

Framework 25

Sea Scallop Fishery Specifications for 2014 and 2015 (default)
September 2013 Council Meeting – Hyannis, MA



Framework 25 - Purpose and Need

- The purpose of this action is 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 2014 and 2015 (default)
- In addition, the Council added two other issues to be addressed
 1. Address 2013 CA1 access area trips
 2. Implement AMs for SNE/MA windowpane sub-ACL

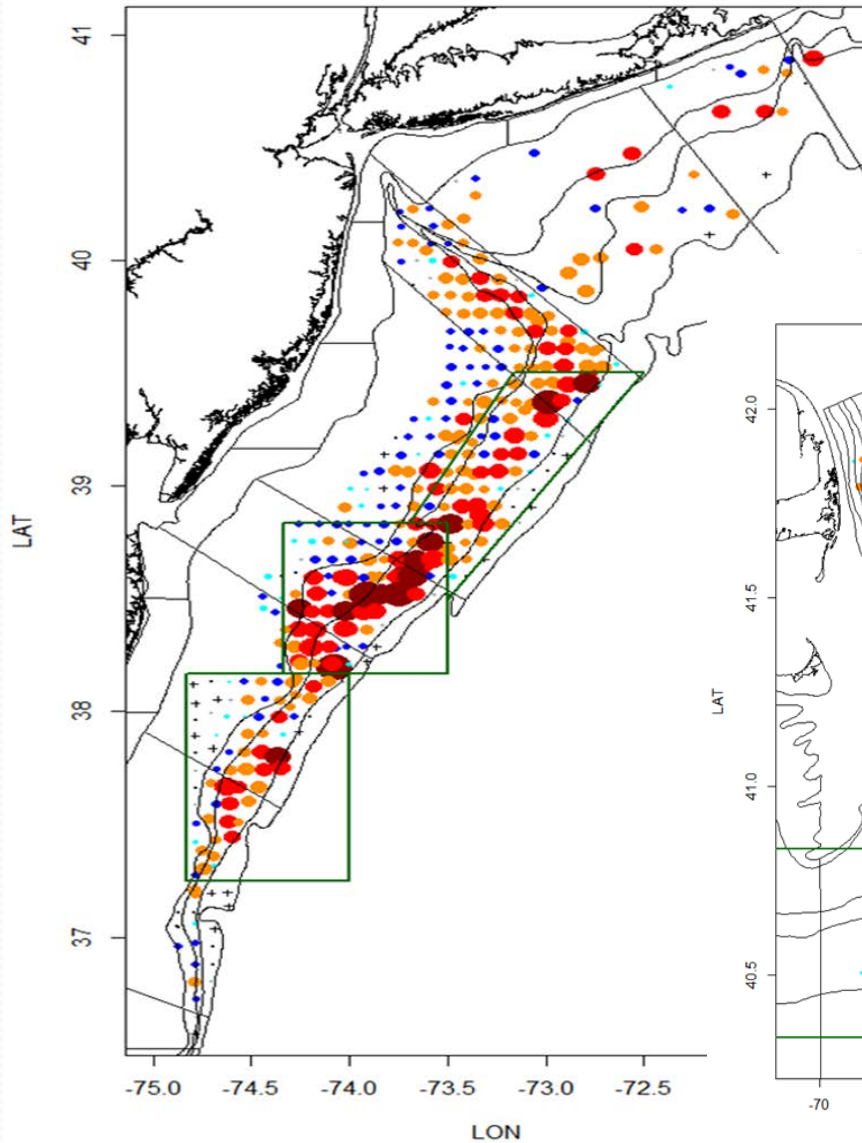
2013 Survey Season

- NEFSC – 183 dredge tows and over 7 million images
- VIMS – About 500 paired dredge tows in NL, northern edge and most of the Mid-Atlantic
- Arnie's Fishery – habcam of CA₁ access area and northern edge
- SMAST – drop camera in Delmarva and CA₂ south
- Overall very extensive survey coverage – 2 surveys in most areas

