Groundfish Advisory Panel Meeting

Webinar

August 31, 2022

New England
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Groundfish Outlook by Quarter in 2022 , updated August 30, 2022, NEFMC Staff

Council Priority	Jan – Mar	Apr - Jun	July - Sept	Oct - Dec
Amendment 23	Submit correction (Jan.) Develop A23 review metrics	GARFO approval letter (Apr.)	GARFO implementation	
Framework Adjustment 63	Preliminary & Final Submissions		GARFO implementation	
Recreational Measures	Develop recommendations to GARFO: GOM cod & haddock recreational measures		GARFO implementation	
Framework Adjustment 65		Initiate action, develop specifications & measures	Develop specifications & measures, conduct analysis	Take final action
Atlantic Cod Management	Receive report from 2021 Workshops - NEFMC/NEFSC/UNH-NH SeaGrant (Feb.)	Add priority, discuss approach	Draft white paper on allocating GB cod to the recreational fishery	
2022-2026 Research Priorities		Make additions / revisions to research priorities		
Stock Assessments	Research Track (RT) – GOM haddock (Jan.), GB/EGB haddock (Mar.)	Management Track (MT) – SNE/MA winter flounder (Jun.)	TRAC– EGB cod, EGB haddock, GB yellowtail flounder (Jul.) RT – American Plaice (Jul.) MT – 13 stocks (Sept.)	
2023 Priorities			Make additions to possible priorities	Final priorities

Draft Framework Adjustment 65

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Framework Adjustment 65

- **Goal**: Discuss development of draft specifications and measures
- **Key discussion question**: What management measures should be examined for Georges Bank cod to promote stock rebuilding?
- **Outcome**: Motions to recommend alternatives to develop.

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Scope

Fishing year (FY) 2023- FY2025 Specifications/Management Measures, to:

- Revise status determination criteria, as appropriate,
- Revise rebuilding plans for Gulf of Maine (GOM) cod and Southern New England/Mid-Atlantic (SNE/MA) winter flounder,
- Set FY2023-FY2024 total allowable catches for US/Canada management units of Eastern Georges Bank (GB) cod and Eastern GB haddock, and the GB yellowtail flounder stock,
- Set FY2023-FY2024 specifications for GB cod, including a catch target for the recreational fishery
- Set FY2023-FY2025 specifications for GB haddock, GOM haddock, CC/GOM yellowtail flounder, SNE/MA yellowtail flounder, GB winter flounder, GOM winter flounder, SNE/MA winter flounder, American plaice, witch flounder, pollock, white hake, Atlantic halibut, ocean pout, and Atlantic wolffish,
- Adopt additional measures to promote stock rebuilding for GOM cod, SNE/MA winter flounder, and GB cod
- Revise acceptable biological catch (ABC) control rules, in consultation with the SSC.

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Objectives

To meet regulatory requirements to prevent overfishing, ensure rebuilding, and help achieve optimum yield in the commercial and recreational groundfish fishery.

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Range of Alternatives

Range of Alternatives:

1. Revisions to status determination criteria
2. Revisions to formal rebuilding plans for GOM cod and SNE/MA winter flounder
3. Updates to annual catch limits
    - Specifications for sixteen groundfish stocks (GB cod, GB haddock, GOM haddock, GB yellowtail flounder, CC/GOM yellowtail flounder, SNE/MA yellowtail flounder, GB winter flounder, GOM winter flounder, SNE/MA winter flounder, American plaice, witch flounder, pollock, white hake, Atlantic halibut, ocean pout, and Atlantic wolffish
    - Total allowable catches for transboundary stocks (EGB cod, EGB haddock, and GB yellowtail flounder
    - Recreational fishery catch target for GB cod
    - Sub-annual catch limits for Atlantic Sea scallop, small-mesh multispecies, and herring fisheries
    - Review and possibly adjust sub-components (other fisheries and state)
4. Revisions to ABC control rules
5. Additional commercial and recreational management measures to promote stock rebuilding for GOM cod
6. Additional commercial and recreational management measures to promote stock rebuilding for SNE/MA winter flounder
7. Additional commercial and recreational management measure to promote stock rebuilding for GB cod

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Timeline

2022	
JAN 25-27	Peer review - Gulf of Maine haddock Research Track assessment
FEB 24	Assessment Oversight Panel meets (SNE/MA winter flounder)
MAR 16	Groundfish Committee meets
MAR 28-31	Peer review - Georges Bank /Eastern Georges Bank Research Track assessment
APR 12-14	**Council initiates framework**
APR 20	TRAC Intercessional
MAY 23-24	Assessment Oversight Panel meets (13 groundfish stocks)
JUN 1	Recreational Advisory Panel meets
JUN 2	Groundfish Advisory Panel meets
JUN 14	Groundfish Committee meets
JUN 27-30	Peer review - SNE/MA winter flounder Management Track assessment
JUN 28-30	**Council receives update on development of draft alternatives**
JUL 12-14	TRAC assesses US/CA management units of EGB cod and EGB haddock, and the GB yellowtail flounder stock
JUL 18-22	Peer review – American plaice Research Track assessment
AUG 3	Assessment Oversight Panel meets (American plaice)
AUG 4	SSC discusses rebuilding plan for GOM cod and an update on possible ABC control rule revisions
AUG 25	SSC recommends OFLs/ABCs for GB yellowtail flounder, GB cod, and SNE/MA winter flounder
AUG 31	Groundfish Advisory Panel meets; Recreational Advisory Panel meets
SEP 12-14	TMGC/SC meets to recommend TACs for US/CA management units/stock
SEP 15	Groundfish Committee meets
SEP 19-23	Peer review - 13 groundfish stocks Management Track Assessments
SEP 26-29	**Council receives TMGC recommendations and reviews progress on developing draft alternatives**
OCT 12(tent.) &26-27 (tent.)	SSC recommends OFLs/ABCs for 13 groundfish stocks; discusses SNE/MA winter flounder rebuilding plan options and possible ABC control rule revisions
OCT/NOV TBD	Recreational Advisory Panel meets; Groundfish Advisory Panel meets; Groundfish Committee meets
DEC 6-8	**Council receives draft alternatives and takes final action**
2023	
JAN	Preliminary submission of framework document to NMFS
FEB	Final submission of framework document to NMFS
MAY 1	Target implementation

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Gulf of Maine Cod Rebuilding

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Background

In an August 13, 2021, letter from GARFO to NEFMC, Gulf of Maine cod was identified as making inadequate progress toward rebuilding following the 2019 stock assessment. The letter explains that the Council must implement a new rebuilding plan within 2 years of the date of notice (i.e., by August 13, 2023).

The cod rebuilding plans may need to be modified after the 2023 research track for Atlantic cod is completed.

The most recent assessment of Gulf of Maine cod was a management track assessment in September 2021. The stock is overfished, and overfishing is occurring.

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Groundfish Committee Tasking

The Groundfish Committee met on June 14, 2022, and passed the following motion:

Task the Plan Development Team with analyzing F-rebuild options for Gulf of Maine (GOM) cod which consider 50%/60%/70% rebuilding probabilities associated with a 10-year rebuilding timeline. Also determine if fishing at 75% of F(MSY) is projected to rebuild the GOM cod stock in 10 years.

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Progress Report

- The PDT conducted several rebuilding projections and assumed a fixed rate for fishing mortality (F), consistent with recent groundfish rebuilding plans.
- Calendar year catch in 2021 is assumed to be the annual catch limit of 523 mt.
- Summarized results are based on the median values from the projections.
- Projections that rebuild (cross the horizontal line in the figures) result in at least a 50% probability of achieving the rebuilding target spawning stock biomass (SSB).
- These projections are preliminary and subject to change.

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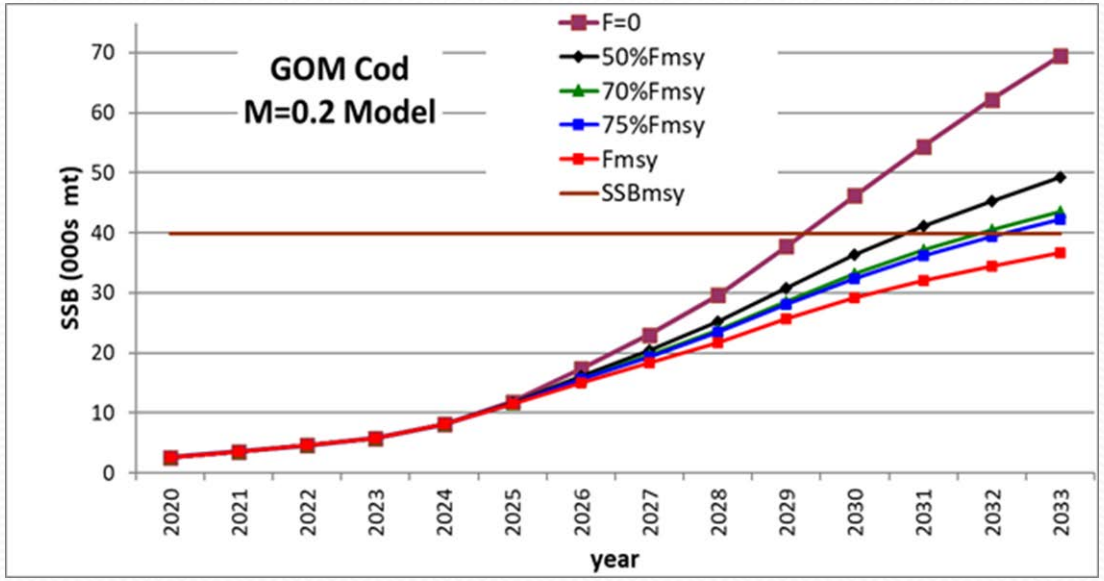
1) M=0.2 Model Standard Projections

With the same assumptions used in the 2021 stock assessment using the M=0.2 model at F=0, 50%FMSY, 70%FMSY, 75%FMSY, and FMSY.



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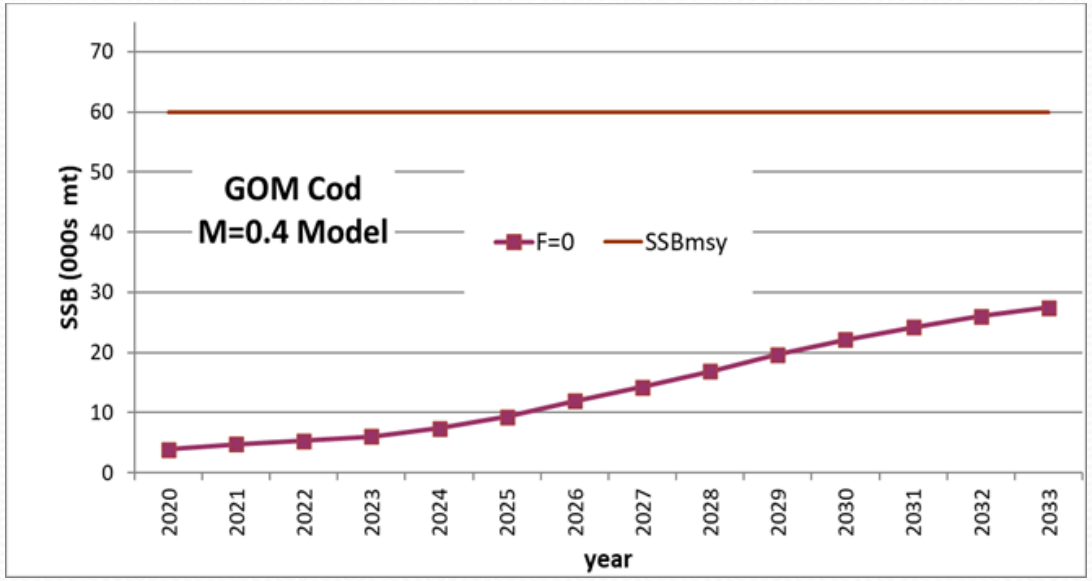
2) M-ramp, M=0.4 Model Standard Projections

With the same assumptions used in the 2021 stock assessment using M-ramp, M=0.4 model at F=0. This assumes natural mortality remains high during the projections.



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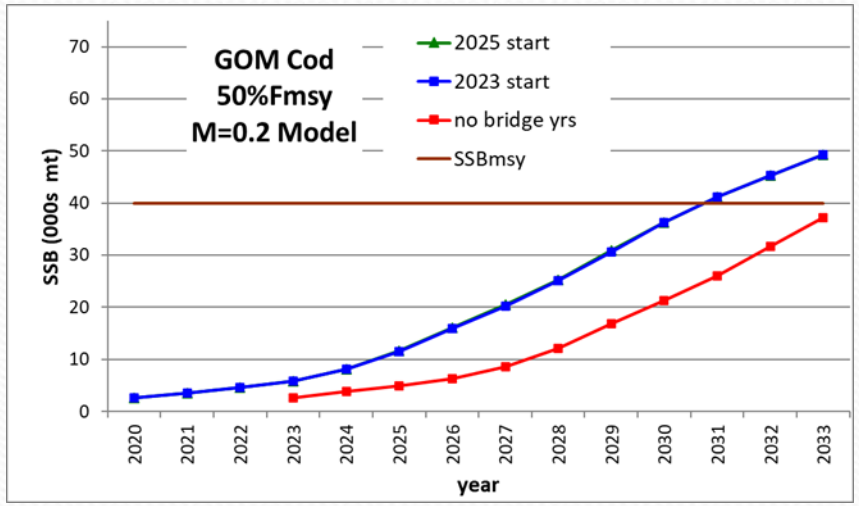
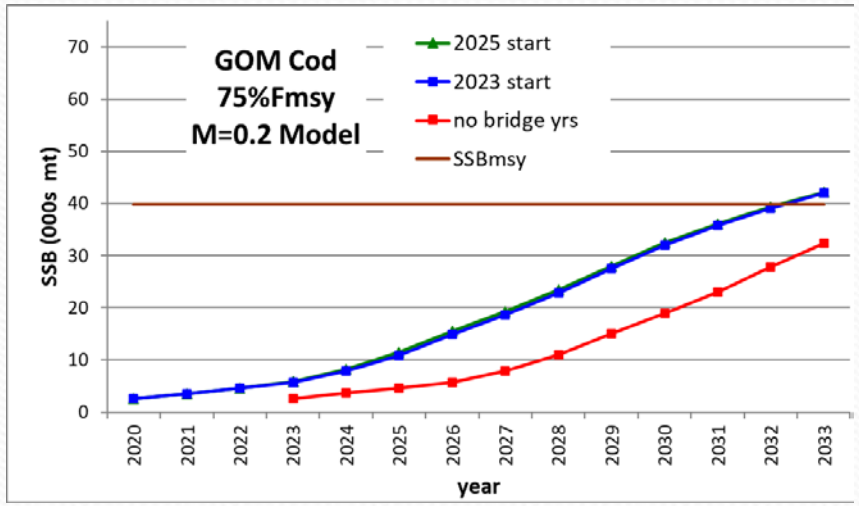
3) Varying the Starting Date

The new F would be applied with the same assumptions used in the 2021 stock assessment using the M=0.2 model at 50%FMSY and 75%FMSY: 2023 start , 2025 start (keeping the current ABCs for 2022-2024), and without bridge year catch assumptions.

