

Framework 22

Sea Scallop Fishery Specifications for 2011 and 2012

*New England Fishery Management
Council Meeting*

November 17, 2010

Brewster, MA



Introduction: where are we?

- SAW 50 in June 2010 assessed scallop resource
- 2009 results:

Region	Full F	Abundance	Biomass (millions mt meats)
Georges Bank	0.18	3453	62,470
Mid-Atlantic	0.60	3993	67,233
Combined	0.38	7446	129,703

Overfished (biomass) status determination:

Estimated biomass in 2009 from CASA:	129,703 mt (July 1)
Estimated BMSY :	125,358 mt
Biomass (overfished) threshold:	1/2 BMSY= 62,679 mt

NOT OVERFISHED

Fishing mortality (overfishing) status determination:

Estimated fishing mortality in 2009 from CASA:	0.38 (0.378)
Estimated FMSY (threshold):	0.38

OVERFISHING NOT OCCURRING (but close)

Introduction cont'd

- Framework 21 was implemented in June 2010 with specifications for 2010

	CL1	CL2	NLS	ET	DMV	HC	Open Area DAS
2010	Closed	Closed	1 trip	2 trips	1 trip	Closed	38

- Target F set at **0.24**, projected landings of 47 mil lbs
- Landings through September equal 48.5 mil lbs, with an additional 6 mil expected in 4th quarter (total projected at ~55 mil lbs, +8 mil expected)
- Implies F around **0.35**, and LPUE of around 2200 lbs/day, 500 lbs more than projected

Introduction cont'd

- If 2010 was under ACL management, it would look like this:

	2010 projected	2010 actual	2010 ABC – set-asides	LA sub-ACL (94.5%)	LAGC sub- ACL (5.5%)
ABC	57,800,000	57,800,000	56,372,923	53,272,412	3,100,511
Incidental	50,000	50,000			
RSA	918,051	918,051	LA sub-ACT	LAGC sub-ACT	3,100,511
Observer	459,026	459,026			
LAGC	2,300,000	2,300,000	43,300,000	(2,532,000)*	(568,511 less)
LA with LAGC	232,000	232,000			
LA	43,300,000	51,040,923*	ACL – ACT	ACL - ACT	
			9,972,412	0	
total	47,259,077	55,000,000			

***(7,740,923 over target)**

Introduction cont'd

- Revised LPUE model was used in development of FW22 specs
- It predicts LPUE of 2200 lbs/day in 2010, and 2400 lbs/day in 2011
- Less open area DAS required to harvest a given catch, so DAS allocations in all alternatives are smaller than recent years
- Adjustment made to the fleet dynamics model – predicts where effort is going to go. In past, effort proportional to exp. biomass – now areas of highest LPUE and biomass different.

FW22 Timeline

- Initiation in June 2010
- Development has coincided with completion of Amendment 15
- Amendment 15 final action was in September; final submission and NMFS approval still pending which creates tricky No Action alternative for FW22
- AP and Committee met Nov 3-4 to discuss preferred alternatives, which are noted in this presentation
- Implementation likely in June 2011 (after A15)

Framework 22 Document

- Section 1.2 Purpose and Need
 - The purpose is to prevent overfishing and improve yield-per-recruit from the fishery.
 - The primary need is to set specifications to adjust the 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.
- Sections 2.1 through 2.14 typical/required alternatives considered
- Section 3.0 contains considered but rejected alternatives
- Analysis of alternatives in Docs #4, #4B and #4C

Section 2.0 - Management Alternatives

2.2 No Action – in general 2010 measures roll over, but complicated by various actions in development (A15 and EFH action) and ET problem.

2.3 ABC – PDT presented the same control rule used for FW21 with updated survey data from 2010; SSC approved

- 25% chance of exceeding OFL is the control rule and risk is evaluated in terms the probability of overfishing compared to the fraction loss of yield

	Landings	Discards	Catch (ABC)	Exploitable Biomass
2011	60,117,237	8,838,241	68,957,683	161,982,985
2012	63,847,421	9,420,256	73,267,676	184,291,332

2.4 Fishery Specifications

- Amendment 15 (if approved) will make specifications three years instead of two, with the **third year (default)** to be superseded by the next framework (acts as a 'buffer' for delayed implementation), so this is included in this FW
- **4 AA trips** expected each year
- DAS allocations set at **$F = 0.38$** in open areas (highest possible based on new hybrid overfishing definition selected in A15)
- Possibility of 'split trips' allocated to half the fleet in one access area and the other half in another to optimize yield
 - Trip trading permitted within permit category and fishing year; trips likely allocated by lottery

