080	1617
	4	17	243339	14314	1517

	5	10	111035	11104	1295
<b>FT SMD Total</b>		<b>66</b>	<b>814940</b>	<b>12348</b>	<b>1452</b>
<b>FT TRW</b>	3	11	140618	12783	2276
<b>FT TRW Total</b>		<b>15</b>	<b>191619</b>	<b>12775</b>	<b>2117</b>

Table 3. LPUE from FT trips by category (All trips >1200 lb., excludes compensation trips)

Category	Month	Number of trips	Scallop lb.	Average lb./trip	Average LPUE
FT DR	3	108	1798010	16648	2135
	4	50	815796	16316	1920
	5	29	489588	16882	1880
	6	11	176184	16017	1735
	11	6	105106	17518	1339
<b>FT DR Total</b>		<b>214</b>	<b>3526072</b>	<b>16477</b>	<b>1973</b>
FT SMD	3	25	362363	14495	1696
	4	13	219158	16858	1615
<b>FT SMD Total</b>		<b>44</b>	<b>669211</b>	<b>15209</b>	<b>1623</b>
<b>FT TRW</b>	3	9	121539	13504	2274
<b>FT TRW Total</b>		<b>11</b>	<b>152867</b>	<b>13897</b>	<b>2121</b>

Despite lower catch rates in the second half of 2011 the PDT did discuss that it could be possible to get the 3 million pounds allocated from that area, but it would be difficult, and likely take longer than expected and definitely longer than access area trips in other areas.

### PDT ADVICE

The PDT had a conference call on Tuesday, January 24 following the Committee meeting.

The PDT discussed that ideally the split trip in 2012 should not be fished in Delmarva. Biomass is lower than anticipated in that area and there are signs of recruitment. Therefore, reducing effort in that area will help protect recent recruitment which is very important since recruitment levels are very low for the Mid-Atlantic overall. Catch rates are expected to be below average for an access area in 2012; therefore area swept will be greater having increased impacts on the scallop resource and other aspects of the ecosystem. Overall, the greatest long-term benefits for area rotation would likely be to shift 2012 Delmarva effort to a different area or a later time. The difficult issue is where to send that effort and when. The PDT discussed a range of possibilities.

The range of options discussed includes: shifting effort to open area DAS, Hudson Canyon, or delaying access to Delmarva until 2014. A forth option was discussed that would take the 2012 HC trips (1.5 trips overall) and allocate one full 18,000 pound trip to the entire fleet and a

second 9,000 pound trip to the entire fleet, rather than half the fleet getting a second 18,000 pound trip in HC and the other half getting an 18,000 pound trip in a different area. This fourth option would allocate less catch overall, about 2.8 million pounds less (156 full-time vessels\*18,000 pounds).

It was discussed that shifting the effort to another area but in 2012 would be preferred. But an Emergency Action is the only vehicle to do that and it would not be implemented by March 1 which causes issues. It is important to note that if an Emergency Action is implemented, it will NOT be in place by March 1. The PDT discussed that some effort in Delmarva in March and April would not be the worst thing since there is some biomass in there and catch rates should be higher. The real concern is increase area swept from trips taken later in the year when meat weights drop off and less biomass is in the area.

It was also discussed that it is possible to implement some of these ideas under Framework 24 for FY2013 instead. This section will briefly describe the pros and cons of each approach in terms of potential impacts and administrative issues if implemented by Emergency Action or Framework 23.

The PDT did not reach consensus on the conference call. **Individual members provided additional input by email and the final recommendation is Option 4.** Option 4 has the highest long-term benefits for the resource and fishery. Option 4 does have lower short term economic benefits, but it is preferable to Option 1 and 2 because of the long-term positive benefits and equitability for the fleet. All the other options have greater distributional impacts and greater impacts in the short-term.

If the Council is opposed to an option with reduced total catch compared to No Action (about 2.8 million pounds) the PDT discussed that effort could go into Hudson Canyon, Closed Area I or open areas. There are tradeoffs with any approach. As mentioned above the PDT is most supportive of not shifting this effort to another area, but if that is what the Council decides most members identified Closed Area I as the option with the fewest negative impacts. However, a minority of members voiced that shifting the effort to Hudson Canyon would enable that biomass to be harvested while it is still there.

