



Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: July 27, 2023
To: Council and Board
From: Kiley Dancy, Staff
Subject: Summer Flounder 2024-2025 Specifications

On Tuesday, August 8, the Council and Board will consider summer flounder specifications for 2024-2025 after reviewing the recommendations of the SSC, Monitoring Committee, and Advisory Panel. Measures to be considered include 2024-2025 commercial and recreational catch and landings limits, as well as any changes to the commercial management measures desired for 2024. Materials listed below are provided for the Council and Board's consideration of this agenda item.

Please note that some documents are behind separate tabs.

- 1) Executive Summary of the July 2023 Scientific and Statistical Committee meeting (*behind Tab 16*)
- 2) Staff memo on 2024-2025 summer flounder specifications dated July 13, 2023
- 3) Staff memo on Summer Flounder Mesh Regulation Issues dated July 18, 2023
- 4) Summer Flounder Draft Management Track Assessment for 2023
- 5) June 2023 Advisory Panel Fishery Performance Report and associated additional AP comments received through July 6, 2023
- 6) 2023 Summer Flounder Fishery Information Document

To be posted separately once available:

- 1) Full report of the July 2023 Scientific and Statistical Committee meeting
- 2) Monitoring Committee meeting summary from July 27, 2023
- 3) Any additional public comments received after July 26, if applicable



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Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

DATE: July 13, 2023 (Revised for minor correction on July 25, 2023)

TO: Chris Moore, Executive Director

FROM: Kiley Dancy, Staff

SUBJECT: Summer Flounder Specifications for 2024-2025

Executive Summary

This memorandum includes information to assist the Mid-Atlantic Fishery Management Council's (Council's) Scientific and Statistical Committee (SSC) and Monitoring Committee in recommending 2024-2025 catch and landings limits and commercial management measures for summer flounder. Additional information on fishery performance and past management measures can be found in the 2023 Summer Flounder Fishery Information Document and the 2023 Summer Flounder, Scup, and Black Sea Bass Fishery Performance Report developed by advisors.¹

In June 2023, the Northeast Fisheries Science Center (NEFSC) provided a management track assessment (MTA) for summer flounder, which updated the 2018 benchmark assessment model with data through 2022.² The 2023 MTA indicates that the summer flounder stock was not overfished, but that overfishing was occurring in 2022. Due to this overfishing, continued high projected fishing mortality for 2023, and associated projected stock biomass declines in 2023, the overfishing limits (OFLs) are projected to decline in 2024-2025 compared to current levels (a 34% decrease from 2023 to 2024).

The Magnuson-Stevens Act requires the Council's SSC to provide ongoing scientific advice for fishery management decisions, including recommendations for Acceptable Biological Catch limits (ABCs), preventing overfishing, and achieving maximum sustainable yield. The Council's catch limit recommendations for the upcoming fishing year(s) cannot exceed the ABC recommendation of the SSC.

There are currently no catch and landings limits in place for summer flounder beyond the 2023 fishing year. The SSC should recommend ABCs for 2024-2025 for the Council and Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Board (Board) to consider at their joint August 2023 meeting. Two-year specifications are recommended to align with the current stock assessment schedule for summer flounder, under which the next update is expected in 2025 to inform 2026-2027 specifications.

¹ Available at: <https://www.mafmc.org/fishery-performance-reports>.

² Available at: <https://www.mafmc.org/council-events/2023/july-2023-ssc-meeting>.

ABC projections for 2024-2025 were provided by the NEFSC, assuming continued application of an OFL CV of 60%, sampling recruitment from the recent, below-average recruitment series, and assuming total fishery catch in 2023 will be equal to the 2023 ABC. Projections were provided for both varying ABCs from 2024-2025, as well as an averaging approach where the 2024-2025 ABCs are identical. The Council and Board have requested the ability to determine which approach is more appropriate from a policy standpoint; therefore, the SSC is requested to provide recommendations for both varying and averaged ABCs. Staff recommend that the Council and Board adopt the averaged ABC approach for 2024-2025 such that the catch and landings limits are held constant over the two years. Under the previously described assumptions, this would result in a 2024-2025 ABC equal to 19.32 million pounds (8,761 metric tons), which would represent a 42% decrease from the 2022-2023 ABC of 33.12 million pounds (15,023 metric tons; Table 1). This decrease is the result of the notable decrease in the OFLs as described above, along with the application of the Council's risk policy that increases the buffer between the OFL and the ABC as projected B/B_{MSY} declines.

The Monitoring Committee should review recent fishery performance and the SSC's recommendations for ABCs and make a recommendation to the Council and Board regarding 2024-2025 commercial and recreational Annual Catch Limits (ACLs) and Annual Catch Targets (ACTs), commercial quotas, and recreational harvest limits. Staff recommend developing these limits using similar methods and assumptions as applied in recent years, including no reduction from the ACLs to the ACTs to account for management uncertainty. The resulting staff recommended sector specific limits are summarized in Table 1.