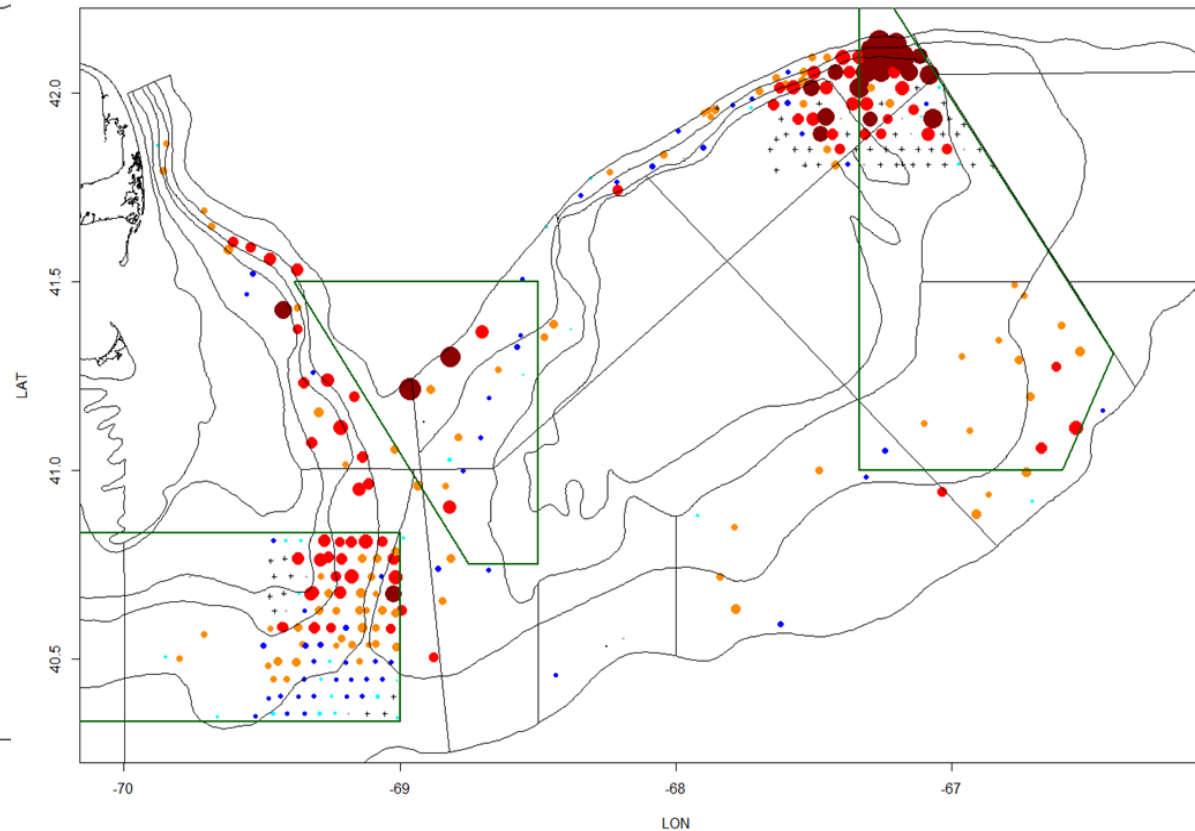
Total Biomass

(NEFSC and VIMS Dredge combined)