2.4 Fishery Specifications cont'd

- ***Alternative 1***

- Developed to allocate as much AA effort as possible
- Uses 'split trips'
- Could be more beneficial in terms of bycatch – less effort in CA2
- PDT, AP and Committee *Preferred* (See motions 1 and 2 from AP and Motion 1a from Committee, and next slide)

	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
2011	1.5	0.5	-	1	1	-	4	open	32
2012	0.5	1	0.5	1.5	0.5	-	4	open	34

2.4 Fishery Specifications cont'd

- **Alternative 1 – Committee motion**
- **Motion 1a.** Under Section 2.4 of the Framework 22 document, the Committee endorses as preferred Motion 1 and Motion 2 from the Advisory Panel, with clarification to include 2013 default allocations shown below. This was amended to specify that the DAS for 2013 be 75% of what is projected (75% of 35 DAS = 26 DAS).
 - *AP Motion 1. The AP adopt **Option 1** as the preferred alternative.*
 - *AP Motion 2. Hughes/Welch; “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.*

	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
2011	1.5	0.5	-	1	1	-	4	open	32
2012	0.5	1	0.5	1.5	0.5	-	4	open	34
2013	-	1	1	1.5	0.5	-	4	Open	<u>26</u>

Expected Lottery Mechanism

- The PDT has discussed the way the lottery would work for splitting trips across the fleet
- 2011 very straight forward – FT permits will be randomized and half the fleet get CA1 other half will get CA2.
- 2012 is more complicated because split trips from 4 different areas
- All FT permits are randomly assigned either 1 trip or zero trips for each area.
- This is repeated several times until each FT vessel gets 2 trips (from 4 possible areas).
- The process is currently set up so that one vessel cannot get more than 1 trip per area.

2.4 Fishery Specifications cont'd

- ***Alternative 2***

- Effort allocation slightly less ideal – integer trips
 - Full trip in DMV in 2012 may mean one won't be available in 2013
 - Full trip in NL is higher F than Alt 1
- Strong back-up option if allocating 'split trips' is not possible
 - (NMFS has said it is possible, to be discussed at end of presentation)

	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
2011	2	-	-	1	1	-	4	open	32
2012	-	1	1	1	1	-	4	open	34

2.4 Fishery Specifications cont'd

- **Alternative 3 (“Schcl”)**
 - Includes ONE YEAR closure of Great South Channel area
 - Closed in 2011 and re-opened in 2012 (2.5 trips)
 - Growth rates up to 46% in recent survey (30% is in A10 guidelines)
 - Yield in area could be substantially increased
 - Worries about access to area before closure hurting yield potential
 - Industry continues to be unsupportive of closing this area
Results in lower DAS, higher # AA trips

	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
2011	2	1	-	1	1	-	5	closed	23
2012	-	1	0.5	1.5	0.5	-	6	open (2.5)	24

2.4 Fishery Specifications cont'd

- ***Comparison of options*****

	CA1	CA2	NL	HC	DMV	ET	Total	Channel	OA DAS
Alt 1									
2011	1.5	0.5	-	1	1	-	4	open	32
2012	0.5	1	0.5	1.5	0.5	-	4	open	34
Alt 2									
2011	2	-	-	1	1	-	4	open	32
2012	-	1	1	1	1	-	4	open	34
Schl									
2011	2	1	-	1	1	-	5	closed	23
2012	-	1	0.5	1.5	0.5	-	6	open (2.5)	24

**Status quo and No action also developed, see Doc 1

2.4 Fishery Specifications cont'd

- **Example allocation scheme for FY 2011, Option 1 (total projected landings of 52.3 million lbs)**

	2011	
OFL	71,400,000	
ABC (minus discards)	60,100,000	
incidental	50,000	
RSA	1,250,000	← set amount (new under A15)
OBS	601,000	← 1% of ABC=ACL
ACL after set-asides/incidental removed (= $ABC - (\text{incidental} + \text{RSA} + \text{OBS})$)	58,199,000	
LA sub-ACL (94.5% of ACL)	54,998,055	← 94.5% of ACL
IFQ-only (5% of ACL)= sub-ACL = ACT	2,909,950	↔ 5.5% of ACL
IFQ + LA (0.5% of ACL)=sub-ACL=ACT	290,995	
LA sub-ACT (after management buffer applied)	47,198,055	← 86% of LA sub-ACL, reduced 14% for mgmt uncertainty

2.5 Measures for Limited Access Vessels

- Standard access area trip numbers, DAS allocations for FT, PT and occasional permits
- 2.5.1.1 Adjustments when YTF catch reaches 10% TAC
 - Compensation open area DAS awarded if TAC is reached as done in the past