The Monitoring Committee will also consider whether any revisions are needed to the commercial management measures (minimum fish size, minimum mesh size, and mesh exemption programs) for 2024. Recreational measures for 2024-2025 will be considered later in 2023. Staff recommend no changes to the commercial minimum size, minimum mesh size, or mesh exemption programs for 2024. As described below in the "Commercial Management Measures" section, staff and a contractor are working to evaluate two issues in more depth for consideration later in 2023: 1) the commercial minimum mesh size exemption programs for summer flounder, and 2) the summer flounder commercial minimum mesh size regulations for summer flounder (5.5" diamond or 6.0" square mesh). Any potential changes adopted as the result of these evaluations would likely be effective in 2025 or later.

Table 1: The current (2023) catch and landings limits for summer flounder as well as staff recommended limits for 2024-2025. The final 2024-2025 values may differ based on the recommendations of the SSC, Monitoring Committee, Council, and Board.

Measure	2023		Basis	2024-2025 Staff Rec.		Staff Recommendation Basis
	mil lb	mt		mil lb	mt	
OFL	34.98	15,865	Stock assessment projections	22.98 (2024) 24.97 (2025)	10,422 (2022) 11,325 (2023)	Stock assessment projections ^a
ABC	33.12	15,021	July 2021 SSC recommendation	19.32	8,761	ABC projections provided by the NEFSC; averaged 2024-2025 ^a
ABC dead discards	7.23	3,279	NEFSC projections; averaged 2022-2023	4.18	1,895	NEFSC projections; averaged 2024-2025
Com. ACL	18.21	8,262	55% of ABC (revised commercial allocation)	10.62	4,819	55% of ABC (revised commercial allocation)
Com. ACT	18.21	8,262	No deduction from ACL for management uncertainty	10.62	4,819	No deduction from ACL for management uncertainty
Expected com. dead discards	2.95	1,336	41% of ABC dead discards portion, based on 2017-2019 average % dead discards by sector	1.83	831	44% of ABC dead discards portion, based on 2020-2022 average % dead discards by sector
Com. quota	15.27	6,925	Comm. ACT, minus expected comm. dead discards	8.79	3,987	Comm. ACT, minus expected comm. dead discards
Rec. ACL	14.90	6,759	45% of ABC (revised recreational allocation)	8.69	3,942	45% of ABC (revised recreational allocation)
Rec. ACT	14.90	6,759	No deduction from ACL for management uncertainty	8.69	3,942	No deduction from ACL for management uncertainty
Expected rec. dead discards	4.28	1,942	59% of ABC dead discards portion, based on 2017-2019 average % dead discards by sector	2.35	1,064	56% of ABC dead discards portion, based on 2020-2022 average % dead discards by sector
RHL	10.62	4,817	Rec. ACT minus expected rec. dead discards	6.35	2,879	Rec. ACT minus expected rec. dead discards

^a Projections assume a continued application of an OFL CV = 60%, and that the catch in 2023 is equal to the 2023 ABC.

Stock Status and Biological Reference Points

In June 2023, the NEFSC provided the 2023 MTA for summer flounder using data through 2022, based on the model developed through the 66th Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC) in 2018. The 2023 MTA³ revised the biological reference points for spawning stock biomass (SSB) and fishing mortality (F). As summarized in Table 2 of the MTA, the SSB target decreased from 104.5 million pounds (55,217 mt) to 90.38 million pounds (49,561 mt), while F threshold increased from 0.422 to 0.451. The new overfished threshold is $\frac{1}{2} SSB_{MSY \text{ proxy}} = \frac{1}{2} SSB_{35\%} = 54.63$ million pounds (24,781 mt; Figure 1). Assessment results indicate that the summer flounder stock was not overfished, but that that overfishing was occurring in 2022.

SSB has generally decreased since 2003 and was estimated to be 90.38 million lb (40,994 mt) in 2022, about 83% of the updated biomass target reference point $SSB_{MSY \text{ proxy}} = 109.26$ million lb (49,561 mt). The 2021 MTA had estimated that stock biomass was at 86% of the previous SSB target.

Fishing mortality on the fully selected age 4 fish ranged between 0.756 and 1.601 during 1982-1996, followed by a period of decreasing F to a low of 0.257 in 2007. Post-2007, F rates increased but have been relatively stable since 2011. F in 2022 was estimated at 0.464, 103% of the updated fishing mortality threshold reference point ($F_{MSY \text{ proxy}} = F_{35\%} = 0.451$; Figure 2). The 2021 MTA had estimated that F was at 81% of the previous overfishing threshold.