Mid-Atlantic Biomass

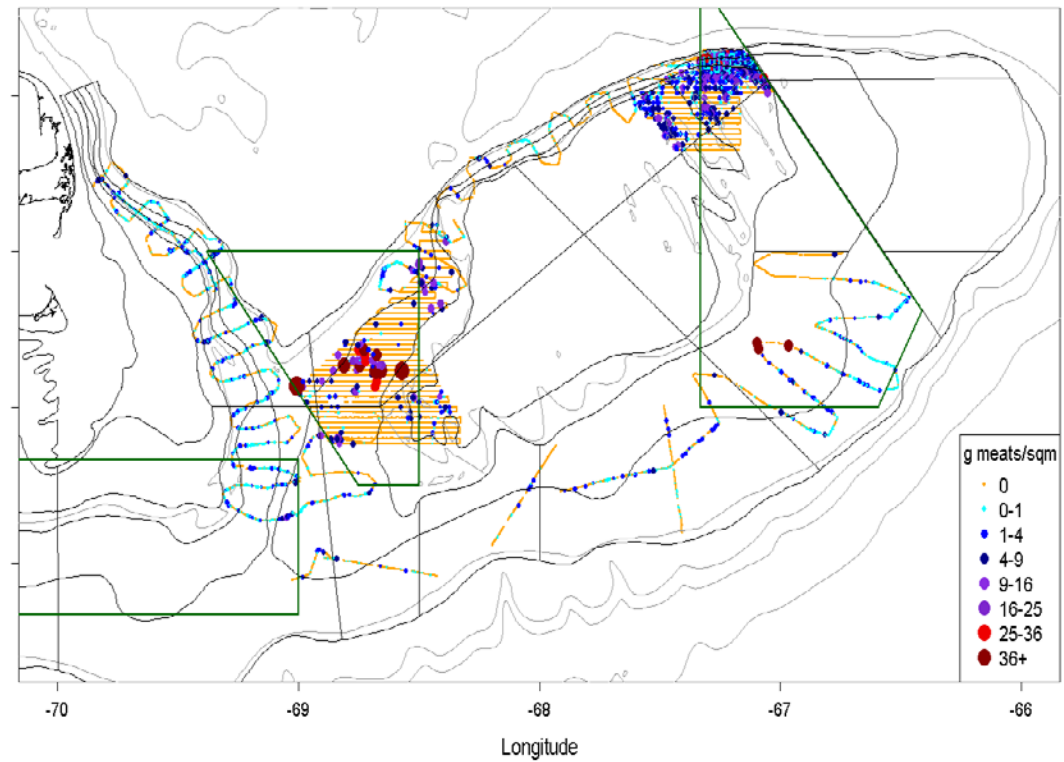
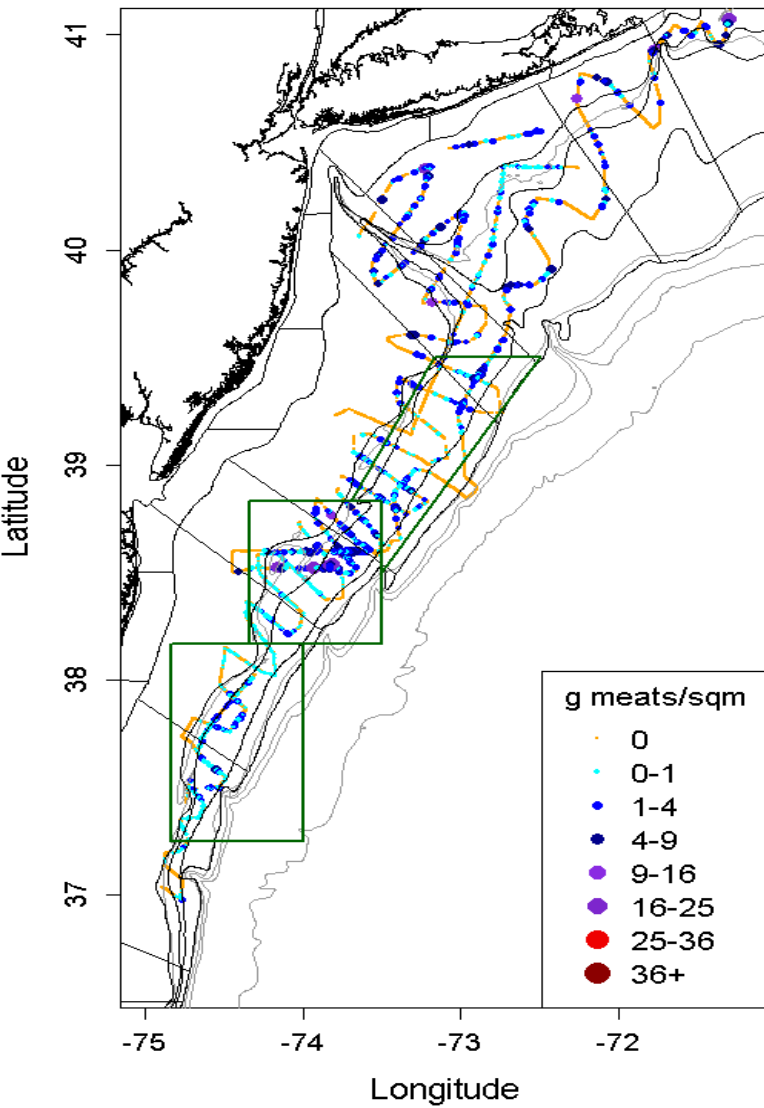