2.6 Measures for General Category Vessels

2.6.1 Total poundage allocated and number of access area trips for LAGC IFQ vessels

2.6.2 NGOM Hard TAC

- Biomass estimate from SAW50 was used to calculate an appropriate TAC for 2011; PDT suggests **31,100** lbs
- AP and Committee motions support status quo of 70,000 lbs (See State of ME correspondence)

2.6.3 Estimate of catch from LA incidental permits

- PDT updated this section based on landings data from incidental catch permits in 2009 and 2010 and reports are below current value of **50,000** lbs
- Some concern about reporting, PDT recommends leaving TAC at 50K lbs

2.7 Research and Observer Set-asides

2.7 Set-asides

- A15 changed RSA from percentage to pounds, set value at 1.25 million lbs
- Both values removed from overall ACL rather than trip and DAS allocations as in the past

2.7.1 Research Priorities for 2011

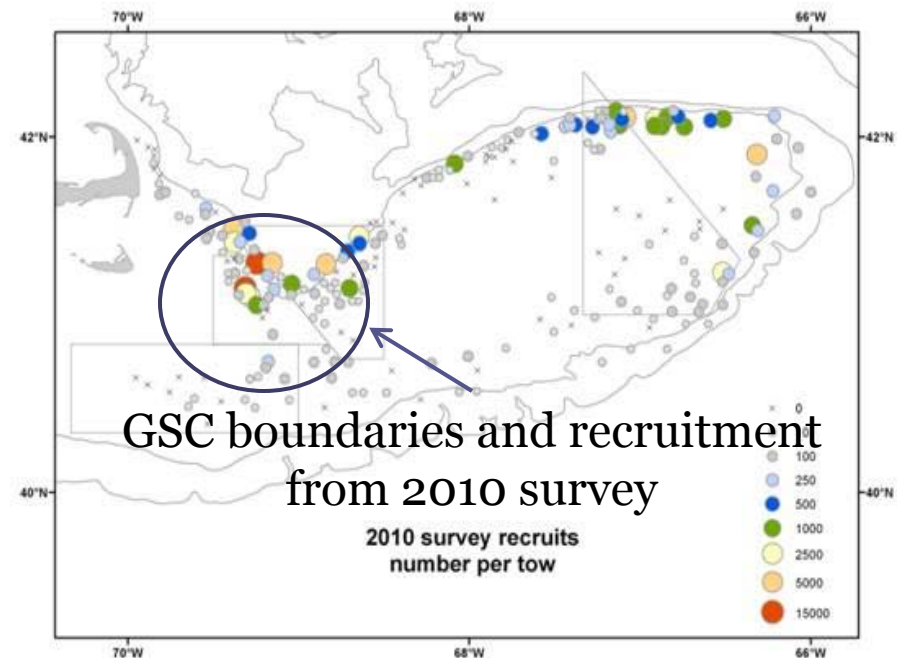
- Identified by Committee in May

2.7.2 Research Priorities for 2012

- PDT discussed priorities in October, made some minor changes highlighted
- AP and Committee endorsed PDT changes and suggested some of their own (Motion 4 from AP and Motions 4 & 5 from Committee)
- See Document #1 pages 38-40

2.8 Consideration of New Rotational Area in GSC

- Updated biomass estimated for that area and growth estimates are about 45%; well above the 30% threshold
- The PDT created Option 3 to explore closing the Channel for one year
- Would re-open in 2012 and allocate 2.5 trips
- Continued lack of support from industry, along with other concerns



2.9 Efforts to Minimize Sea Turtle Takes

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

- Restrict the number of open area DAS a vessel can use between July and September in the Mid-Atlantic
- Restrict the number of access area trips in the MA that can be used between June 15-Oct 31
- Seasonal closure for Delmarva
 - 1. Sept & Oct
 - 2. July through Oct
- Seasonal closure for Hudson Canyon (2012 and 2013 only)
 - 1. Aug & Sept
 - 2. July through Sept

2.9 Efforts to Minimize Sea Turtle Takes

2.9.1.6 Combined measures if stand alone measures do not have more than minor impact

2.9.1.7 Require use of modified turtle excluder dredge in Mid-Atlantic (move to Considered but Rejected)

- the PDT recommended CTE write a letter to NMFS arguing that RPM be modified to be gear-based rather than effort-based, and support including this in FW23

- **AP/CTE Input**

- **Motion 5 AP/8 CTE:** The AP/Committee would support a RPM of one access area trip maximum in the Mid-Atlantic 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 in MA), he would be limited to taking two during the turtle window instead of one.

