

Scallop AP and Committee Meeting

**Jonathon Peros, Council Staff,
Sam Asci, Council Staff**

**October 26 & 27, 2021
Webinar**



Meeting Outcomes and Agenda

Today's meeting:

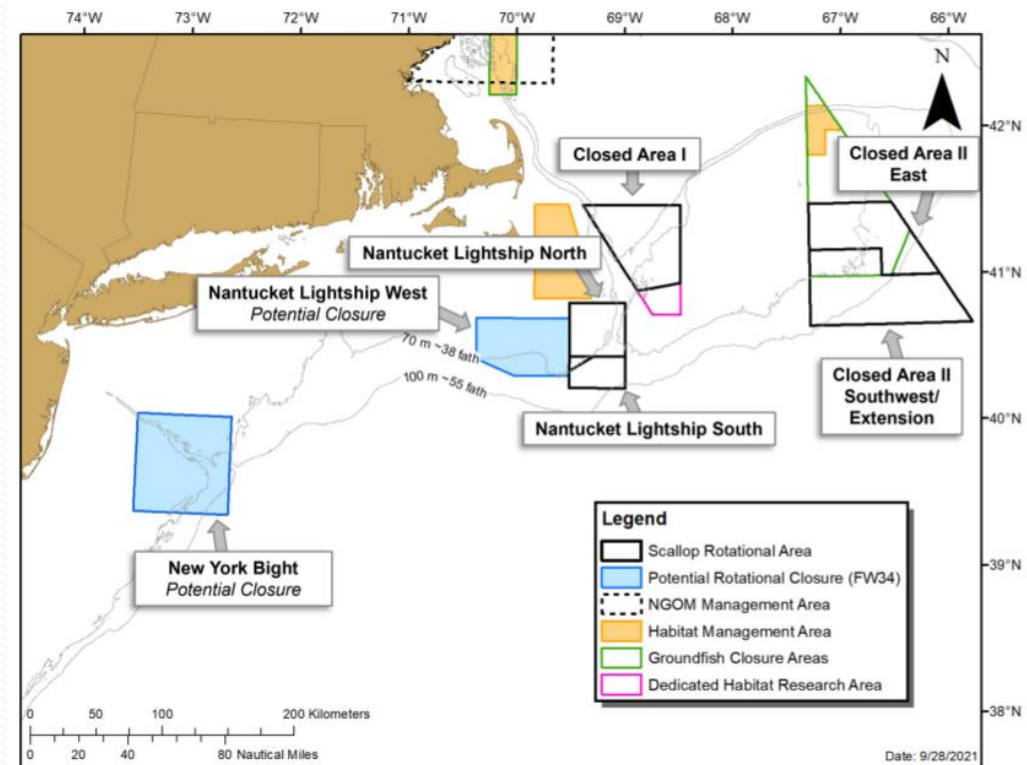
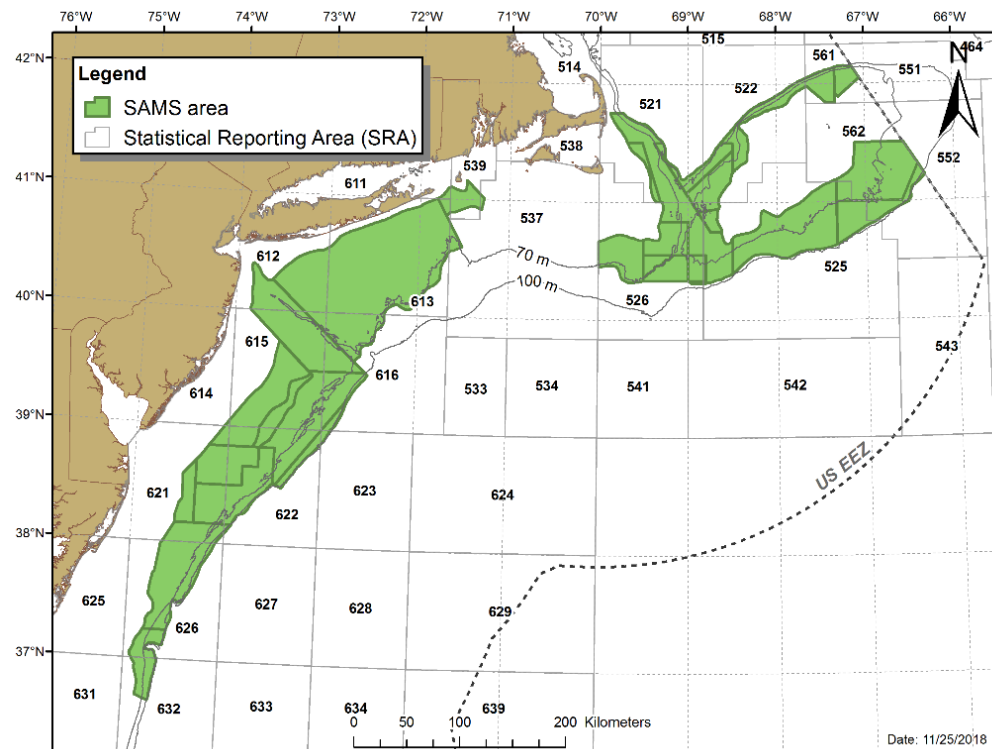
- Recommend specification alternatives and other measures to be developed in Framework 34.
- Provide feedback on the evaluation of rotational management.
- Recommend 2022 work priorities.

AGENDA

- 9:00 a.m.** Welcome and Introductions
- 9:20 a.m.** **FW34 Specifications:** Review and discuss specification alternatives and access area configurations, including outputs from Committee tasking motions. Make recommendations for alternatives to be included in Framework 34.
- 12:00 pm** *Lunch break*
- 1:00** Continue discussion on specification alternatives (if needed).
- 1:45** **Evaluation of Rotational Management** – Update on project progress from Dr. Cate O’Keefe (Fishery Applications Consulting).
- 3:00** **2022 Priorities Discussion.** Review progress toward 2021 priorities and timelines. Provide input to Committee for potential scallop work priorities for 2022.
- 4:30** **Other Business**

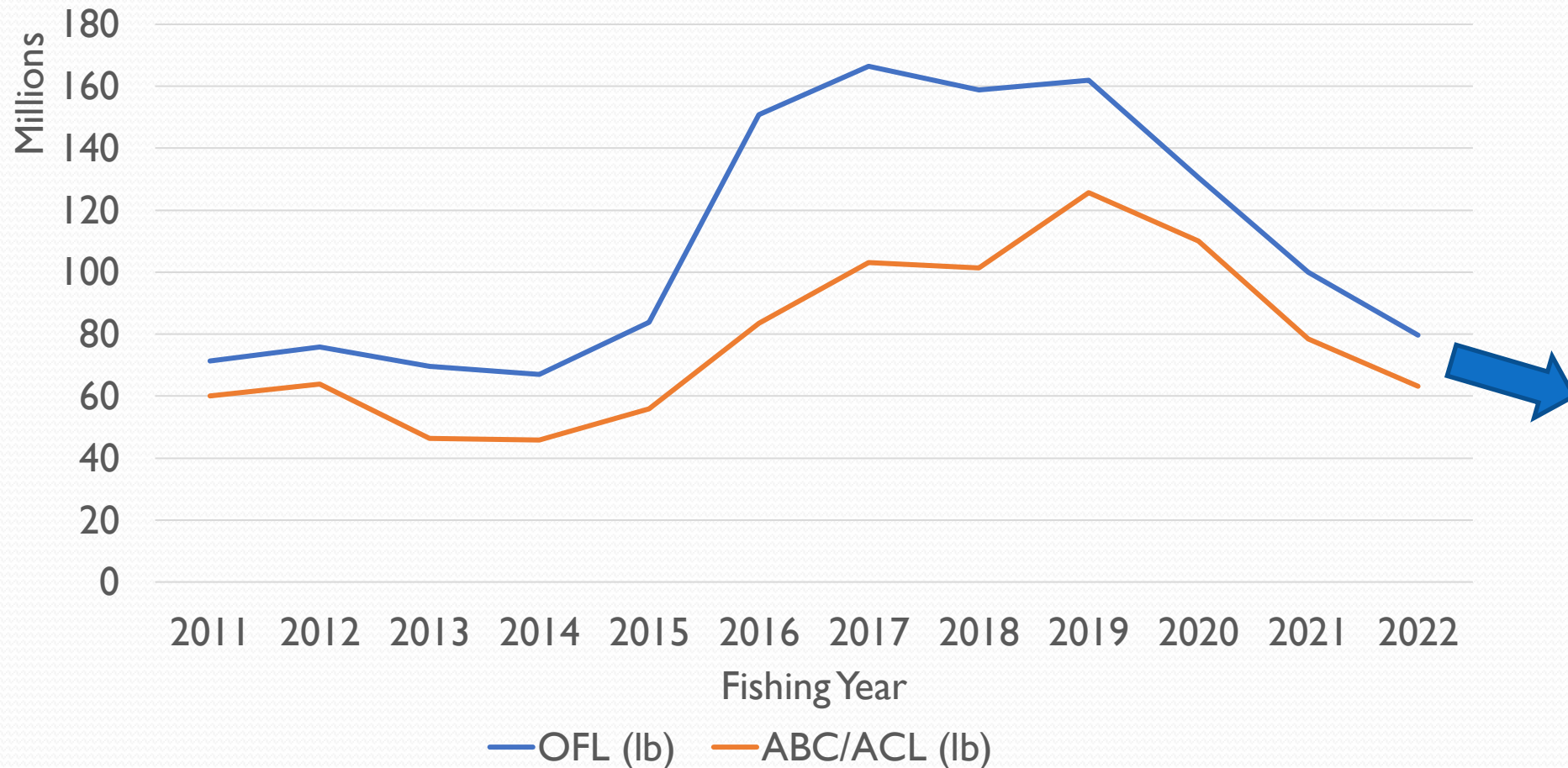
**Proposed FY 2022
ACL
(F=0.45)
~63.2 million lbs**

**“Spatial Management”
FY 2022 Possible
Landings
(TBD < ACL)**



Recent OFL & ABC (GB & MA)

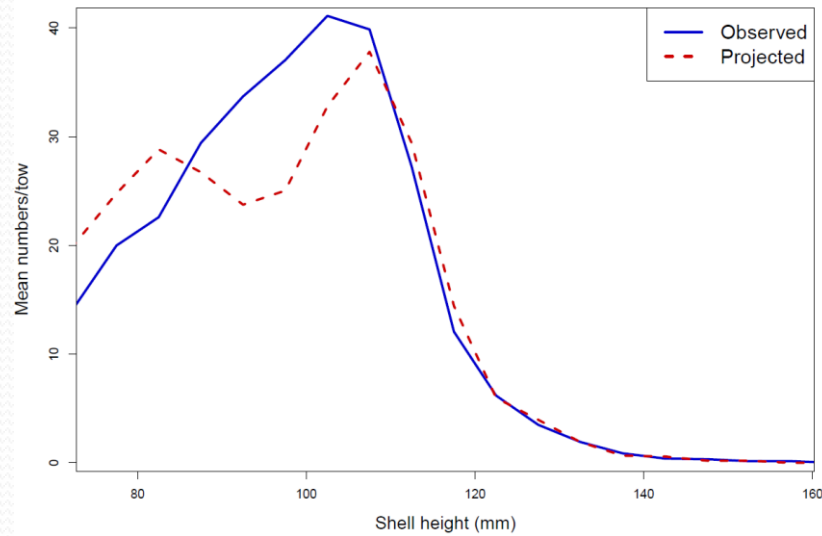
OFL & ABC (2011-2022) in pounds



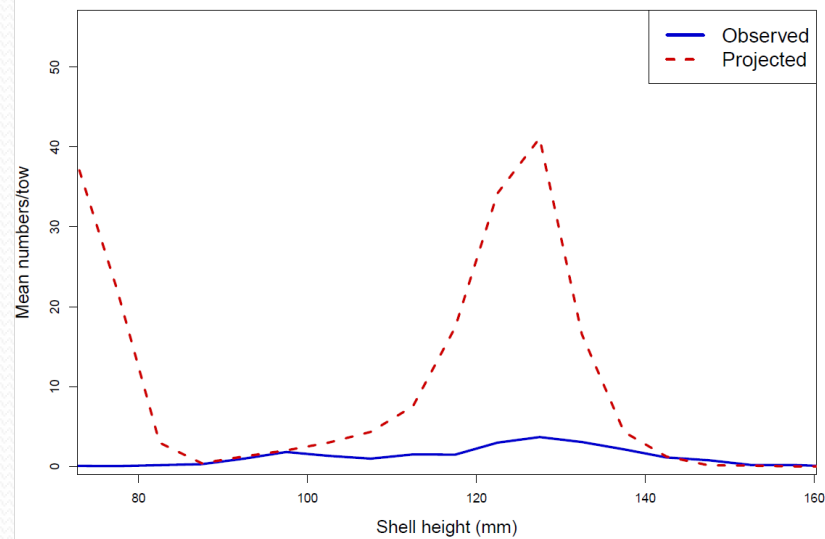
Comparison of Projections and Survey Estimates

2021 Survey Results compared to 2021 projections from 2020 data. Growth parameters were reduced in the 2020 and 2021 projections, consistent with 2020 management track assessment.