Average recruitment from 1982 to 2022 is 51 million fish at age 0. Recruitment of juvenile summer flounder has been below-average from 2011-2022, ranging from 27 to 43 million fish and averaging 36 million fish. The driving factors behind this period of below average recruitment have not been identified. While the 2018 year class was originally estimated to be above average (estimated in the previous assessment at 61 million fish), the 2023 MTA revised the recruitment estimate down to 43 million fish. Recruitment estimates for 2019-2022 range from 36 to 42 million fish at age 0, all below the time series average and near or slightly above the recent average.

The next management track assessment for summer flounder is expected in 2025 to inform 2026-2027 limits.

³ https://www.mafmc.org/s/e_Summer_flounder_MTA_2023_06_08.pdf

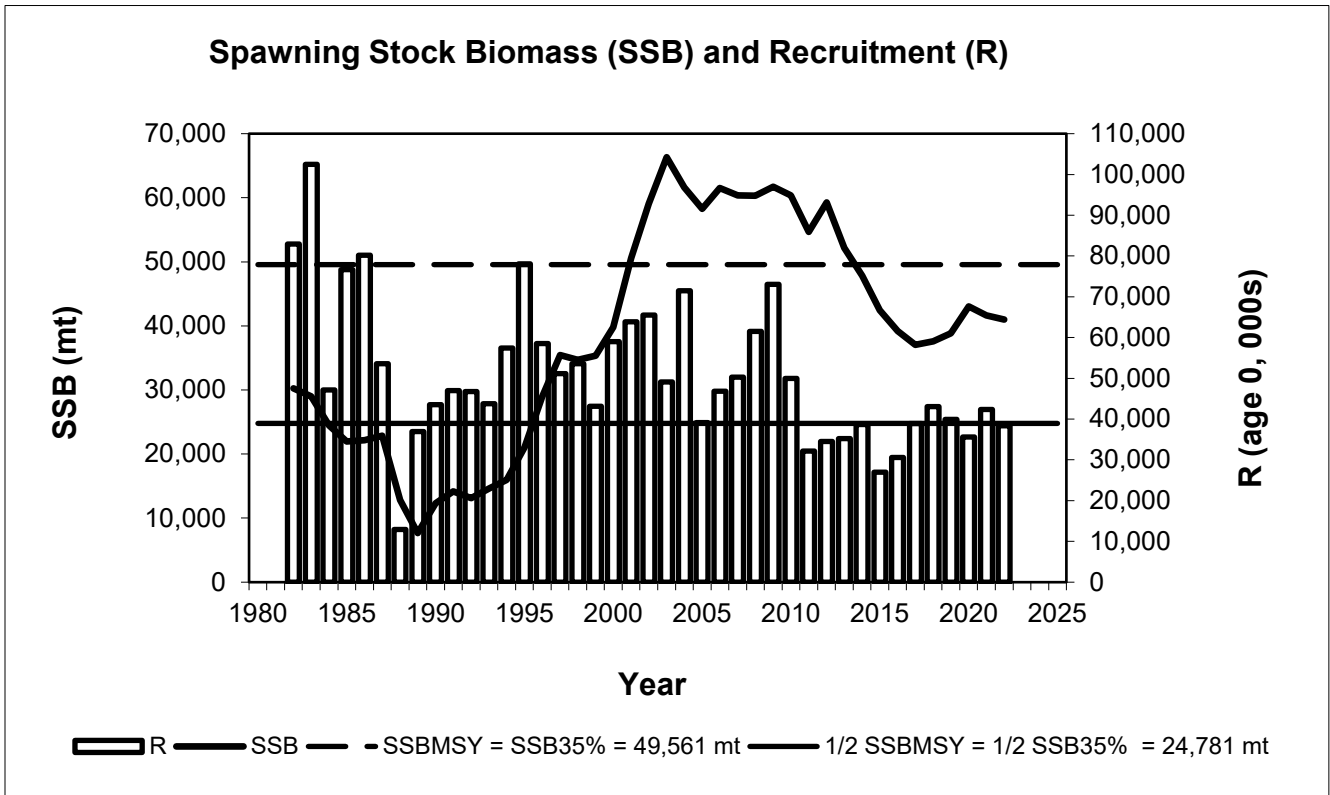


Figure 1: Summer flounder spawning stock biomass (SSB; solid line) and recruitment at age 0 (R; vertical bars), 1982-2022. The horizontal dashed line is the updated target biomass reference point. The horizontal solid line is the updated threshold biomass reference point. Source: 2023 management track assessment.

