Scallop PDT/AP

Jonathon Peros Council Staff

Joint Scallop AP & PDT November 10, 2020 Webinar



Today's Meeting:

- 2020 Management Track Assessment (Dr. Dvora Hart)
- Framework 33 Surveys and projections
- Amendment 21 & 2021 Work Priorities (AP & CTE)

AP and Committee action anticipated on Framework 33

PDT Tasking for Spatial Management and LA DAS

2020 Management Track Assessment



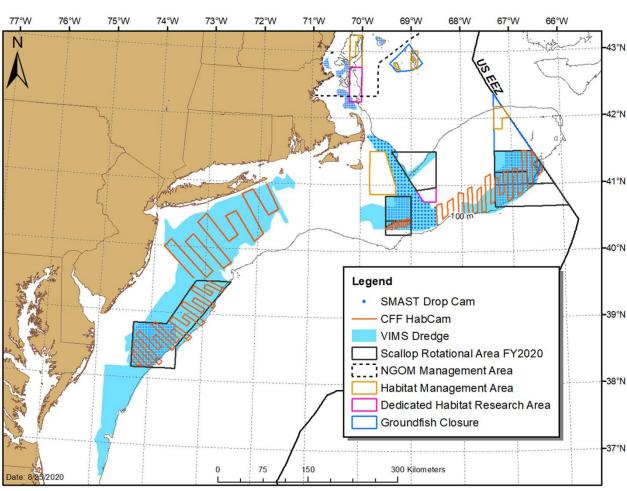
- Two assessment models reviewed.
- Stock status as of 2019:
 - Not overfished
 - Overfishing not occurring
- New reference points:
 - OFL: F=0.61
 - ABC: F=0.45
 - ACT: F=0.40

Framework 33

2020 Surveys







2020 Surveys

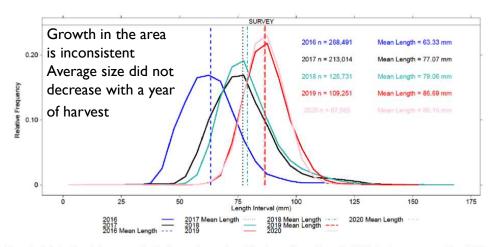


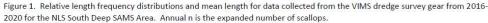


VIMS Dredge Surveys



- Four cruises from July Sept, 2020.
 - Leg I: 7/10 7/20 (VIR \rightarrow HCS)
 - Leg 2: 7/30 8/11 (NYB \rightarrow BI 450 total stations in MA, $\sim 4,760$ SH/MW samples)
 - Leg 3: 8/24 8/31 (CAI & CAII 111 stations, ~1,350 SH/MW samples)
 - Leg 4: 9/1 9/8 (NLS & GSC 195 stations, ~2,300 SH/MW samples)



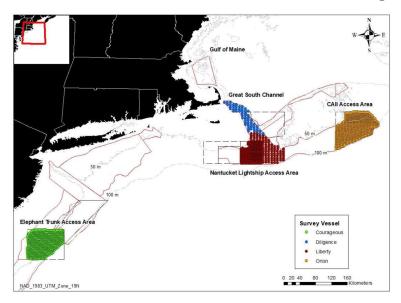




SMAST Surveys



- Four cruises that covered parts of Georges Bank and the Mid-Atlantic.
 - Elephant Trunk 2.8 km grid (583 stations)
 - Nantucket Lightship North and South 2.8 km grid (269 stations)
 - Great South Channel 5.6 km grid (143 stations added work)
 - Closed Area II and Ext 2.8 km grid (630 stations)



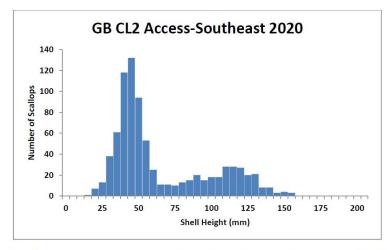


Figure 7. Shell height distribution of scallops in the CL2-Access-Southeast SAMS zone from the SMAST drop camera digital images. The overall average shell height was 62.4 mm and 823 scallops were measured.

CFF Surveys



- Three cruises with HabCam v3 on F/V Kathy Marie.
 - Leg I: 7/6 7/14 (NLS-South, SF, CAII & Ext, 66 Inm, I:400 annotation rate, 7,050 images annotated, 5.6 million images)
 - Leg 2: 7/17 7/14 (ET & HC, 598nm, ~1:400 annotation rate, ~6,800 images annotated, 5.4 million images)
 - Leg 3: 8/3 I 9/5 added work (NYB, LI, BI, 525nm, \sim I:400 annotation rate, \sim 5,500 images annotated, 4.4 million images) \rightarrow Recruitment in NYB and LI





Combined Survey Biomass Estimates

			Dredge				Di	ropC	am		H	łabca	m		Mean			F32	Projection	ons
Region	Subarea	Num	Bmsmt	SE	MeanWt	Num	Bmsmt	SE	/leanWt	Num	Bmsmt	SE	ИeanWt	Num	Bmsmt	SE	MeanWt	Num	Bmsmt	%Change
GB	CL1ACC													52.0	829		15.9	52	829	
GB	CL1NA	60.2	1490	271	24.8									60.2	1490	271	24.8	143	3300	-54.8%
GB	CL-2(N)													301.0	6347		21.1	301	6347	
GB	CL-2SE	370.6	5185	528	14.0	505	5083	842	10.1	406	6718	57	16.5	427.3	5662	332	13.3	892	14763	-61.6%
GB	CL-2SW	1079.0	21357	4722	19.8	790	17769	3442	22.5	774.9	14693	354	19.0	881.3	17940	1951	20.4	757	8385	113.9%
GB	CL2Ext	913.8	12924	1524	14.1	1048	15401	1986	14.7	856	11055	200	12.9	939.3	13127	837	14.0	109	5965	120.1%
GB	SF-Rest									262.4	4165.6	28.5	15.9	262.4	4166	29	15.9			
GB	SF-VIMS	765.7	6747	124	8.8					621.9	9393.5	145	15.1	693.8	8070	95	11.6	472	8820	-8.5%
GB	NLSAccN	44.5	1725	223	38.7	101	3,990	775	39.4					72.8	2858	403	39.3	176	4619	-38.1%
GB	NLSAccS-Deep	3613	38606	8270	10.7	2544	34918	6595	13.7	2591	29496	1020	11.4	2916.0	34340	3542	11.8	3544	44995	-23.7%
GB	NLS-W	11.4	255	41	22.6									11.4	255	41	22.6	200	3706	-93.1%
GB	NF													109.0	1434		13.2	109	1434	
GB	GSC	241.8	6056	851	25.0	329	6077	2917	18.5					285.4	6067	1519	21.3	149	8056	-24.7%
GB	GSC-45	0.3	13	6	43.3									0.3	13	6	43.3			
GB	TOTAL	7100.4	94358	9704	13.3									7012.1	102596	4441	14.6	6904	111219	-7.8%
MAB	ВІ	25.3	809	118	32.0				remov	ed HabCa	am data			25.3	809	118	32.0	130	1450	-44.2%
MAB	LI	294.9	6151	338	20.9					557	11228	2359	20.2	426.0	8690	1192	20.4	1079	9512	-8.6%
MAB	NYB	256.4	4007	230	15.6					387.9	6905	924	17.8	322.2	5456	476	16.9	603	8613	-36.7%
MAB	MA inshore	10.1	309	46	30.6									10.1	309	46	30.6	105	1163	-73.4%
MAB	HCSAA	174.7	4095	233	23.4					301.6	7949	847	26.4	238.2	6022	439	25.3	586	9393	-35.9%
MAB	ET Open	265.7	7811	370	29.4	453	12469	1171	27.6	393	10771	881	27.4	370.4	10350	504	27.9	663	20145	-48.6%
MAB	ET Flex	113.9	3208	283	28.2	262	8143	1127	31.1	242.4	5697	246	23.5	206.0	5683	396	27.6	1359	14990	-62.1%
MAB	DMV	37.0	352	61	9.5									37.0	352	61	9.5	304	799	-55.9%
MAB	VIR	16.1	71	11	4.4									16.1	71	11	4.4	50	110	-35.5%
MAB	TOTAL	1194.1	26813	677	22.5									1651.2	37742	1507	22.9	4879	66175	-43.0%
TOTAL	TOTAL	8295	121171	9727	14.6									8663	140338	4690	16.2	11783	177394	-20.9%