Georges Bank Biomass



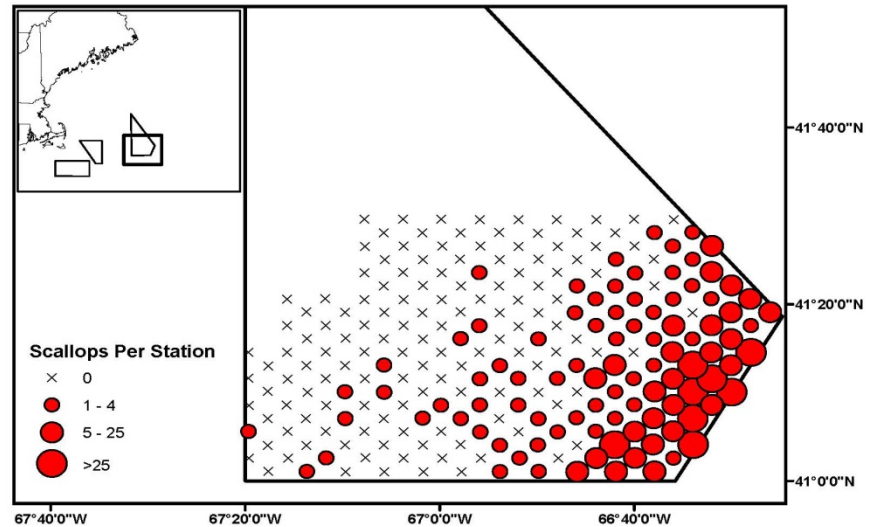
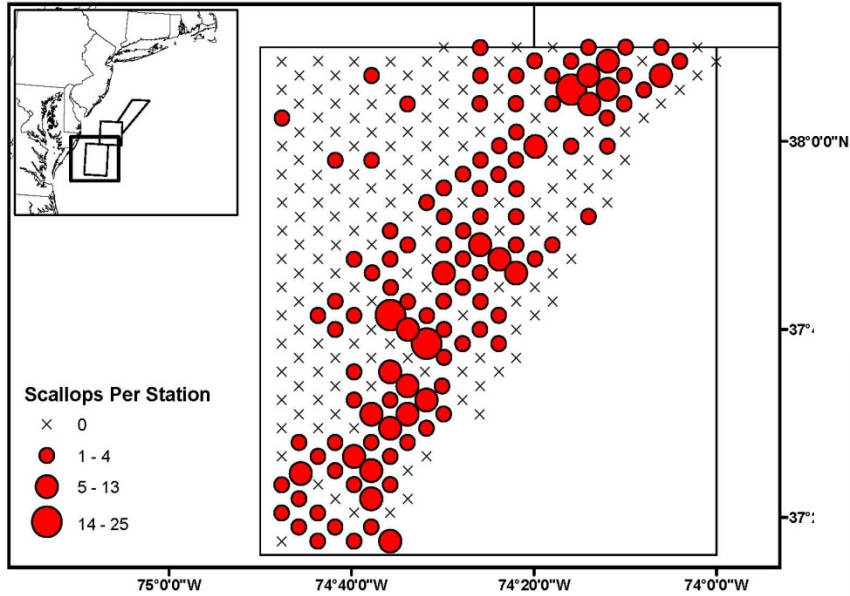
Total Biomass

(NEFSC and Arnie's Habcam combined)