- **2012 - Emergency Action (implementation date uncertain – April/May?)**
  1. Close Delmarva and convert 2012 trips to open area (about 5 DAS)
  2. Close Delmarva and convert 2012 trips to Hudson Canyon Access Area
  3. Close Delmarva and give vessels access to Delmarva in 2014
  4. Close Delmarva and redistribute 1.5 HC trips evenly among the fleet (27,000 pounds per vessel)

- **2013 – Framework 24 (projected implementation in May 2013)**
  5. Vessels can fish 2012 Delmarva trip or that trip would be converted to additional open area DAS in FY2013 (about 5 DAS)
  6. Vessels can fish 2012 Delmarva trip or that trip would be converted to an additional 2013 access area trip in Hudson Canyon
  7. Vessels can fish 2012 Delmarva trip or that trip would be converted to an additional trip in Delmarva in 2014
  8. Vessels can fish 2012 Delmarva trip or receive a 9,000 pound trip allocation in HC for 2013. The second original 2012 HC trip (0.5) would be redistributed so that every full-time vessel receives 27,000 pounds from the area compared to some getting 36,000 and others 18,000. FW24 will clarify that if a vessel fished more than 9,000 pounds in Delmarva or HC (on their second Mid-Atlantic access area trip), that amount would be deducted from their allocation in 2014 somehow.

**1. Close Delmarva and convert 2012 trips to open area DAS (about 5 DAS)**

Pros: LPUE has been increasing in Mid-Atlantic open areas for several years and biomass is currently relatively high. However, that is because there has been above average recruitment in the Mid-Atlantic, particularly the 2006 year class which recruited into the fishery in 2011. FW22 projected that LPUE would be 2,460 pounds per day in open areas (GB and MA combined) and a more recent estimate is 3,100. This is likely due to the very strong year 2006 year class that has recruited into the fishery and increased efficiencies. FW22 projected that catch rates would be higher in 2012 compared to 2011, so it is possible that actual open area catch rates in 2012 could be even higher than the updated estimate of 3,100 pounds for 2011. If catch rates are 3,100 to 3,500 pounds a day, an allocation of 5 DAS would be conservative and likely keep total catch under 18,000 pounds for 5 DAS.

Open area effort would likely go to the Channel and areas in the Mid-Atlantic with higher biomass (see Figure 1). One issue to keep in mind is that fishing effort was high in waters east of Long Island in 2011 and that is an area that vessels would likely fish in 2012 as well based on 2011 surveys (VIMS and SMAST both surveyed areas outside of the federal survey strata farther east of LI and high levels of biomass found in that area). However, statistical areas 613, 537 and 539 are expected to close in March 2012 because the 2011 sub-ACL for YT is projected to be exceeded (Figure 2). Therefore, limited access effort will not be permitted to fish in that area until FW47 is implemented (projected to be in May 2012), since that action proposes to only trigger YT AMs for the scallop fishery if the total YT ACL is projected to be exceeded, or the scallop fishery exceeds their sub-ACL by 50% or more. May is the best case scenario and it

could be later since final 2011 data for the GF fishery may not be available by May to determine whether the total ACL could be exceeded in 2011.

Shifting Delmarva effort to open areas would at least potentially spread out the effort; hopefully having more distributed impacts. Shifting Delmarva trips expected to have increased area swept to another area with higher biomass (lower area swept) could have beneficial impacts on turtles.

Cons: If effort moves to waters east of LI there could be increased impacts on SNE/MA YT compared to Delmarva effort. If effort moves to the Channel there could be more impacts on CC YT compared to No Action. The PDT is concerned that biomass is going to fall in the Mid-Atlantic in the future because there has not been strong recruitment since 2006. In 2007, 2008 and 2009 there has been below average recruitment in the Mid-Atlantic, so limiting effort in open areas will help protect the biomass that is there. Shifting an access area trip with a set poundage (18,000) to open area DAS does have potentially more risk in terms of exceeding the overall ACL. However, if the DAS allocation is conservative that risk can be minimized. If catch rates are 3,500 pounds per day that is still less than 18,000 pounds (17,500).

Administrative issues: Emergency action will not be in place by March 1, 2012 so vessels will get FW22 allocations and could take trips in Delmarva before EA is effective. Could delay FW24 if substantial PDT resources spent on Emergency Action.