The no bridge years projects off the terminal year of the assessment and has the effect of slowing SSB rebuilding in the projections.

Note: the 2025 start projection is obscured by the 2023 start projection in the figures.





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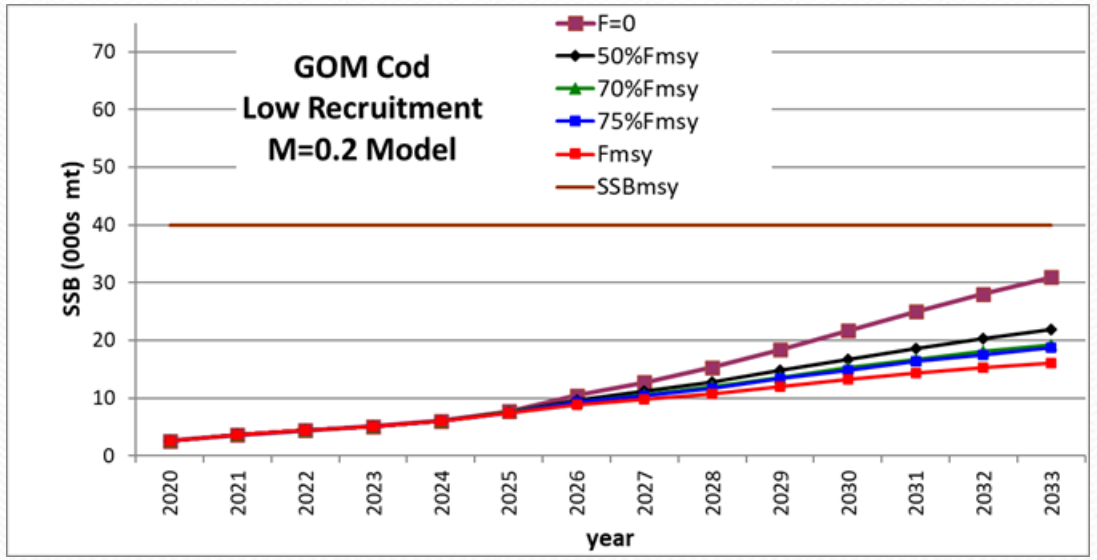
4) Sensitivity Projections with M=0.2 Model

Changing the recruitment in the projections to draw from the last 15 years of recruitment using the M=0.2 model at F=0, 50%FMSY, 70%FMSY, 75%FMSY, and FMSY.

This assumes continued poor recruitment and is based on feedback from the 2021 peer review and SSC with respect to characterizing uncertainty and future research.



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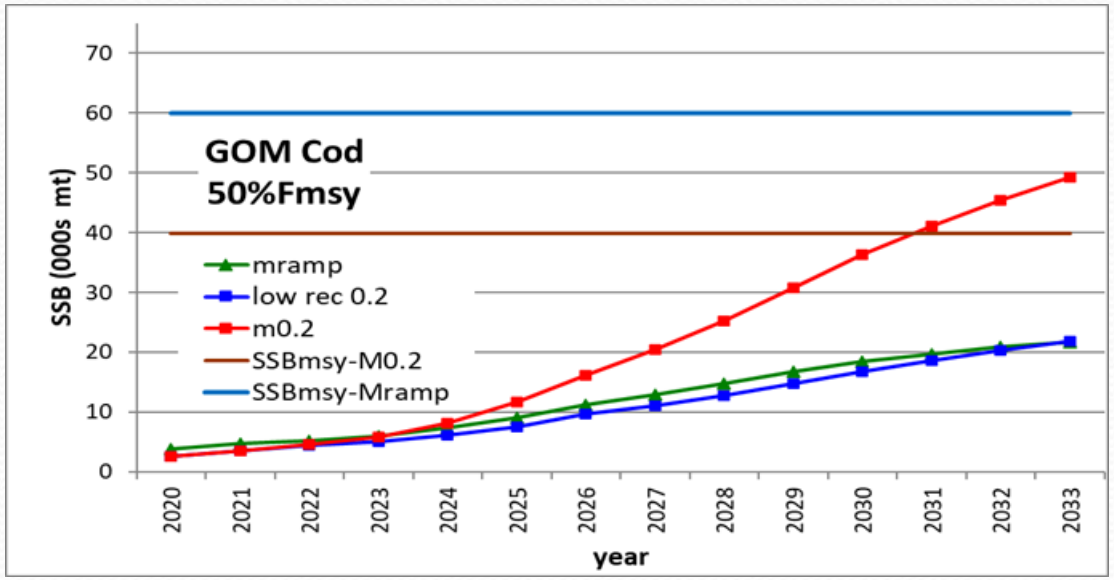
5) Comparison

Comparing the various projections and low recruitment sensitivity projection at 50%FMSY as an example.



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Preliminary PDT Summary and Questions for the SSC

1. The PDT recommends using the current ABCs for 2022-2024 (551 mt, held constant) in the rebuilding plan. The PDT would fix the catches at the ACLs (522 mt) in those years for the projections. The PDT would like feedback from the SSC on this decision. Or should the PDT consider developing revised ABC options for 2023 or 2024 that increase with the projections?

2. The standard projections under the M=0.2 model indicate the stock can rebuild within 10 years or less. However, projections at F=0 under the M-ramp, M=0.4 model and the sensitivity on the M=0.2 model with assumed low recruitment do not rebuild the stock. Should the PDT consider developing rebuilding strategies for 10 years, given these uncertainties in natural mortality and recruitment?

3. To date, the PDT has not developed an approach to model Atlantic cod stock structure uncertainty in the projections. Does the SSC have any ideas?

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Council Staff's Preliminary Summary of SSC Recommendations

- The SSC agrees with using the current ABCs for 2022 through 2024, which is a constant of 551mt.
- The SSC acknowledges the difficulty in reconciling with some projections showing the stock can rebuild in 10 years when in practice rebuilding might not occur in that timeframe. The SSC discussed some uncertainties with projections including changing environmental conditions and future recruitment along with predation.
- The SSC encourages the PDT to move forward with a GOM Cod rebuilding plan based on the current stock structure. The SSC recognizes that the PDT may have to pivot in the future in response to the completion of the Research Track and potential changes in biological stock units.

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Risk Policy Matrix

Does the AP have any feedback on the risk policy matrix for GOM cod?

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Georges Bank Cod
Additional Relevant Information for Fishing Year 2023-Fishing Year 2024 OFLs and ABCs

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Table 1- Summary of rebuilding status for GB cod stocks on the most recent assessment in 2021.

Groundfish Stock	**Rebuilding Plan Start of the Current Plan**	**Planned Rebuilding Date**	**Years Remaining in Plan, starting with FY2022**	**Total ACLs exceeded within past three completed FYs?** *If yes, identify the Fys.*	**Has the original rebuilding F been achieved? Or is this unknown?** *Indicate the current F estimate relative to F rebuild at the start of the plan.*	**What is current SSB estimate relative to SSBMSY? Or is this unknown?**
Georges Bank cod	5/1/2004	2026	5	No	Unknown	Unknown

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Atlantic Cod Stock Structure

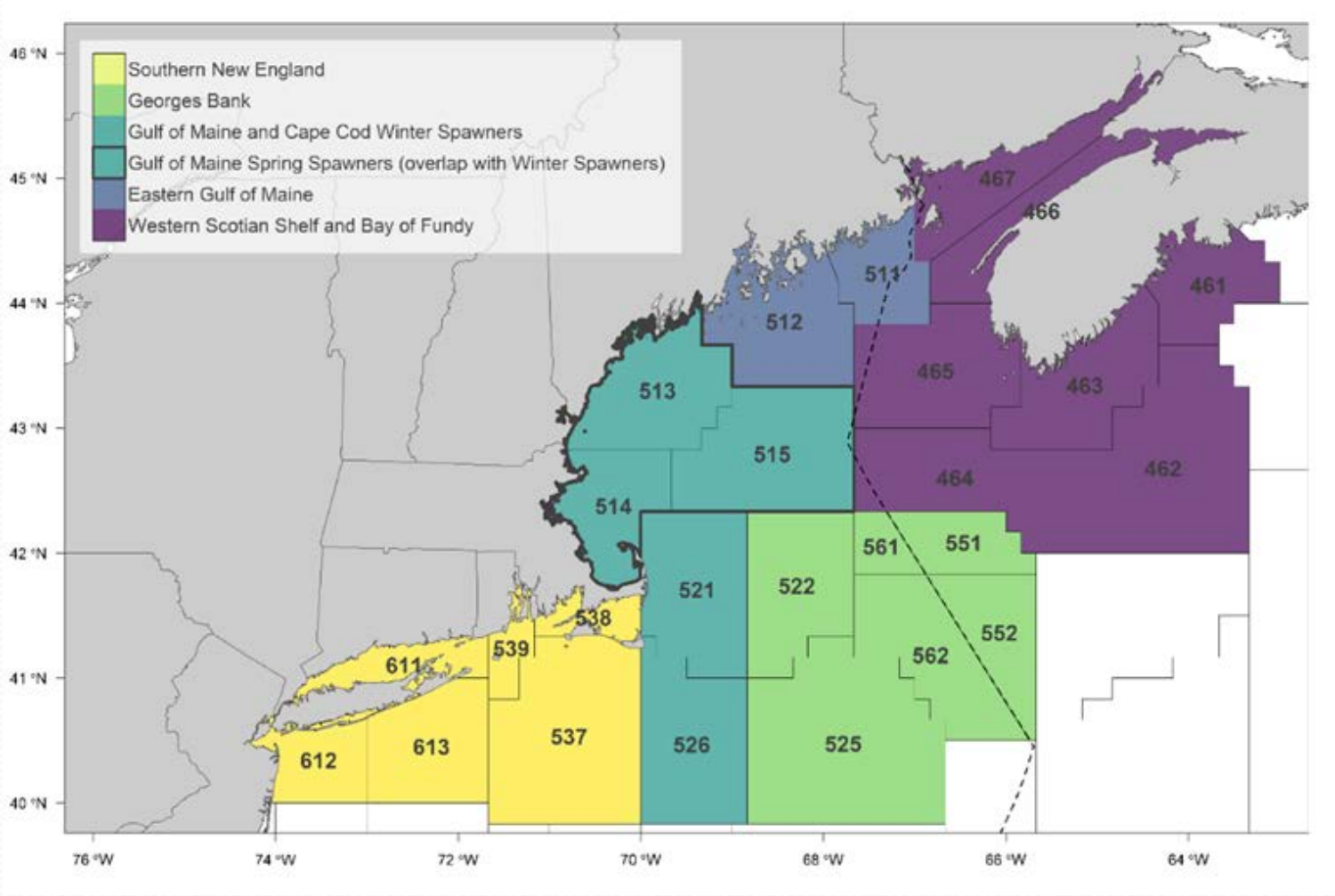

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Figure 3. GB cod stratified mean numbers at length from the NMFS fall bottom trawl survey

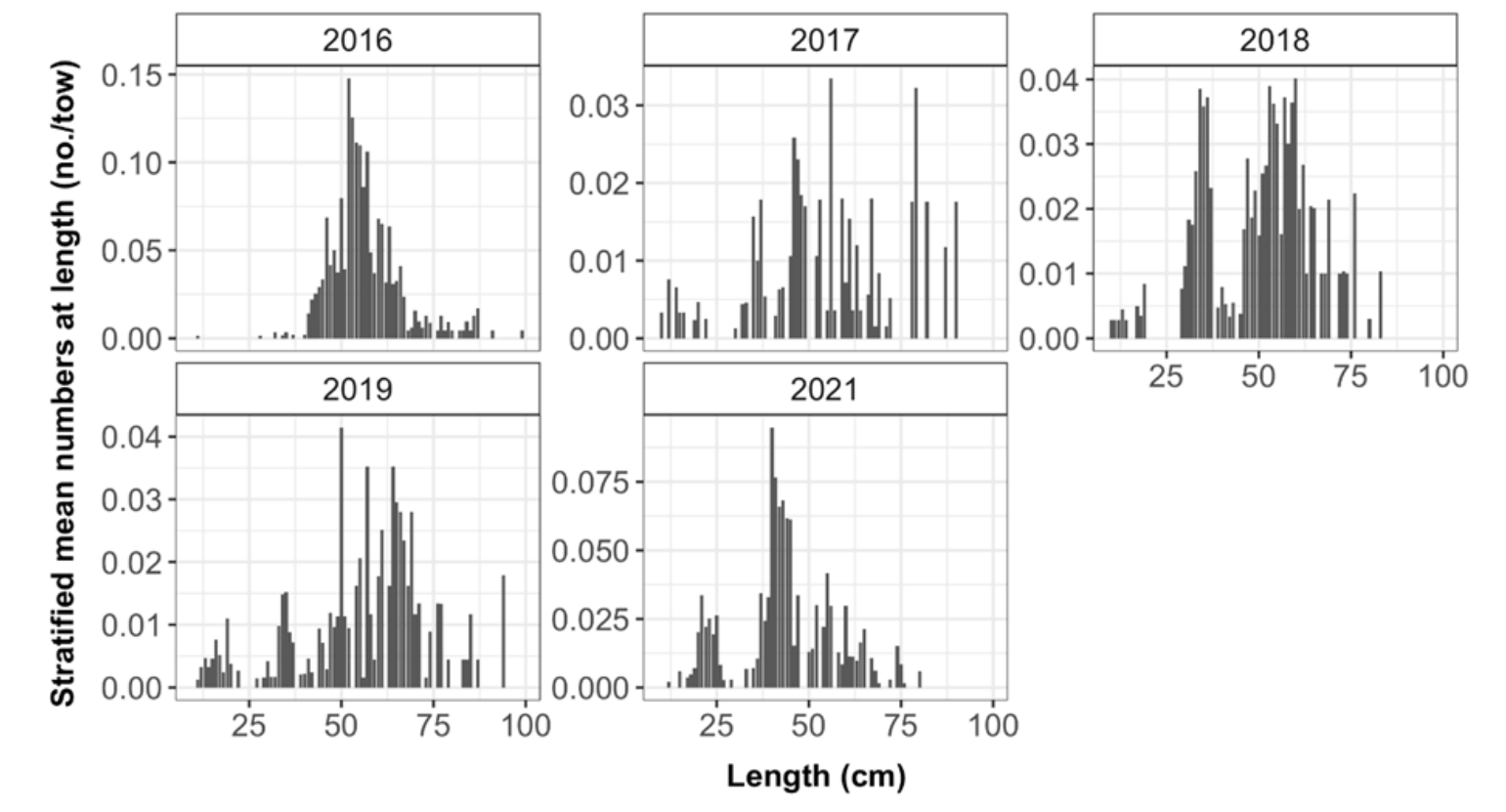

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Figure 4. GB cod stratified mean numbers at length from the NMFS spring bottom trawl survey