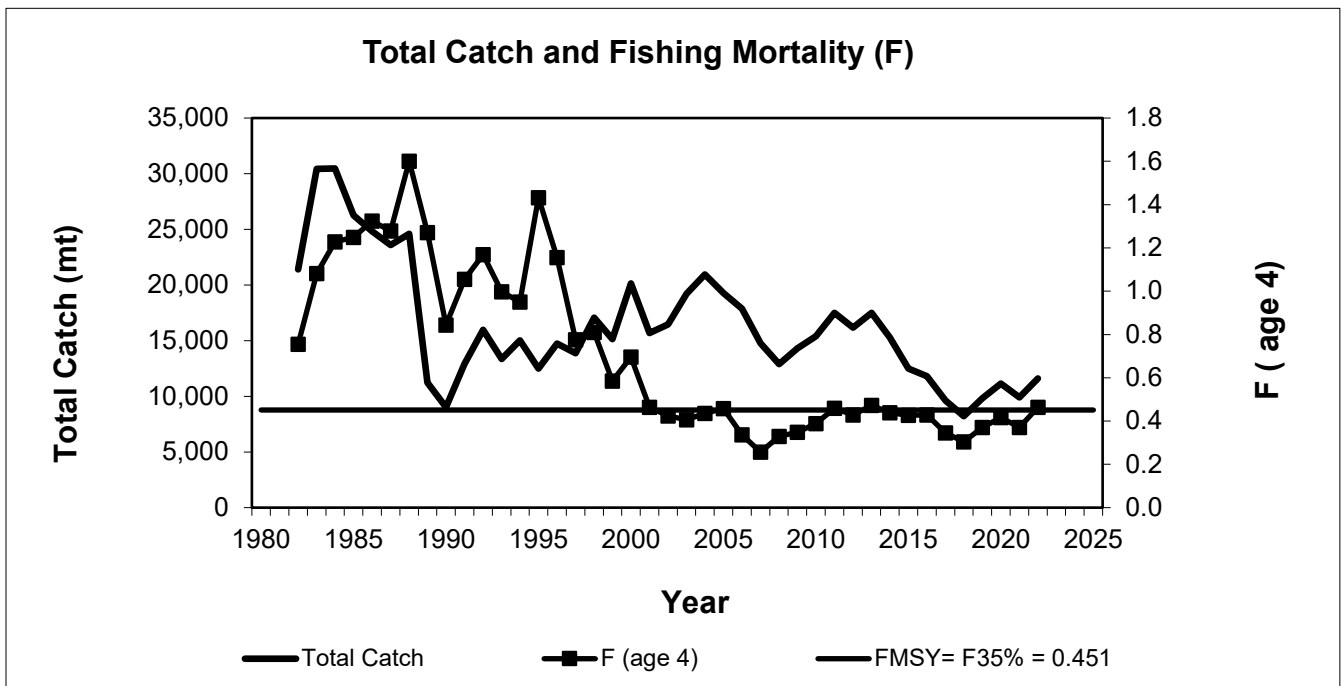


Figure 2: Total fishery catch (metric tons; mt; solid line) and fully-recruited fishing mortality (F, peak at age 4; squares) of summer flounder, 1982-2022. The horizontal solid line is the updated fishing mortality reference point. Source: 2023 management track assessment.

Recent Catch and Fishery Performance

Total Catch

Table 2 shows summer flounder total catch, overfishing limits (OFLs), and ABCs from 2019 through 2023. The ABC is set less than or equal to the OFL to account for scientific uncertainty. The OFL and the ABC for summer flounder have not been exceeded in recent years.⁴

Table 2: Total summer flounder dead catch (i.e., commercial and recreational landings and dead discards) compared to the OFL and ABC, 2019-2022. All values are in millions of pounds. Catch data from 2023 MTA.^a

Year	Total dead catch	OFL	OFL overage/underage	ABC	ABC overage/underage
2019	21.63	30.00	-28%	25.03	-14%
2020	24.60	30.94	-21%	25.03	-2%
2021	21.82	31.67	-31%	27.11	-20%
2022	25.61	36.28	-29%	33.12	-23%
2023	--	34.98	--	33.12	--

^a Numbers here may vary slightly from those in the 2023 Fishery Information Document due to the Catch Accounting and Monitoring System (CAMS) commercial fishery estimates now being used for 2020-2022 as reflected in the 2023 MTA.

Commercial Fishery

The commercial fishery has underharvested their quota since 2018, by 7% to 19% (Table 3). The larger underages since 2019 (17-19%) may be due in part to a substantial increase in quota starting in mid-2019, with possible additional influence from market factors related to COVID-19. Commercial landings in 2022 were approximately 12.53 million pounds (5,683 mt), about 81% of the commercial quota of 15.53 million pounds (7,046 mt).

Since 2019, in most years commercial dead discards have been below projected levels (with the exception of 2020). In all years since 2019, the commercial ACLs have not been exceeded. In 2022, commercial catch was 24% below the ACL (Table 3).