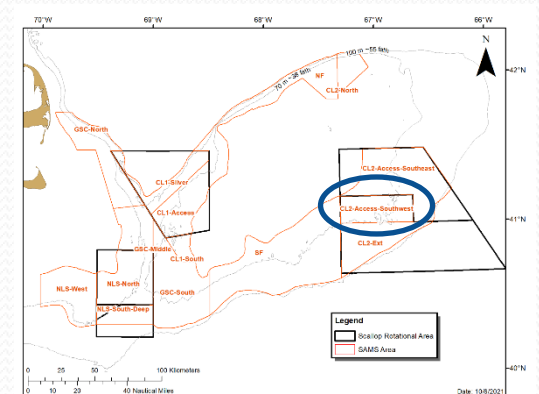
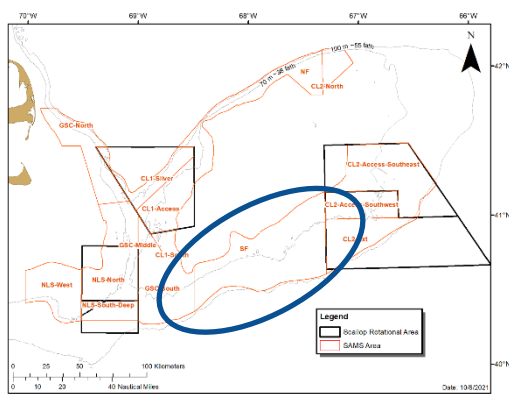
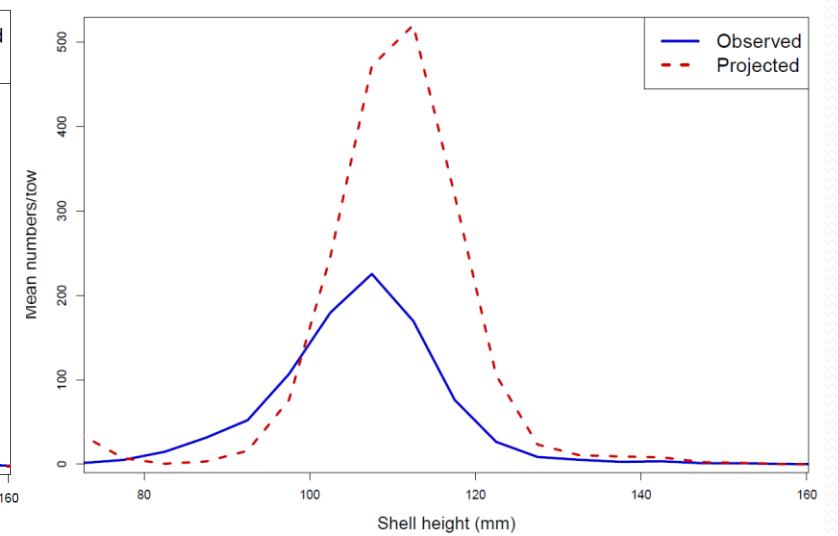
Southern Flank (west of CAII)



Elephant Trunk Flex

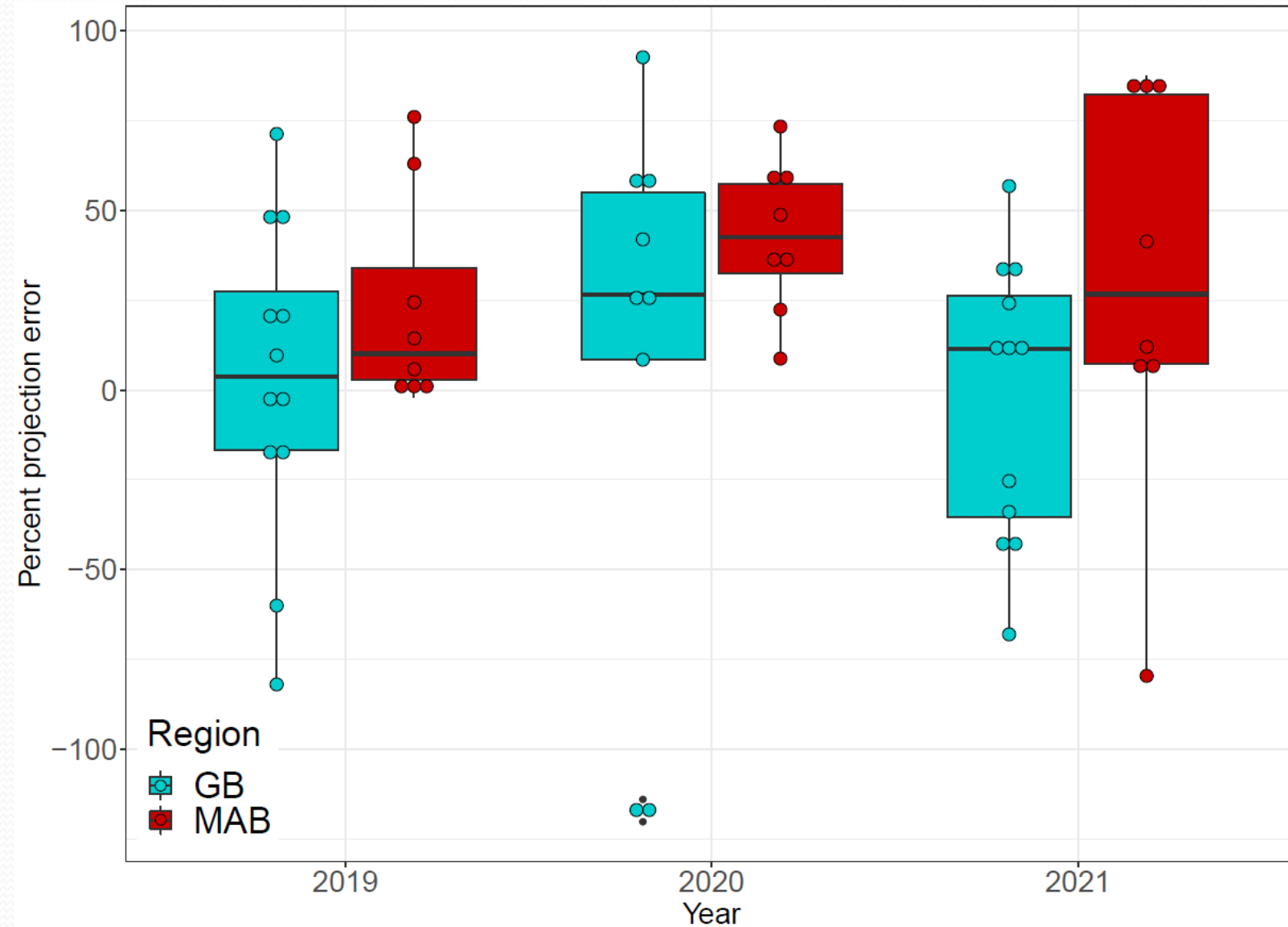


CAII-Southwest (Growth not adjusted)



Comparison of Projections and Survey Estimates

The % error is calculated as $100 * (\text{predicted} - \text{observed}) / \text{predicted}$. Positive errors mean the projection was an overestimate, and negative is an underestimate.



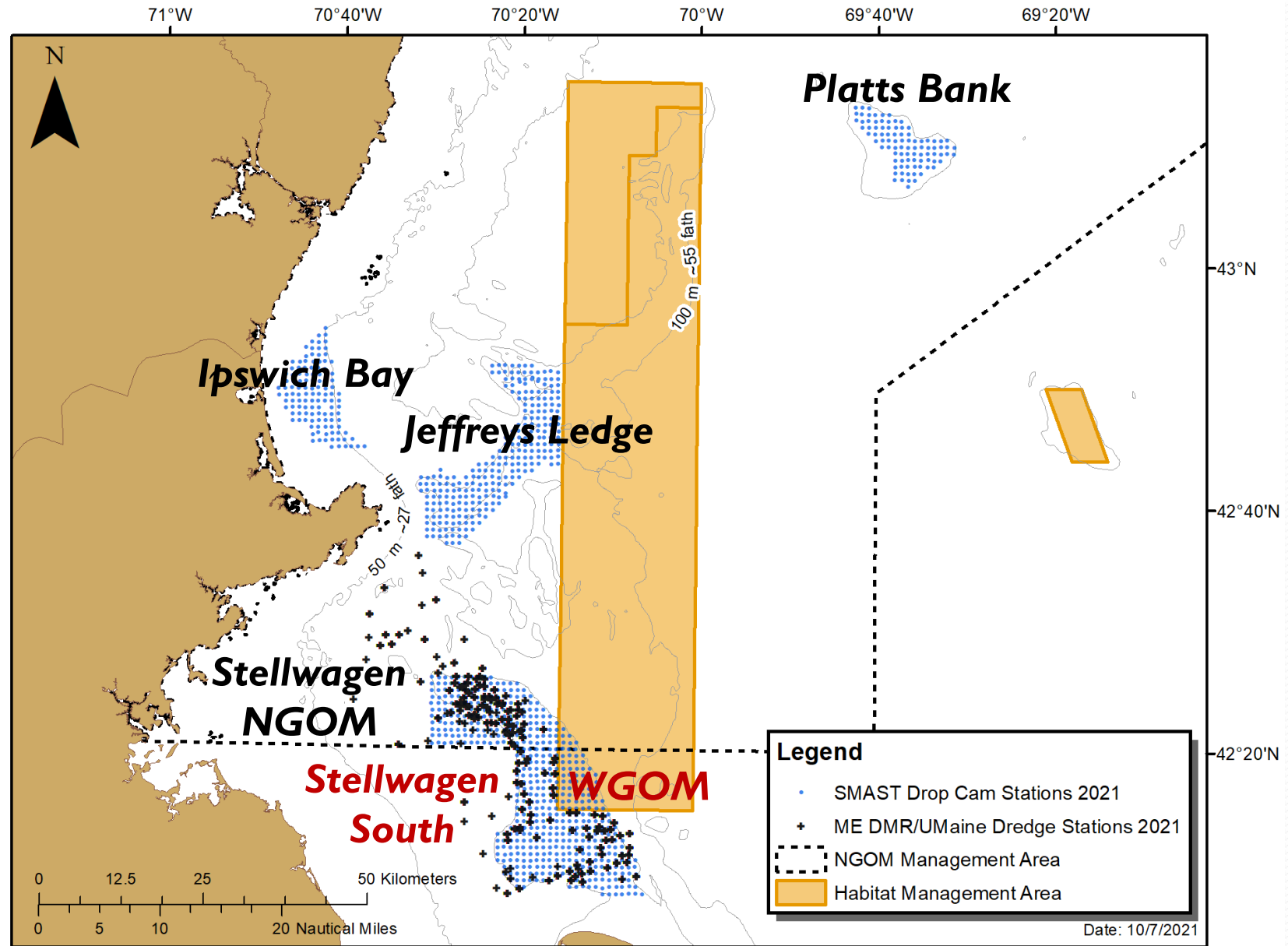
Contribution to 2022 OFL + ABC

(values in mt)

	OFL	ABC
NGOM Stellwagen	741	560
NGOM Other Platts, Jeffreys, Ipswich	166	124
TOTAL NGOM	907	684

	OFL	ABC
Stellwagen South	239	180
WGOM	990	739
TOTAL GOM	1,229	919

	OFL	ABC
GB & MA	36,135	28,702



Adding GOM would have a small impact on fishery allocations for 2022.