2.10 Procedures to Reduce F in 2012 if needed

- PDT feels that the only measure necessary is a reduction of trips for the Channel if Option 3 is selected
 - If updated biomass in 2011 lower than projected, number of allocated trips in 2012 will be reduced
 - Table will be developed with biomass thresholds for reduced trips in the Channel if Option 3 is identified as proposed action
- No action from AP or CTE since Option 1 preferred

2.11 Modifications to Vessel Monitoring Systems

- Started off with two specific requests:
 - 2.11.1 Change VMS positioning requirement for IFQ and incidental permits to once per hour (Moved to Considered but Rejected)
 - 2.11.2 Alleviate VMS requirement for inactive vessels
 - PDT and Committee recommend moving this to considered but rejected. By consensus AP supported No Action – leave VMS measures the same

2.12 Revisit provision to allow LAGC IFQ vessels to possess 100 bushels (bu) of in-shell scallops seaward of the VMS Demarcation Line

- Reports that vessels are catching 100 bu of scallops – landing 50 bu and leaving 50 bu seaward of the VMS Demarcation Line, and returning for those scallops to land on the next day – issues for mortality, quality, etc.
- The PDT examined bushel weight data and determined an appropriate amount given average poundage and desired possession limit increase to 600 lbs (A15)
- PDT recommends a value of 100 or slightly higher to account for variance in meat weights
- Unanimous AP and CTE motions to take No Action

2.13 Extension of unused Elephant Trunk access area trips through May 31, 2011

- Catch rates are low in the ETA
- Extension would 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 31 when scallop meat weights are larger
- AP and Cmte voted No Action for ETA extension

2.14 Eliminate schedule of Georges Bank access areas in regulations

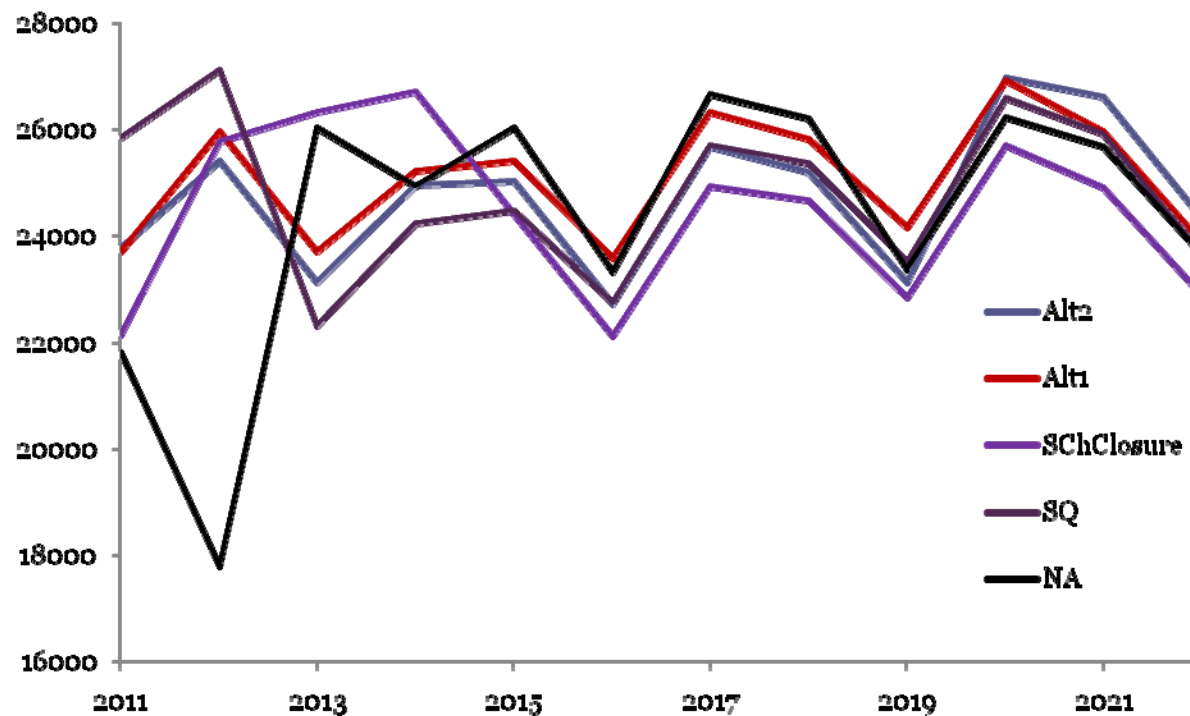
- Default schedule of access areas on GB has created confusion of regulatory inconsistencies
- This alternative would eliminate any reference to the three-year schedule of access areas on GB
- AP and Cmte support eliminating in regulations