The 2023 commercial landings as of July 5, 2023, indicate that 45% of the 2023 coastwide commercial quota has been landed, slightly above last year's trajectory where 39% of the quota had been landed as of the same week in 2022.⁵

⁴ Despite the previously specified OFLs not being exceeded, as noted above, the new 2023 MTA now estimates that overfishing was occurring for summer flounder in 2022. This is partially driven by the latest model run adding three years (2020-2022) of fishery catch, survey catch, and biological data (including continued decreases in mean weights and maturities at age). While the average retrospective errors for SSB and F are small, adding multiple years of data contributed in this case to overestimating stock size and underestimating F. The previous OFLs were set using an assessment with terminal year 2019 and creating biomass projections for 2020-2023, which now appear to have been overoptimistic.

⁵ Based on data available at <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>

Table 3: Summer flounder commercial landings, dead discards, and dead catch compared to the commercial quota, projected commercial dead discards, and commercial ACL, 2014-2023. All values are in millions of pounds. Landings and discard data from 2023 management track assessment.^a

Year	Com. Land	Com. quota	Quota over/under	Com. dead disc ^a	Proj. com. dead disc	Proj. dead disc. Over/under	Com. dead catch	ACL	ACL over/under
2014	11.00	10.51	5%	1.83	2.03	-10%	12.83	12.87	0%
2015	10.71	11.07	-3%	1.55	2.27	-32%	12.26	13.34	-8%
2016	7.80	8.12	-4%	1.70	1.31	30%	9.50	9.43	1%
2017	5.83	5.66	3%	2.00	0.92	117%	7.83	6.57	19%
2018	6.14	6.63	-7%	2.16	1.07	102%	8.30	7.70	8%
2019	9.06	10.98	-17%	1.73	2.00	-14%	10.79	13.53	-20%
2020	9.44	11.53	-18%	2.56	2.00	28%	12.00	13.53	-11%
2021	10.88	12.49	-13%	1.92	2.14	-10%	12.80	14.63	-13%
2022	12.53	15.53	-19%	1.50	2.95	-49%	14.03	18.48	-24%
2023	--	15.27	--	--	2.95	--	--	18.21	--

^a Numbers here may vary slightly from those in the 2023 Fishery Information Document due to the Catch Accounting and Monitoring System (CAMS) commercial fishery estimates now being used for 2020-2022 as reflected in the 2023 MTA.

Recreational Fishery

Recreational fishery performance relative to RHLs through 2018 cannot be evaluated using the revised MRIP data, since past RHLs were set based on assessments that used the old data. A performance evaluation for 2014-2022 using old or new MRIP data, depending on the year, is provided in Table 4. Recreational performance has been more variable relative to the limits compared to the commercial fishery but was below its limits in both 2021 and 2022. Recreational harvest was estimated at approximately 8.63 million pounds (3,916 mt) in 2022, about 83% of the 2022 RHL of 10.36 million pounds. Recreational catch has generally been below the recreational ACL in most years since 2014, with the exception of 2014, 2016, and 2020 overages ranging from 4 to 12% (Table 4).

As of this memo, recreational harvest estimates for 2023 are only available through April, which does not provide meaningful information about 2023 recreational harvest trends for summer flounder given that in recent years wave 2 (March/April) has accounted for less than 1% of annual summer flounder harvest.

Table 4: Summer flounder recreational landings, dead discards, and dead catch compared to the RHL, projected recreational dead discards, and recreational ACL, 2014-2023. Values are provided in the “old” and “new” MRIP units where available as the ACLs and RHLs did not account for the revised MRIP data until 2019. All values are in millions of pounds.

Year	Rec. land. OLD MRIP ^a	Rec. land. NEW MRIP ^b	RHL	RHL over/under	Rec. dead disc. old MRIP units ^a	Rec. dead disc. new MRIP units ^b	Proj. rec. dead disc.	Projected dead disc. over/under ^c	Rec. dead catch OLD MRIP ^a	Rec. dead catch NEW MRIP ^b	Rec ACL	Rec ACL over/under ^c
2014	7.39	16.23	7.01	5%	2.05	4.61	1.84	12%	9.44	20.84	9.07	4%
2015	4.72	11.83	7.38	-36%	1.24	3.47	2.06	-40%	5.96	15.30	9.44	-37%
2016	6.18	13.24	5.42	14%	1.48	3.27	1.41	5%	7.66	16.51	6.84	12%
2017	3.19	10.09	3.77	-15%	0.94	3.30	0.95	-1%	4.13	13.39	4.72	-13%
2018	3.35	7.60	4.42	-24%	0.97	2.21	1.11	-13%	4.32	9.81	5.53	-22%
2019	NA	7.80	7.69	1%	NA	3.04	3.82	-20%	NA	10.84	11.51	-6%
2020	NA	10.08	7.69	31%	NA	2.52	3.82	-34%	NA	12.60	11.51	9%
2021	NA	6.82	8.32	-18%	NA	2.20	4.16	-47%	NA	9.02	12.48	-28%
2022	NA	8.63	10.36	-17%	NA	2.95	4.28	-31%	NA	11.58	14.64	-21%
2023	NA	--	10.62	--	NA	--	4.28	--	NA	--	14.90	--

^a Based on the data update provided by the NEFSC in 2018 (most recent data from NEFSC in “old” MRIP units). Values for 2018 provided by GARFO.