Fishery Data

DAS Usage

Year		DAS	
	1994		204
	1995		182
	1996		182
	1997		164
	1998		142
	1999		120
	2000		120
	2001		120
	2002		120
	2003		120
	2004		42
	2005		40
	2006		52
	2007		51 35
	2008		35
	2009		42
	2010		38
	2011		32
	2012		34
	2013		33
	2014		31
	2015		30.86
	2016		34.55
	2017		30.41
	2018		24
	2019		24
	2020		24

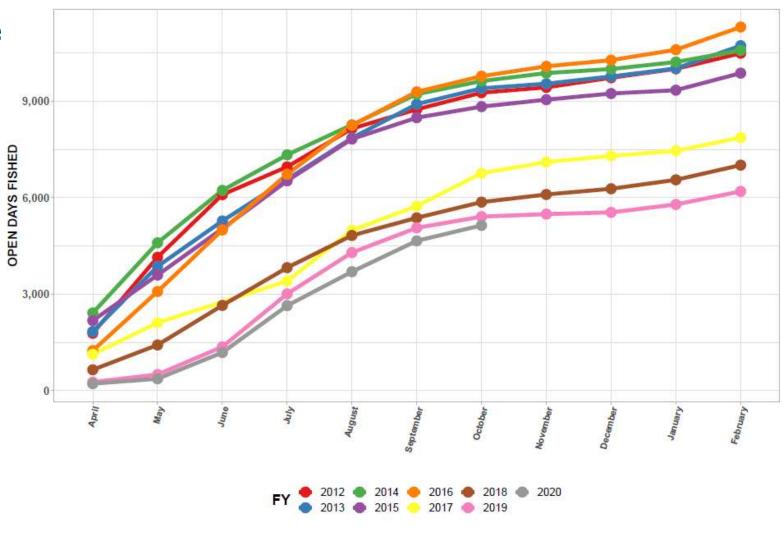
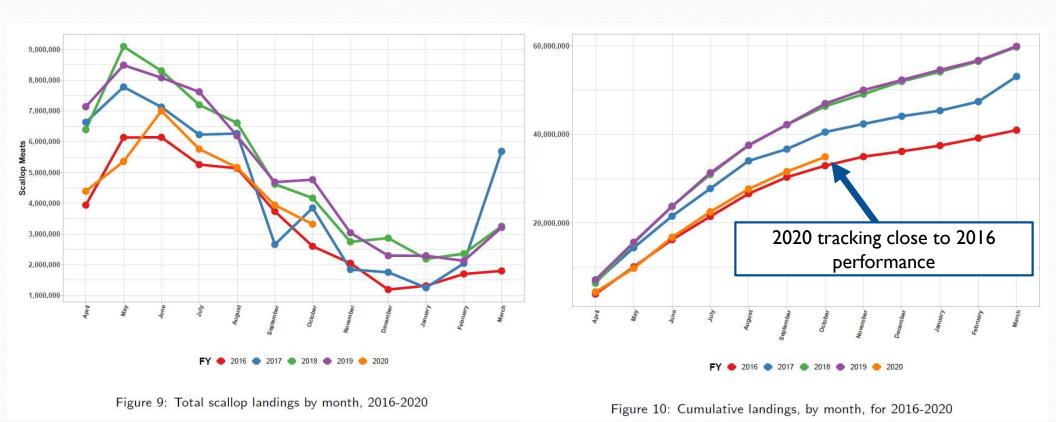


Figure 11: Cumulative open area days fished, for 2010-2020

Monthly Landings



LPUE

FW32 Estimate: 2,459 pounds

As of Oct. 29, 2020 FY2020 Open Area Fishing:

- 8,904,935 lbs
- 5,102 DAS used
- LPUE: 1,745

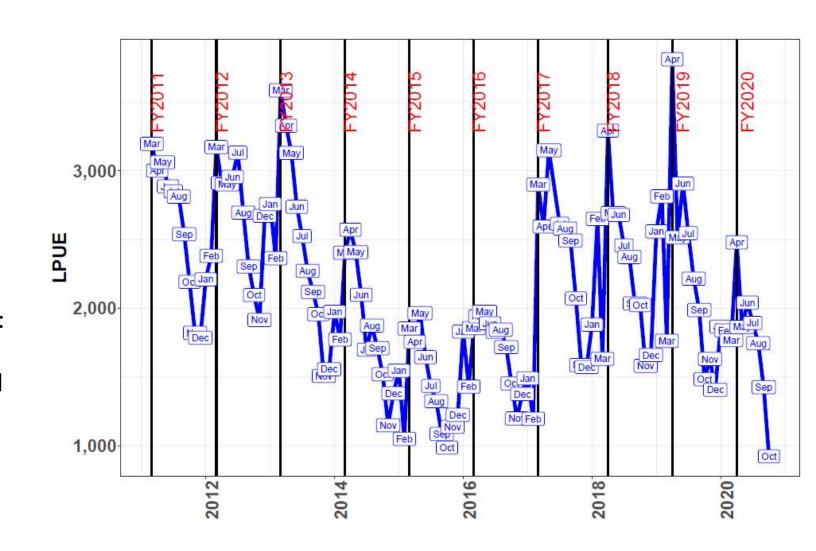
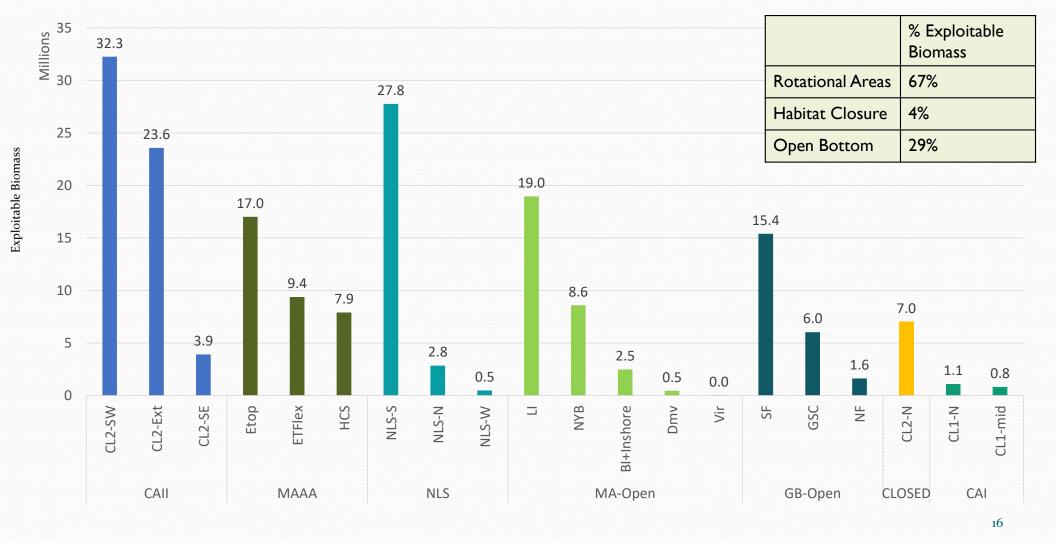


Figure 8: LPUE by month for Open Area Limited Access fishing. LPUE was calculated by dividing monthly scallop meat total landings by the days-at-sea charged.