Framework 34 Projections

October 25, 2021

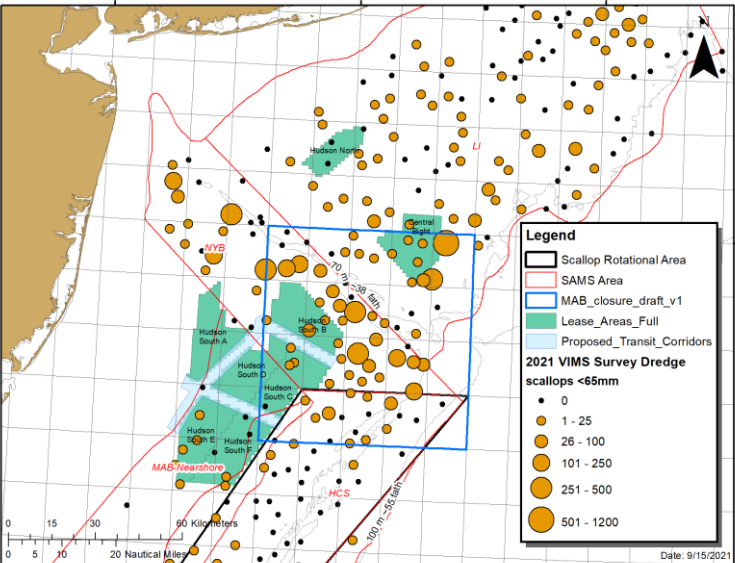
Scallop AP and Committee

For Reference: Committee Tasking

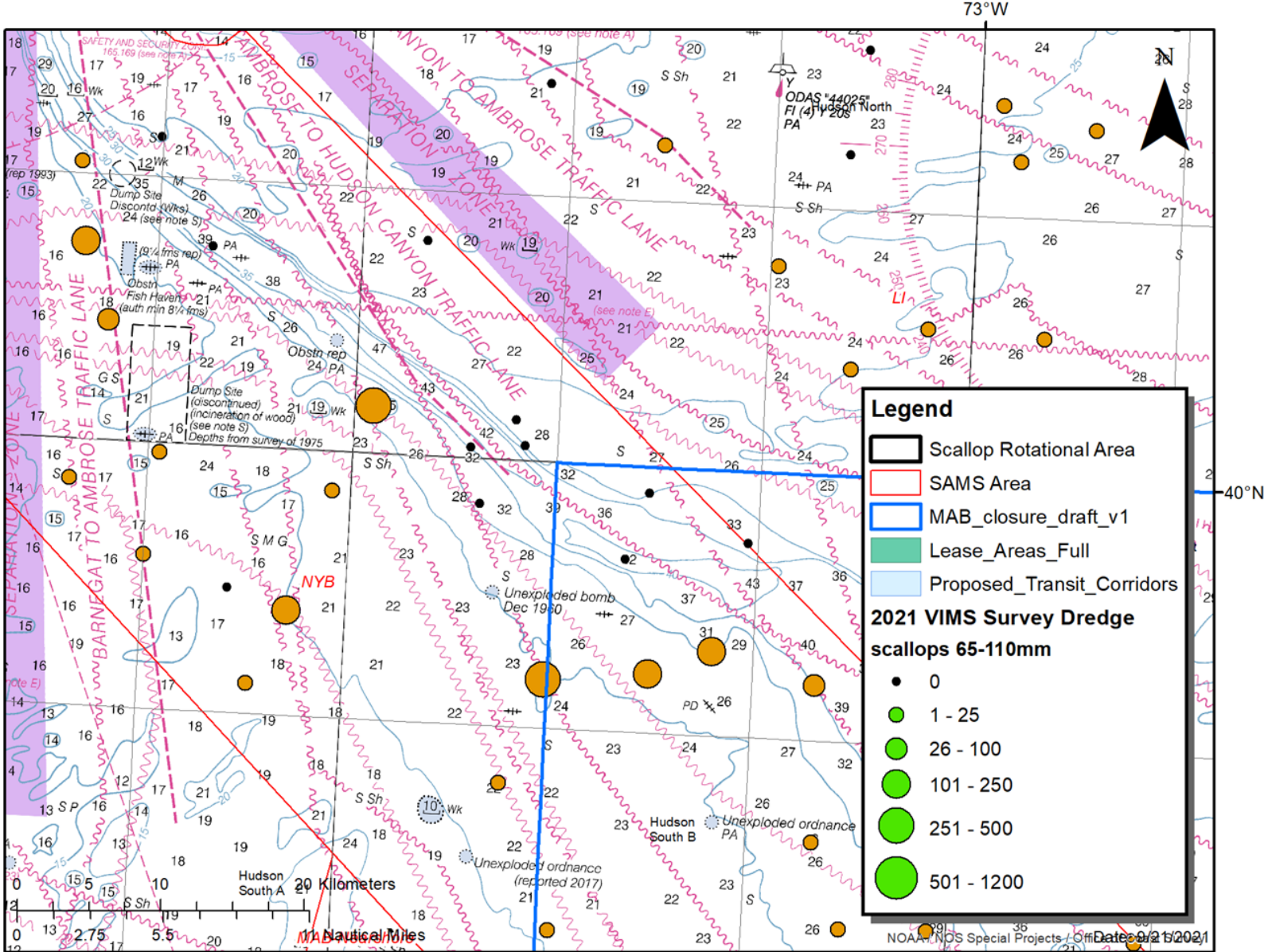
Runs 1-6, plus Run 3 at F=0.36 and 24 DAS (PDT & PDT 24 runs).

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
	Status Quo	AP Motion 1; AP Motion 4	AP Motion 2 Run 1; AP Motion 3, 5, 6	AP Motion 2 Run 2, Motion 4, Motion 5/6	AP Motion 2 Run 3, Motion 3	NO ACTION
Open Area F	F=0.3	F=0.3	F=0.3	F=0.3	F=0.3	18 DAS
FT LA Trip Limit	18,000 lbs	18,000 lbs	18,000 lbs	15,000 lbs	15,000 lbs	18,000
Trips trading	9,000 lbs	9,000 lbs	9,000 lbs	15,000 lbs	15,000 lbs	n/a
CL2-SE	CLOSED	18000 lbs	CLOSED	CLOSED	CLOSED	CLOSED
CLS-SW	27,000 lbs (1.5 trips)		27,000 lbs (1.5 trips)	30,000 lbs (2 trips)	15,000 lbs	CLOSED
CL2-Ext		18,000 lbs			15,000 lbs	CLOSED
NLS-South	18,000 lbs	18,000 lbs	18,000 lbs	15,000 lbs	15,000 lbs	CLOSED
NLS-North	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
NLS-West	Open Bottom	CLOSED	CLOSED	CLOSED	CLOSED	Open Bottom
NLS-Triangle	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
CL2-N (HAPC)	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
CA1	513k lbs LAGC AA	Open Bottom	LAGC IFQ AA from CAII	Open Bottom	LAGC IFQ AA from CAII	CLOSED
NYB	Open Bottom	Open Bottom	NEW CLOSURE	NEW CLOSURE	Open Bottom	Open Bottom
NF	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
GSC	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
SF	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
BI	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
LI	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
MAB-Nearshore	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
MAAA	18,000	Open Bottom	Open Bottom	Open Bottom	Open Bottom	18,000
DMV	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom	Open Bottom
West of NLS-W (Non-SAMS)	n/a	n/a	NEW CLOSURE	NEW CLOSURE	n/a	

NYB Closure Area used in the projections



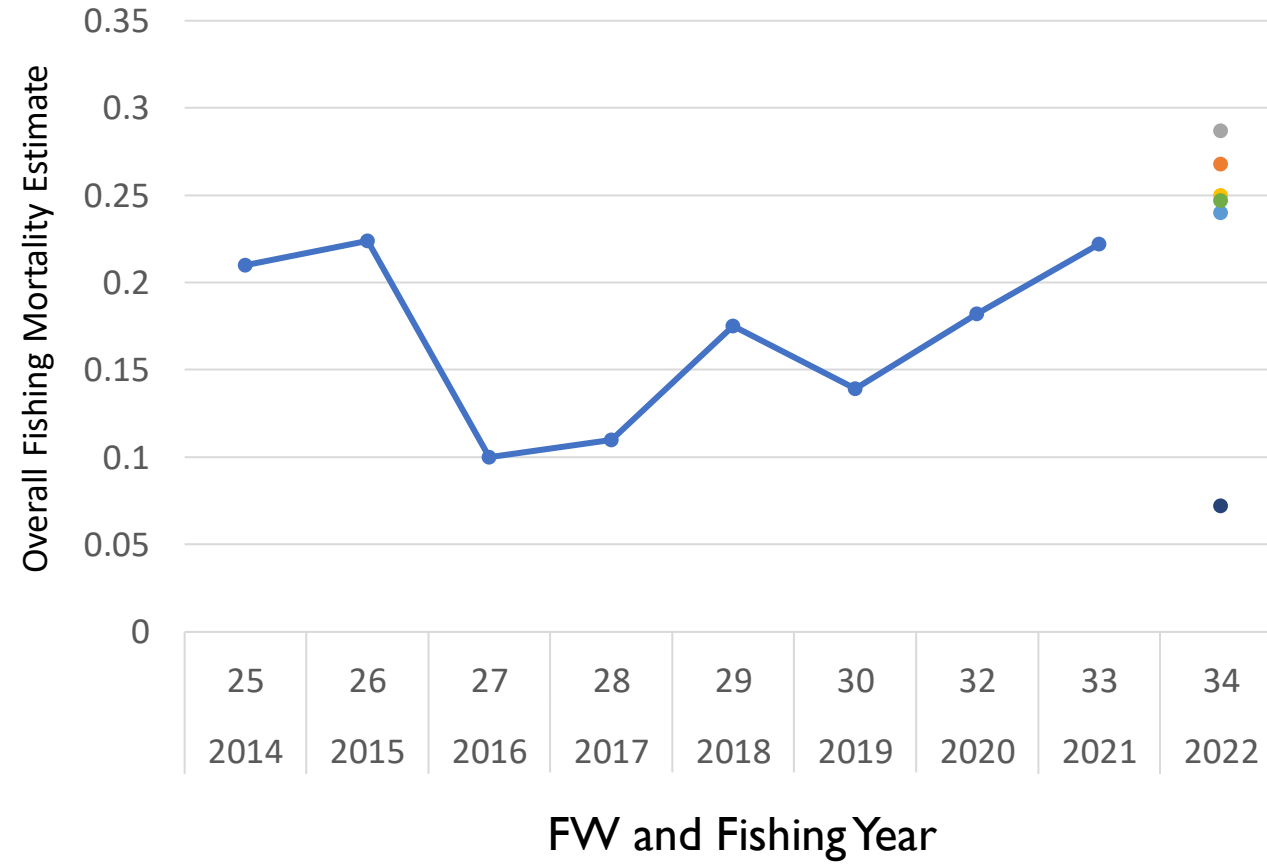
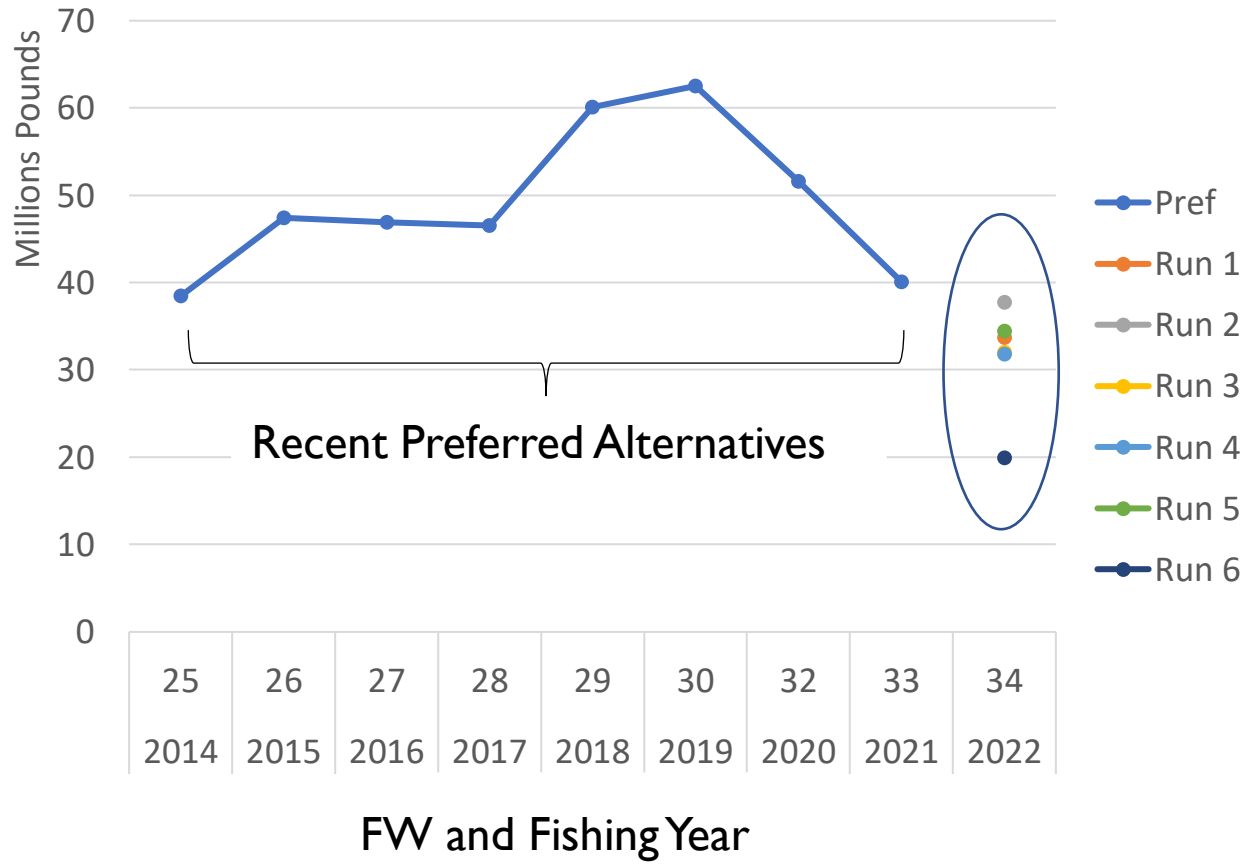
Scallops <65mm