SMAST

Delmarva and CA2 south

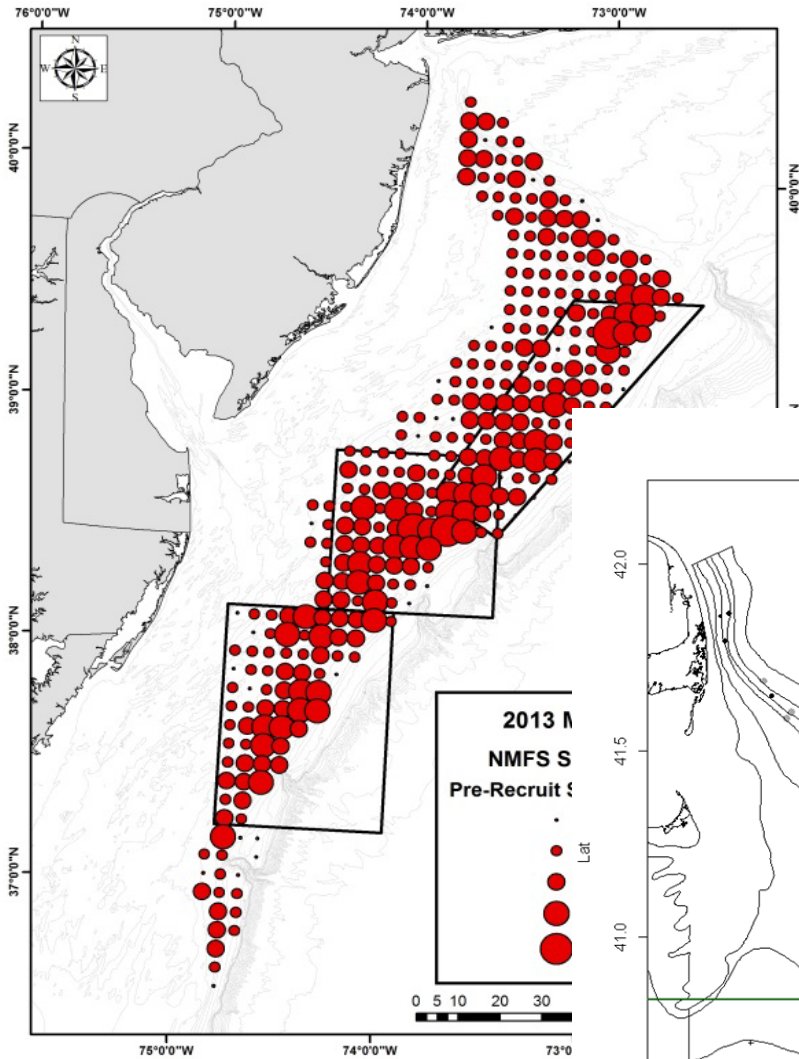


Mid-Atlantic Bight	Dredge	SE	Habcam	SE	SMAST	SE	Mean	SE
Hudson Canyon South	7839	1126	7528	1097			7684	786
Delmarva	4559	605	6067	655	6249	803	5625	400
Elephant Trunk	14317	1758	19063	1993			16690	1329
Inshore of ET	109	421	868	825			489	463
Virginia Beach	1208	605	395	388			802	359
NYB/LI (includes str 21)	20662	2468	29816	2485			25239	1751
Block Island	N/S	N/S	1655	364			1655	364
TotalMA Rotational	26715	2173	32658	2367			29687	1607
TotalMA Open	21979	2575	31079	2647			26529	1847
Total MidAtlantic	48694	3370	63737	3551			56216	2338

Georges Bank

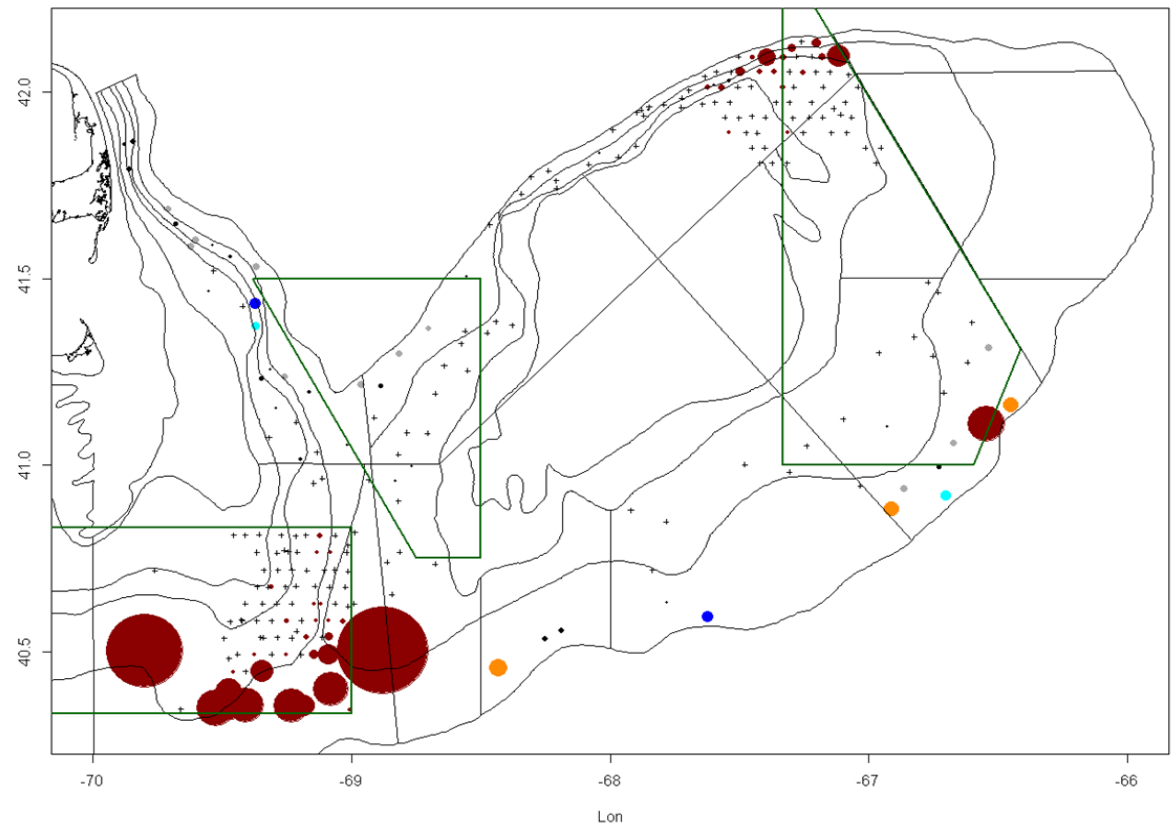
Closed Area I Acc	494	108	3340	401			1917	208
Closed Area I NA	16940	5750	4553	747			10747	2899
Closed Area II Acc	5552	1042	9845	1221	5148	1049	6848	639
Closed Area II NA	9041	1220	8497	765			8769	720
NLS Acc	3271	342	4098	584			3685	338
NLS NA	90	28	N/S	N/S			90	28
S Channel	11711	2842	13496	1130			12603	1529
Southern Flank	5704	1197	11445	1946			8575	1142
Northern Edge	4425	580	3160	537			3793	395
Total GB Clsd/Acc	35389	5980	30333	1771			32861	3119
Total GB Open	21840	3138	28101	2313			24970	1949
Total Georges Bank	57229	6754	58434	2913			57027	7899