3.0 Considered but Rejected Alternatives

- 3.1 Extend exemption in GSC for LAGC IFQ vessels in April – June
- 3.2 Gear modifications to reduce YT bycatch
- 3.3 Revisit non-payment of observer provider issue
- 3.4 Change VMS positioning requirement for LAGC IFQ and incidental permits to once per hour
- 3.5 Delay the opening date of Mid-Atlantic access areas for general category vessels
- 3.6 Split an incidental LAGC permit from other permits

Analyses of Alternatives - Doc. 4, 4B, 4C

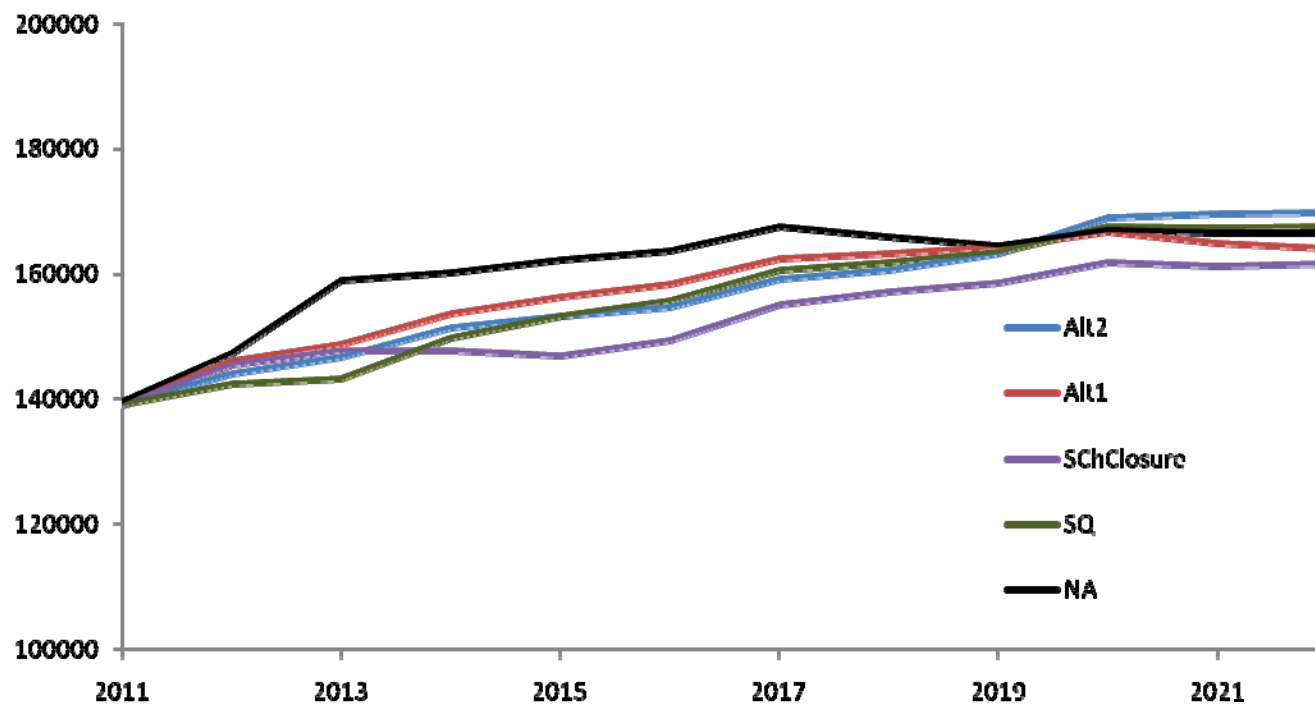
- Landings



- “Status Quo” has highest landings in 2011-2012, but has overall Fs above both open and access area targets.
- Alternative 1 has the highest short and long term landings, is the most stable over time, and closest to 2010 catch levels.