Preliminary Projections

2021 Exploitable Biomass by SAMS Area (Millions of Lbs)



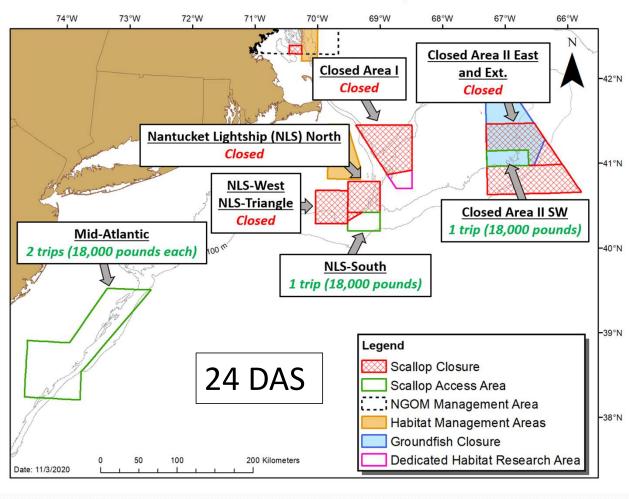
Preliminary Projections

From Doc.2b

Model Run	No Action	BASE	BASE -	Status Quo	
	Default measures	PDT	IowLPUE	(SQ)	
	from FW32 –	Suggestion	PDT	2 MAAA	
	I MAAA	2 MAAA	Suggestion	I NLS-S	
	18 FT LA DAS	I NLS-S	2 MAAA	I CAII-SE	
		I CAII-SW	I NLS-S	1/2 CAI FLEX	
		24 DAS	I CAII-SW	½ NLS-N	
			24 DAS with	F=0.33 (22	
			reduced LPUE	DAS)	
Overall F (all					
areas)	0.061	0.201	0.194	0.195	
Open Area F					
rate	0.28	0.36	0.31	0.33	
FTDAS (per					
vessel)	18	24	24	22	
Landing (APL)					
(mt)	9546	19368	18359	19762	
Landing (APL)					
Lbs	21,045,328	42,699,131	40,474,667	43,567,752	
LPUE (all					
areas)	2399	2456	2117	2270	
Open Area					
LPUE	2127	2098	1798.6	2112	
Open Area					
Landing (mt)	6816	8420	7410	7717	
Open Area					
Landings (lbs)	15,026,708	18,562,922	16,336,254	17,013,073	

Projections (with PDT BASE Run)

	Expl Biomass (t meats)	
	2021	2022
HCS	3589	2135
Etop	7720	4176
ETFlex	4259	2287
Dmv	209	408
NYB	3901	3794
LI	8602	7755
Vir	14	97
BI+Inshore	1132	1202
Total	29426	21854
CL1-N	498	523
CL1-mid	378	431
CL2-N	3186	3120
CL2-SE	1777	2429
CL2-SW	14630	21806
NLS-W	225	176
NLS-N	1292	1322
NLS-S	12594	15111
CL2-Ext	10697	15432
GSC	2737	2656
NF	743	921
SF	6989	6159
Total	55746	70086



Results of BASE Run Projections for 2021

• Four 18k lb trips, with 24 DAS \rightarrow landings of 40.4 to 42.7 million pounds

MAAA: 2 trips

• CAII-SW: I trip

• NLS-S: I trip

24 DAS (with high & low LPUE estimates)

Access area landings: ~24 million lbs

Open area landings: 16.3-18.6 million lbs

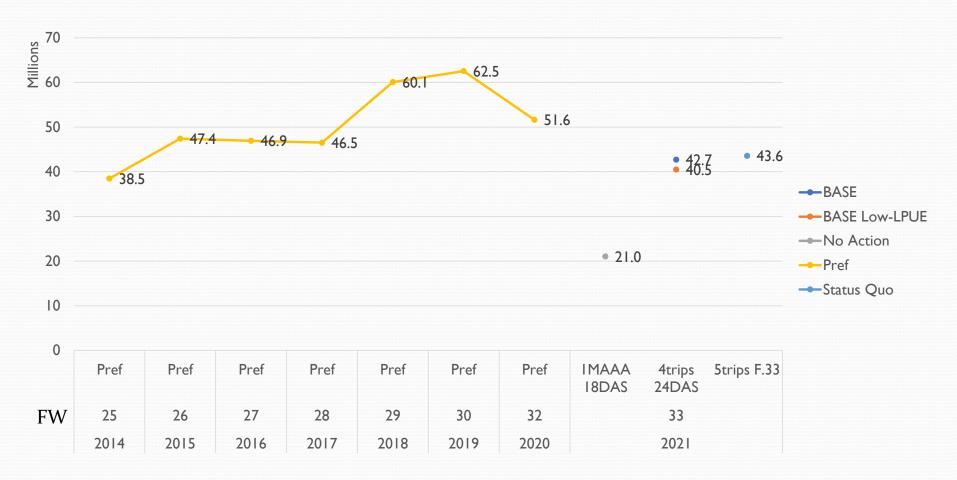
• Less than recent open area landings, ~21 mil.

	Total	Landings	Projected Landings
FY	(lbs)		(lbs)
201	1	58,461,465	
201	2	57,098,684	
201	3	39,807,589	
201	4	32,020,980	
201	5	36,974,195	
201	6	42,423,177	
201	7	51,325,269	
201	8	58,100,342	
201	9	60,453,876	
202	20		51.6 million lbs
202	21		40.5-42.7 million lbs

Source: year-end catch reports, updated November 3,2020.

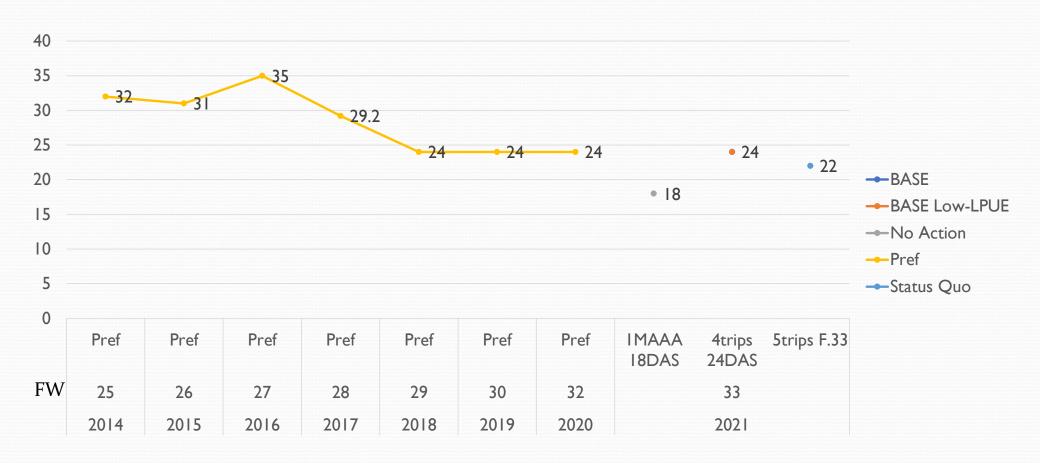
Comparison of Projected Landings (Mil. Lbs)

• Preliminary runs, with preferred options from recent actions



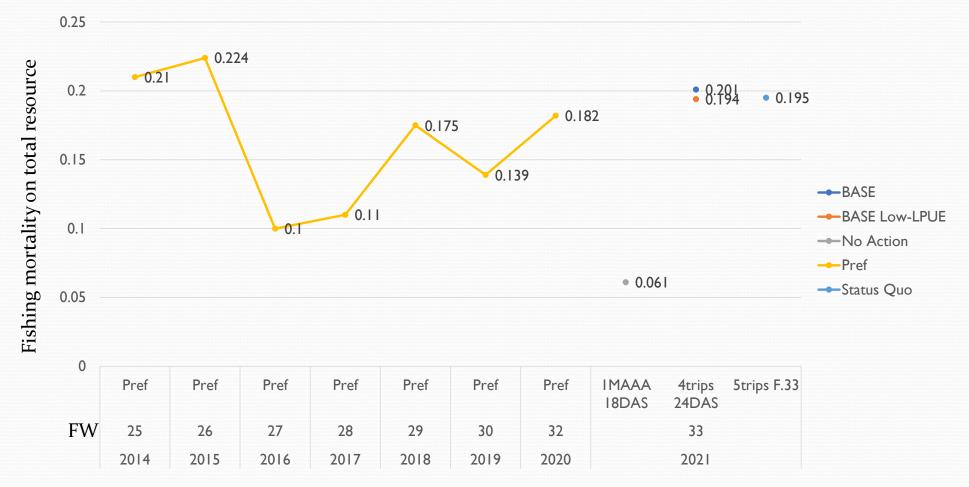
Comparison of Allocated FT LA DAS from recent actions