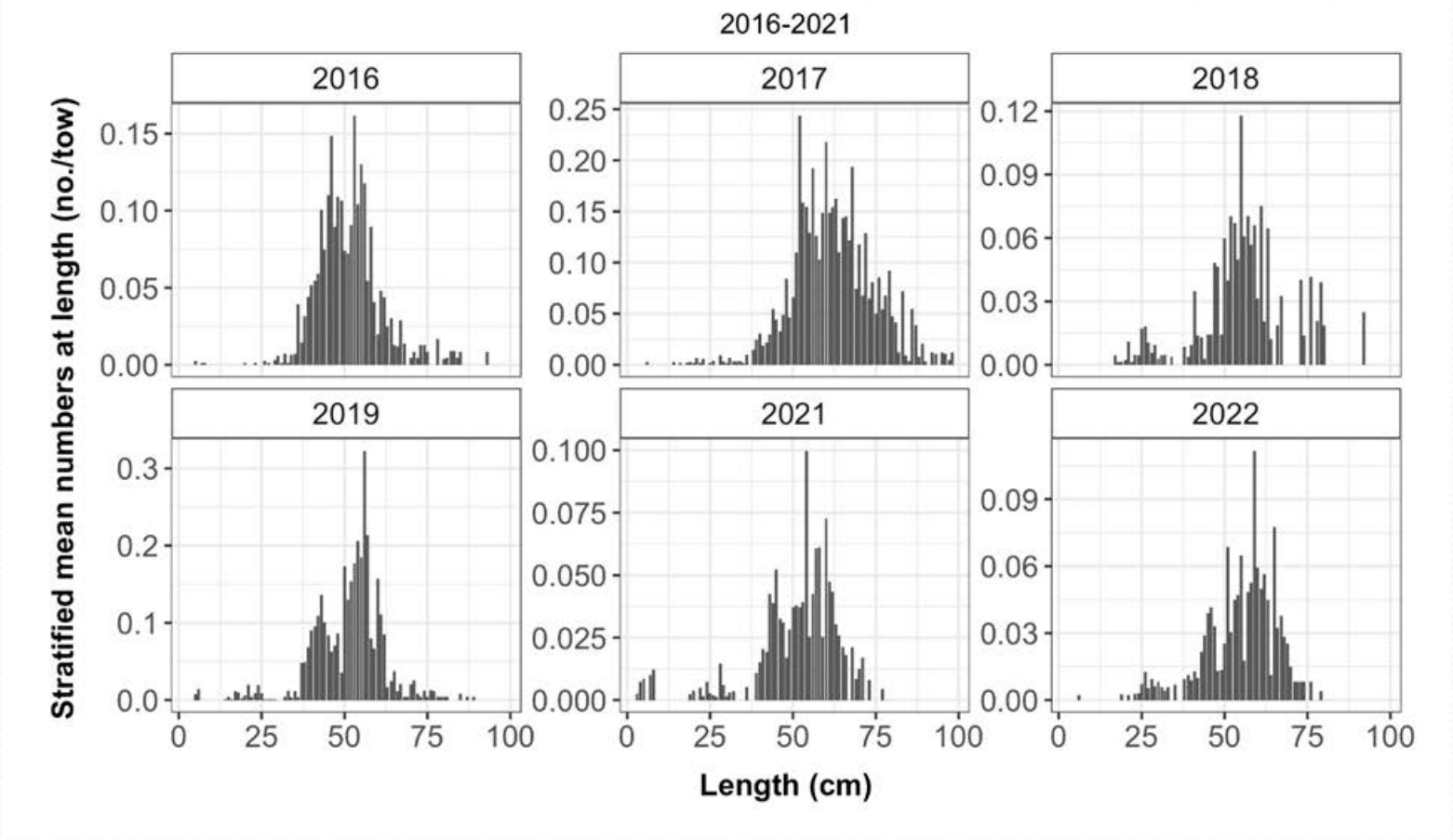

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Figure 2. GB cod abundance (number/tow) and biomass (kg/tow) trends in the NMFS fall bottom-trawl survey (top panels) and NMFS spring bottom-trawl survey (bottom panels).

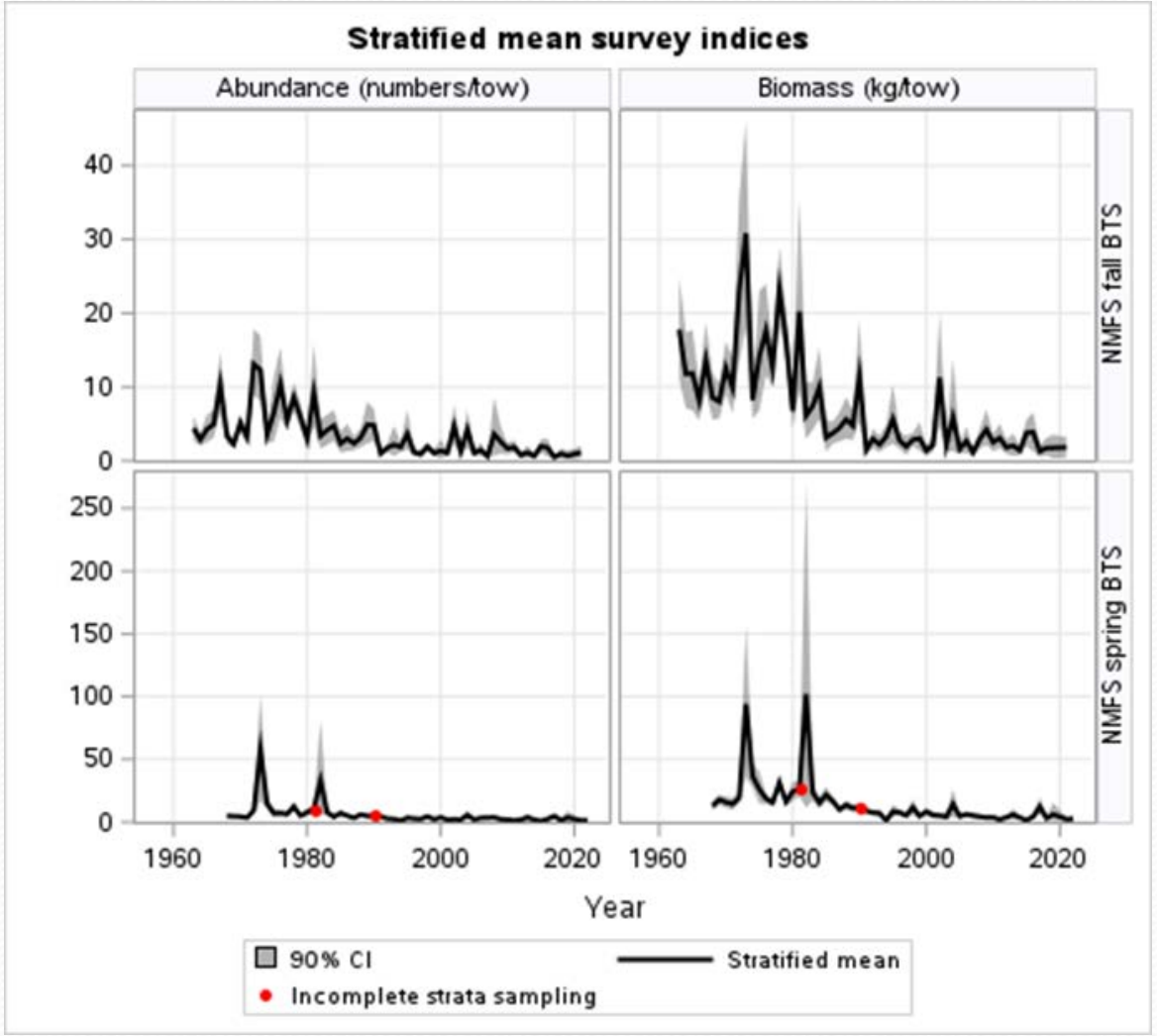

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Table 3. GB cod biomass (kg/tow) trends in the NMFS spring bottom-trawl survey and NMFS spring bottom-trawl survey (2013-2022)

NMFS Survey	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Spring BTS	5.8647	3.5196	1.4858	4.2183	12.3237	2.9447	6.0064	*	2.2052	2.6966
Fall BTS	2.0122	1.3712	3.7573	3.8386	1.2575	1.7074	1.725	*	1.7896	*

*Survey indices not available.

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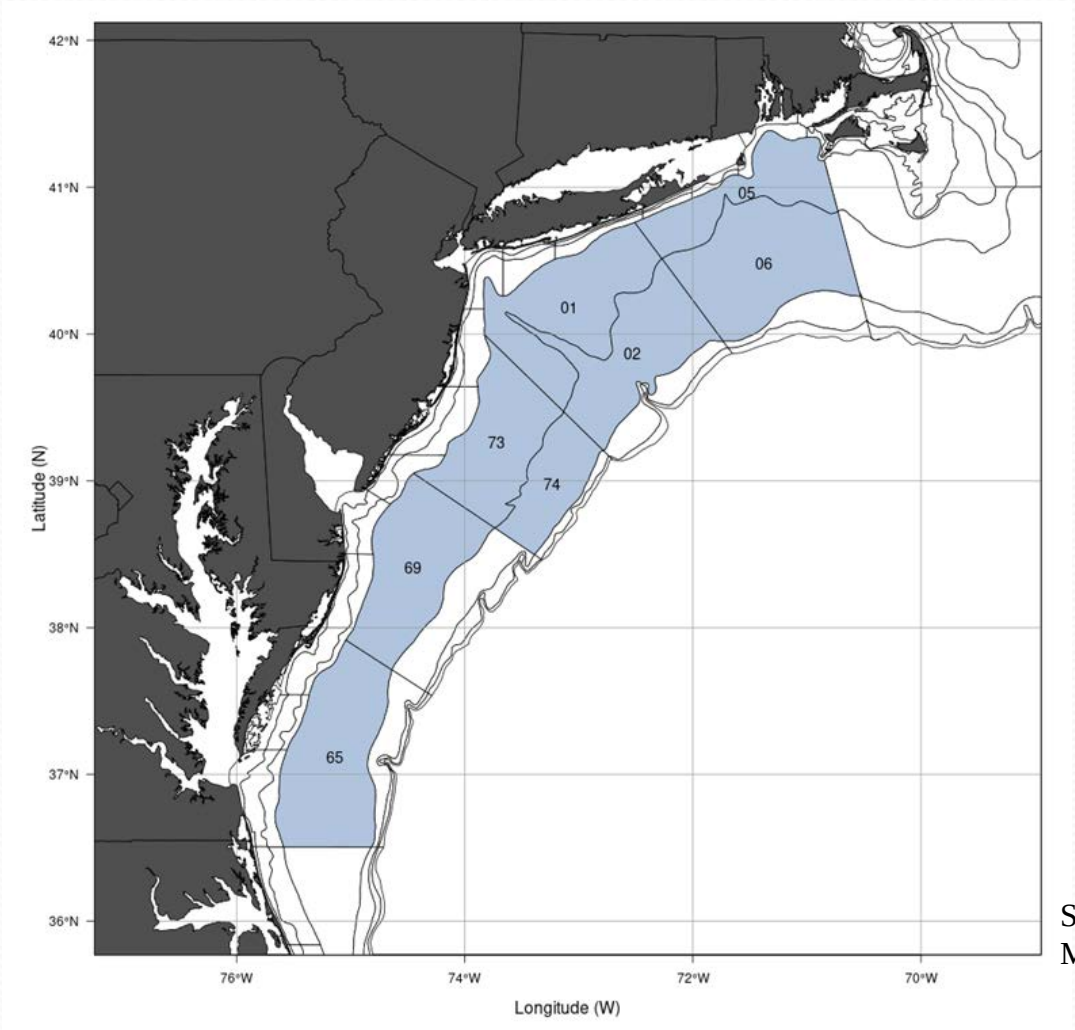
Figure 6. Map of the Northeast Fisheries Science Center (NEFSC) bottom trawl survey strata used to construct NEFSC survey indices for SNE cod (shaded blue).



Source: 2022 Cod Research Track Working Group Meeting, June 24, 2022

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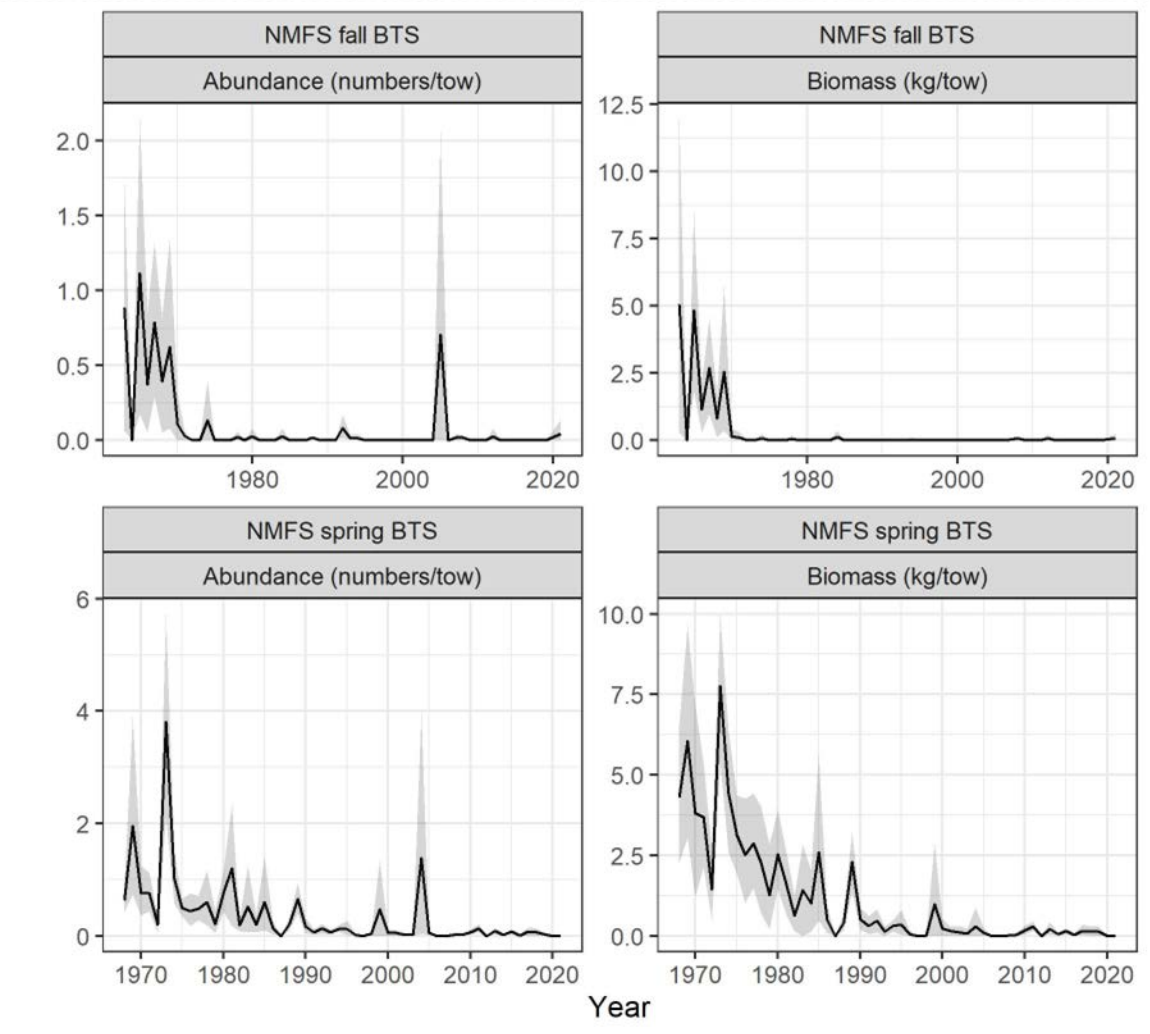
Figure 5. Northeast Fisheries Science Center (NEFSC) spring and fall bottom trawl survey abundance (numbers/tow) and biomass (kg/tow) indices for SNE cod. The shaded area represents the 90% confidence interval.