Figure 1 – 2011 Scallop biomass (NEFSC Dredge survey)

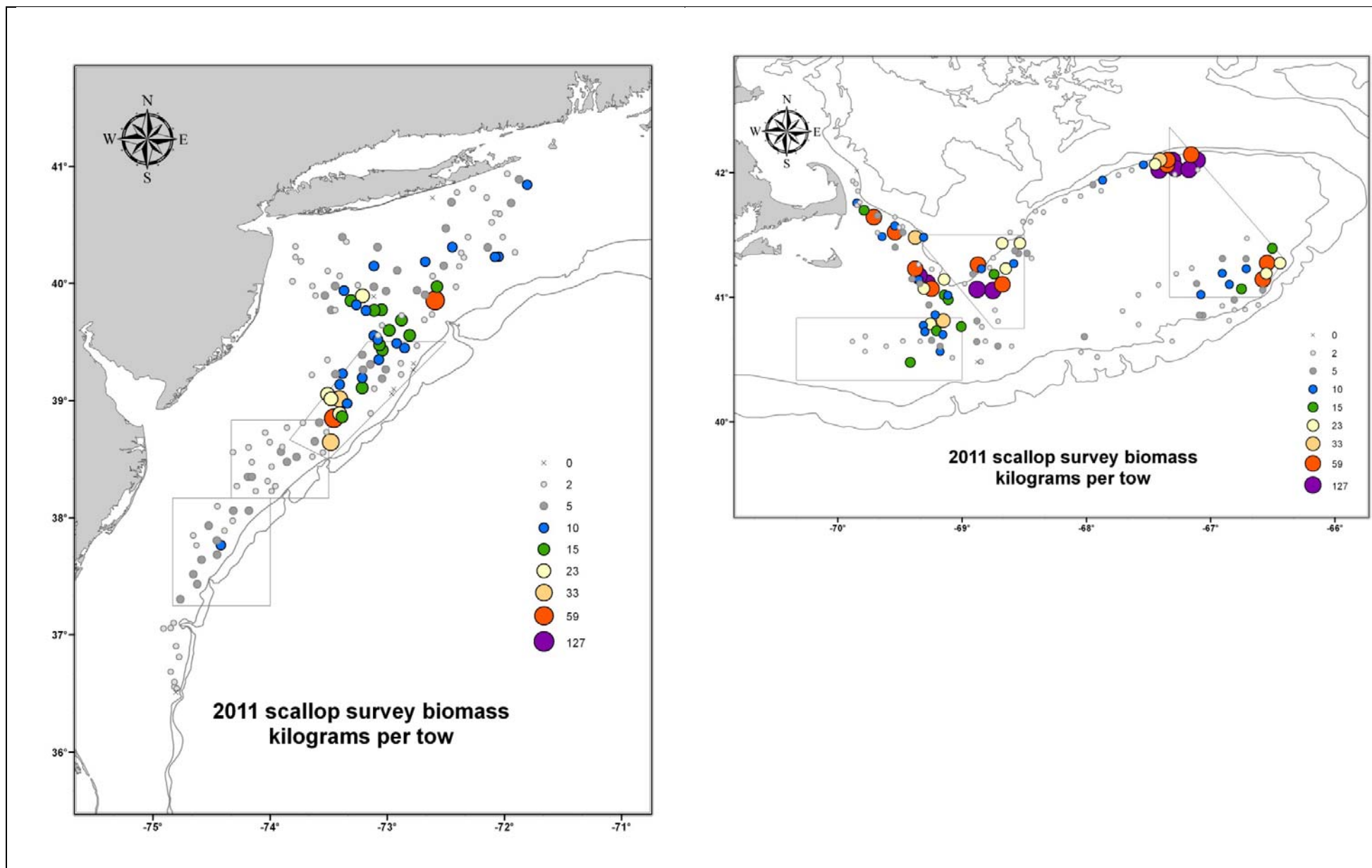
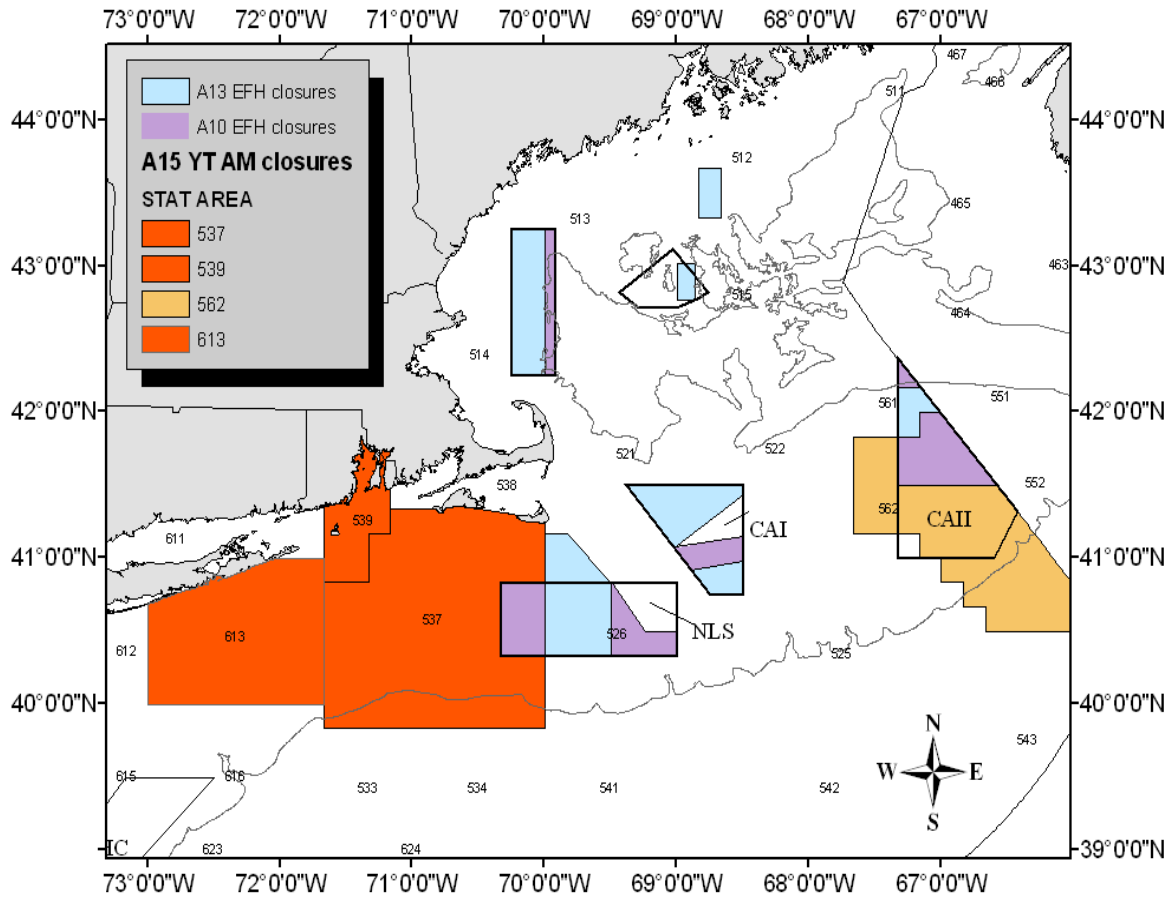