Analyses of Alternatives

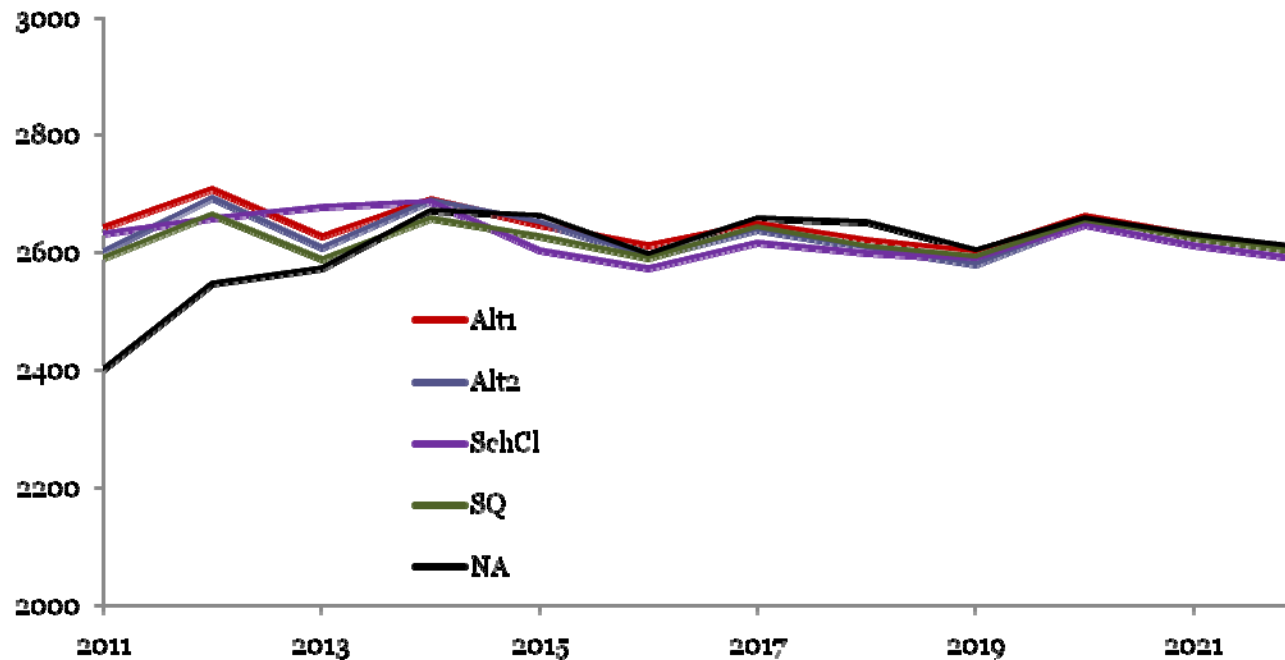
- Biomass



- Biomass is expected to increase modestly over a 10 year period

Analyses of Alternatives

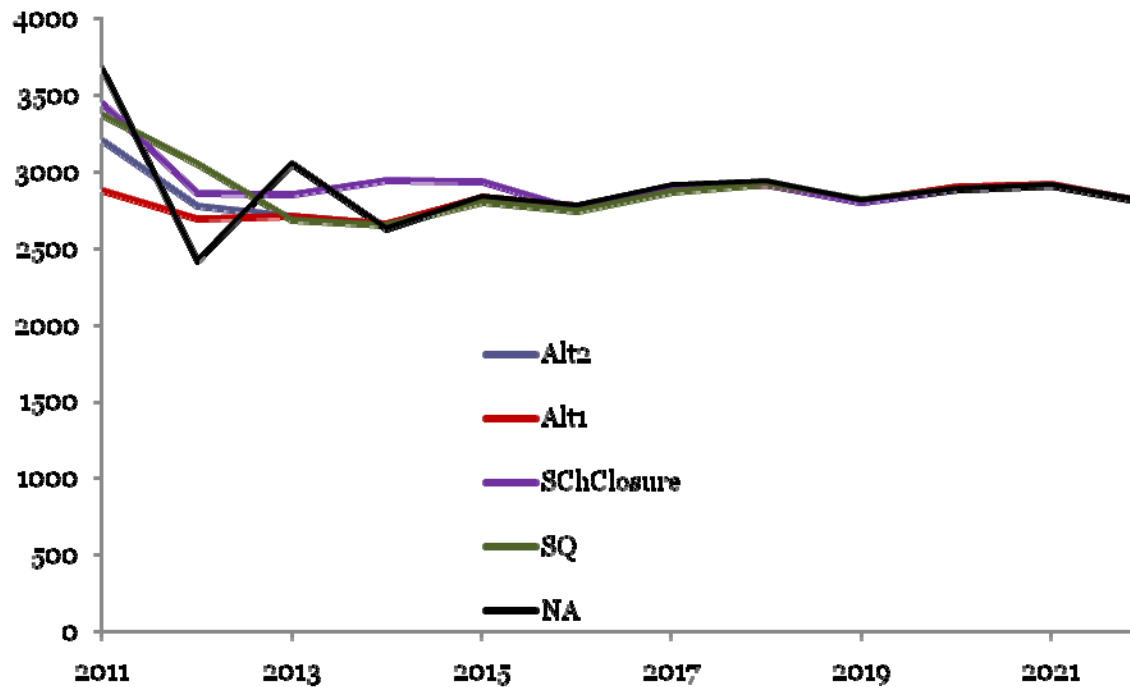
- LPUE



- Open area LPUE is expected to be over 2400 lbs/day in 2011 and 2600 lbs/day in 2012