^b Data from 2023 management track assessment.

^c Based on a comparison with old MRIP data through 2018 and new MRIP data starting in 2019.

Review of Prior SSC Recommendations

In July 2021, as requested by the Council, the SSC recommended two alternative sets of two-year ABC recommendations based on the information and projections from the 2021 management track assessment: one with varying ABCs each year, and one with a constant ABC across 2022-2023.

The SSC indicated that the approach to estimating uncertainty in the OFL had not changed since the previous benchmark (SAW/SARC 66 in 2018). Accordingly, the SSC maintained its determination that the assessment should be assigned an “SSC-modified OFL probability distribution.” In this type of assessment, the SSC provides its own estimate of uncertainty in the distribution of the OFL.

The SSC continued the application of a 60% OFL coefficient of variation (CV), because: (1) the latest management track assessment did not result in major changes to the quality of the data and model that the SSC has previously determined to meet the criteria for a 60% CV; (2) the summer flounder assessment continues to be a data rich assessment with many fishery independent surveys incorporated and with relatively good precision of the fishery dependent data; (3) several different models and model configurations were considered and evaluated by SAW-66, most of which showed similar stock trends and stock status; and (4) no major persistent retrospective patterns were identified in the most recent model. The SSC noted that significant improvements in quality of data and investigations of alternate model structures affirm the specification of the 60% OFL CV by the SSC.

The SSC accepted the OFL proxy ($F_{35\%} = 0.422$) used in the 2021 management track assessment. Given recent trends in recruitment for summer flounder, the SSC recommended the use of the most recent 9-year recruitment series for OFL projections (2011-2019) because near-term future conditions were more likely to reflect recent recruitment patterns than those in the entire 38-year time series.

The SSC considered the following to be the most significant sources of uncertainty associated with the determination of the OFL and/or ABC:

- Changes in life history are apparent in the population; for example, declining growth rates and differences in sex-specific age structure.
- Uncertainty regarding recreational catch and discard estimates from MRIP, especially for 2020 where some data were imputed.
- Potential changes in productivity of the stock, which may affect estimates of biological reference points. Changes in size-at-age, growth, and recruitment may be environmentally mediated, but mechanisms are unknown.
- Potential changes in availability of fish to some surveys and to the fishery as a result of changes in the distribution of the population.

Table 5 shows the SSC recommended 2022-2023 ABCs along with the associated OFLs and P* values. In August 2021, the Council and Board ultimately adopted the SSC-recommended ABCs based on the two-year averaged approach, implementing a constant ABC of 33.12 million pounds (15,021 mt) in each year 2022-2023.

In July 2022, the SSC reviewed the previously adopted ABC along with a data update for summer flounder, and recommended no changes to the previously recommended 2023 ABC adopted by the Council of 33.12 million pounds (15,021 mt).

Table 5: SSC-recommended 2022-2023 OFLs, ABCs, and P* values for the variable and averaged ABC approaches.

Variable ABCs			
Year	OFL	ABC	P*
2022	36.28 mil lb 16,458 mt	33.96 mil lb 15,403 mt	0.452
2023	34.74 mil lb 15,759 mt	32.27 mil lb 14,639 mt	0.447
Averaged ABCs^a			
Year	OFL	ABC	P*
2022	36.28 mil lb 16,458 mt	33.12 mil lb 15,021 mt	0.435
2023	34.98 mil lb 15,865 mt		0.461

^a Reflects currently approved ABCs adopted by Council and Board in August 2021.

2024-2025 ABCs

ABC projections for 2024-2025 were provided by the NEFSC, using several assumptions based on past recommendations of the SSC. The projections continue to sample from a shorter, more recent time series of recruitment since 2011, in this case, the 12-year time series of 2011-2022. As described above, recruitment was below average in these years. The causes of below-average recruitment have not been identified, and the SSC has previously adopted projections which use the shorter recruitment series believing that near-term future conditions are more likely to reflect recent recruitment patterns than those in the entire assessment time series (1981-2022).

Staff recommend continued use of the 60% OFL CV, which has been adopted by the SSC for summer flounder each year since 2014. There have been no major changes to the assessment that would impact the quality of the data and model that the SSC has previously determined to meet the criteria for a 60% CV. The summer flounder assessment continues to be a data rich assessment with many fishery independent surveys incorporated and with relatively good precision of the fishery dependent data. Several different models and model configurations were considered and evaluated by the most recent SAW, most of which showed similar stock trends and stock status. No major persistent retrospective patterns were identified in the most recent model.