Figure 2 – YT AM area implemented by Scallop Amendment 15 – closure for LA scallop vessels only



## **2. Close Delmarva and convert 2012 trips to Hudson Canyon Access Area**

Pros: Allocating the Delmarva trips into Hudson Canyon would make all allocations even for the fleet minimizing potential distributional economic impacts. There may be potentially beneficial impacts on turtles since the trips in HC will likely be fished faster (lower area swept) than the Delmarva trips. Both areas have similar turtle distribution and EFH, but the trips in HC will likely be fished with lower area swept.

Cons: The PDT is concerned about shifting additional effort to HC. That is the only access area in the Mid-Atlantic with decent biomass and additional effort could compromise the long-term effectiveness of the area rotation program. The PDT discussed that biomass in Mid-Atlantic access areas deplete faster than expected, particularly in terminal years of an area opening; therefore, in order to potentially get more yield effort levels should be lower to protect the biomass in the access area. It was pointed out however that if biomass depletes faster than expected an alternative approach could be to harvest the yield before it is gone.

Each vessel was allocated one full trip in HC in 2011 (about 6 million pounds). As of January 18, 2012 315 trips were taken in HC (not including compensation trips). Assuming 18,000 pounds were landed on each trip total catch would be 5.7 million pounds, or 96%. Before FW22 was in place the PDT reviewed the biomass estimates for HC. Three surveys were conducted in that area in 2010: the federal survey (19,031 mt), SMAST video survey (16,858 mt), and VIMS dredge survey (18,679 mt). The overall combined estimate was 18,005 mt. or 39.7 million pounds. The PDT recently reviewed 2011 survey information and the estimate of biomass for HC is now 36.2 million pounds from the NEFSC dredge survey and 42.6 million pounds from the SMAST survey, VIMS did not survey that area in 2011. It is important to note that some 2011 fishing effort occurred before the 2011 surveys and some after. But overall biomass is still very strong in that area.

Administrative issues: Emergency action will not be in place by March 1, 2012 so vessels will get FW22 allocations and could take trips in Delmarva before EA is effective. Could delay FW24 if substantial PDT resources spent on Emergency Action.

### **3. Close Delmarva and give vessels access to Delmarva in 2014**

Pros: Protects the biomass and recruitment that is in Delmarva until a later date when recruitment has time to grow. The PDT is not in favor of delaying access in Delmarva until 2013 because that will have negative impacts on the recruitment in that area. By 2014 the recruitment that is in that area will be of exploitable size and catch rates should be higher than in 2012 or 2013. This alternative does not shift Delmarva effort into another area that could have different impacts on bycatch.

Cons: The primary concern raised by the PDT is the potentially high economic cost of delaying an access area trip two years. Each access area trip is 18,000 pounds and at \$10 a pound that is \$180,000 dollars. That is a large amount of income for the year and many vessels will not be willing to delay that income to 2014. In general, delaying current income to the future would make sense if the rate of return exceeds the inflation rate and the rate of return on alternative investments, such as in bonds and stocks. There is no guarantee; however, even for a positive return from postponing income (approximately \$180,000 assuming the prices will stay at \$10 in 2012). Although potential increase in catch per day in 2014 would reduce DAS that it would take to land 18,000 lb., a decline in the price of scallops or an increase in gas prices in 2014 could easily wipe out any savings in costs due to potentially higher LPUEs in 2014.

It was discussed that vessels could trade this trip and some may be willing to wait until 2014, but pushing revenue off for that long may not be attractive to most vessels. Therefore, more vessels would tend to fish in 2012 having more impacts on the resource and environment.

Administrative issues: Emergency action will not be in place by March 1, 2012 so vessels will get FW22 allocations and could take trips in Delmarva before EA is effective. Could delay FW24 if substantial PDT resources spent on Emergency Action.

### **4. Close Delmarva and redistribute 1.5 HC trips evenly among the fleet (27,000 pounds per vessel)**

Delmarva would close and each vessel would have 2 trips into HC. The Council should identify if each vessel should be allocated one 18,000 pound trip and one 9,000 pound trip; or two 13,500 pound trips. The intent of this option is to take the original allocation for HC and distribute it evenly among the fleet. The projected catch for Delmarva in 2012 is not there and should not be shifted to another area.

Pros: Protects the biomass and recruitment in Delmarva. Gives all vessels the same allocation; therefore, no distributional economic impacts. Reduced risk of exceeding ACLs in 2012.

Cons: Less total yield and associated economic benefits. The revenue loss in the short-term would be about \$30 million and revenues net of trip costs would decline by about \$25 million. However, the long-term gains from closing Delmarva could exceed this short-term decline in net benefits.

Administrative issues: Emergency action will not be in place by March 1, 2012 so vessels will get FW22 allocations and could take trips in Delmarva before EA is effective. Some vessels will also get 2 full 18,000 pound trips under FW22 and could fish that before the Emergency Action takes place that would convert the second 18,000 pound trip to 9,000 pounds. If vessels harvest the additional 9,000 pounds subsequent action (FW24) will need to address that potential overage adding complexity to the action. Could delay FW24 if substantial PDT resources spent on Emergency Action.

**5. Vessels can fish 2012 Delmarva trip or that trip would be converted to additional open area DAS in FY2013 (about 5 DAS)**

Pros: Same pros as Option #1 above.

Cons: Same cons as Option #1 above. An additional con is that this effort could either impact allocations for 2013 or increase the risk that the 2013 ACL is exceeded if allocations are not reduced to account for this effort. In addition, some vessels would get to harvest catch in 2012 and others would need to wait until 2013, having potentially distributional economic impacts.