Projections: Landing and Overall F

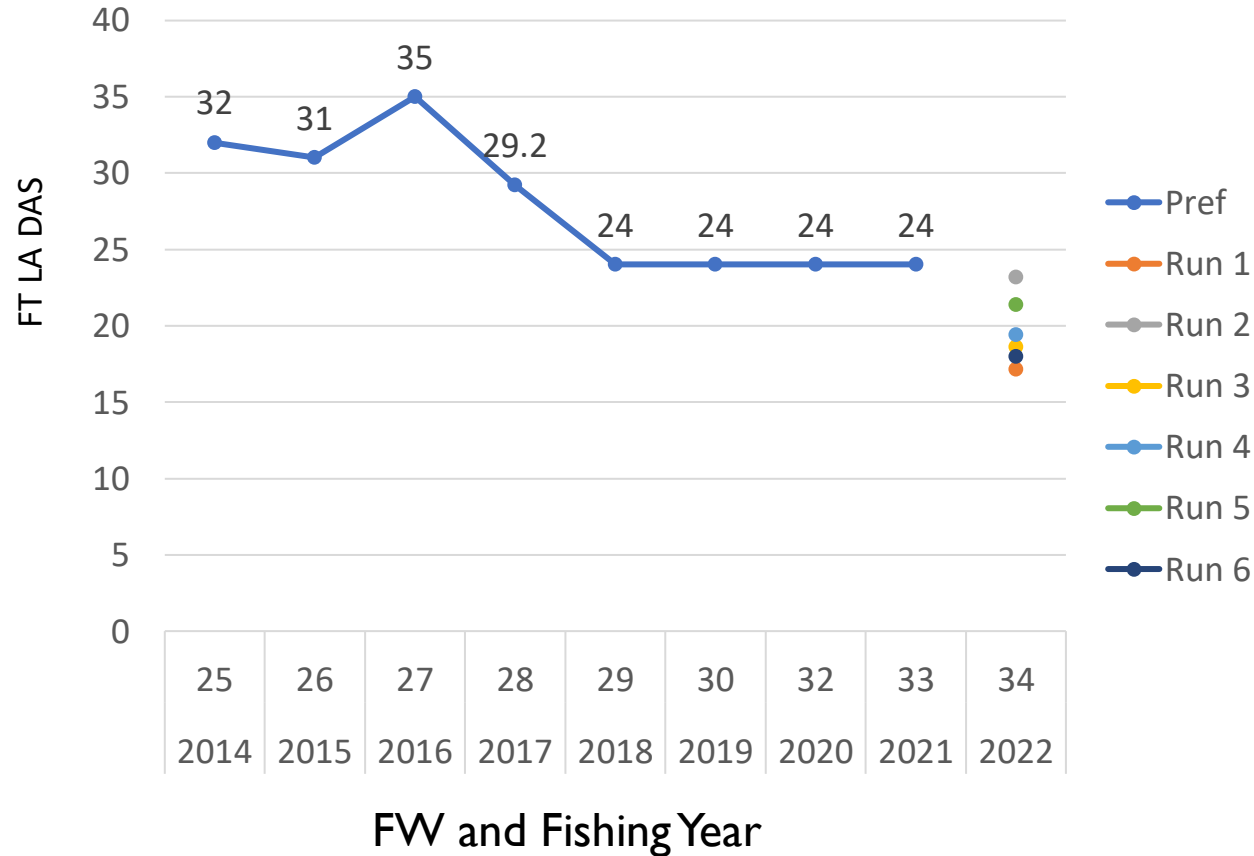
Landings are decreasing under all scenarios.
37.7 – 31.7 mil lbs (without set-asides removed)

Fishing mortality rate is increasing under all scenarios.

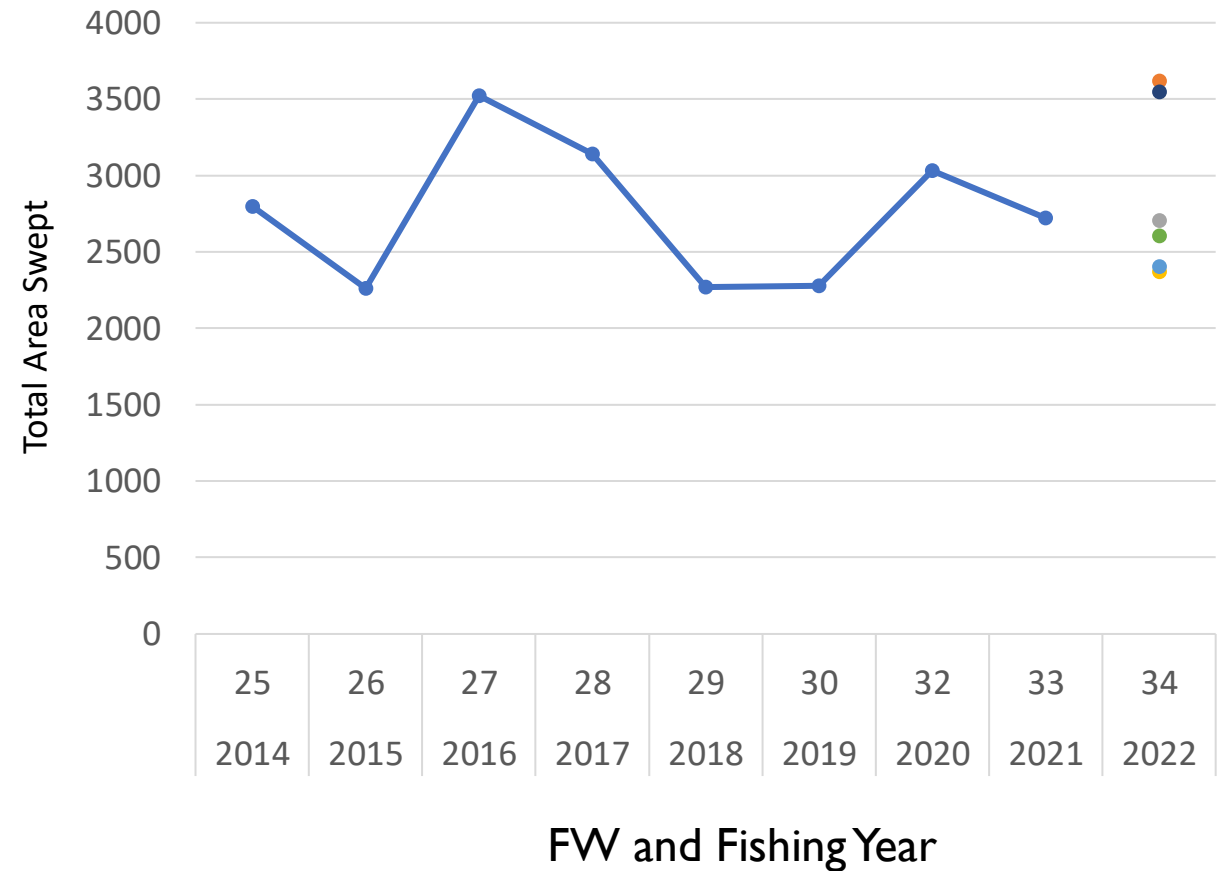


Projections: FT DAS and Area Swept

FT DAS at 24 for several years.
Run 1-5 use $F=0.3$ to set DAS.

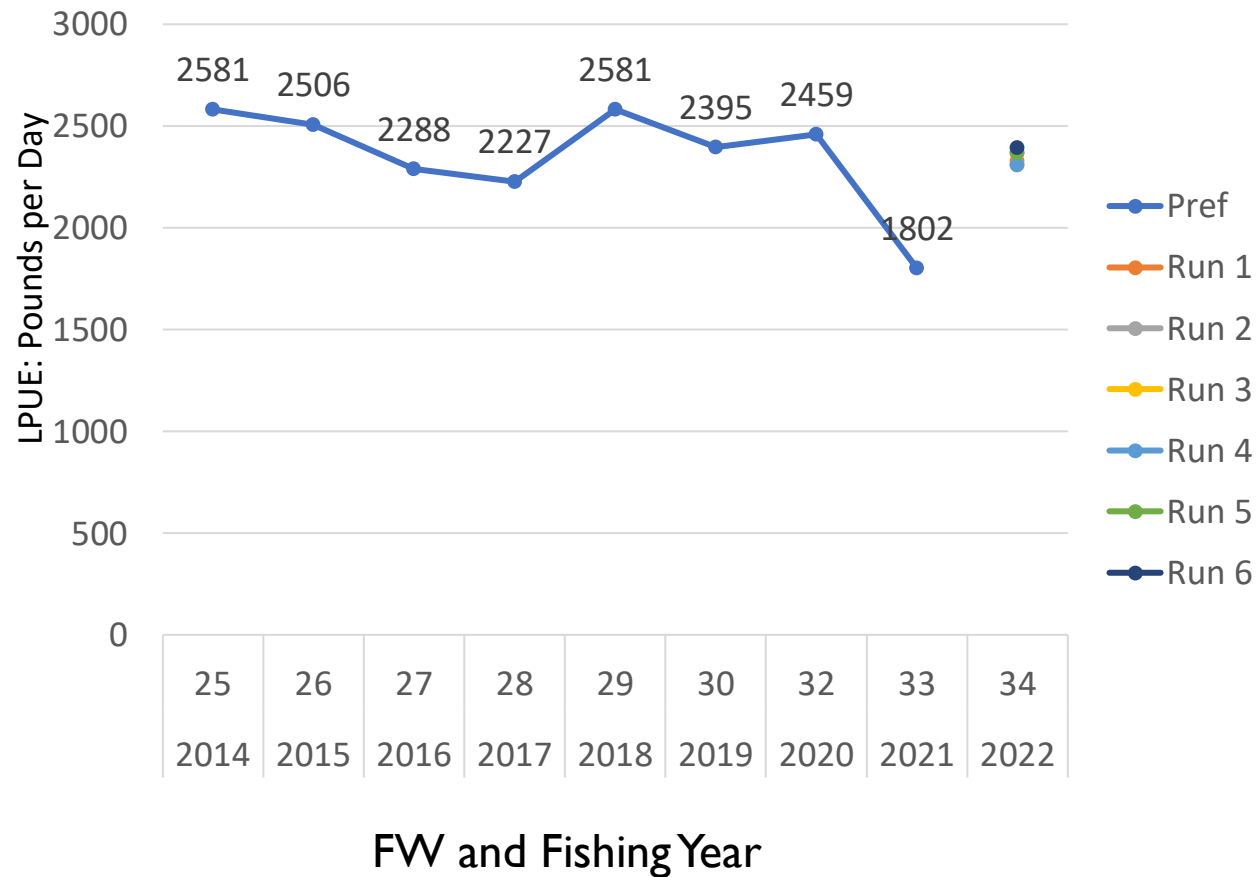


Total area swept may be underestimated if LPUE is over-estimated (rotational areas).