Preliminary runs, with preferred from recent action



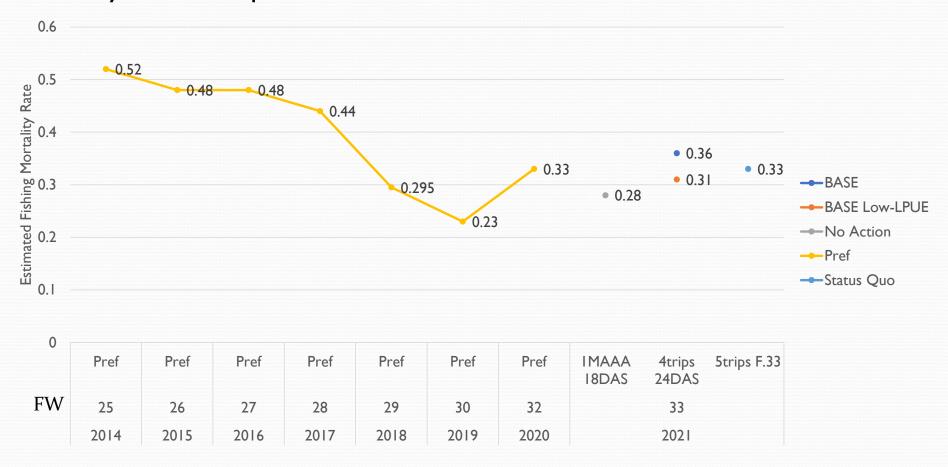
Comparison of Total Projected F

Preliminary runs, with preferred from recent actions



Open Area F rate comparison

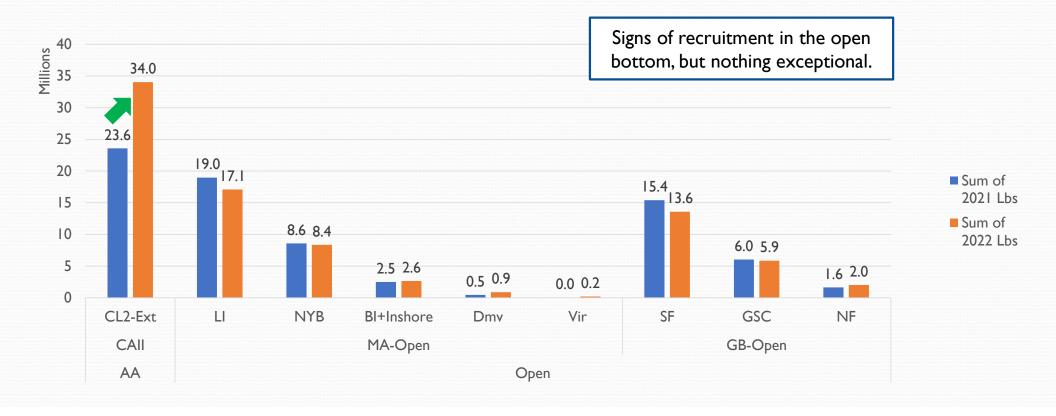
Preliminary runs, with preferred from recent actions



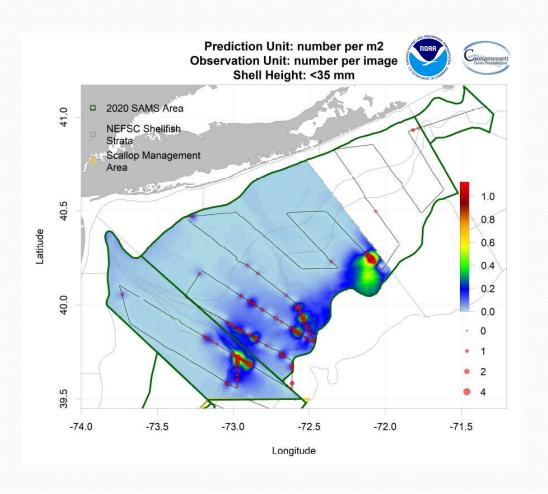
Open Areas

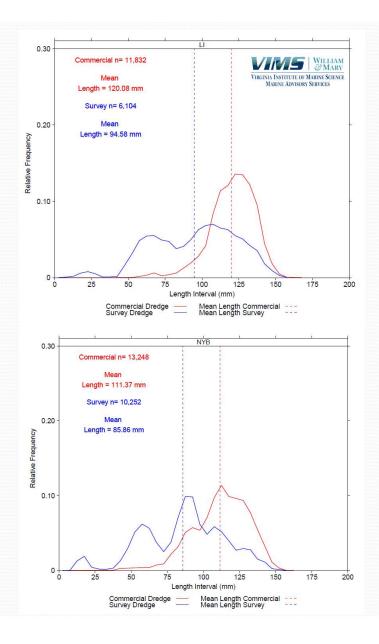
Open area projections for 2021 & 2022

- Exploitable biomass for 2021 (blue), projected biomass for 2022 assuming BASE run with open area F=0.36 (18.5 million pounds of landings)
- CAll-ext shown as an example of increasing biomass from growth and incoming YC

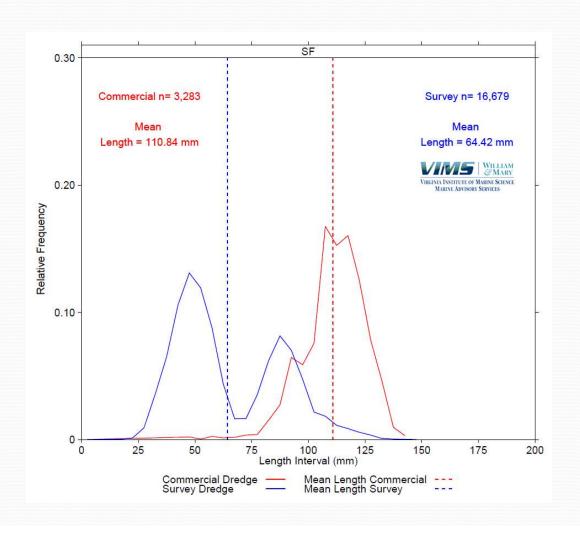


LI and NYB recruitment





Southern Flank and GSC



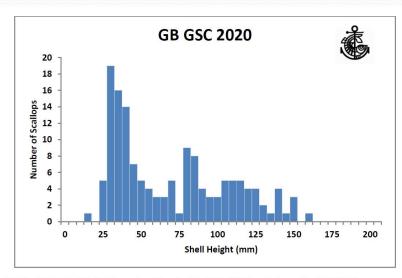
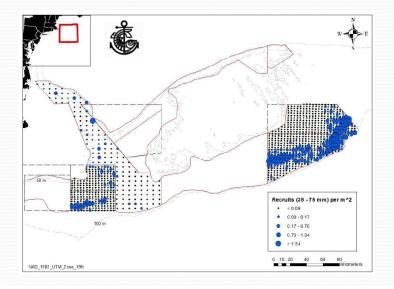


Figure 12. Shell height distribution of scallops in the GSC SAMS zone from the SMAST drop camera digital images. The overall average shell height was 67.1 mm and 145 scallops were measured.



Open area projections

- AP Discussion: What do you think the average LPUE will be for FY2021
 - The number of allocated DAS will depend on what we think LPUE is.
- Focus on F rates and projected landings associated with each F.