Analyses of Alternatives

- Bottom area swept



- Any of the proposed actions should decrease bottom area from about 5000 sqnm in 2010 to under 3500 sqnm in 2011 and 2012

Economic Analyses - Landings (in mil lbs)

	No Action	SQ	Option 1	Option 1	Option 3
2011	48.1	57.0	52.3	52.4	48.8
2012	39.2	59.8	57.2	56.0	56.8
2011-2012	87.3	116.8	109.5	108.4	105.7
2013-2022	556.0	539.1	553.5	546.3	541.3
Grand Total	643.3	656.0	663.1	654.7	646.9

Economic Analyses - Revenue (in mil \$)

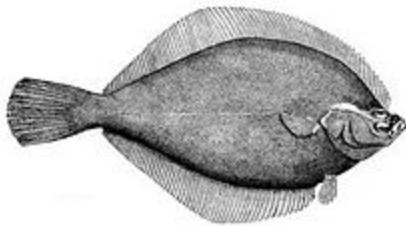
Fishing year	No Action	SQ	Option 1	Option 2	Option 3
2011	364.5	433.4	399.3	402.1	372.5
2012	290.2	446.8	428.4	418.7	420.5
2011-2012	654.6	880.2	827.7	820.8	792.9
2013-2022	4,150.2	4,018.8	4,118.6	4,064.8	4,025.6
Grand Total	4,804.8	4,899.1	4,946.3	4,885.6	4,818.5

- Net benefits (consumer surplus + producer surplus) highest for Alternative 1 (\$53 million higher than Alt.2 over the long term and +\$97 million over Alt.3)

Yellowtail Flounder - Doc.#6

FW22 Final Action, Council Meeting 11/17/2010

	2010	2011	2012
GB	146	201	307
SNEMA	135	82	127

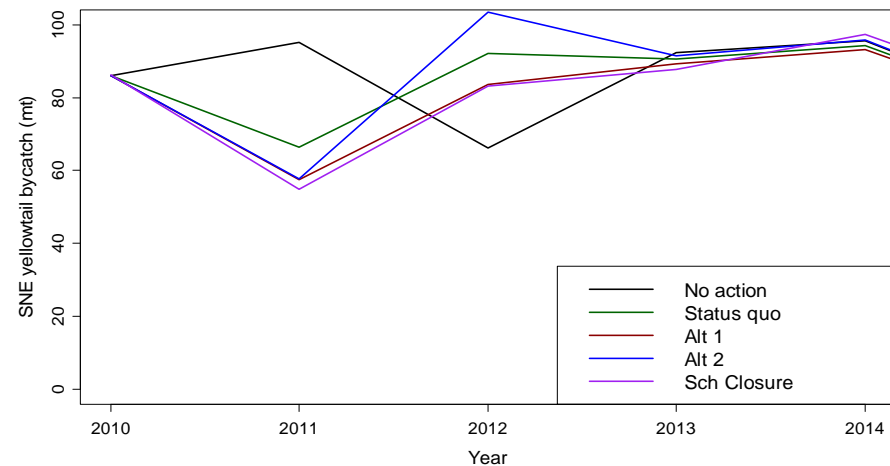
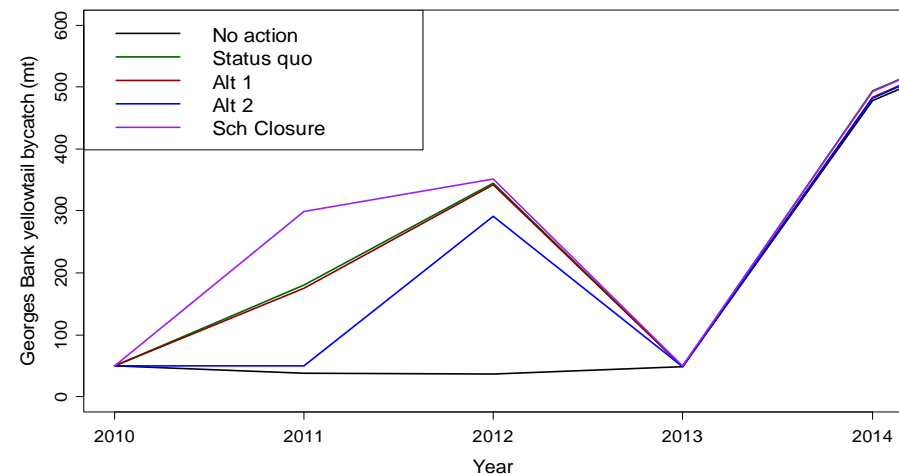