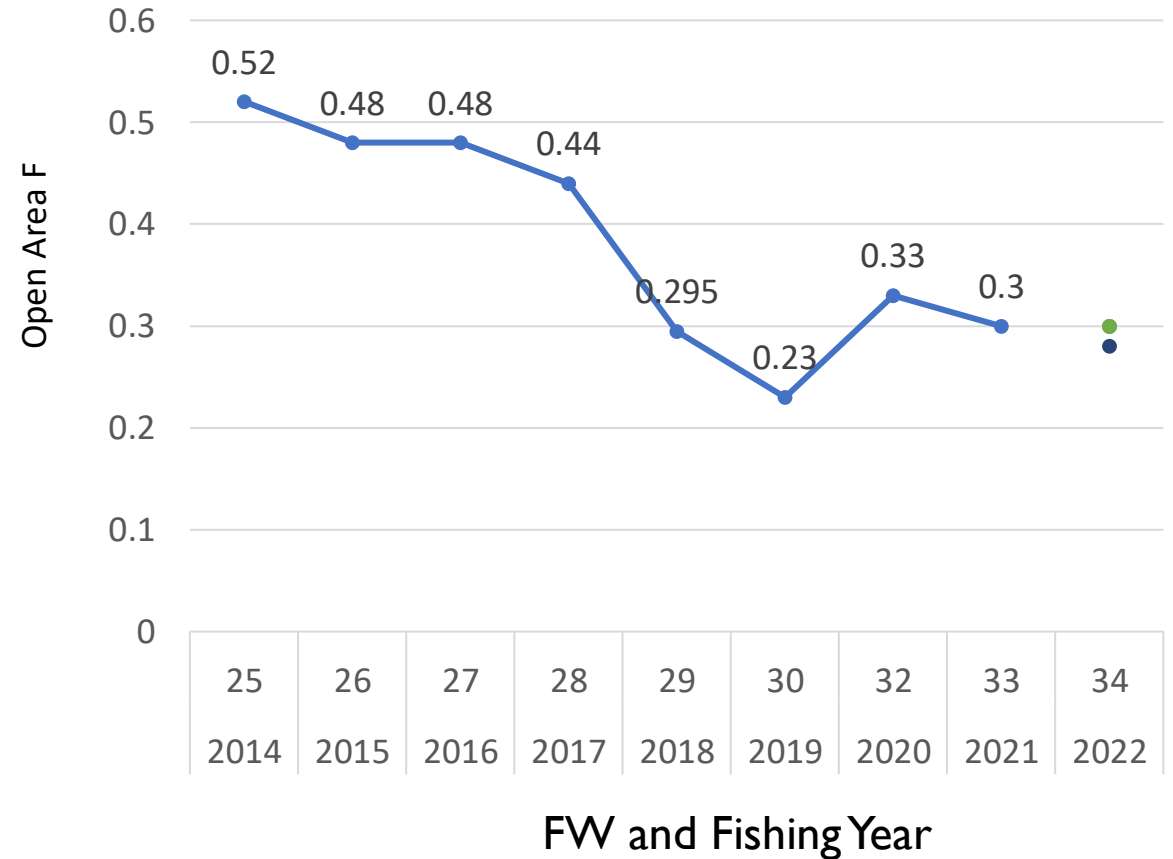


Projections: Open Area LPUE and Area Swept

Open bottom LPUE is very likely over-estimated at ~2,300 pounds per day.

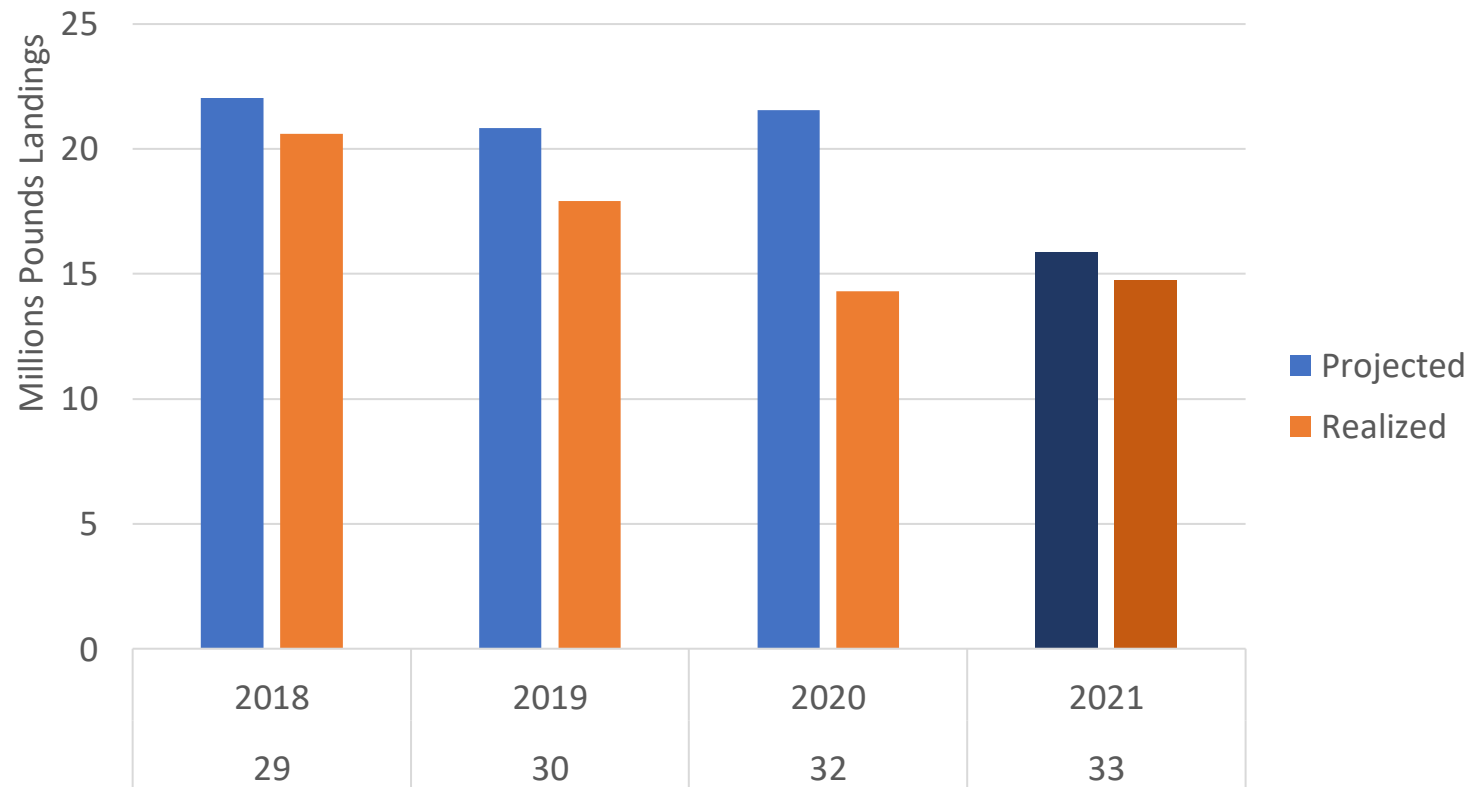


Open Area F rates over time.



Open Area Landings: Projections vs. Realized

- Realized open area landings were less than forecasted landings in 2018-2020, suggesting LPUE was over-estimated, among other factors.
- In FY2021, open area LPUE was set ~1,800 pounds, and realized landings will likely exceed the forecast. [80% of DAS used as of 10/20/21]



FW and Fishing Year
24 DAS allocated 2018-2021

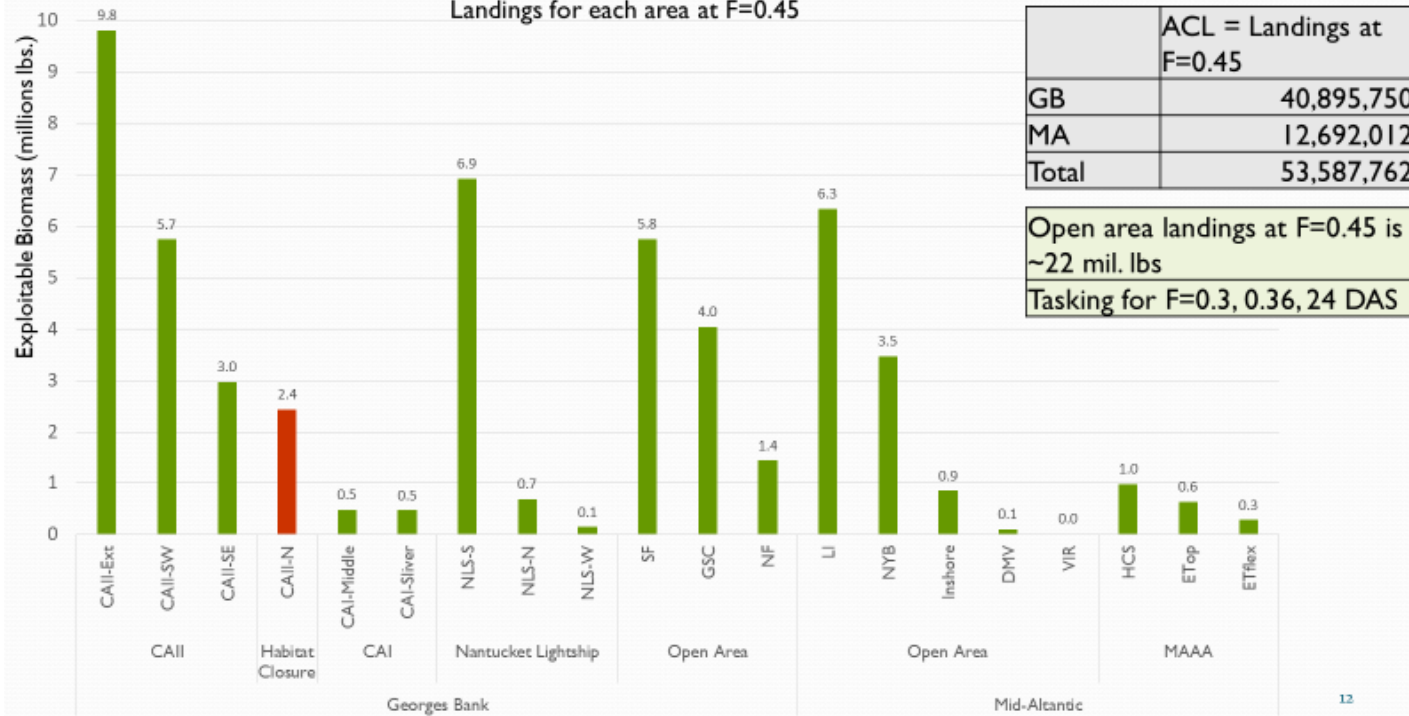
Open Area Outlook

Majority of biomass on Georges Bank.

2022 Forecasts: All runs with $F=0.3$
Higher open area F in GB SAMS areas.

2022 Projections – Exploitable Biomass by SAMS area

Landings for each area at $F=0.45$



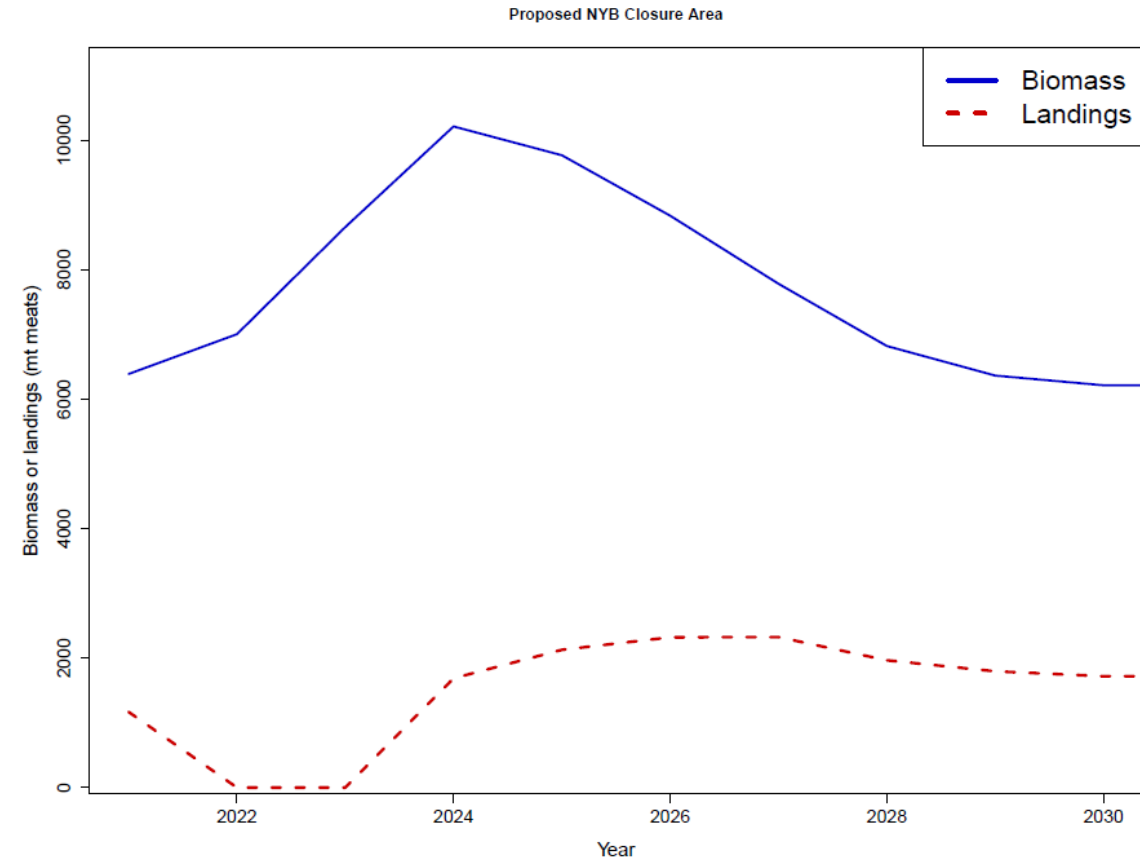
Open Area F Rates (GB SAMS Areas)

Run	GSC	NF	SF	Stell-S
1	0.39	0.49	0.41	0.48
2	0.38	0.47	0.4	0.47
3	0.39	0.49	0.41	0.49
4	0.4	0.49	0.41	0.49
5	0.38	0.48	0.4	0.47

GB F rates will be higher for PDT ($F=0.36$) and PDT24 ($F=0.39$) runs, which are based on Run 3.