Source: 2022 Cod Research Track Working Group Meeting, June 24, 2022
Note: Spring survey did not begin until 1968.

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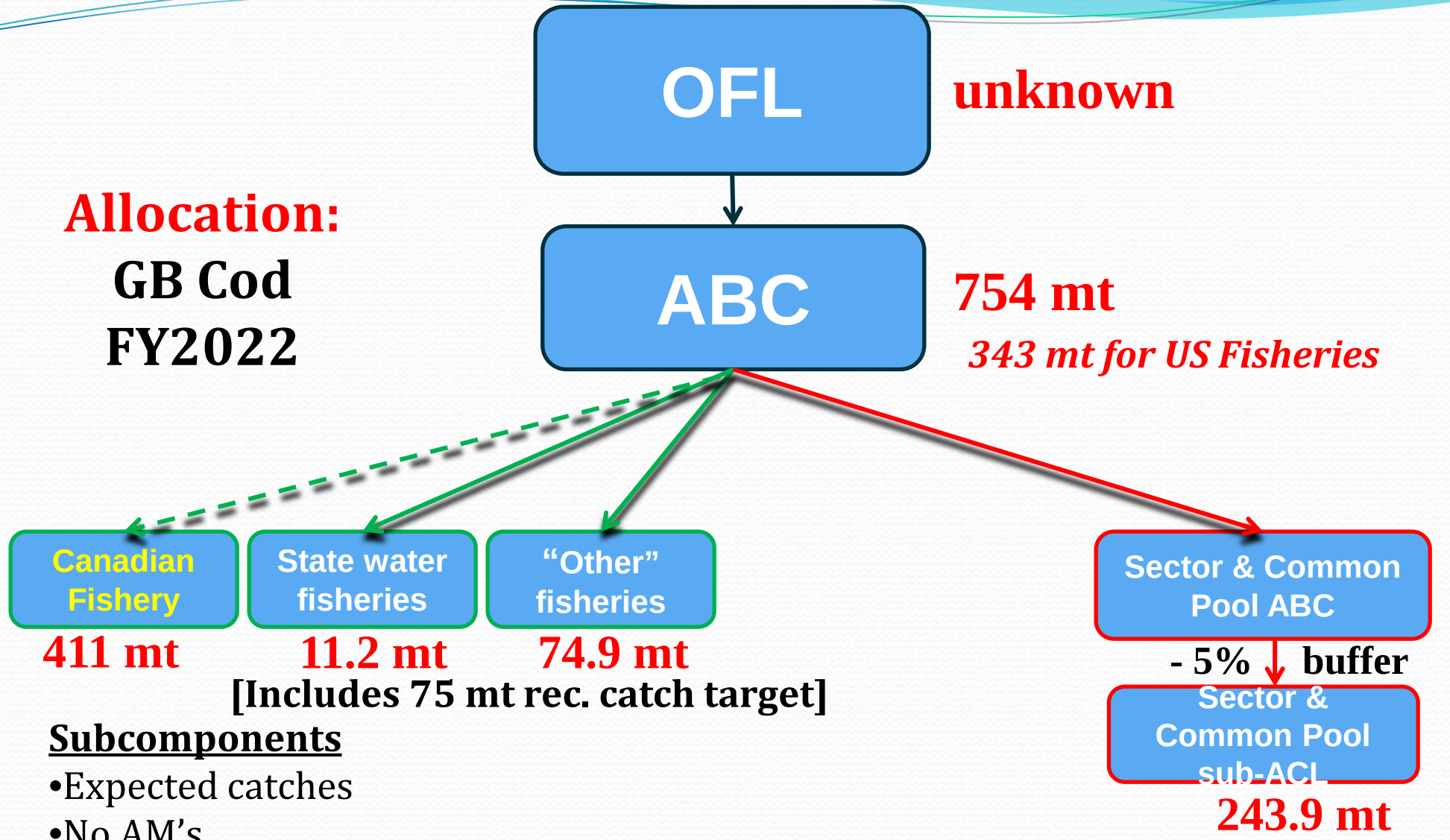
Allocation:
GB Cod
FY2022



[Includes 75 mt rec. catch target]

Subcomponents

- Expected catches
- No AM's
- No adjustment for management uncertainty

Sub-ACL's

- Subject to AM's
- Management uncertainty adjustment

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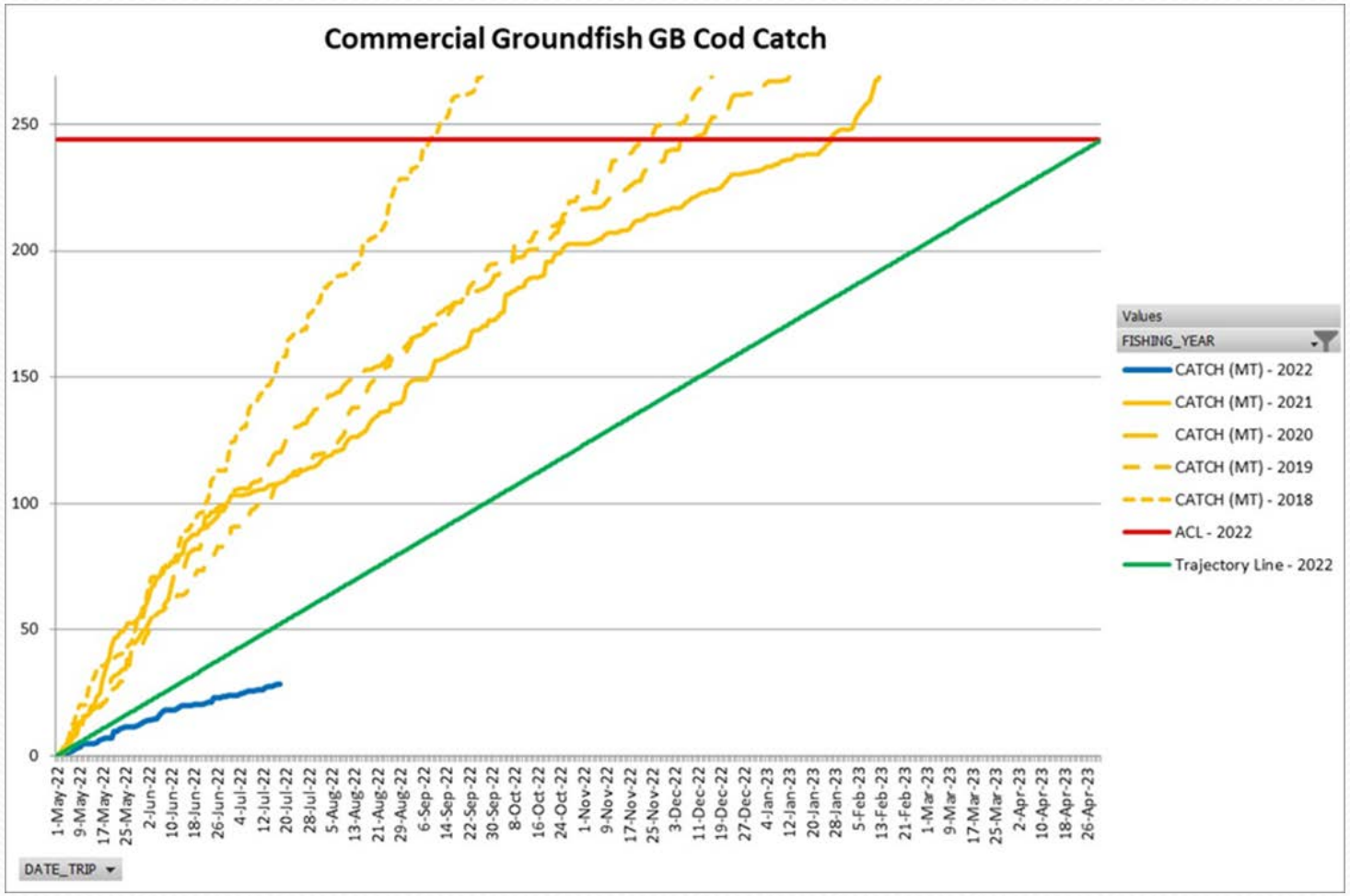
Figure 7- In-season Utilization of GB cod by the commercial (sectors and common pool) groundfish fishery (FY2018 - 2022)



Note: FY2021 catch has not been finalized.

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Table 4- Summary of recent catches (mt) of Georges Bank cod by the US commercial (sectors and common pool) groundfish fishery, FY2015-FY2020, preliminary FY2021, and in-season FY2022. Sources: FY2015 – FY2020 final year-end multispecies catch reports and catch monitoring, GARFO

	Commercial Groundfish Fishery- Georges Bank Cod				
Fishing Year	Sub-ACL	Landings	Discards	Catch	Percentage of sub-ACL
2015	1,787	1,608.5	28.3	1,636.8	91.6%
2016	608	571.9	24.6	596.6	98.1%
2017	531	432.8	13.1	446.0	84.0%
2018	1,360	833.2	4.7	837.9	61.6%
2019	1,568	524.5	7.9	532.4	34.0%
2020	1,073	417.4	7.8	425.3	39.6%
**2021*	*1,093.1*	**463.6*	**7.2*	**470.8*	**43.1%*
***2022*	*243.9*	***29.7*	***2.7*	***32.4*	***13.3%*

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Table 5. Sector and Common Pool Catch Monitoring for FY2022. Report run on August 15, 2022 for data reported through August 9, 2022.

Stock	Cumulative Kept (mt)	Cumulative Discard (mt)	Cumulative Catch (mt)	Sub-ACL* (mt)	Percent Caught
GB Cod East	1.2	0.1	1.2	160.0	0.8
GB Cod	29.7	2.7	32.4	243.9	13.3

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Table 6. Summary of landings and discards for GB cod (FY 2019 and FY 2020).

	2019 (mt)				2020 (mt)			
	Groundfish Fishery	**Other**	**State**	**2019 Total**	**Groundfish Fishery**	**Other**	**State**	**2020 Total**
Landings	524.5	83.5	13.1	621.1	417.4	138.1	145.2	700.8
Discards	7.9	11.7	1.0	20.6	7.8	20.4	2.3	30.5
Total	532.4	95.2	14.1	641.7	425.3	158.5	147.5	731.2

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Table 7. Summary of realized FY2020 and predicted FY2021 and FY2022 revenues and costs for the sector portion of the commercial groundfish fishery; median values, nominal dollars

Option	Groundfish Gross Revenues	Total Gross Revenues	Operating Costs	Sector Cost	Quota Cost	Operating Profit	Days Absent
FY2020 Realized	54.2	72.9	11.4	2.2	2.4	59.7	11,435
FY2020 Prediction (FW59)	49.0	70.1	10.9	1.8	3.6	50.3	10,919
FY2021 Prediction (FY61)	46.3	64.1	10.9	1.8	3.6	47.7	9,942
FY 2022 Prediction, GB cod = 233 mt[1]	51.9	73.3	10.9	1.8	2.7	59.4	11,448
FY2022 Prediction, GB cod = 1,045 mt[2]	55.1	75.7	12	1.9	3.0	59.7	11,838

Source: Groundfish FW63

[1]The sector sub-ACL implemented for FY2022

[2]Analyzed under the no-action alternative in FW63.

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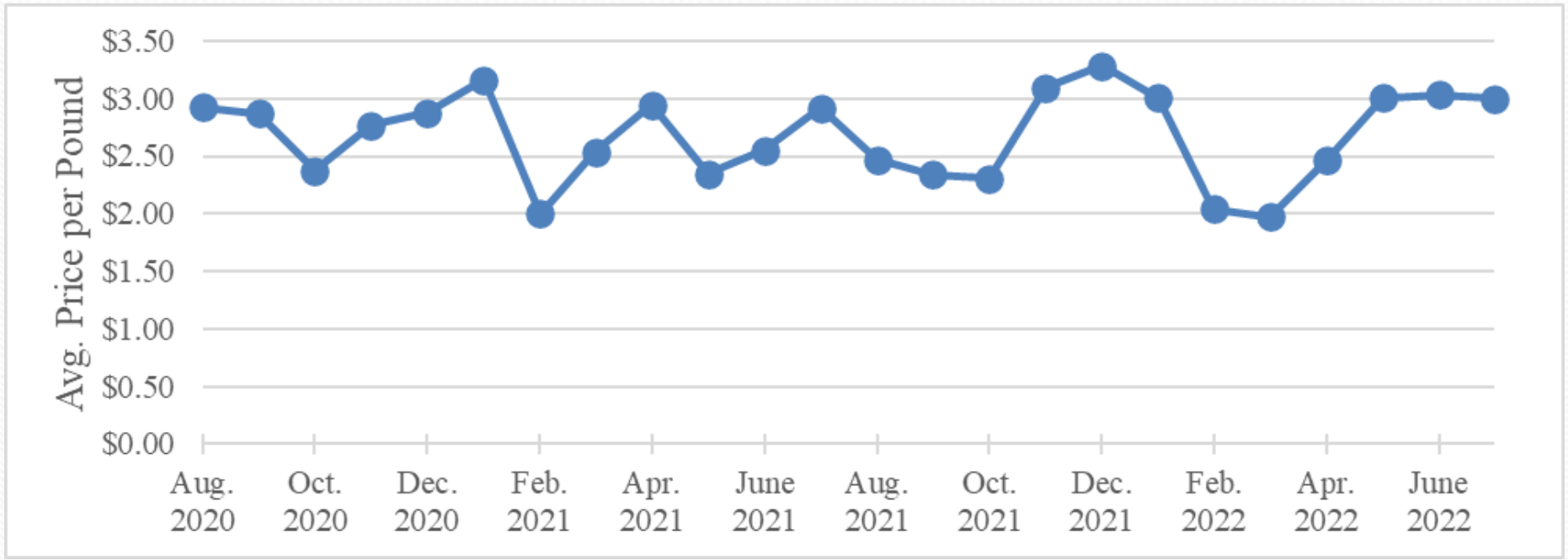
Figure 9. Average cod ex-vessel price (nominal dollars) by month from August 2020 through July 2022.



Source: Dealer data was used to calculate prices, which are across all cod stocks.