Open Area F	Projected Open-Bottom Landings (lbs)	Open Area LPUE (lbs)	FTDAS	Run
0.28	15,026,708	2127	18	NoAction
0.31	16,336,254	1799	24	BASE-lowLPUE
0.33	17,013,073	2112	22	SQ
0.36	18,562,922	2098	24	BASE

Access Areas

Mid-Atlantic Access Area

Sub-Area	Projection of Exploitable Biomass 2021	Year Classes in the Area	Recruitment?	Average Size (2020 Dredge surveys)
Hudson Canyon	7.9 mil. Lbs (3,589 mt)	2013YC	No	Survey: 110 mm Comm: 119 mm
Elephant Trunk Flex	9.3 mil. Lbs (4,259 mt)	2013YC	No	Survey: 114 mm Comm: 123 mm
Elephant Trunk Open	17 mil. Lbs (7,720 mt)	2013YC	No	Survey: 124 mm Comm: 121 mm

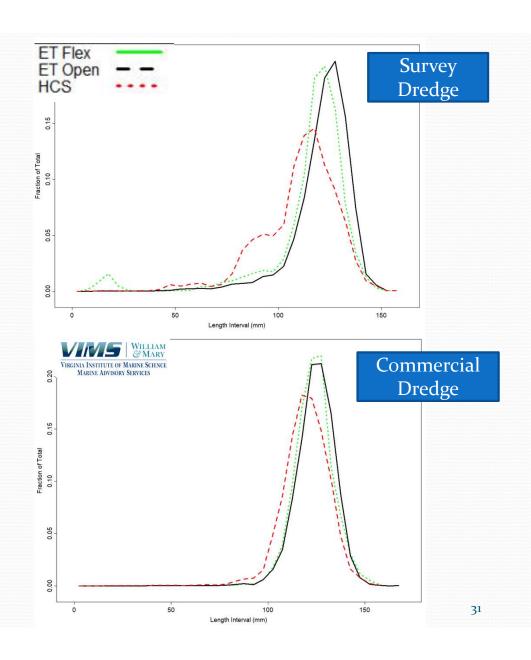
Possible Allocations to MAAA	F rate
Two 18,000 lb trips - ~12 million pounds	F=0.6
One 18,000 lb trips - ~6 million pounds	F=0.23

Percentage of annual RSA pounds harvested by area, Note that FY 2020 is incomplete data.

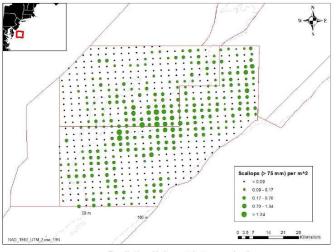
FY	OPEN	CAI	MAAA	NLS-S	NLS-W	NGOM
2017	88%	0%	12%	0%	0%	0%
2018	17%	35%	30%	9%	9%	0%
2019	26%	1%	62%	0%	8%	2%
2020	3%	0%	93%	0%	4%	0%
Total	38%	14%	39%	3%	6%	1%

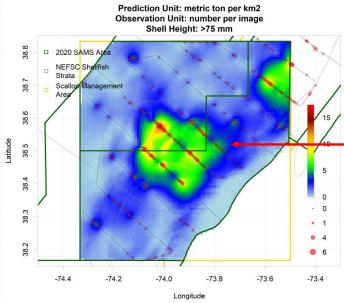
Mid-Atlantic Access Area

- 2020 Survey Data Length frequencies
- PDT Input for 2021
 - Fishing continues to be on exceptional 2013 YC in ET and HCS.
 - 8 years old, limited growth potential.
 - Blips of pre-recruits, but no signs of strong incoming YC.
 - Area supports bulk of RSA fishing, and FLEX trips from CAI.
 - Consider partial trips as tool for FY2021 (i.e., 1.5 trips?)

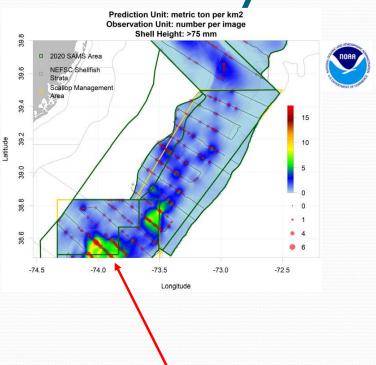


Elephant Trunk





Hudson Canyon



Plots show scallops larger than 75mm.

Highest densities in the ET-Flex and ET-Open.

Most of the biomass projected to be in the ET-Open.

Meat Quality

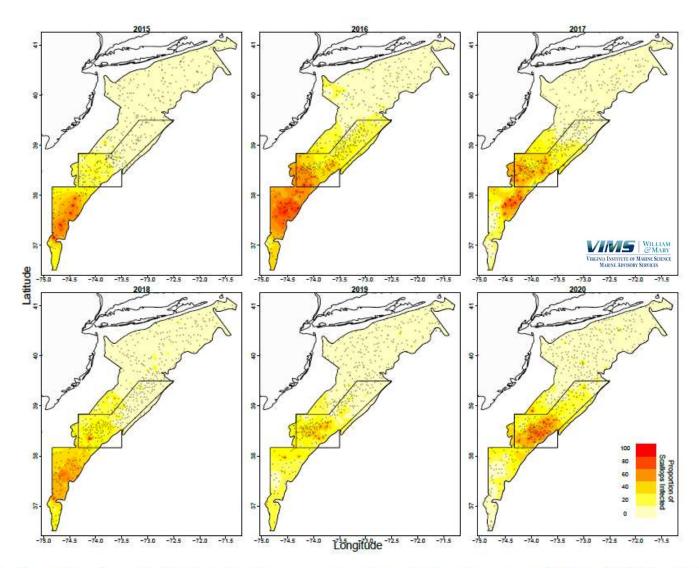
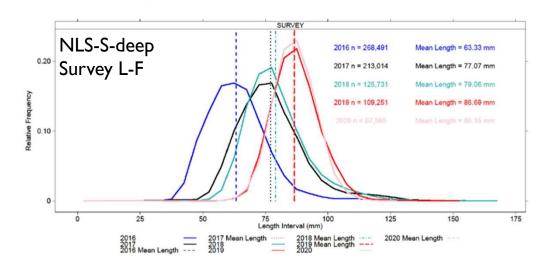


Figure 1: Proportion of nematode infected scallops as a percentage of all scallops assessed during SHMW analysis at the station-level by year for 2015 - 2020 from the VIMS dredge survey.

Nantucket Lightship

Sub-Area	Projection of Exploitable Biomass 2021	Year Classes in the Area	Recruitment?	Average Size (2020 Dredge surveys)	PDT Recommendations
NLS-North	2.8 mil. Lbs (1,292 mt)	2	No	Survey: 112 mm Comm: 113 mm	No AA fishing
NLS-South	27.7 mil. Lbs (12,594 mt)	2012 YC	No	Survey: 86 mm Comm: 94 mm	One trip, high density area like the NLS-West.
NLS-West	496,000 lbs (225 mt)	2012 YC	No	Survey: 100 mm Comm: 115 mm	Discussion on making open bottom
NLS-Triangle	n/a				



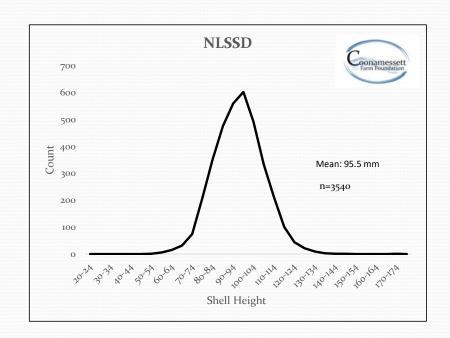
SMAST Drop Camera Data for NLS-S-deep

Year	Density per m ²	Avg. Size
2017	13.66	73mm
2018	6.85	76mm
2019	6.26	87mm
2020	3.69	93mm

Nantucket Lightship

- PDT Input for 2021
 - Fishing continues to be on exceptional 2012
 YC in NLS-South.
 - 9 years old, slow growers in marginal habitat
 - High densities of smaller scallops. Harvest has been on lower count scallops, price
 - Consider partial trips as tool for FY2021 (i.e., I.5 trips?)
 - Two-year harvest strategy?