Projections were provided for both annual (varying) 2024-2025 ABCs (Table 6) and averaged (constant) 2024-2025 ABCs (Table 7). Because the Council is unable to recommend ABCs higher than what the SSC recommends for any given year, the SSC is asked to provide ABC recommendations for both approaches to allow the Council and Board to select their preferred approach. The projections assume that catch in 2023 is equal to the 2023 ABC of 15,021 mt, and that catch in 2024 is equal to the relevant 2024 ABC specified within each table.

Table 6: Projections for annual 2024-2025 ABCs, including OFL and ABC total catch, ABC projected landings and discards, ABC projected F, and projected SSB. These projections sample from a recent time series of recruitment (2011-2022) and assume application of the current Council risk policy with a 60% OFL CV.

Year	OFL Total Catch		ABC Total Catch		ABC F	ABC P*	SSB		SSB/SSB _{MSY}
	mil lb	mt	mil lb	mt			mil lb	mt	
2023	34.98	15,867	33.12	15,023	0.622	0.461	82.08	37,233	75%
2024	22.98	10,422	17.88	8,111	0.338	0.326	89.15	40,439	82%
2025	25.39	11,515	20.75	9,411	0.358	0.358	93.59	42,452	86%

Table 7: Projections for averaged 2024-2025 ABCs, including OFL and ABC total catch, ABC projected landings and discards, ABC projected F, and projected SSB. These projections sample from a recent time series of recruitment (2011-2022) and assume application of the current Council risk policy with a 60% OFL CV.

Year	OFL Total Catch		ABC Total Catch		ABC F	ABC P*	SSB		SSB/SSB _{MSY}
	mil lb	mt	mil lb	mt			mil lb	mt	
2023	34.98	15,867	33.12	15,023	0.622	0.461	82.08	37,233	75%
2024	22.98	10,422	19.31	8,761	0.369	0.377	87.98	39,908	81%
2025	24.97	11,325	19.31	8,761	0.336	0.322	93.43	42,380	86%

Staff recommend that the Council and Board adopt ABCs for 2024-2025 based on the averaged ABC approach, resulting in a 2024-2025 ABC of 19.31 million pounds (8,761 mt; Table 7). This is consistent with the previous approach for summer flounder, and would provide stability and simplicity between limits in these two years.

The next management track assessment update is expected in 2025 to inform 2026-2027 catch and landings limits. A data update (updated fishery catch and federal trawl survey data only) would be requested next year. 2024-2025 ABCs adopted this year are not expected to be revised unless there are unusual signals in interim data updates that prompt the SSC to determine that changes may be warranted.

Sector-Specific Catch and Landings Limits

Recreational and Commercial Annual Catch Limits

The summer flounder commercial/recreational allocation was recently revised via Amendment 22 to the Fishery Management Plan (FMP), effective in 2023, such that 55% of the ABC is allocated to the commercial fishery as a commercial ACL, and 45% is allocated to the recreational fishery as a recreational ACL.⁶ Figure 3 illustrates the current flowchart for deriving commercial and recreational catch and landings limits from the OFL and ABC.

Under the staff recommended constant ABCs, these allocation percentages would result in a 2024-2025 commercial ACL of 10.62 million pounds (4,819 mt) and a recreational ACL of 8.69 million pounds in each year (3,942 mt; Table 1).