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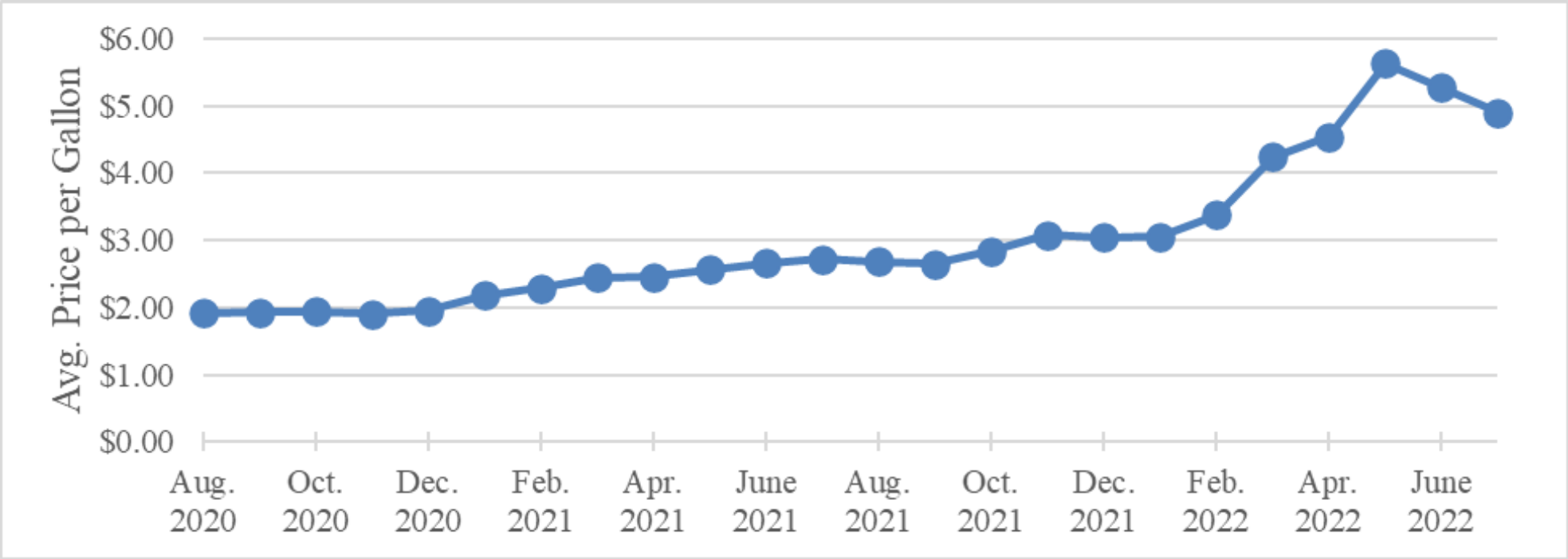
Figure 10. Average fuel cost per gallon (nominal dollars) by month from August 2020 through July 2022. Source: NEFOP and ASM Data



Note: At-sea observers in the NEFOP and ASM programs collect information from the captain on the number of gallons of fuel used and the price paid per gallon on all observed trips. The quantity and price were multiplied to calculate the total cost per trip. Trip costs were then aggregated by month and divided by the fuel quantity to derive monthly fuel prices.

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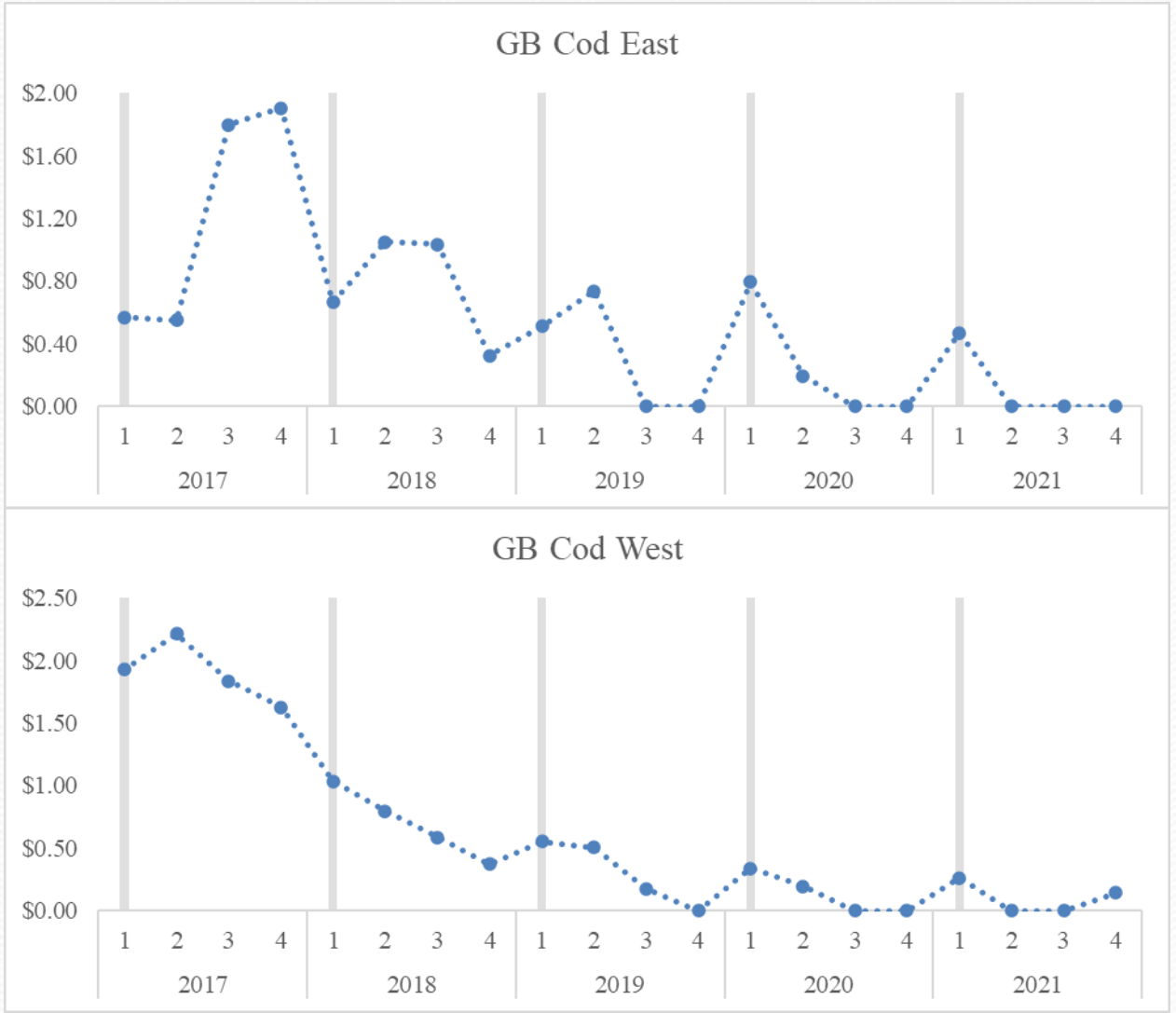
Figure 11. ACE lease prices estimated for GB Cod East and GB Cod West for fishing years 2017-2021 using a hedonic price model. First quarter (May-July) lease prices are indicated by the vertical gray bars.



Note: ACE lease prices for GB Cod East and GB Cod West were estimated for fishing years 2017-2021 using a hedonic price model. Input data into the model is comprised of inter-sector ACE leases over the FY2017-2021 period.

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Table 8- Georges Bank cod recreational catch (mt), FY2015-FY2020. Sources: FY2015 – FY2020 final year-end multispecies catch reports, GARFO. Preliminary FY2021, NEFSC personal communication.

	Recreational Fishery – Georges Bank Cod					
Fishing Year	Federal Waters Recreational Catch	State Waters Recreational Catch	All Recreational Catch	Recreational Catch Target	Total US Catch	Recreational Portion of Total US Catch (Percent)
2015	132.1	33.0	165.1	n/a	1,835.4	9.0%
2016	419.7	57.8	477.5	n/a	1,125.5	42.4%
2017	50.1	2.8	52.9	n/a	522.5	10.1%
2018	31.6	5.5	37.1	138	887.3	4.2%
2019	88.9	11.0	99.9	138	641.7	15.6%
2020	152.6	141.8	294.4	138	731.2	40.3%
**2021*			**236.0*	138		
***2022*				75		

**Preliminary*

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Council Staff's Preliminary Summary of GB Cod OFLs and ABCs SSC Recommendations

- SSC considered:
  - Current FY2022 ABC held constant (754 mt)
  - SSC minority report from 2021 (FY2022 – 1053 mt, FY2023 – 904 mt, FY2024 – 754 mt)
  - Final recommendation by the majority of the SSC:

Fishing Year	OFL	ABC
2023	Unknown	904
2024	Unknown	904

  - A minority report will be prepared recommending 754 mt for FY2023 and FY2024.

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Risk Policy Matrix

Does the AP have any feedback on the risk policy matrix for GB cod?

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Southern New England/Mid-Atlantic Winter Flounder
Fishing Year 2023-Fishing Year 2025 OFLs and ABCs

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Table 1- Summary of rebuilding status for SNE/MA winter flounder based on the previous assessment in 2020.

Groundfish Stock	**Rebuilding Plan Start of the Current Plan**	**Planned Rebuilding Date**	**Years Remaining in Plan, starting with FY2022**	**Total ACLs exceeded within past three completed FYs?** *If yes, identify the FYs.*	**Has the original rebuilding F been achieved? Or is this unknown?** *Indicate the current F estimate relative to F rebuild at the start of the plan.*	**What is current SSB estimate relative to SSBMSY? Or is this unknown?**
Southern New England/Mid-Atlantic winter flounder	5/1/2004	2023	2	No	F rebuild (plan start) = 0.175 F2019 = 0.077	SSB2019 = 3,638 mt 30% of SSBMSY

- 2022 management track assessment – not overfished, no overfishing, rebuilt
- GARFO notified the Council on August 13, 2021 that SNE/MA winter flounder had not been making adequate rebuilding progress. Updated rebuilding plan expected in Framework Adjustment 65
- If NMFS revises the official stock status to be rebuilt, the Council could choose to end the rebuilding plan, rather than revise the existing plan.

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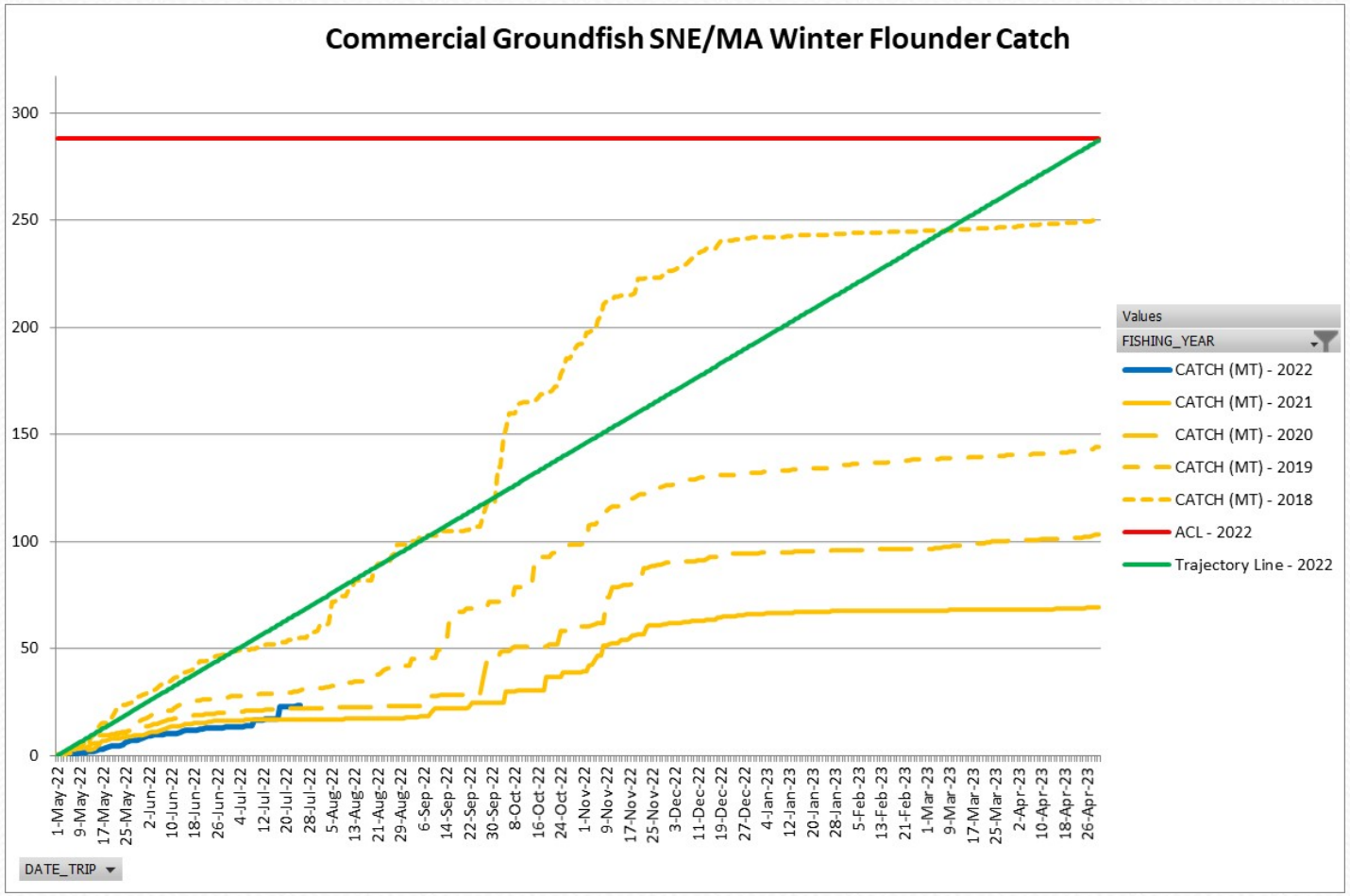
Figure 1- In-season utilization of SNE/MA winter flounder by the commercial (sectors and common pool) groundfish fishery.



Note: FY2021 catch has not been finalized.

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Recent Total Catches and Specifications

SNE/MA Winter Flounder Utilization

Fishing Year	Total ACL (mt)	Total Catch (mt)	Percent of Total ACL Caught (%)
2016	749	597.2	79.7
2017	749	550.5	73.5
2018	700	398.0	56.9
2019	700	295.4	42.2
2020	699	233.4	33.4

FYs 2021-2023

OFL	ABC	ACL
1,438	456	441

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SNE/MA winter flounder other sub-component catch (mt). Total catch and groundfish fishery catch shown for comparison.