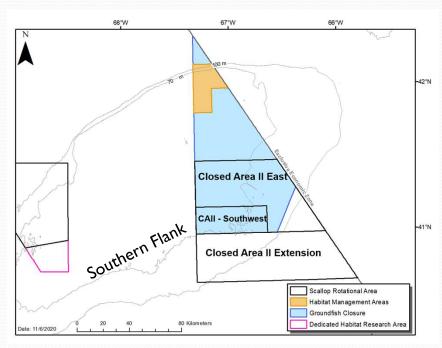


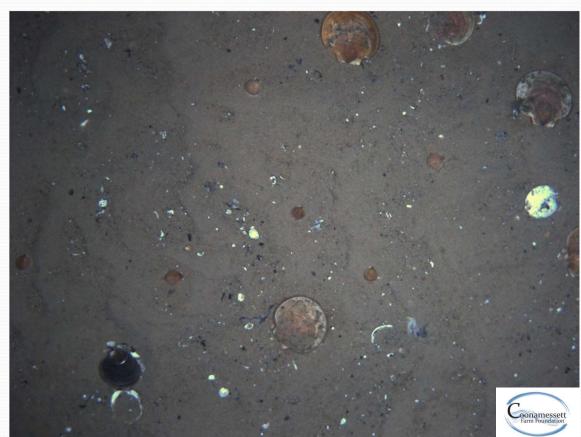


At 27.7 million pounds, NLS-Southdeep ~15% of total scallop exploitable biomass. This is part of the OFL and ABC.

Eastern Georges Bank

- Several Year Classes in region, mixed in some areas.
- Highest biomass "region"
- Candidate areas to open, close

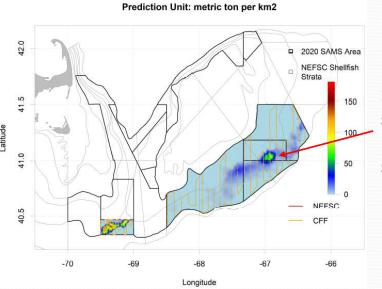




Eastern Georges Bank

Sub-Area	Projection of Exploitable Biomass 2021	Year Classes in the Area	Recruitment?	PDT Recommendation
Closed Area II SE	3.9 Mil. Lbs. (1,777 mt)	Pre-recruits and 2 YCs	Yes	Closed
Closed Area II SW	32.3 Mil. Lbs. (14,630 mt)	One year class 4 years old	No	Discuss – Options for access or continued closure
Closed Area II Ext	23.6 Mil. Lbs (10,697 mt)	2+	Yes	Closed
Southern Flank	15.4 Mil. Lbs (6,989 mt)	2+	Yes	Open Bottom

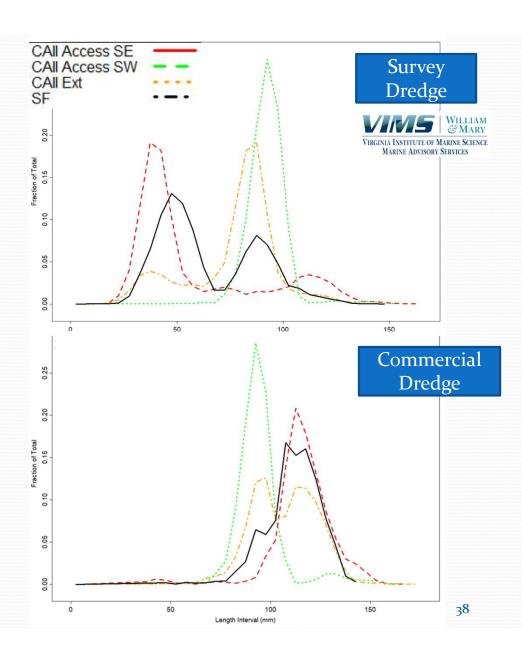
Possible Allocations to CAII-SW	F rate
One 18,000 lb trips - ~6 million pounds	F=0.23



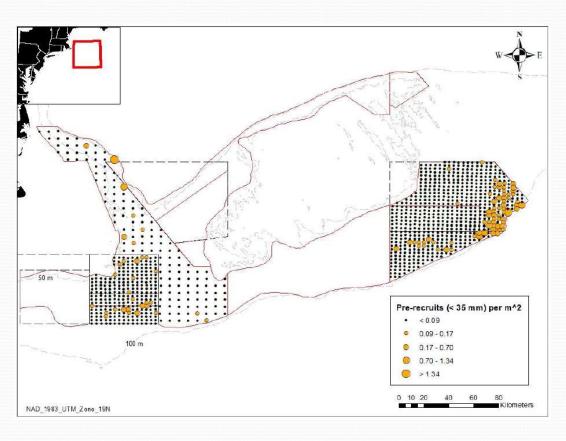
Scallops in CAII-SW area are concentrated in a relatively small area (high densities)

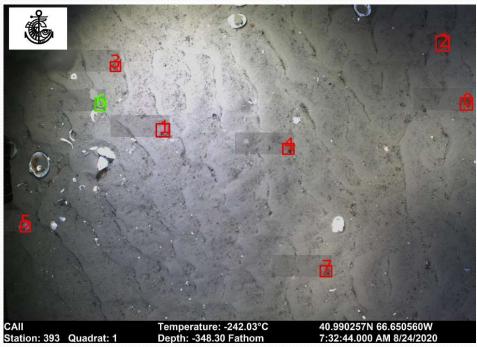
Eastern Georges Bank

- 2020 Survey Data Length frequencies
- PDT Input for 2021
 - Close CAII-SE & EXT to protect recruitment and optimize yield (orange and red lines)
 - Southern Flank stays open bottom; several cohorts but no exceptional recruitment (black line).
 - Consider access in CAII-SW, one cohort in this area (green line). Scallops grew more than expected, and have largest SH/MW relationship on EGB



Eastern Georges Bank: pre-recruits

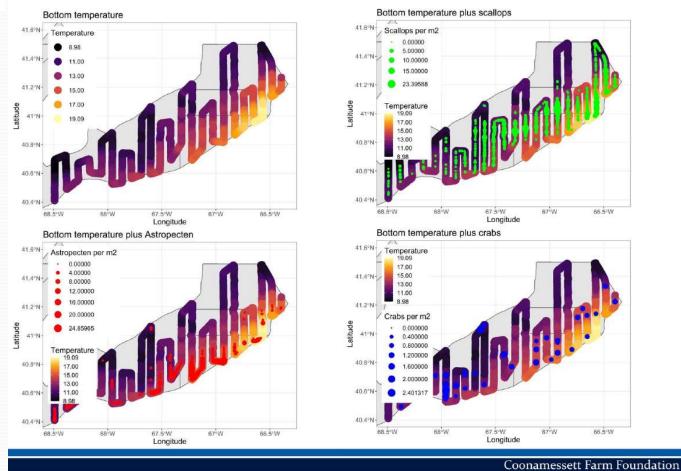




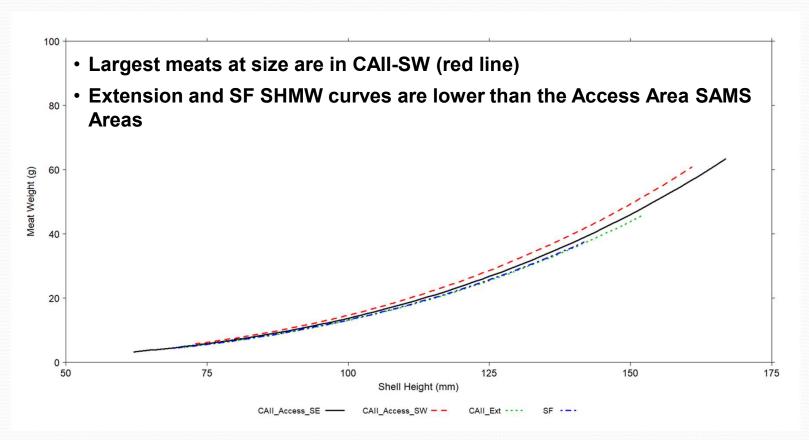
Eastern Georges Bank Bottom Temperature and Predators



CAIIS into the SF



Eastern Georges Bank Shell Height to Meat Weight Relationships from 2020 Dredge Survey

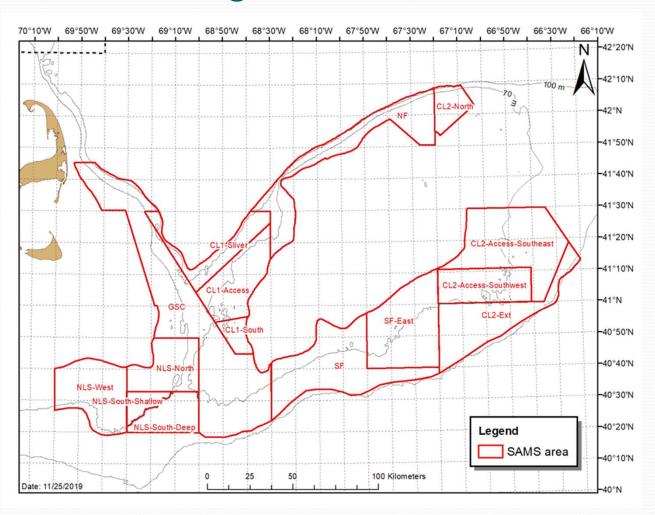


Questions?