- FW44 for MS allocated YT to the scallop fishery for 2010-2012
- Projected catch is now different since FW22 projections different, bycatch rates and biomass projections updated

		Updated bycatch est		ACL (90% est catch * 0.)	
		GB	SNE	GB	SNE
FW22 Option 1	2011	175.3	57.6	153	48.2
	2012	341.8	83.7	298.4	70
	2013	404.0	134.0	352.7	112.2
FW22 Option 2	2011	50.3	57.6	43.9	48.2
	2012	291.6	103.4	254.6	86.6
	2013	404.0	134.0	352.7	112.2
FW22 Option 3	2011	298.7	54.9	260.7	46
	2012	351.8	83.1	307.1	69.6
	2013	404.0	134.0	352.7	112.2

YTF, continued

- GB bycatch estimates dominated by CA2 access schedule
- If necessary, adjustments can be made to the sub-ACL allocations of YT
- In most cases, the new projected catch is lower compared to allocations in FW44



Impacts on Protected Resources - Doc #4B and 5

- FW22 must comply with RPM to limit LA effort in the MA during the turtle season
- PDT completed the same analyses as last year for determining “more than minor” threshold
- New analyses include turtle bycatch rate by month and area to assess impacts on turtles
- AP and Committee favored alternatives that limited the number of trips that can be taken in the ‘turtle window’ time frame (1 trip max)

Impacts on Protected Resources cont'd

- PDT - Threshold for more than a minor change should be based on “effort shift”
- Model estimates changes in fishing mortality, effort shift and impacts on revenue
- Doc #5 – Table 1 and 2
 - In 2011: estimated 37-70% shift from RPMs, but some will shift to other time within longer turtle season, so 2-8% shift more likely (200-800 DAS)
 - 2012: similar results
- Overall: One trip max most certain in terms of impact and largest shift excluding open area DAS option
- Closing Delmarva from July-Oct has higher impact on F
- Analyses assumes no trading of trips, so vessels that trade in additional MA trips could be impacted more

Impacts on Protected Resources cont'd

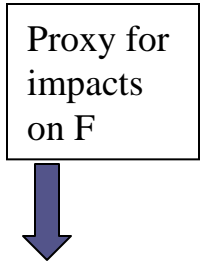
- Last year impacts of RPMs on turtles were qualitative
- A recent study (Murray, 2010) developed a model for estimating turtle takes in the scallop fishery by month and area
 - These monthly turtle take rates were used by the PDT to estimate the take rates per trip
 - The impacts of each RPM were assessed based on the number of estimated takes, or percent reduction in takes, due to an RPM

Take Rates

Month	Delmarva		
	Takes/dhr	2011 Takes/Trip	2012 Takes/Trip
March	0	0	0
April	0	0	0
May	0	0.003	0.003
June	0.001	0.089	0.074
July	0.0014	0.122	0.102
August	0.001	0.09	0.075
September	0.0014	0.124	0.104
October	0.0012	0.123	0.103
November	0.0002	0.018	0.015
December	0	0	0
January	0	0	0
February	0	0	0

- Delmarva
 - Highest take rates in July, Sept, and Oct
 - Take rate is lower than HC, but takes per trip are higher because scallop biomass is lower in Delmarva
- HC
 - Highest take rates in Aug and Sept

	Est Takes		Est Takes		
	2011		2012		
NoClosure					
HCS	10		17		
Delmarva	18		7		
Open	36		33		
Total	64		58		
1 trip max		PctRed	2012	PctRed	MWGain
HCS	9	13%	15	13%	-0.01
Delmarva	16	12%	7	12%	0
Open	36		33		
Total	60	5%	55	6%	
Sept/Oct Dmv		PctRed	2012	PctRed	MWGain
HCS	10	0%	17	0%	0
Delmarva	13	27%	5	27%	0.02
Open	36		33		
Total	59	8%	56	3%	
Sept/Oct Dmv + 1 trip max		PctRed	2012	PctRed	MWGain
HCS	9	13%	15	13%	-0.01
Delmarva	11	35%	5	35%	0.02
Open	36		33		
Total	56	12%	53	8%	



FW22 Action

- FW22 alternatives - Document #1
- FW22 analyses – Documents #4, 4B, 4C, and 5
- Decision Document with input from PDT, AP, and Cmte – Document #3

- Potential modification to YT sub-ACL for scallop fishery based on updated YT bycatch estimates – Document #6 – Action on 11/18 under GF agenda