Framework 34: Open Bottom – CAI and NYB Closures

- Model predicts that the CAI would be fished harder as open bottom vs. IFQ/RSA
 - Open Bottom: CAI sliver $\sim F=0.35$; CAI Access $\sim F=0.34$ (Above average F for both areas)
 - IFQ/RSA (with IFQ share of CAI AA fishing coming from CAI): CAI sliver $\sim F=0.26-0.3$; CAI AA $\sim F=0.16$
- Model predicts that the NYB Closure area would be fished at $\sim F=0.35$ if open bottom



Closed Area I and NYB Sensitivity

- Model results pivot off CAI and the proposed NYB Closure being **OPEN**.
(23.3 DAS at F=0.3 with predicted LPUE at 2,366, Open Landings = 19.2 Mil. pounds)
- At F=0.3:
 - Model thinks about 2.6 mil. pounds would come from NYB if it is open bottom.
 - Model thinks around 600k pound would come from CAI areas if they are open bottom.

	<i>Run 2</i>	<i>Run 3, PDT runs</i>	<i>Run 4</i>	<i>Run 5</i>
CAI	Open Bottom	LAGC IFQ/RSA	Open Bottom	LAGC IFQ/RSA
NYB Closure	Open Bottom	NEW Closure	NEW Closure	Open Bottom

24 DAS		F=0.39 (19.5 mil)		
F=0.36		22.3 DAS (18.2 mil)		
F=0.30	23.2 DAS (19.2 mil)	18.6 DAS (15.9 mil) (-3.3 mil)	19.4 DAS (16.6 mil) (-2.6 mil)	21.4 DAS (18.6 mil) (-600k)

Open Area DAS

- Landings from open areas at an F rate.
- Divided by LPUE Estimate. (Model based)
- Divided by Full Time Equivalent (327) to account for both FT and PT vessels.
- Two ways to adjust: LPUE & F rates.
- **FW34: Focus on changes to F rates.**
- **AP and Committee can recommend a range of F rates for development in FW34. (F=0.3, F=0.36...24 DAS)**



Open Bottom and Overall F, Run 3

- Overall F rates are estimated to less than $F=0.3$ ($ABC=0.45$, $OFL=0.61$).
- Assuming an average open area F of 0.3, some GB F rates are estimated to be close to $F=0.5$.
- Open bottom LPUE is very likely over-estimated.
 - If vessels do not achieve these catch rates, overall landings will be over-estimated, and realized fishing mortality will be under-estimated.
- With NYB closure area opened and $F=0.3$, the model still predicts that most of the of open area fishing will be in on Georges Bank, and that those areas will be fished around a $F=0.4$ or higher.
- Open area F rates may be underestimated on Georges Bank if vessels do not fish in the Mid-Atlantic regions (VIR, DMV, ET areas, HCS).
- Any input on how much open area fishing might occur in ET/HCS if MAAA becomes open bottom?
- Any input on seasonal closures? Delayed openings?

SAMS areas	Run 3 F
CAI AA	
CAIMid	0.16
CAIN	0.26
CAII AA	
CA2Ext	0.19
CA2SW	0.25
Closed	
CA2N	0
CA2SE	0
NLSN	0
NLSW	0
NYBPCI	0
NLS-S AA	
NLSS	0.4
Open Bottom	
DMV	0.11
ETFL	0.27
ETOp	0.29
GSC	0.39
HCS	0.29
Inshore	0.28
LI	0.19
NF	0.49
NYBOP	0.31
SF	0.41
Stell-S	0.49
Vir	0.06

F rates for Rotational Access Areas

- Consider varying F rates CAII and NLS-S SAMS areas.
- AP/Committee: Input on CAII configuration.

RUN	Description	Trips	Trip Limit	Landings	CA2SE (F)	CA2SW (F)	CA2Ext(F)	NLSS (F)
1	Status Quo: 1.5 trips in CAISW+EXT combined, and 1.5 trips in NLS-South.	3	18,000	~18 million	0	0.25	0.2	0.66
2	1 trip in CAII SE & SW combined. 1 trip in CAII EXT. 1 trip in NLS-South.	3	18,000	~18 million	0.15	0.3	0.25	0.4
3	1.5 trips in CAISW+EXT combined, and 1 trip in NLS-South.	2.5	18,000	~15 million	0	0.25	0.19	0.4
4	2 trips in CAISW+EXT combined, and 1 trip in NLS-South.	3	15,000	~15 million	0	0.31	0.2	0.31
5	1 trip CAII SW, 1 trip in CAII EXT, 1 trip in NLS-South	3	15,000	~15 million	0	0.31	0.2	0.31
6	No Action – Default. 1 trip to the MAAA.	HCS, ET open, ET Flex all fished at F=1.2, which results in 1/3 of a trip.			0	0	0	0

Summary of Committee Tasking Runs

PDT runs: Combination on Run 3 open bottom, and Run 4 access area fishing.

- 15k lbs trip limits (45k lbs per FT LA)
 - 2 trips to CAII region
 - 1 trip to NLS-South
- Open bottom: (F=0.36 & 24 DAS)
 - CAI for RSA & LAGC IFQ
 - NYB Closure

Run	Land (Mil)	APL after set-asides
Run 1 (SQ)	33,686,634	31,692,816
Run 2	37,745,344	35,751,527
Run 3	32,048,599	30,054,782
Run 4	31,788,454	29,794,636
Run 5	34,398,727	32,404,910
Run 6 (NA)	19,940,812	17,946,994
PDT	32,791,557	30,797,740
PDT 24DAS	34,039,373	32,045,556

Run	Year	OverallF	OpF	Land	Land (Mil)	U10	1020	2030	30+	LPUE	OpLPUE	MALPUE	GBLPUE	TDAS	OpDAS	FTDAS	BotAreaS wept	OpLand	OpLand (Mil)
Run 1	2022	0.268	0.3	15280	33686634	1327	7413	4676	1611	2368	2325	1778	2555	14224	6318	17.14	3617	6662	14687196
Run 2	2022	0.287	0.3	17121	37745344	1350	8478	5353	1697	2479	2366	2020	2607	15225	8133	23.2	2707	8727	19239742
Run 3	2022	0.25	0.3	14537	32048599	1150	6872	4633	1628	2400	2308	1740	2553	13352	6876	18.6	2372	7197	15866669
Run 4	2022	0.24	0.3	14419	31788454	1241	7268	4211	1445	2458	2308	1738	2626	12933	7184	19.4	2404	7521	16580967
Run 5	2022	0.247	0.3	15603	34398727	1189	8005	4674	1489	2482	2367	2019	2632	13860	7875	21.4	2605	8456	18642289
Run 6	2022	0.072	0.28	9045	19940812	970	5424	1806	615	2322	2392	1995	2725	8589	6941	18	3546	7530	16600808
PDT	2022	0.232	0.36	14874	32791557	1295	7589	4203	1488	2426	2281	1732	2621	13519	7993	22.3	2792	8269	18230024
PDT 24	2022	0.24	0.39	15440	34039373	1352	7900	4320	1544	2410	2266	1727	2615	14123	8597	24	3050	8835	19477841

FW 34: Other measures

Default Measures for 2023

- Standard Default Measures:
 - Default specifications: Set DAS and LAGC IFQ quotas at 75% or previous years allocations.
 - Allocate 5.5% of access area allocations to the LAGC IFQ component for access area fishing.
- Council can deviate from this formula.
- **AP and Committee:** You may wish to identify Access Areas to be included as part of 2023 default measures.
- Do not need to allocate a default access area trip for 2023 – planning to do specs again next year.
 - Mixed results in recent years: NLS-West, MAAA for 2022...

PT Allocations for 2022

- Part time vessels get 40% of FT allocations.
 - EX: 3 FT trips at 15k would be 18k pounds of PT allocation.
- **AP and Committee:**
 - What is the lowest trip limit that is viable; what is a preferable trip limit?
 - Do PT vessels want/need access to all the same areas at FT or not?
 - Feedback about flexibility for PT vessels with CAI trips
 - What is the preference on total number of trips (1 or 2)?
- **PDT will develop options for the December meeting, and include in the Committee preferred.**
 - Need guidance on how to approach this.

IFQ AA Trips

- **AP and Committee:** Need input on distribution of trips, specifically if Closed Area II is open.
 - In the past, Council has redirected CAII trips to other access areas.
 - Analyzed options for LAGC IFQ fishing in CAI.
 - Looking for a motion today.

FT LA Allocation to AA	LAGC IFQ Trips @800
9,000	214
15,000	357
18,000	428
27,000	642
30,000	714
45,000	1,071

Potential Options for Closed Area II trips:

1. Distribute to CAI
2. Distribute across GB access areas (CAI/NLS)
3. Other ideas?

NGOM TAL and Defaults

- **AP and Committee:** Need input on defaults for 2023.
 - PDT recommends 75% or 50% of 2022 NGOM Set-Aside for default in 2023.

The new process established in A21 is as follows:

1. Calculate the OFL and ABC for the NGOM based on exploitable biomass in all surveyed areas. This is shown in rows A + B.
2. Calculate NGOM Total Allowable Landings based on F rate prescribed by the Council. The Committee recommended F=0.15, 0.18, and 0.20 be analyzed in FW34. These values are shown in row C.
3. To calculate the NGOM Set-Asides, and determine if there will be a LA or LAGC IFQ share added to the APL, the TAL (row C) is reduced by 1% of the NGOM ABC to support observer coverage (row D), and 25,000 lbs that are added to the overall RSA (row E).
4. For 2022, all NGOM set-aside (row F) options are less than 800,000 lbs, so the directed scallop fishery will be limited to LAGC NGOM & IFQ vessels fishing at 200 lbs a day. (The NGOM set-aside was calculated as: $C - D - E = F$ for each option)
5. The Council will consider setting NGOM default measures for FY 2023. The PDT discussed this briefly on their October 19, 2021 call. Two options are presented below: 75% of the 2022 NGOM set-aside, and 50% of the NGOM set-aside. The AP and Committee should be ready to recommend a 2023 default approach at your next meeting, or to task the PDT to develop more options.

	NGOM Exploitable Biomass	2022 (mt)	2022 (lbs)	
A	OFL	907	1,999,593	
B	ABC (F=0.32 all areas)	684	1,507,962	
Fishing Year 2022 (values in lbs) Stellwagen Bank Only				
		F=0.15	F=0.18	F=0.20
C	Total Allowable Landings	559,974	661,387	727,525
D	1% NGOM ABC for Observers	15,080	15,080	15,080
E	RSA Contribution	25,000	25,000	25,000
F	NGOM Set-Aside	519,895	621,307	687,446
Possible 2023 Default Approach				
G	75% of 2022 NGOM Set-Aside	389,921	465,980	515,584
H	50% of 2022 NGOM Set-Aside	259,947	310,654	343,723

Measures to Reduce Fishery Impacts

- Two sets of alternatives usually considered with specifications:
 1. Where RSA compensation fishing can occur
 2. Extend Closed Area II seasonal closure
 3. Reminder of NWP AM

Northern Windowpane Numbers & AM

- **Predict that the scallop fishery will be subject to Large AM (exceeded 150% of sub-ACL). Details on next slide.**
- Estimated NWP bycatch values for 2020. Does NOT include estimated catches in other fisheries. (2019 estimate for other fisheries was ~20mt)
- NWP ABC and ACL going up for 2021 – 2023, scallop sub-ACL 31 mt.
- Limited observer data for FY2020.