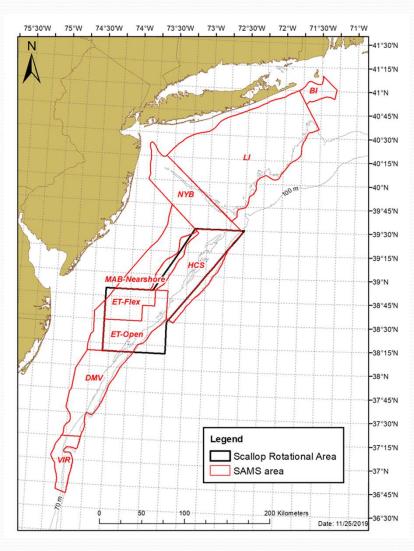
Other specs related issues

- **PT trip allocations:** At a meeting earlier this year there was some concern about PT boats having to fish their CAII allocations in CAII. Do we want to see more flexibility with this in some years the Council has allowed PT boats to pick the areas that they go to.
- NLS-Triangle Some transplant work by industry...consider as a closure for another year?
- **Default access area allocations** Discussion on whether it makes sense to try to allocate a default trip as part of the FW for FY 2022.
- Crew limits in the NLS-South This year boats were allowed to take up to 2 additional crew. Should we maintain this or think about changing it?
- LAGC IFQ Access Area trips There is a possibility for access area fishing in CAII in 2021. Do we
 want consider moving those trips to other access areas?
- Options for where RSA compensation fishing can be done. Could consider limiting it to only
 the MAAA, or perhaps allowing some in CAII if there is a trip that is allocated. Just looking for options
 for the Committee to consider right now.
- F rates for NGOM we don't have an update from the 2020 surveys, but we can weigh in the F rates to use for setting catch advice. Last year the PDT looked at a range of 0.18, 0.20, and 0.25.

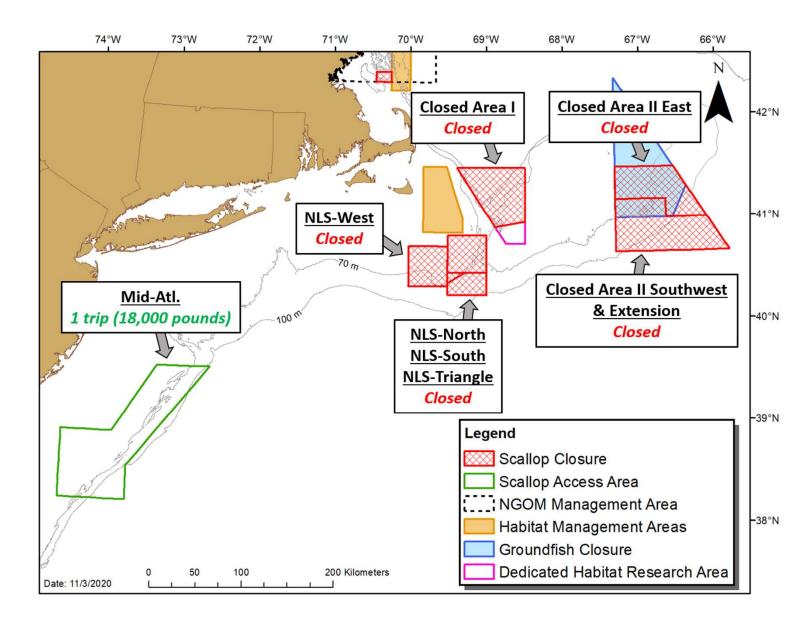
SAMS areas – Georges Bank



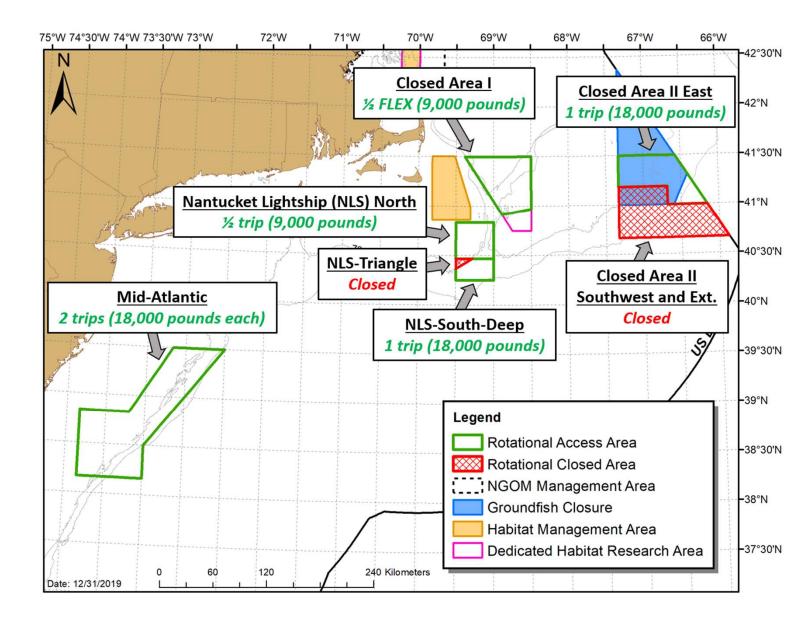
SAMS areas - Mid-Atlantic



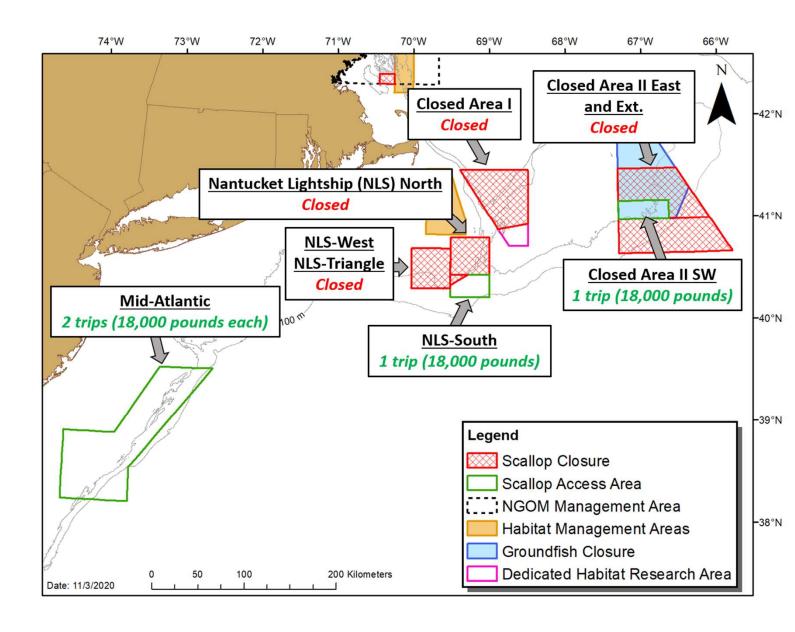
No Action



Status Quo



PDT BaseRun1



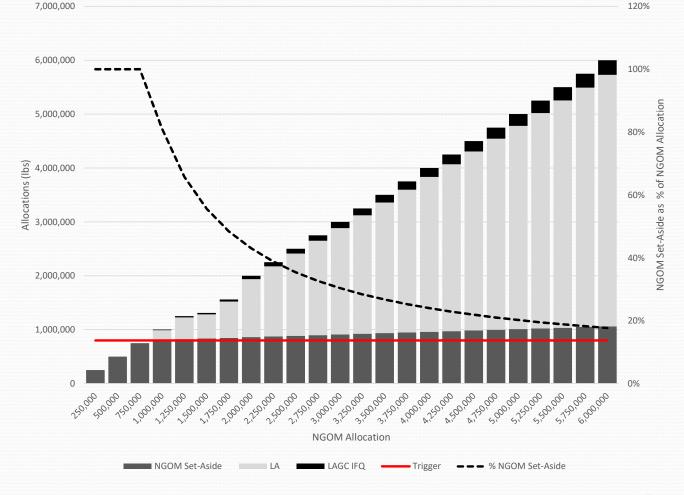
Amendment 21 Update & 2021 Scallop Work Priorities