Administrative issues: Compared to Option #1 this approach is arguably preferred because it would not require an Emergency Action. Resources on the PDT would not have to be spent working on an Emergency Action.

**6. Vessels can fish 2012 Delmarva trip or that trip would be converted to an additional 2013 access area trip in Hudson Canyon**

Pros: Same pros as Option #2 above.

Cons: Same cons as Option #2 above. An additional con is that this effort could either impact allocations for 2013 or increase the risk that the 2013 ACL is exceeded if allocations are not reduced to account for this effort. In addition, some vessels would get to harvest catch in 2012 and others would need to wait until 2013, having potentially distributional economic impacts.

Administrative issues: Compared to Option #2 this approach is arguably preferred because it would not require an Emergency Action. Resources on the PDT would not have to be spent working on an Emergency Action.

**7. Vessels can fish 2012 Delmarva trip or that trip would be converted to an additional trip in Delmarva in 2014**

Pros: Same pros as Option #3 above.

Cons: Same cons as Option #3 above. An additional con is that this effort could either impact allocations for 2014 or increase the risk that the 2014 ACL is exceeded if allocations are not reduced to account for this effort. In addition, some vessels would get to harvest catch in 2012 and others would need to wait until 2014, having potentially distributional economic impacts.

Administrative issues: Compared to Option #3 this approach is arguably preferred because it would not require an Emergency Action. Resources on the PDT would not have to be spent working on an Emergency Action.

**8. Vessels can fish 2012 Delmarva trip or receive a 9,000 pound trip allocation in HC for 2013. The second original 2012 HC trip (0.5) would be redistributed so that every full-time vessel receives 27,000 pounds from the area compared to some getting 36,000 and others 18,000 pounds. FW24 will clarify that if a vessel fished more than 9,000 pounds in Delmarva or HC (on their second Mid-Atlantic access area trip), that amount would be deducted from their allocation in 2014 somehow.**

Pros: Same pros as Option #2 above.

Cons: Same cons as Option #2 above. An additional con is that this effort could either impact allocations for 2013 or increase the risk that the 2013 ACL is exceeded if allocations are not reduced to account for this effort. In addition, some vessels would get to harvest catch in 2012 and others would need to wait until 2013, having potentially distributional economic impacts.

Administrative issues: Compared to Option #2 this approach is arguably preferred because it would not require an Emergency Action. Resources on the PDT would not have to be spent working on an Emergency Action.

Other ideas [none of these discussed in detail with the PDT]

- a. Close Delmarva and take the 2012 split trip allocation away in HC to keep allocations even (EA) *[reduce total catch by 6 million pounds compared to No Action]*
- b. Close Delmarva and allocate trips into Closed Area 1 in 2012 (EA) or 2013 (FW24) *[same projected catch as No Action – effort shifted to Closed Area 1]*
- c. Close Delmarva and give vessels as many options as possible for that trip to spread effort out (open area DAS, HC, or CA1) *[same projected catch – more uncertainty in terms of where catch comes from but could help distribute potential impacts]*

General Category Considerations

The Committee did not discuss the potential impacts on the general category allocations. The Council may or may not want to address the LAGC IFQ fleetwide 2012 Delmarva trips. Under No Action the General category fleet will be allocated 296 trips in Delmarva. These are not an individual allocation so vessels can either take a 600 pound trip in an access area or decide to fish in open areas, both go against their IFQ. If Delmarva closes by Emergency Action it should be clarified if that includes a closure for general category vessels. And if Delmarva trips are converted to open area DAS it is probably not necessary to address general category measures. But if those trips are moved to Hudson Canyon the Council could decide to allocate additional general category trips into HC as well to keep total access equal to 5% for the area. Similarly if access is delayed until 2014 it should be clarified if that includes general category allocations as well. The PDT did not reach a consensus on this issue; it is primarily a policy decision since this is a relative small amount of effort. The PDT only raises the issue so that it is clarified in the final Council recommendation.

**COUNCIL ACTION**

- Does the Council agree with the Committee that NMFS should implement emergency action?
- If yes, identifying one preferred strategy would simplify the analyses for NMFS.
- Keep in mind that if the Agency agrees to pursue Emergency Action it is not bound to the measures recommended by the Council.