TOTAL	105923	7548	122171	4593			113242	8238
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Recruits and Pre-recruits (2 year olds and 1 year olds)

Georges Bank Pre-recruits



“Remarkable and
unusual event”

Summary of 2013 compared to 2012

- Total biomass stable
- Exploitable biomass lower
- Small scallop observed in 2012 are growing, but not ready for fishery yet
- Since biomass stable and larger proportion of scallops are smaller – fishing mortality higher
- Large recruitment event near NL – what do we do?

Update of stock status

- Last benchmark in 2010 (SAW₅₀)
- $B_{msy} = 125,358$ mt and $F_{msy} = 0.38$
- Overfishing if overall F above 0.38
- Overfished if biomass less than $\frac{1}{2} B_{msy}$ (62,679)

2012 CASA Update

Total Biomass = 113,242 mt

Overall $F = 0.377$

Therefore, overfishing is not occurring and the stock is not overfished – but overall F is just under F_{msy}

Why is realized F so close to F associated with OFL when set so much lower (0.28)?

- Four sources of mortality included in model (natural mortality, discard mortality, incidental mortality, and fishing mortality)
- SAW₅₀ discussed and assigned values for the first three
- Fishing mortality = landings / exp biomass
- Realized catch can be higher than projected – underestimate LPUE (we know this is happening)
- Realized biomass can be lower than projected
- Or both – if numerator higher and denominator lower overall F increases

Uncertainty

- Projections are uncertain
- About 20% error in the projected exploitable biomass estimates
- Not unreasonable to expect realized biomass estimate and landings to be ??

Performance of Recent Projections

	Action	Projected Biomass	Projected Landings	Projected Overall F	Actual Biomass	Actual landings	Realized Overall F	Diff in biomass	Diff in landings
2011	FW ₂₂	140,000	23,723	0.26	138,700	26,795	0.33	99.1%	112.9%
2012	FW ₂₂	145,000	25,945	0.28	104,417	26,160	0.377	72.0%	100.8%
2013	FW ₂₄	130,000	17,327	0.28	113,242	21,000		87.1%	121.2%
2014	FW ₂₄ (default)	140,000	17,599	0.28					

2013 landings are an estimate only – FY only half over

- Realized F has been higher than projected (20-30%)
- In one year mostly due to catch being higher than projected, and one year primarily because biomass overestimated
- More than random error – model too optimistic

Section 2.0 – Management Alternatives

2.1.1 OFL and ABC – PDT will present the same control rules developed in A15 and used for FW21-24, with updated survey and fishery data

- OFL - equivalent to the catch associated with F_{msy} – currently estimated at $F = 0.38$
- ABC control rule – catch set at 25% probability of exceeding OFL. Risk is evaluated in terms the probability of overfishing compared to the fraction loss of yield.

	OFL	ABC	Discards	ABC for fishery
2014	29,848	25,680	6,193	19,487
2015	36,693	31,730	7,068	24,662

Performance of OFL/ABC/ACL/ACT to date

	OFL	ABC (including discards)	Discards	ABC available to fishery = ACL (after discards removed)	Actual Landings	% of ACL (landings/ ACL)	Total Catch (landings plus assumed discards)	% of ABC (including discards)
	A	B	C	B-C = D	E	E/D	E+C=F	F/B
2011	32,387	31,279	4,009	27,269	26,795	98.3%	30,804	98.5%
2012	34,382	33,234	4,266	28,961	26,160	90.3%	30,426	91.6%
2013	31,555	27,370	6,366	21,004	21,000	100.0%	27,366	100.0%
2014 (default)	35,110	30,353	6,656	23,697				
2014 proposed	29,848	25,680	6,193	19,487	OFL and ABC values updated on PDT call 9/13			
2015 proposed	36,693	31,730	7,068	24,662				