Northern Gulf of Maine Measures

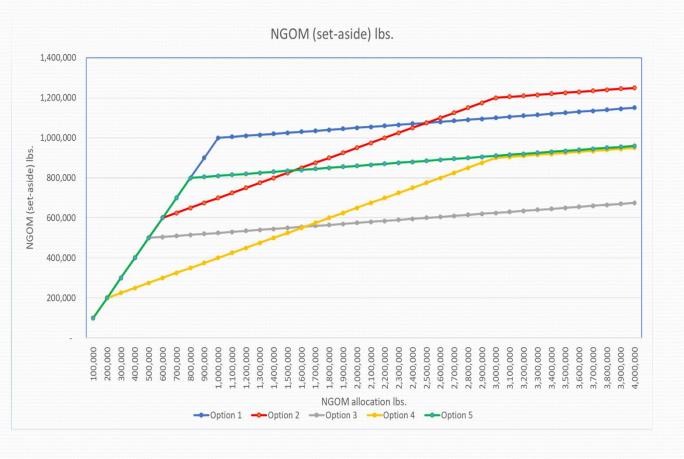
ACTION	FINAL PREFERRED ALTERNATIVE
NGOM Catch Limits (Section 4.1 of EA)	Account for the scallop biomass in the NGOM as part of the legal limits in the fishery by adding biomass from the area into calculations of the overfishing limit (OFL) and acceptable biological catch (ABC), i.e., included in the "ABC flowchart"
NGOM Allocations (Section 4.2 of EA)	Create a NGOM Set-Aside and a NGOM Set-Aside trigger of 800,000 pounds. When the NGOM Allocation is over 800,000 pounds, pounds above the trigger would be shared with 5% for the NGOM Set-Aside and 95% for the NGOM APL (for the LA and LAGC IFQ).
Monitoring Directed Scallop Fishing in the NGOM (Section 4.3 of EA)	Expand the IFO program to include LAGC NGOM vessels, increase scallop observer set-aside with scallops from the NGOM; require call-in for all vessels fishing in the NGOM
Support Scallop Research Using Scallops from the NGOM (Section 4.4 of EA)	Allocate 25,000 pounds of the NGOM Allocation to increase the overall Scallop Research Set-Aside (RSA) to 1.275 million pounds and support RSA compensation fishing
NGOM Fishing Season (Section 4.5 of EA)	No Action. Maintains current measures for the number of landing days and sailings per day vessels are allowed in the NGOM, as well as maintaining a year-round opening of the NGOM management area unless an allocation is reached
Cumulative Maximum Dredge Width Fished in the NGOM (Section 4.6 of EA)	No Action. Maintains the provisions in the current Gulf of Maine dredge exemption program with no additional restrictions on maximum dredge width

Action 2: NGOM Allocation

- New option selected at Final Action:
 - 800,000 lb trigger
 - 95% for LA/IFQ; 5% for the NGOM APL



Action 2: NGOM Allocation



 Preferred Option (5) shown in green.

NGOM Set-Aside Triggers		NGOM Sharing Agreement		
	Option 1: I million pounds	I Tier Sharing: All pounds > Trigger		
	Option 3 : 500,000 pounds	5% NGOM Set-Aside 95% NGOM APL		
	Option 2 : 600,000 pounds	2 Tier Sharing: Pounds > trigger ≤ 3 million 25% NGOM Set-Aside 75% NGOM APL		
	Option 4 : 200,000 pounds	Pounds > 3 million 5% NGOM Set-Aside 95% NGOM APL		

LAGC IFQ and Other Measures

ACTION	FINAL PREFERRED ALTERNATIVE		
Increase LAGC IFQ Possession Limit (Section 4.7 of EA)	Increase LAGC IFQ possession limits to 800 pounds for access areas and maintain the 600 pound possession limit for open area trips		
Increase Observer Compensation for LAGC IFQ Vessels (Section 4.8 of EA)	Allow LAGC IFQ vessels to be eligible for additional compensation when carrying an observer on fishing trips longer than one day; daily compensation rate would be prorated at 12-hour increments for trips exceeding 24 hours up to 48 hours		
One-Way Transfer of Quota from LA with IFQ to LAGC IFQ-Only (Section 4.9 of EA)	Allow temporary one-way transfers of quota from LA with IFQ to LAGC IFQ-only with no change to the pool of quota LAGC IFQ accumulation caps apply to (5% of APL)		
Specifications and Framework Adjustment Process (Section 4.10 of EA)	The Council voted to support Alternative 2, which adds details about what kinds of changes could be made to the management of the NGOM and monitoring in future FW actions.		

2021 Priorities and Vehicles

Each column represents a way to address the priority

Limited time in 2021 to work on "new" priorities (summer of 2021)

Ongoing Work from 2020, Reg Req. that will continue in 2021

Priorities for 2021

Response to Executive Order

Specs	Framework	Other		Amendment	
	2021/2022 Specs	RSA Support	Tracking flatfish catch	Amendment 21: NGOM Management Measures, LAGC IFQ	
20	22/2023 Specs	Scallop Survey Advisory Panel		Trip Limits, One-way IFQ transfers	
	Northern Edge (Habitat)	Evaluate Rotational Management			
	IFQ Trip Counting	(Counc	rip exchange cil letter, llemaking)		
		(Counc	Closure Noticing cil letter, llemaking)		

Council's response to E.O. 13921

Enclosure (4) EO 13921 Response Ex Comm Recommendations

	Ť		Action type (e.g. Changes to			Rationale of how the recommended	A CONTRACT OF THE PARTY OF THE
	Council(s) P	Priority Number	Regulations, Orders, Guidance		Description of recommended action(s)	domestic fishing and increases	Proposal for initiating each recommended action(s) within 1 year of the date of this order (i.e., by May 7, 2021)
	NEFMC	1	Other Similar Agency Action	N/A	Recommend creating a seafood marketing branch in NMFS- that	A national-level program that emphasizes the sustainable products produced by the U.S. fishing industry	NMFS to coordiante development of a national seafood marketing effort, partnering with industry.
	NEFMC	2	Other Similar Agency Action	N/A	Recommend establishing federal policy that imports of seafood, including HMS products, should meet or exceed the same standards of harvest, for example in terms of the gear used and impacts		NMFS convene a working group to identify the steps necessary t oimplement this policy.
•	NEFMC (GARFO)	3	Order	50 CFR 648.59(b)(3)(ii)	Develop tools/website to allow online exchange of Atlantic Sea Scallop fishery access area trips		GARFO to hire contractor by May 1, 2021 to make necessary changes to IT system. No regulatory action needed.
>	NEFMC	4	Order		Modify LAGC closure noticing	closures must be based on a forecast. The risk is that the forecast may be in error; usually this leads to an under-	GARFO to identify ways to modify the notice process. If possible, these should be adopted through agency action. If Council action is needed, this could be considered in a future management action.

Possible Timelines for 2021 Actions

	Amendment 21	Framework 33	Framework 34
January		Final Action	
February	Preliminary Submission	Preliminary Submission	
March		Proposed Rule, NMFS Reviews FW	
April		NMFS Reviews FW, Council Final submission	
May - June	Final Submission	Publish Final Rule, Implementation FW33	
June	Proposed Rule/NOA		
July	Proposed Rule/190A		
August			Survey Data
September	Decision (determine what measures are needed in FW34)		Run Projection Model
October			Start developing RUNS
November			
December			Final Action

Questions