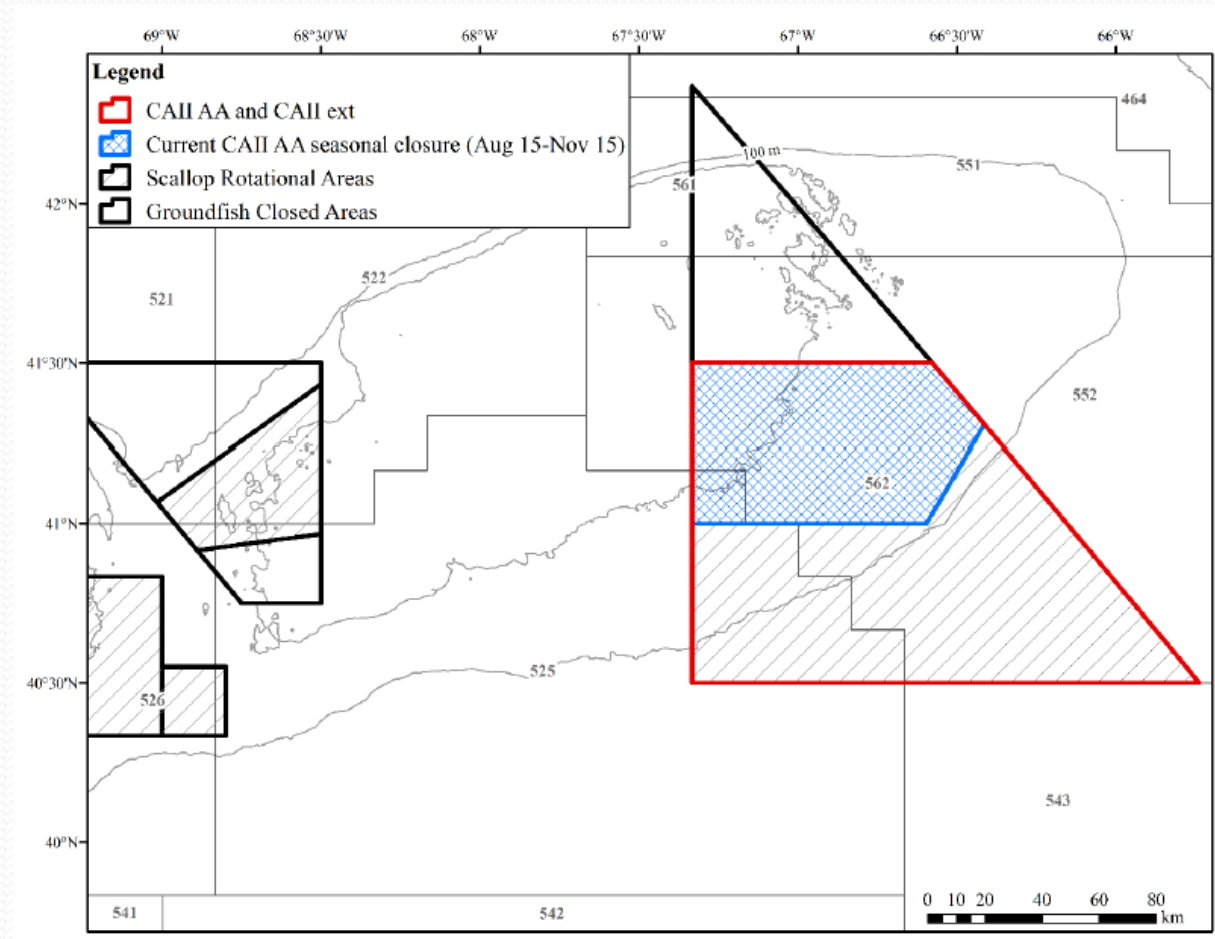
	(Catch)/Legal Limits
Scallop catch	(34.8 mt; 290% of sub-ACL)
Groundfish catch	(10.2 mt; 27% of sub-ACL)
ACL	55 mt
ABC	59 mt
OFL	84 mt

Northern Windowpane Large AM

- Year-round GRA

Gear

- 5 row apron
- Max 1.5:1 hanging ratio
- Must use the gear inside the area shown in red (CAII and CAII-EXT)

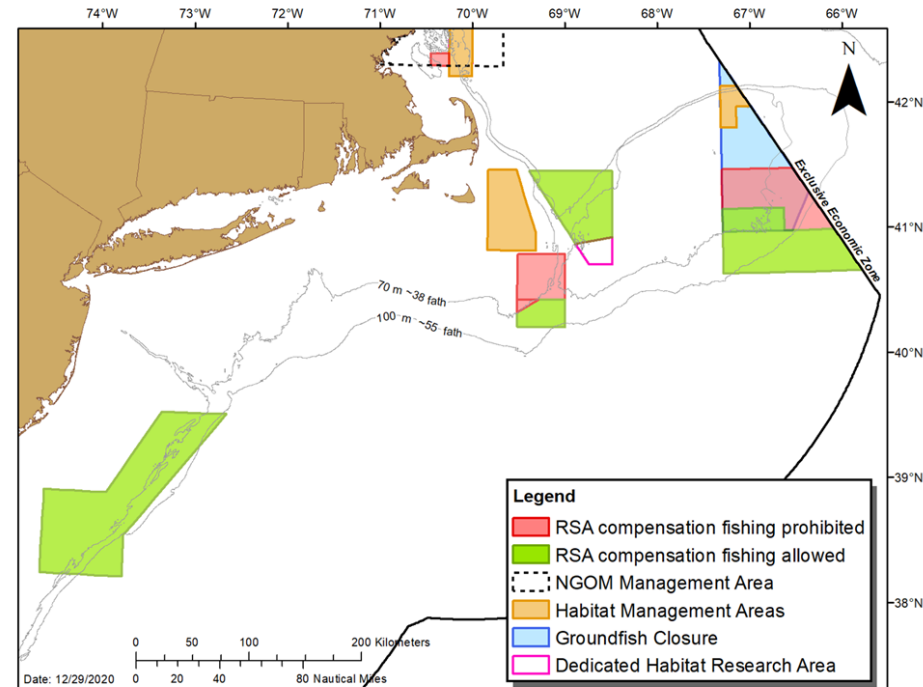


RSA compensation fishing

- Typically limit RSA fishing in areas with lower biomass, smaller scallops, and(or) potential for higher flatfish bycatch
- Example alternatives from FW33 in table to right
 - “No Action” – RSA fishing only in open area
 - “Action” – allow RSA fishing in access areas
- For FY2021, Council limited any RSA compensation fishing in CALL to time of year with lowest GBYT/NWP bycatch (June 1 – August 15)

Input needed today on range of alternatives to be considered in FW34.

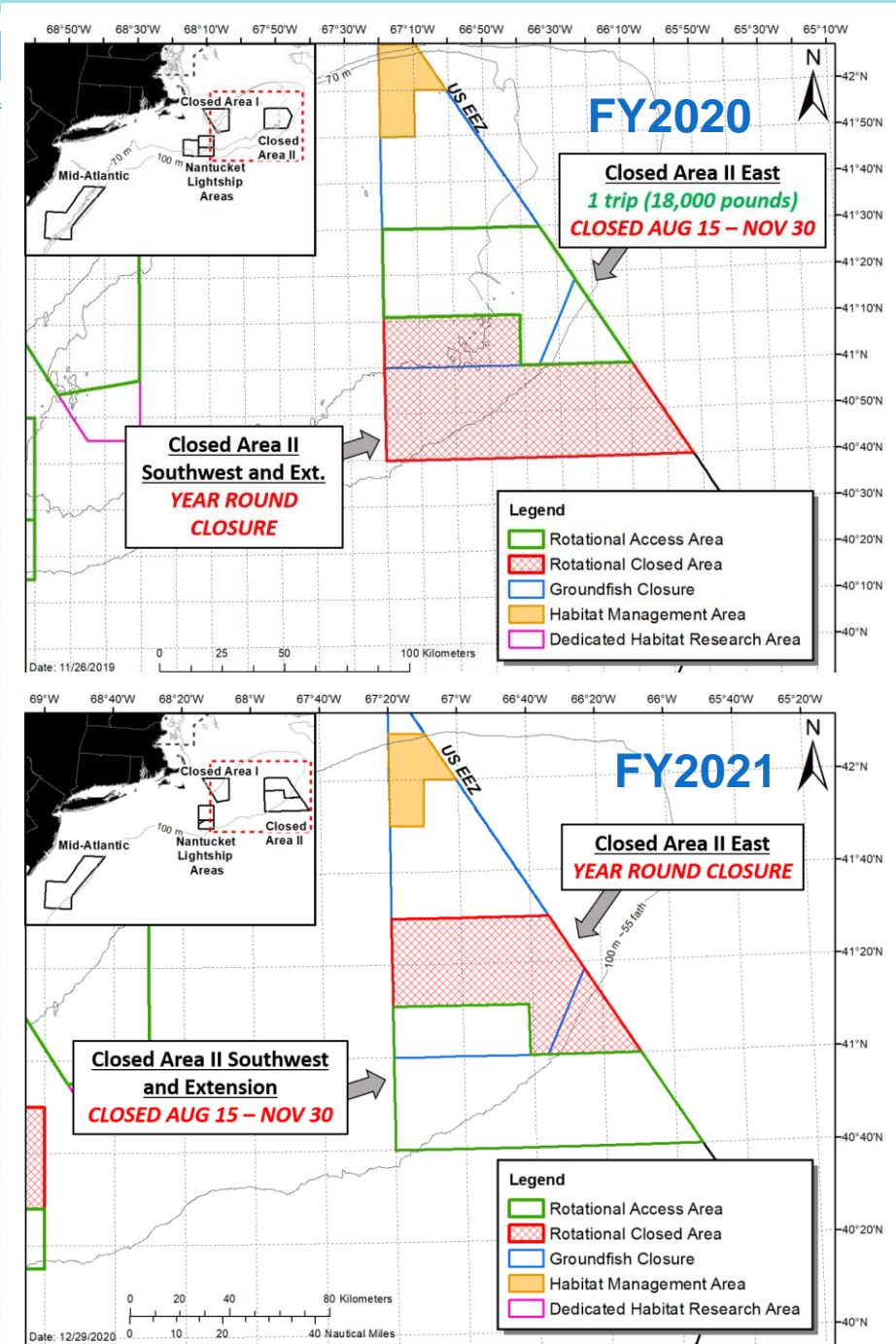
RSA Compensation Fishing FW33
<i>No Action:</i> RSA Compensation fishing in open bottom only, no access areas.
<i>Mid-Atlantic Access Area, NLS-South, Closed Area II, and Closed Area I, with limited RSA compensation fishing in the NGOM Management Area</i>



Closed Area II seasonal closure

- Goal for seasonal closure – reduce scallop fishery bycatch of GB yellowtail
- In 2020 and 2021, closure extended by two weeks to further mitigate impacts to GB YT
- Seasonal closure has followed shifting CAII access area configuration:
 - CAII-East in 2020 (top figure)
 - CAII-SW and Ext in 2021 (bottom figure)

Input needed today on whether to include seasonal closure options in FW34 to reduce flatfish bycatch



Outlook for FY2022

GB yellowtail

- SSC/TMGC recommendation for GB yellowtail—similar to FY2021

	YT ABC	US Share	Scallop 'ABC'	Scallop 'sub-ACL'	150% of sub-ACL
	FY2022	61%	16%	95% of ABC	
	200 mt	122 mt	~20 mt	~19 mt	~28 mt