- 2013 Actual catch is a projection only – the fishing year is only half over.
- Assumes 100% of all sub-ACLs harvested, 50 mt for incidental catch, 200 mt for state water catch, 10 mt for NGOM catch and 100% of set-asides.
- Further breakdown of 2011 and 2012 landings provided in Tables 10-11 in Document #2

Discard estimate

- Discards = mortality from discards on deck + incidental mortality during fishing (unobserved)
- Discard mortality – from observer data/SBRM methodology. SAW₅₀ – 20% both areas
- Incidental mortality – limited research on this topic (2 studies: Caddy 1973, Murawski and Serchuk 1989). SAW₅₀ – $0.2 * F_{landings}$ for GB and $0.1 * F_{landings}$ for MA
- Overall discards higher in 2014 and 2015 compared to 2011 and 2012 but lower than 2013: 1) more biomass on GB; and 2) larger proportion of total biomass is small scallops in 2014 and 2015 compared to earlier years

Potential Fishery Specifications

- PDT met on Aug 19/20 to review 2013 survey results and CASA results for 2013
- SAMS projections not complete yet
- Very preliminary – lower catch than 2013
 - LA fishery - Fewer access area trips and similar or fewer DAS
 - LAGC – lower IFQ
 - NGOM – 26.3 mt or 31.8 mt hard TAC
 - Incidental catch – 23 mt lb target TAC (was higher in 2012)
 - Research set-aside – 567 mt
 - Observer set-aside – 1% of total ACL
 - Assumption for state water catch – has been 73 mt (was higher in 2011 and 2012)

Potential Specification Alternatives

- No Action (Alt 1): 2014 Default set in FW24
 - LA: 23 DAS no AA trips GC: 2.77 million lbs
- Alternative 2: One AA trip (split NL, CA2, and Del)
 - 2b: only northern part of NL
- Alternative 3: One AA trip (split NL, CA2 and Del) with a new closed area in and around NL
- Alternative 4: One AA trip (CA2 and Del) and NL treated as open area with controlled # of DAS

Cmte Motion 1: Recommend that Alternatives 1, 2, 2b, and 4 as possible specification alternatives in FW25.

Vote: 6:0:0, motion carries

Other measures in FW25

1. **Address 2013 Closed Area I access area trips**

Catch rates have been lower than expected in CA1 and some vessels have unused 2013 trip left. This action is considering some type of extension.

2. **AMs for SNE/MA windowpane flounder sub-ACL**

AMs are required for the sub-ACL allocated to the scallop fishery. FW25 is considering a range of measures (seasonal closures, seasonal gear restricted areas, and several proactive gear modification AMs).

Preliminary data for CA1 catch

Year	Allocation	Harvested in 2012	Harvested in 2013	Unused catch
2012	5.8	5.0	0.2	0.6
2013	1.5	N/A	0.2	1.3
Total	7.3	5.0	0.4	1.9

Alternatives for unused FY2013 CA1 Trips

- No Action – no rollover of FY2013 trips
- Alternative 2 – Allow rollover (through 2014, 2015, or when the area reopens in the future)
- Alternative 3 – Shift trip to different access area (2014 or 2015)
- Alternative 4 – Shift trip to open area for 2014 (as poundage or DAS conversion)

Cmte Motion 2: Move to retain in FW25 Alternative 2 related to CA1 trips modified so that unused CA1 catch would be permitted to be fished in the current or revised area if modified by the EFH Omnibus Action. Retain Alternative 4 and add AP motion 4 (split unused 2012 and 2013 CA1 trips to be permitted in open areas). Not include Alternative 3.