FY2021 YTD Groundfish Commercial (Sector + Common Pool) Catches **69.1 mt** August 12, 2022, GARFO

	Catch (mt)						
Fishing Year	Total	Groundfish Fishery	SCALLOP[1]	FLUKE	SCUP	SQUID	SQUID/ WHITING
2010	370.1	47.4	NA	NA	NA	NA	NA
2011	298.7	93.9	60.3	16.4	8.3	19.5	6.8
2012	315.9	106.0	68.9	15.0	10.7	17.3	6.6
2013	1025.9	788.6	78.2	10.8	9.7	14.5	11.2
2014	703.2	545.8	33.3	6.4	5.7	6.6	3.2
2015	886.7	688.0	65.9	7.6	6.5	3.1	2.2
2016	597.2	453.3	40.4	3.6	3.7	19.6	8.5
2017	550.5	409.3	48.6	5.5	5.6	35.2	2.9
2018	398.0	250.7	52.5	3.8	3.5	47.9	3.2
2019	295.4	143.8	39.0	5.4	3.4	66.4	4.8
2020	233.4	103.2	34.6	6.3	3.3	57.2	4.8

[1]Based on scallop fishing year; all other columns are based on groundfish fishing year

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SNE/MA winter flounder other sub-components percentage of total catch (%). Groundfish fishery shown for comparison. Years in which catches exceeded 5% of total catch indicated by yellow cells.

For the category described as "other non-specified", catches will be monitored and if the catch rises above five percent accountability measures will be developed to prevent the overall ACL from being exceeded. A16

	Percentage of Total Catch (%)					
Fishing Year	Groundfish Fishery	SCALLOP[1]	FLUKE	SCUP	SQUID	SQUID/ WHITING
2010	12.8	NA	NA	NA	NA	NA
2011	31.4	20.2	5.5	2.8	6.5	2.3
2012	33.5	21.8	4.7	3.4	5.5	2.1
2013	76.9	7.6	1.1	0.9	1.4	1.1
2014	77.6	4.7	0.9	0.8	0.9	0.5
2015	77.6	7.4	0.9	0.7	0.3	0.2
2016	75.9	6.8	0.6	0.6	3.3	1.4
2017	74.3	8.8	1.0	1.0	6.4	0.5
2018	63.0	13.2	0.9	0.9	12.0	0.8
2019	48.7	13.2	1.8	1.1	22.5	1.6
2020	44.2	14.8	2.7	1.4	24.5	2.1

[1]Based on scallop fishing year; all other columns are based on groundfish fishing year

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Table 2- SNE/MA winter flounder stock-level catch and revenue predictions from the Quota Change Model (QCM) for each fishing year between 2012 and 2021 compared to realized catch and revenue (in 2021$).

FY	Sector sub-ACL	Catch (mt)		*Utilization (%)*		Gross Rev ($mil, 2021)	
		Realized	**Predicted**	***Realized***	***Predicted***	**Realized**	**Predicted**
2012	N/A	105	N/A	*N/A*	*N/A*	N/A	N/A
2013	1,074	670	N/A	*0.62*	*N/A*	2.9	N/A
2014	1,063	490	95	*0.46*	*0.10*	2.4	3.0
2015	1,147	583	833	*0.51*	*0.73*	3.3	1.1
2016	523	397	355	*0.76*	*0.69*	3.0	2.1
2017	515	372	386	*0.72*	*0.74*	2.1	3.0
2018	456	229	428	*0.50*	*0.94*	1.5	2.8
2019	444	135	455	*0.30*	*1*	0.8	2.8
2020	475	97	314	*0.21*	*0.68*	0.4	1.8
2021	247	83	163	*0.34*	*0.64*	0.4	0.9

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Figure 5- ACE lease prices estimated for SNE/MA winter flounder for fishing years 2017-2021 using a hedonic price model. First quarter (May-July) lease prices are indicated by the vertical gray bars in the figures.

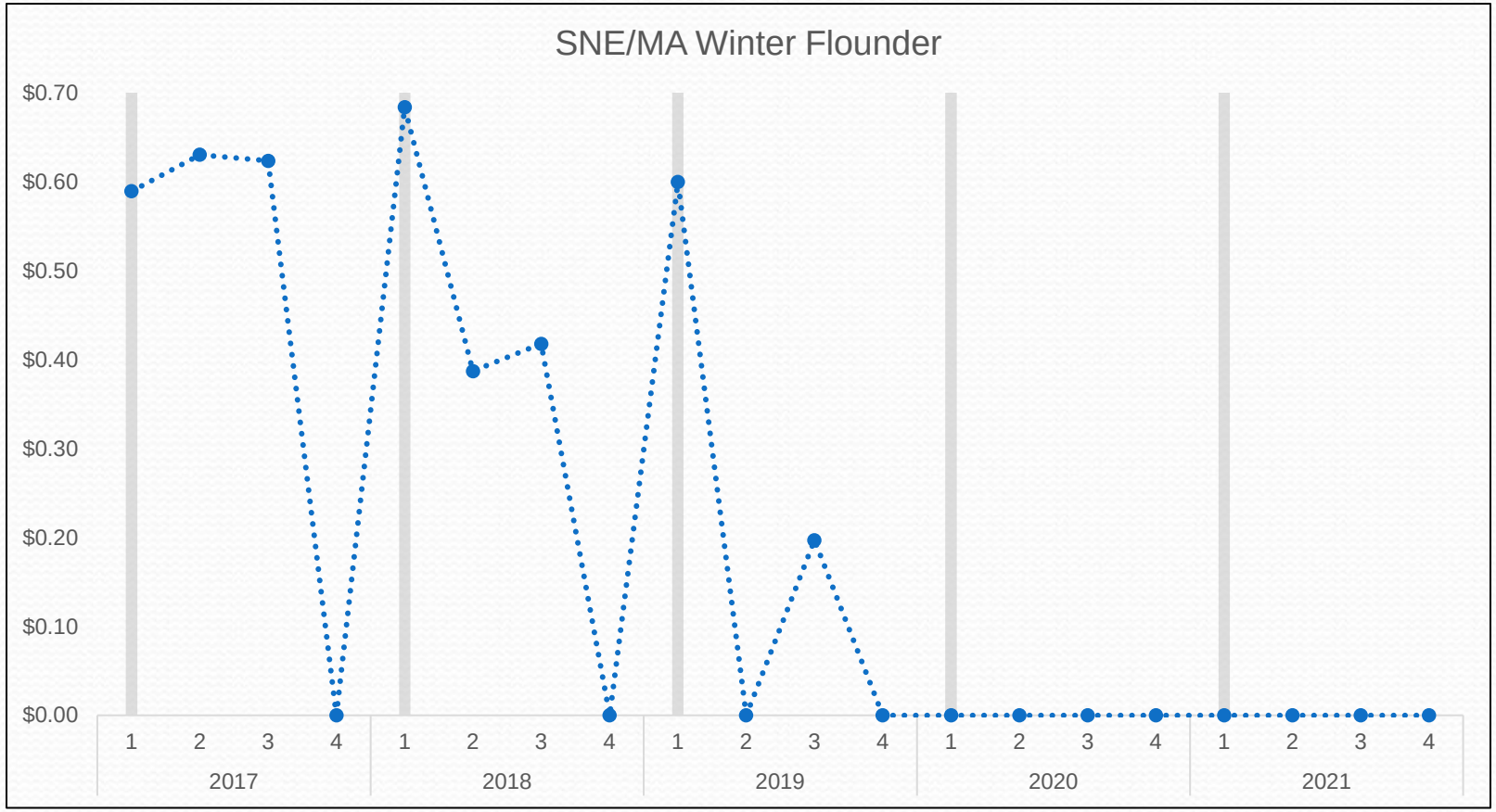

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Table 3- Catch performance (CY2010-CY2021), historical OFLs and ABCs (FY2010-FY2021), CY2022 "bridge year" catch assumption, and catch projections for F40 and 75%F40 (FY2023-FY2025) for SNE/MA winter flounder.

Year	Catch	Historical OFLs	Historical ABCs	Catch Assumption	F_{40}	$75\%F_{40}$
2010	469	1,568	644			
2011	620	2,117	897			
2012	750	2,336	626			
2013	1,085	2,732	1,676			
2014	826	3,372	1,676			
2015	787	4,439	1,676			
2016	708	1,041	780			
2017	629	1,021	780			
2018	460	1,228	727			
2019	342	1,228	727			
2020	180	1,228	727			
2021	216	1,438	456			
2022		1,438	456	224		
2023		1,438	456		1,186	914
2024					1,306	1,052
2025					1,275	1,069

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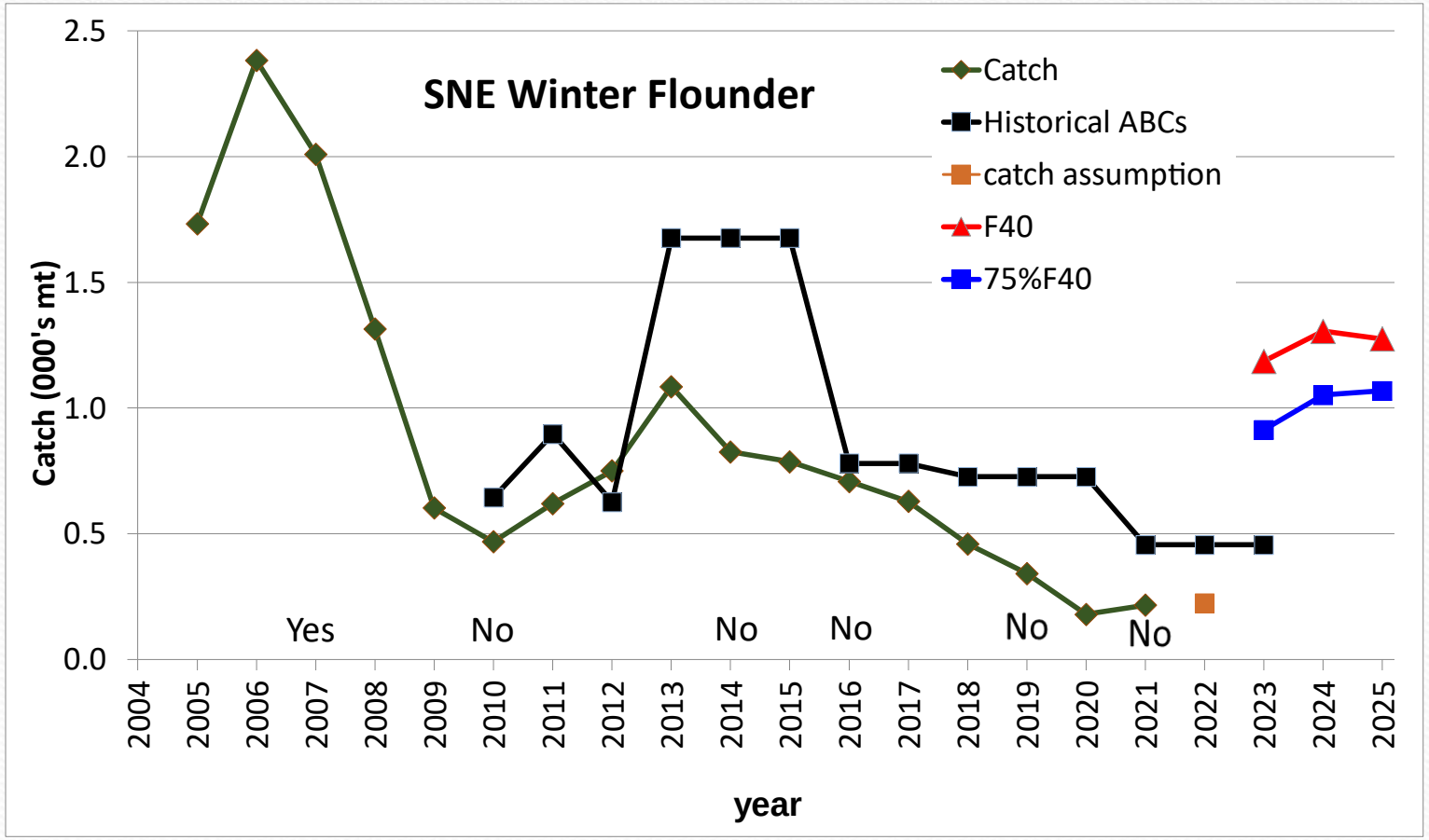
Figure 7- Catch performance for SNE/MA winter flounder including: catches from CY2005-CY2021, historical OFLs and ABCs since FY2010, CY2022 "bridge year" catch assumption, and projections for FY2023 - FY2025 at F40 and 75%F40. Overfishing status in the terminal year of the assessment indicated on the x-axis ("Yes" = overfishing or "No" = not overfishing).



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Council Staff's Preliminary Summary of SNE/MA Winter Flounder OFLs and ABCs SSC Recommendations

- PDT developed options to consider under:
  - 75%FMSY – Option A of Groundfish Control Rules
  - 75%FMSY – first year held constant
  - Frebuild – Option B of Groundfish Control Rules
  - Frebuild – first year held constant
  - 60%FMSY constant
  - 50%FMSY constant (SSC's recommendation)
  - Three-year average catch

50%FMSY constant

Year	OFL	ABC
2023	1,186	627
2024	1,425	627
2025	1,536	627

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Risk Policy Matrix

Does the AP have any feedback on the risk policy matrix for SNE/MA winter flounder?

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Georges Bank Yellowtail Flounder Fishing Year 2023-Fishing Year 2024 OFLs and ABCs

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Stock Status

NOAA Fisheries determined GB yellowtail flounder is overfished and overfishing is occurring. GB yellowtail flounder is in a 26-year rebuilding plan, with a target rebuild by date of 2032.

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Groundfish PDT Summary

The PDT supports the 2022 TRAC's recommendation to use the GB yellowtail flounder limiter, including the biological bounds, to set catch advice. The resulting catch advice is 200 mt. The PDT supports the TRAC's recommendation of 200 mt. Based on this, the following table summarizes possible OFLs and ABCs for fishing year 2023-2024 for consideration by the SSC. The second year (2024) is anticipated to be updated following the 2023 TRAC assessment.