Monthly/biweekly bycatch analysis

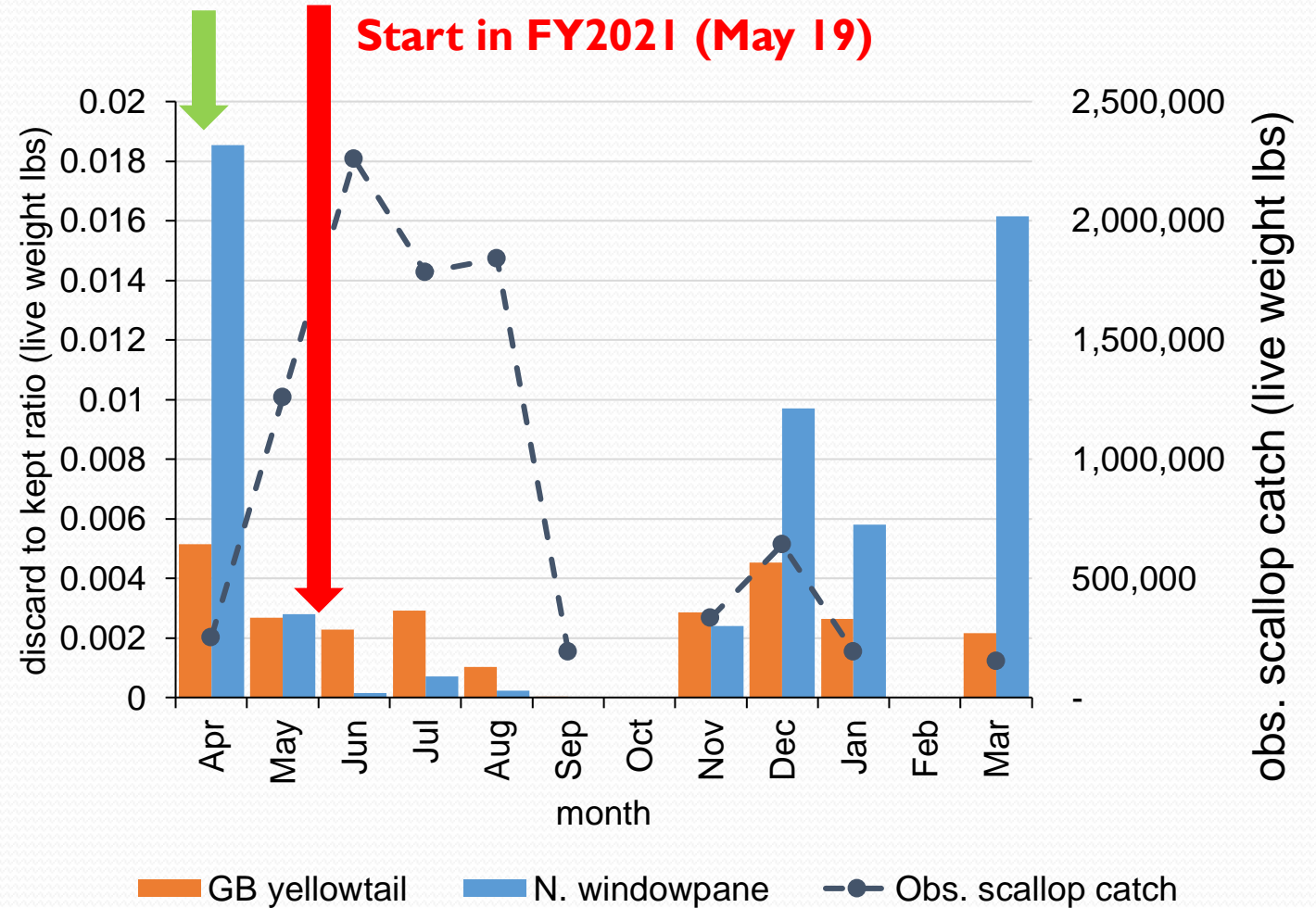
- Bycatch analyses done in 2019 – basis for extended seasonal closure of CALL through FW32, FW33.
- Based on 2014-2018 observed discard to kept ratios in CALL and CALL-Ext
 - considered most recent data due to limited coverage in CALL since 2017 (either CALL was closed, or observer coverage limited due to pandemic)

Monthly d/K

- High points for GBYT & NWP: early spring, late fall
- Late start in FY2021 due to delays in FW33 – expected this to reduce impacts to both stocks

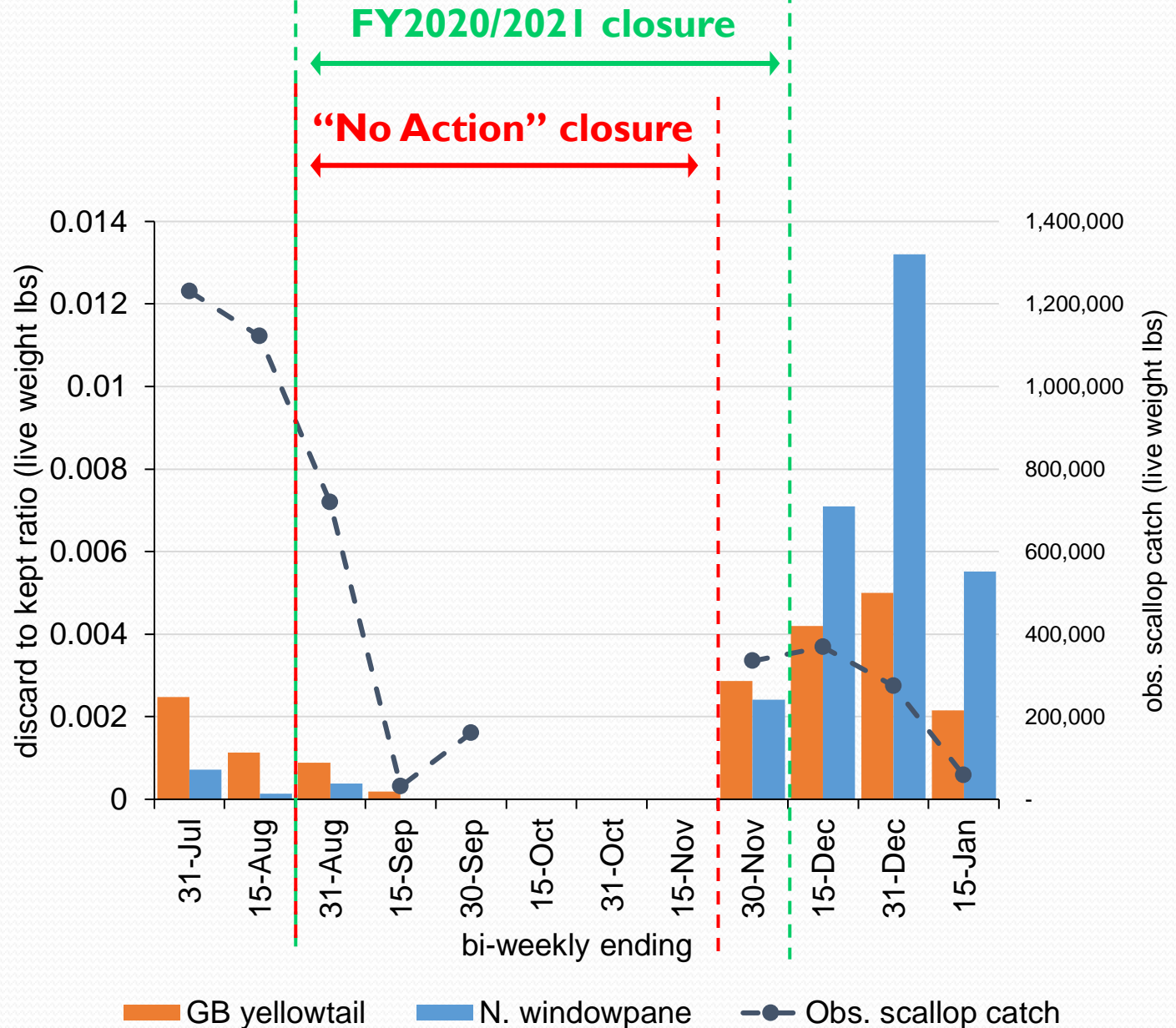
Expected start in FY2022 (Apr 1)

Start in FY2021 (May 19)



Biweekly d/K

- Council extended CAI closure by two weeks for FY2020 and FY2021 (Aug 15 – Nov 30)
- Closure will go back to Aug 15 – Nov 15 timing unless measures are included in FW34



Other considerations

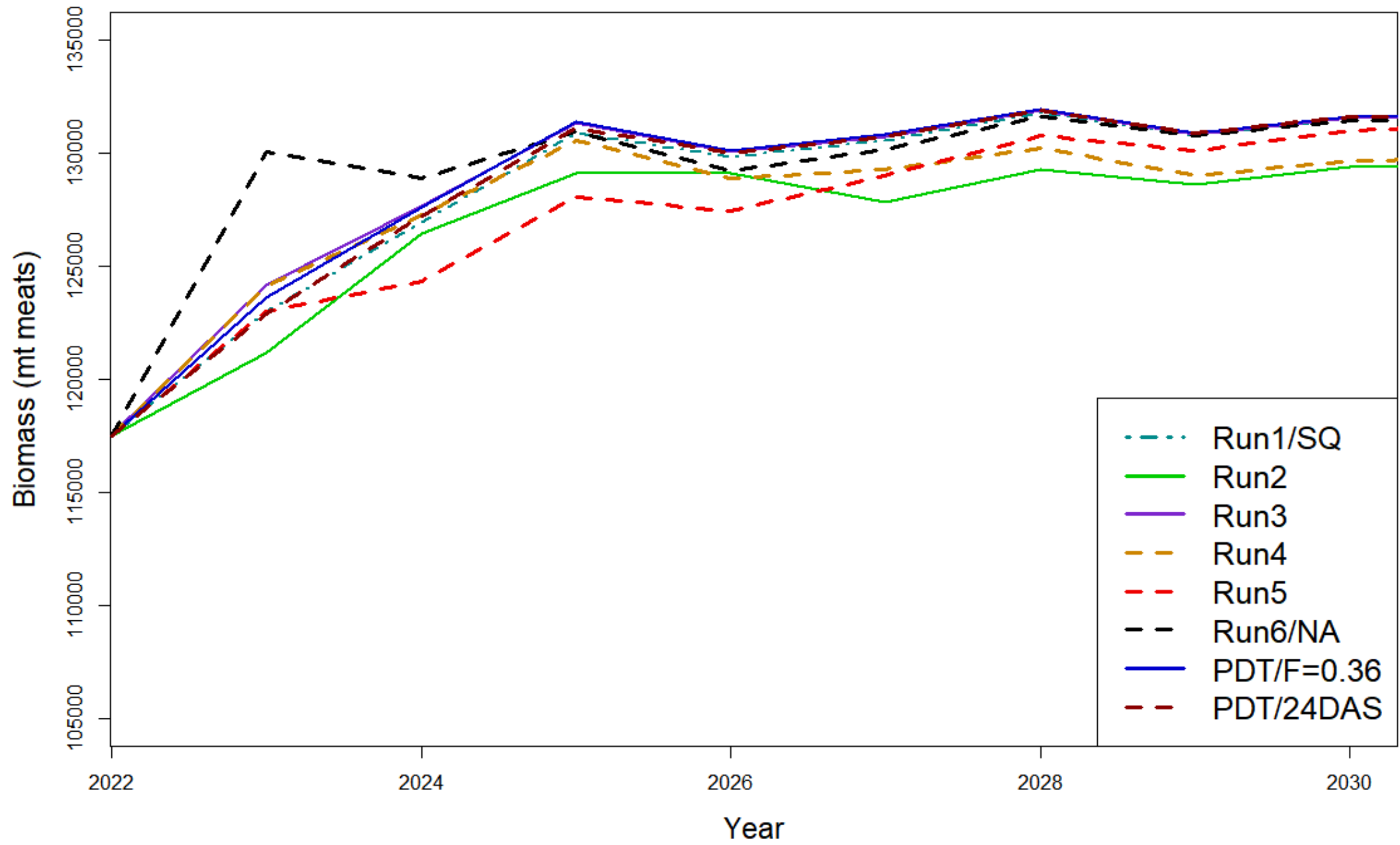
- Flatfish sub-ACLs for GB stocks continue to be very low
- FW33 projections close to or greater than anticipated sub-ACLs for FY2022
- Lack of observer data in 2020/2021 – elevated uncertainty around recent GB YT/NWP bycatch
- **Staff recommendation:** consider extended FY2020/2021 seasonal closure in FY2022 as way to help reduce impacts.

Table 1 - Overview of FY2021 projected scallop fishery bycatch estimates for the preferred alternative in FW33, including the anticipated FY2022 scallop sub-ACL for each stock.

Alternative	Scenario		GB YT	SNE/MA YT	GOM/GB WP	SNE/MA WP
	<i>Anticipated 2022 sub-ACL</i>	GB Closure	~19 mt	~2 mt	~33 mt	~129 mt
FW33 Preferred	1 MAAA: 18k 1.5 CAII SW & Ext: 27k 1.5 NLS-S-Deep: 27k 24 DAS	CAII-East closed	16	3	31	68

Notes: See 2020 memo for bycatch methodology: <https://s3.amazonaws.com/nefmc.org/Doc.2c-201124-MEMO-to-GF-PDT-re-Scallop-Bycatch-Outlook-2021-FINAL.pdf>

Additional Information



Evaluation of Rotational Management

See Document 1c2

Scallop Work Priorities

See Document 4a