Vote: 6:0:0, motion carries

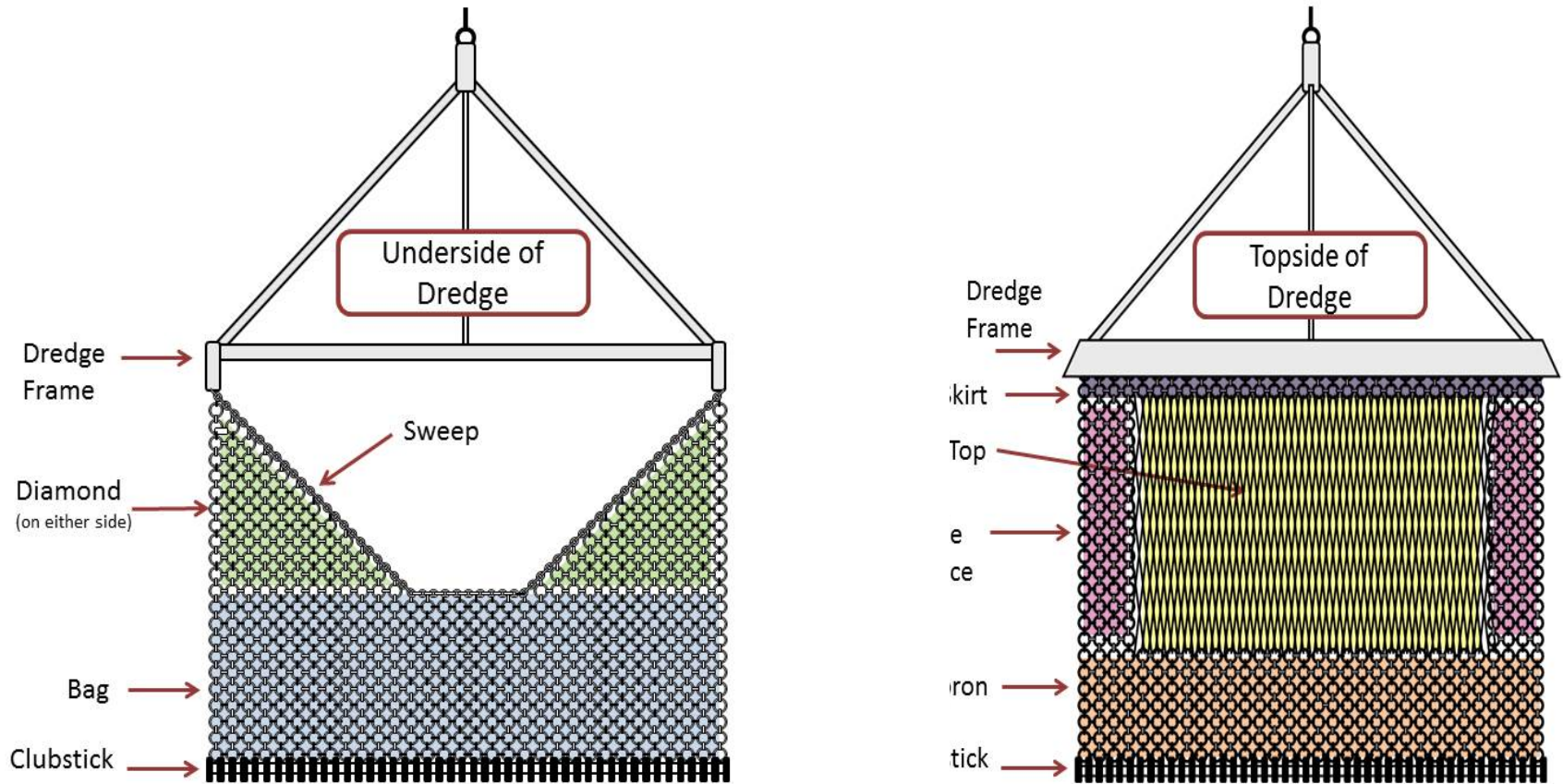
LAGC Measures

- LAGC IFQ – likely lower than 2013
- Allocation of fleetwide AA trips – with or without CA2?
By Consensus: Include both in Section 2.1.3.2
- Consider a sub-ACT for LAGC IFQ sub-ACL to address uncertainty of IFQ carryover? *Failed Motion*
- NGOM – No Action (70,000) and Alt 2 (58,000)
By Consensus: Include both in Section 2.1.3.3
- Incidental – No Action (50,000) and Alt 2 (?)
By Consensus: Include only 50,000 lb in Section 2.1.5
- State Waters – Leave at 160,000 pounds

SNE/MA WP AMs

- No Action – No AMs
- Alt 2 – Reactive AM – Seasonal closure
- Alt 3 – Reactive AM – Seasonal gear restricted area
 - shorter apron and reduced twine top hanging ratio
 - several options for how trawl vessels addressed
- Alt 4 – Proactive AM – Max of 7 rows of rings in apron
- Alt 5 – Proactive AM – Max hanging ratio of 1.5:1
- Alt 6 – Proactive AM – Max of 5 rows of rings in newly opened access areas
- Alt 7 – Proactive AM – Max hanging ratio of 1.5:1 in newly opened access areas

Gear Restrictions (2)



Cmte Motion 4: Include AM Alternatives 1-4 and eliminate 5-7 for consideration in FW25. Include reference in FW25 that there are already measures in place that reduce wp bycatch including requirement for use of turtle dredge. Vote: 6:0:0, motion carries

Council Agenda Item

- Consider Committee motions to date for FW25 (1-4)
- 2 Motions under Other Business (Enforcement Committee and Framework 51)
- Timeline for FW25
 - Council final action at November 2013 meeting
 - Expected implementation around May 1, 2014