Fishing Year	Possible OFL	Possible ABC
2023	*Unknown*	200
2024	*Unknown*	200

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Groundfish PDT Report Summary

Updated fishery information:

(1) catch performance for GB yellowtail flounder

(2) the ratio of US discards to US landings for GB yellowtail flounder,

(3) observed catches of GB yellowtail flounder,

(4) in-season utilization of GB yellowtail flounder by the commercial groundfish fishery, and

(5) summary of economic information

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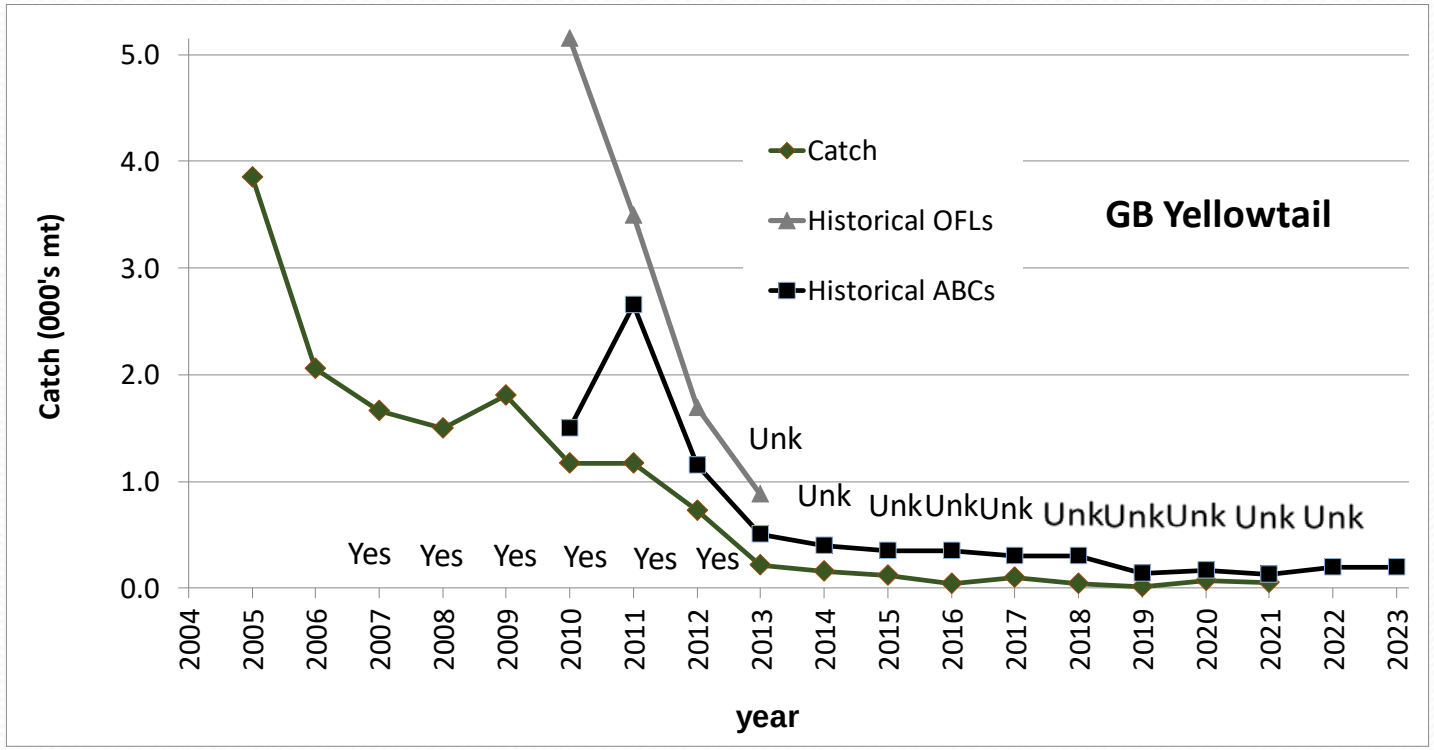
Catch Performance



Year	CY Catch	OFLs	ABCs
2010	1,170	5,148	1,500
2011	1,171	3,495	2,650
2012	725	1,691	1,150
2013	218	882	500
2014	159	undefined	400
2015	118	undefined	354
2016	44	undefined	354
2017	95	undefined	300
2018	45	undefined	300
2019	8	undefined	140
2020	68	undefined	162
2021	51	undefined	125
2022		undefined	200
2023		undefined	200

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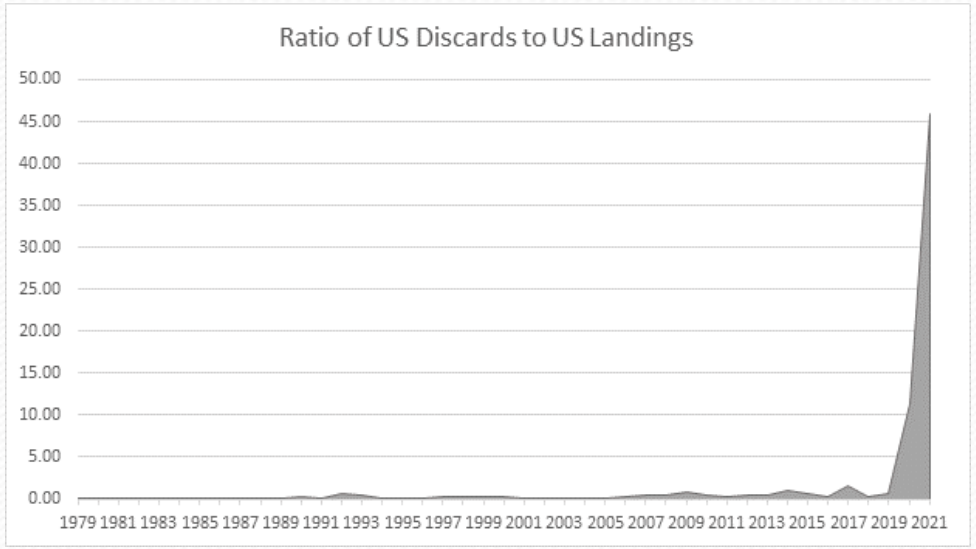
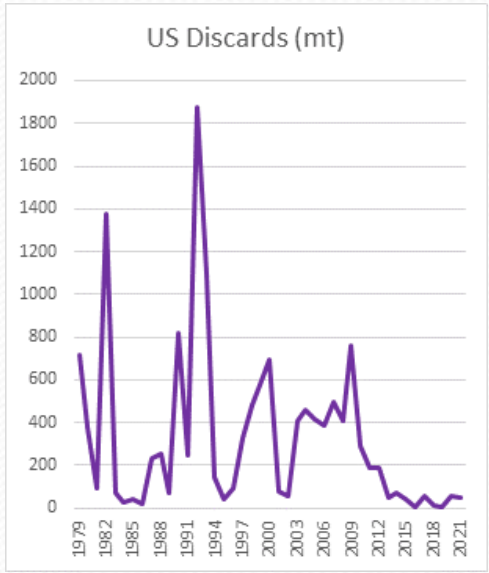
Ratio of US Discards to US Landings





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Observed Catches of Yellowtail Flounder

	CC/GOM				GB				SNE/MA			
	513	**514**	**515**	**521**	**522**	**525**	**561**	**562**	**537**	**538**	**539**	**611**
0 lbs.	128	967	6	136	23	*	5	5	19	*	26	3
-<200 lbs.		200		16								
-<300 lbs.		84		5								
+ lbs.		103		14			*					

* Indicates confidential data based on <3 vessels.

Count of observed large-mesh hauls of yellowtail flounder by haul weight (binned in 100 lb. increments) and statistical reporting areas (SRAs) for fishing year 2021

Data are all large-mesh bottom trawl hauls (NEGEAR=050) and are not filtered by fishery.

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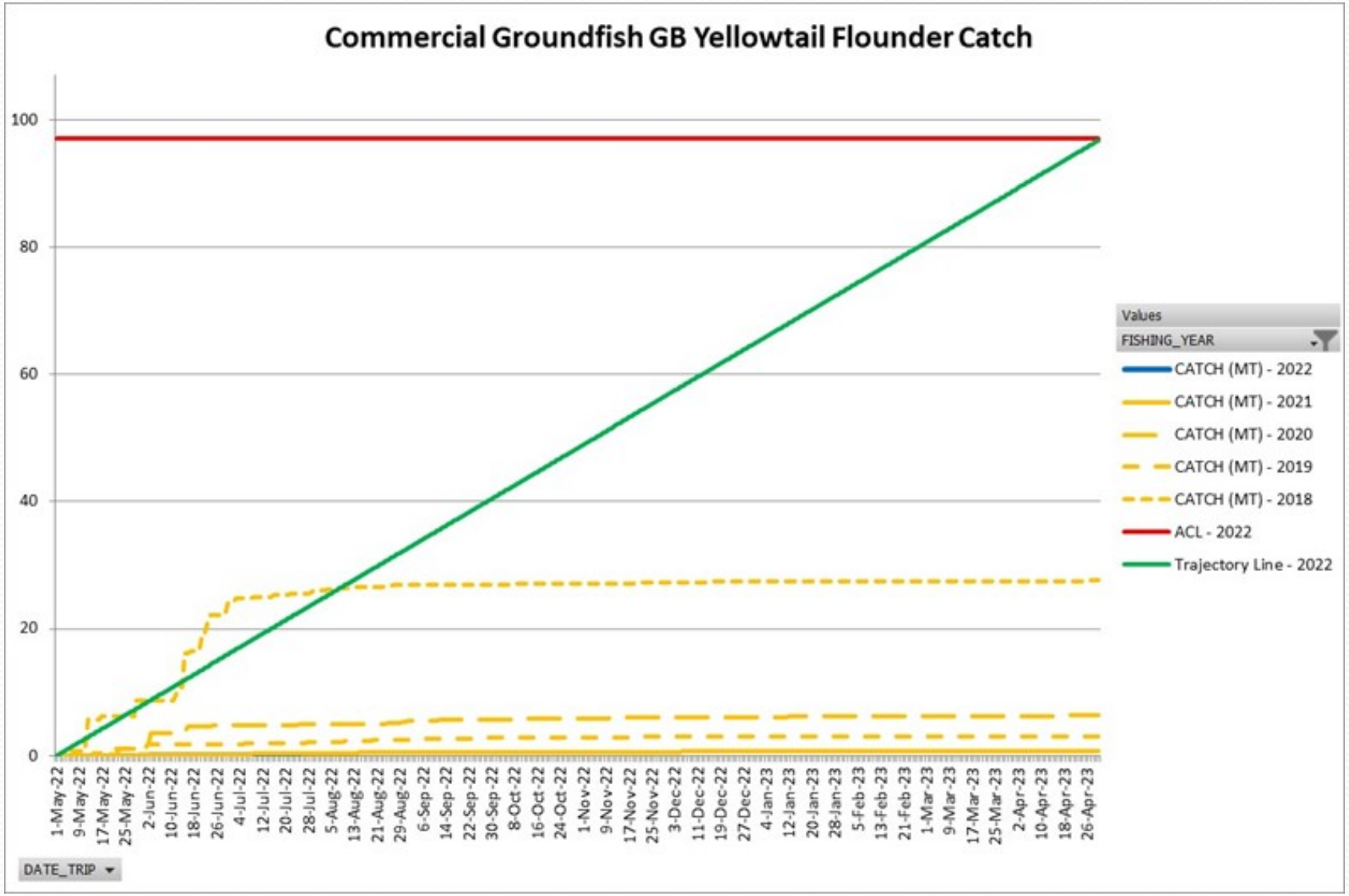
In-Season Utilization Commercial Groundfish



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Economic Information – Sectors - QCM

FY	Sector sub-ACL	Catch (mt)		*Utilization (%)*		Gross Rev ($mil, 2021)	
		Realized	Predicted	*Realized*	*Predicted*	Realized	Predicted
2012	364	201	360	*0.55*	*0.99*	0.7	1.1
2013	100	46	97	*0.46*	*0.97*	0.2	0.3
2014	252	54	167	*0.21*	*0.66*	0.2	0.6
2015	192	36	55	*0.19*	*0.28*	0.1	0.2
2016	207	23	22	*0.11*	*0.10*	0.1	0.1
2017	160	31	18	*0.19*	*0.11*	0.1	0.1
2018	167	27	37	*0.16*	*0.22*	0.1	0.2
2019	83	3	37	*0.04*	*0.45*	<0.1	0.1
2020	93	5	27	*0.05*	*0.29*	<0.1	<0.1
2021	59	1	2	*0.01*	*0.04*	<0.1	<0.1

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Other US Fisheries with Catch Limits

- Small-mesh (mainly squid and whiting) fisheries
- Scallop fishery

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Small-Mesh Fisheries

	Small-mesh fisheries sub-ACL (mt)	Small-mesh fisheries (mt)	Percent small-mesh fisheries Caught (%)
FY2013	4	2.5	63.7%
FY2014	6.1	1.1	18.1%
FY2015	5	0.1	1.0%
FY2016	5	4.8	95.2%
FY2017	4	0.4	9.7%
FY2018	4	0.1	2.5%
FY2019	2	<0.0	1.5%
FY2020	2	1.8	82.2%
FY2021	1.5		
FY2022	2.3		

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Sea Scallop Fishery – Scallop PDT Report

- The scallop fishery is allocated a sub-Annual Catch Limit (sub-ACL) of GB yellowtail equivalent to 16% of the US TAC.

- The scallop fishery accountability measure (AM) is structured in a way that the fishery would be able to continue to harvest scallops even if the AM is triggered. If the reactive AM is triggered for either GB yellowtail or northern windowpane, the fishery would be required to use a gear modification while fishing on eastern Georges Bank. Preliminary data suggests that the northern windowpane sub-ACL was exceeded by more than 150% in FY2020. This would mean that the gear restricted area (GRA) would be in effect in FY2022 and that a reduction in GB yellowtail catch could be expected in CAII AA in FY2022 as a result of the AM.

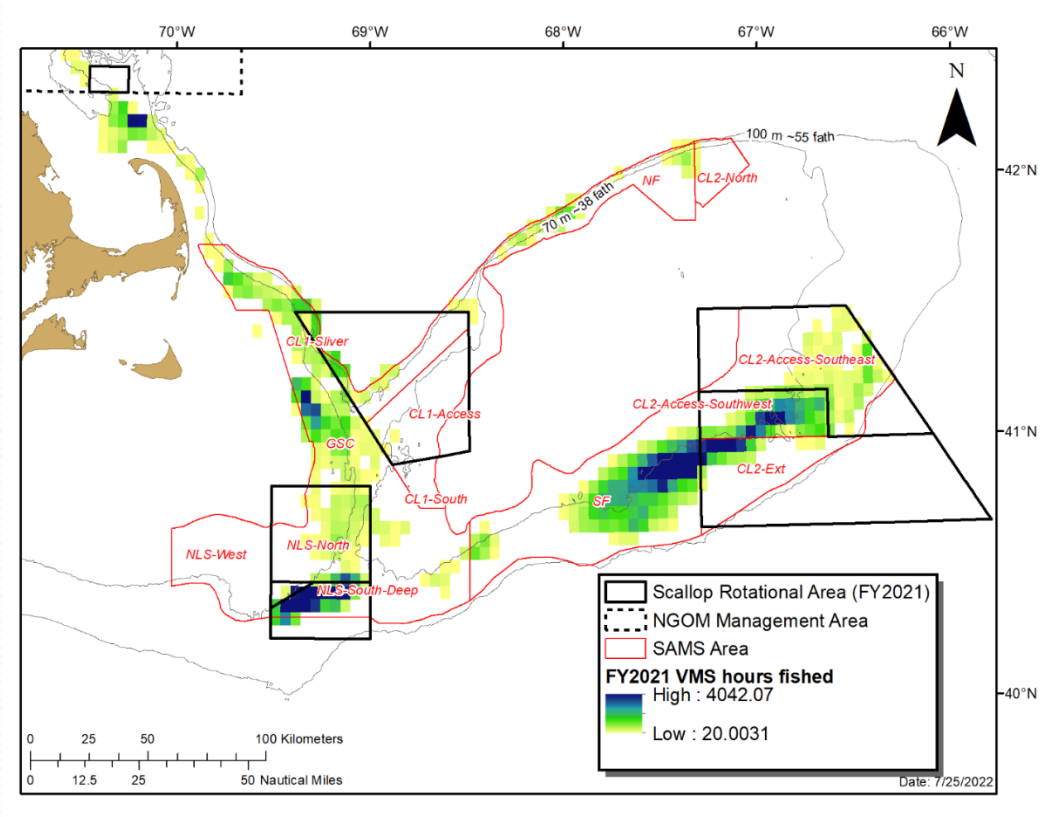
- Due to an overage of the northern windowpane flounder sub-ACL in FY2020, the scallop fishery is subject to a reactive accountability measure (AM) for the duration of FY2022. The reactive AM requires use of a modified dredge (i.e., maximum 5-row apron with 1.5:1 hanging ratio) when fishing in Closed Area II for the entirety of FY2022. Use of the modified dredge is anticipated to reduce bycatch of both GB yellowtail and northern windowpane flounder.

Sea Scallop Fishery – Scallop PDT Report

- The Scallop PDT projected GB yellowtail bycatch to be about 17 mt for FY2022, which is slightly lower than the scallop fishery sub-ACL of 19 mt. Due to several caveats associated with the data used for projections and lack of current observer information on bycatch rates of flatfish stocks on eastern Georges Bank, the Scallop PDT noted that the FY2022 GB yellowtail bycatch projection was highly uncertain.

- In season bycatch estimates are typically based on area-specific (i.e., in access areas and open areas) observed discard rates. Due to a lack of observer coverage in 2020 and data processing delays in 2021 and 2022, limited observer data are available to inform bycatch estimates for CAII, an area where GB yellowtail bycatch is typically higher than elsewhere in the stock area. The lack of up-to-date observer data has resulted in continued use of the 2019 broad stock discard rate for certain strata (LAGC in Closed Area I, LA in NLS North) when estimating GB yellowtail bycatch for FY2021 (i.e., 30 mt, 251% of the scallop sub-ACL). The boundaries for Closed Area II changed between FY2020 and FY2021, from the Southeast to the Southwest, adjacent to the Southern Flank open area and Closed Area II Extension. The PDT reiterates that the FY2021 scallop fishery bycatch estimate of GB yellowtail remains uncertain and suggests that this estimate be revisited when more recent observer records are available from FY2021.

Scallop fishery effort in terms of Vessel Monitoring System (VMS) hours fished for fishing year 2021 on Georges Bank. Scallop Area Management Simulator (SAMS) area boundaries are shown in red..



New England Fishery Management Council

Council Staff's Preliminary Summary of GB Yellowtail Flounder OFLs and ABCs SSC Recommendations

- Option D of Groundfish Control Rules

	OFL	ABC
2023	*Unknown*	200
2024	*Unknown*	200

New England Fishery Management Council

Risk Policy Matrix

Does the AP have any feedback on the risk policy matrix for GB yellowtail flounder?

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Current ABC Control Rules

These ABC control rules will be used in the absence of better information that may allow a more explicit determination of scientific uncertainty for a stock or stocks. If such information is available - that is, if scientific uncertainty can be characterized in a more accurate fashion -- it can be used by the SSC to determine ABCs, these ABC control rules can be modified in a future Council action (an amendment, framework, or specification package):

A. ABC should be determined as the catch associated with 75% of FMSY.
B. If fishing at 75% of FMSY does not achieve the mandated rebuilding requirements for overfished stocks, ABC should be determined as the catch associated with the fishing mortality that meets rebuilding requirements (Frebuild).
C. For stocks that cannot rebuild to BMSY in the specified rebuilding period, even with no fishing, the ABC should be based on incidental bycatch, including a reduction in bycatch rate (i.e., the proportion of the stock caught as bycatch).
D. Interim ABCs should be determined for stocks with unknown status according to case-by-case recommendations from the SSC.

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ABC Control Rules – Council Staff

Key question: What type of approach(es) would the Committee like to consider in FW65?

Approach #1 – Refine the existing Control Rules – The current control rules would remain and clear decision rules on their application would be developed. For example, when/how to apply a constant ABC based on projections from analytical assessments and the results of empirical approaches.

Approach #2 – Modify the existing Control Rules – One or more control rules would be modified or dropped. For example, removing "option c" and refining "option d" and specifying how to use a fixed $F_{rebuild}$ under "option b".

Approach # 3 – Replace the existing Control Rules – Completely new control rules would be developed. For example, one alternative could be tiered control rules that consider the stock and its assessment. Furthermore, should the public participate in a MSE process like what was done for Atlantic herring? If so, this would be a much longer and more involved process beyond the timing for FW65.

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Groundfish Committee - Meeting 6/14/22

Move that the Committee recommends to the Plan Development Team that work related to the ABC control rule in Framework 65 begin with Council staff approach #1 (*refine the existing control rules, including developing guidance on when to use a constant ABC*). The Committee continues to recognize the value of Council staff approaches #2 (*modify the existing control rules*) and #3 (*replace the existing control rules*); however, additional time and conversations with the SSC and Advisory Panels is warranted under these approaches and their more extensive nature may be best addressed under an additional priority in 2023.

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Groundfish Committee - Meeting 6/14/22

The Groundfish Committee tasks the Plan Development Team to further investigate the bycatch of Southern New England/Mid-Atlantic (SNE/MA) winter flounder in the "squid" fishery between fishing years 2017 to 2020. Specifically, to determine:

- What component of the "squid" fishery is the bycatch occurring (ie. Illex, Loligo or other small mesh fisheries with a significant catch of squid)
- The extent or magnitude of small mesh otter trawl trips that have observed high levels of SNE/MA winter flounder bycatch compared to total effort
- Examination of outliers in the trip discard data
- The temporal and spatial distribution of this bycatch in the "squid" fishery

New England Fishery Management Council

Groundfish Committee - Meeting 6/14/22

GOM Cod

The Groundfish Committee tasks the Plan Development Team to analyze the effectiveness of the management uncertainty buffer for the Gulf of Maine cod recreational fishery including consideration of how the uncertainty buffer could impact carryover determinations for sectors.

SNE/MA Winter Flounder

The Groundfish Committee tasks the Plan Development Team to work with Atlantic States Marine Fisheries Commission staff to summarize any information available on documented spawning locations for Southern New England/Mid-Atlantic winter flounder and existing management measures within those areas.

New England Fishery Management Council

Council Motion – June 29

That the Council include Georges Bank cod as a stock to pursue “additional measures to promote rebuilding” in Framework Adjustment 65, including mechanisms that could be adopted to minimize the impact to the commercial fishery if the recreational fishery exceeds its catch target.

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Framework Adjustment 65

- **Goal**: Discuss development of draft specifications and measures
- **Key discussion question**: What management measures should be examined for Georges Bank cod to promote stock rebuilding?
- **Outcome**: Motions to recommend alternatives to develop.

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Amendment 23 Metrics

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PDT Progress Report – A23 Review Metrics

Next steps:

- Discuss GAP, GF CTE, and Council input on possible review metrics and indicators and provide feedback
- Develop draft discussion document

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PDT Discussion Notes 5/26/22

- Broad categories of possible metrics and indicators:
  - Realized coverage compared to target coverage – explore factors/reasons, comparison between monitoring tools (ASM, EM), exclusions
  - Monitoring bias (re-run PDT monitoring analyses, species composition correlations
  - Fishery performance (catch, effort, quota leasing prices, fishing costs)
  - Observer program administration/social indicators (PTNS compliance, refusals, safety issues)

New England Fishery Management Council

Groundfish Advisory Panel 6/2/22

- Broad categories of possible metrics and indicators:
  - Observer program administration/reasons for realized coverage
  - Monitoring costs (cost/benefit analysis, costs relative to discards)
  - Impacts on stock assessments

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Fishery Management Council

Council Motion June 29

That the Council consider the following analyses in the Amendment 23 review metrics:

1. Comparison of target coverage rates vs. realized coverage rates, including comparison between vessels using EM monitoring tools and human at-sea monitors
2. The number of trips where waivers for monitoring requirements are issued and the reason for the waiver
3. Evidence of bias in catch reporting between monitored and un-monitored trips, including:
    a. Trip duration
    b. Species composition and size composition of landed groundfish
    c. Species composition and weight of discarded groundfish
    d. Ratio of landed to discarded fish by species
4. Overall industry and agency costs for meeting monitoring requirements, including a cost comparison between EM-monitored trips and human at-sea monitored trips
5. Efficacy of the Dockside Monitoring Program required in the Maximized Retention EM program, including purpose of the program (size composition and weights of sub-legal fish, validating dealer weights, hold inspection) cost of the program and the use of information collected

New England Fishery Management Council

Council Motion June 29

That the Council consider in the current development of Amendment 23 (A23) metrics additional analysis that go to quantifying the magnitude of bias analyzed in A23. Specifically, pursue the numerous suggestions offered by the A23 SSC Sub-Panel Peer Review on ways the following two analysis could be further pursued to understand the magnitude of the observer bias question. (1) Methods to Predict Groundfish Catch in the presence of an observer (2) Methods to evaluate groundfish catch ratios A23 analysis.

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Council Motion June 29

1. True cost of monitoring at significantly higher targets by sea day (not days absent)
    a. including sea day rate, travel, training & meal reimbursement, equipment, operations costs etc.
    b. should be for each of the 3 industry paid programs, ASM, Audit EM & MREM
2. Stat Area/BSA Reporting (Palmer work) - comparing VTR/OBS/VMS data
    a. can help determine if getting better with higher levels of coverage
    b. also can help to determine if differences are due to misreporting or due to differences in guidance
3. Compare/Contrast discard estimates by monitoring program (ASM, Audit EM, MREM, NEFOP)
4. Rerun PDT observer bias work since don't expect coming close to 100 % realized rate for trips with ASM requirements a. can simplify this work by tailoring analysis to those that showed significant differences originally
5. Examine if those vessels that showed observer bias in the PDT work remaining in the fishery post 23
6. For trips that are exempt from ASM in SNE (west of 7130), could potentially look at observed discard estimates Pre/Post Amendment 23 since coverage rates will be dramatically different
7. recommendation of QA/QC on lease price data if examining leasing information

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Atlantic Cod Management

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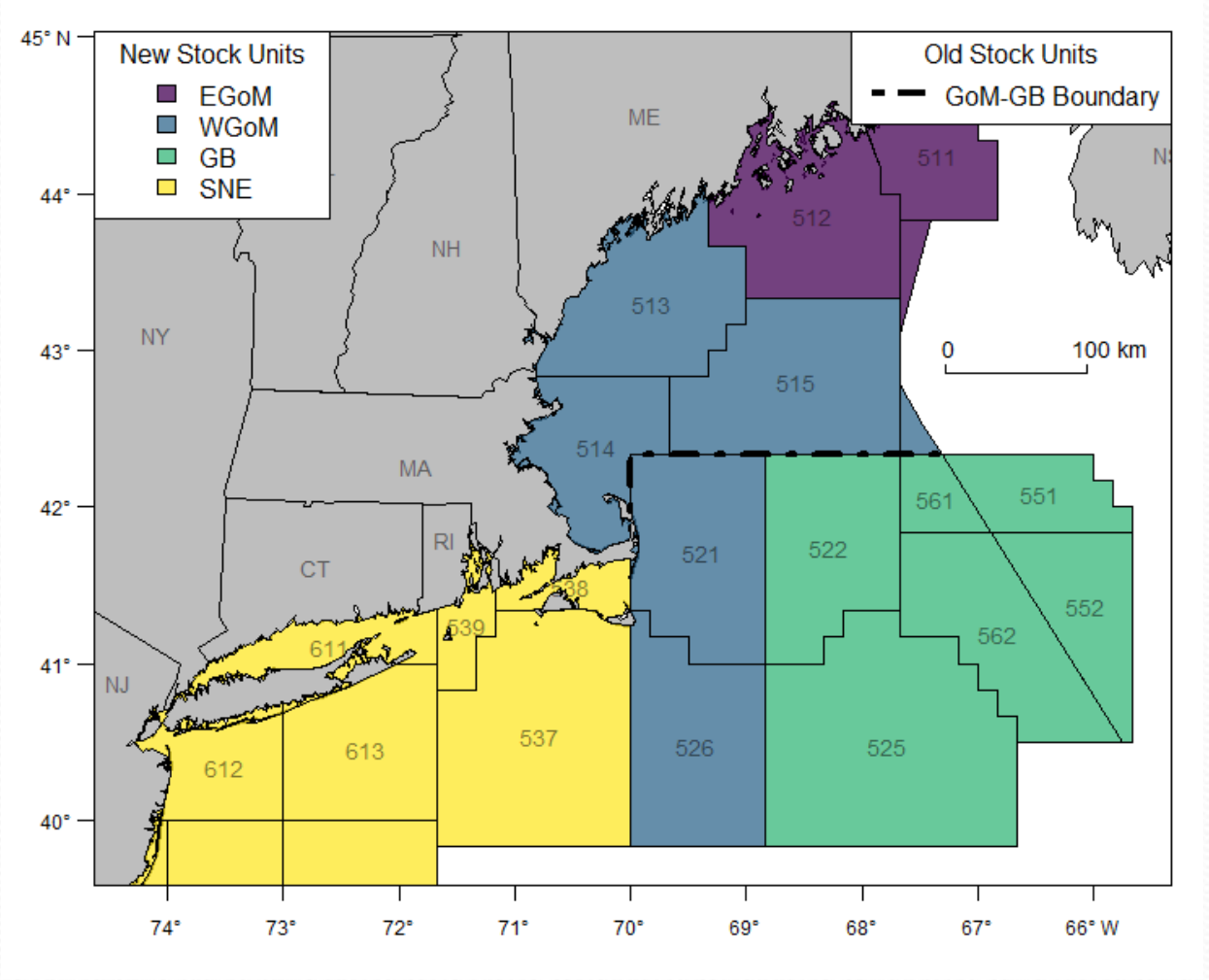
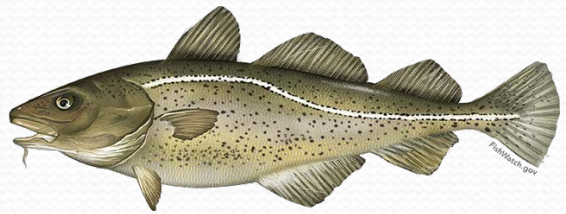
Fishery Management Council

Atlantic Cod Management





New England Fishery Management Council

Groundfish Committee - Meeting 6/14/22

The Committee recommends to the Plan Development Team that the White Paper on potential approaches to allocate "Georges Bank cod" to the recreational fishery consider the following:

a) Management measures that each sector (rec vs. comm) was subject to during time periods considered, including whether the recreational fishery was subject to a catch target, if that catch target was linked to a change in the ABC, and if the catch target was based on old vs. new MRIP data
b) Whether to consider catch data from years prior to the recreational catch target being established (FY2018)
c) Identification of years in which an overage of the rec catch target or the commercial sub-ACL occurred and a methodology to ensure overages do not inflate a sub-ACL
d) If a management uncertainty buffer is appropriate for the recreational fishery and, if yes, the potential magnitude of the buffer
e) The influence of deducting sub-components after the recreational and commercial sub-ACLs
f) Using weight vs. numbers of fish in the allocation
g) If and how state waters catch factors into the allocation
h) Exploration of what recreational catch is compared to and its impacts (i.e. commercial catch, the ACL, something else?)

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