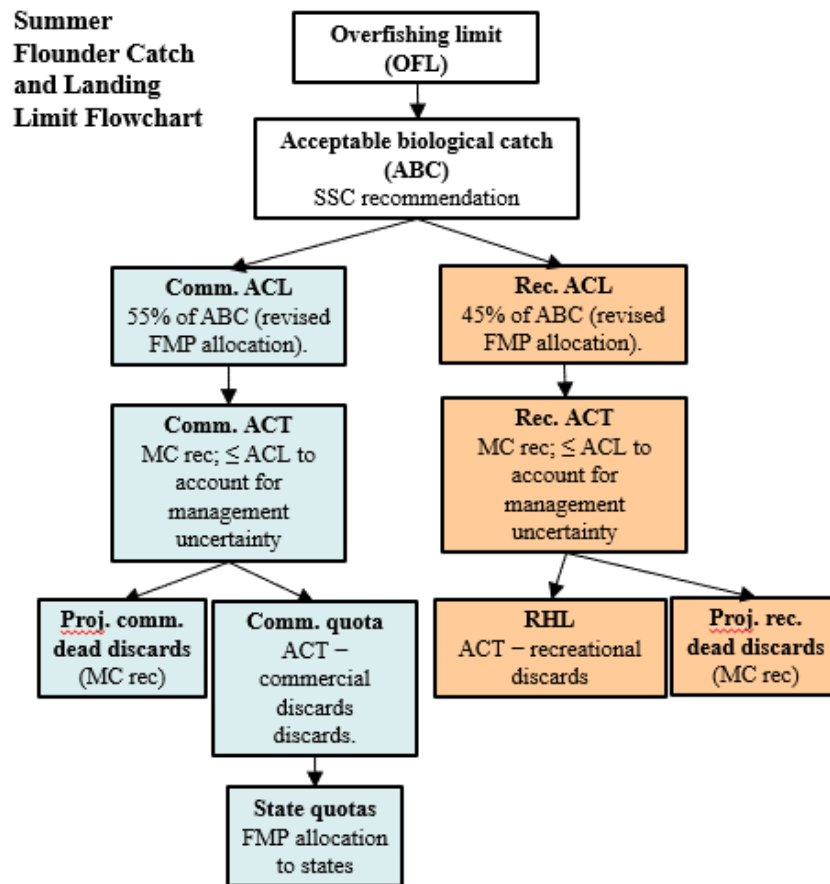


Figure 3: The current catch and landings limit flowchart for summer flounder, updated to reflect commercial/recreational allocation revisions that became effective in 2023.

⁶ <http://www.mafmc.org/actions/sfsbsb-allocation-amendment>

Annual Catch Targets

ACTs are set less than or equal to the sector-specific ACLs to account for management uncertainty. Management uncertainty is comprised of two parts: uncertainty in the ability of managers to control catch and uncertainty in quantifying the true catch (i.e., estimation errors). Management uncertainty can occur because of a lack of sufficient information about the catch (e.g., due to late reporting, underreporting, and/or misreporting of landings or discards) or because of a lack of management precision (i.e., the ability to constrain catch to desired levels). The Monitoring Committee should consider all relevant sources of management uncertainty in the summer flounder fishery when recommending ACTs.

Consistent with the approach taken for summer flounder in recent years, staff recommend that the commercial and recreational ACTs remain equal to their respective ACLs for 2024-2025, such that no reduction in catch is taken for management uncertainty.

The Monitoring Committee has previously noted that for summer flounder, commercial fishery landings are well controlled with in-season closure authority and commercial quota monitoring systems which typically allow timely reactions to landings levels that approach quotas. The commercial fishery has underharvested their quota since 2018, more notably since 2019 when quotas were increased mid-year by approximately 50% (Table 3). Given the proposed decreases in commercial quota for 2024-2025, the Monitoring Committee may wish to consider the impact that this may have on commercial discards. The last time that the commercial ACL was exceeded based on higher-than-expected discards was in 2017 and 2018, when commercial quotas were quite low (lower than the proposed quota for 2024-2025). In general, commercial dead discards are not strongly correlated with commercial quotas or landings, but there could be more of an impact in unusually low quota years. The Monitoring Committee could consider potential changes in commercial discards in terms of management uncertainty and/or in specifying expected commercial discards (see section below). Staff note that a buffer between the ACL and ACT in response to this concern may exacerbate the problem by further lowering commercial quotas and therefore recommends maintaining ACTs=ACLs.

Recreational fishery performance relative to recreational ACLs and RHLs has been more variable, but below the recreational ACLs in most recent years, more notably so in 2021 and 2022. The Percent Change Approach and the use of a new recreational harvest estimation model (the Recreational Demand Model) were both applied to the development recreational summer flounder measures in 2023 for the first time. Application of this approach for summer flounder in 2023 resulted in unchanged recreational measures. As previously stated, it is not possible to predict 2023 recreational harvest based on currently available data.

The Percent Change Approach considers the RHL in the upcoming year(s) as well as biomass compared to the target level when setting measures. In some cases, RHL and ACL overages are permitted under this approach. In other cases, this approach requires more restrictive measures than would be needed to prevent RHL and ACL overages. The Percent Change Approach will sunset after the 2025 fishing year with the goal of using an improved process for setting 2026 recreational measures. A management action to consider the appropriate replacement for the Percent Change Approach is currently in development.

Additionally, a separate amendment is under development to consider managing for-hire recreational fisheries separately from other recreational fishing modes (referred to as sector separation) and improvements to recreational catch accounting.

Given these ongoing management actions, coupled with the recent trend of recreational catch falling below the ACL, staff recommend no buffer for management uncertainty in the recreational fishery, consistent with past practice for this fishery.

Projected Dead Discards

The Monitoring Committee should recommend projected discards for each sector, to be removed from the sector-specific ACTs to derive the commercial quota and RHL (Figure 3). Typically, the Monitoring Committee has apportioned dead discards based on a 3-year moving average of the proportion of discards from each sector, applied to the total projected discards for the upcoming fishing year(s).

In 2022, when the Monitoring Committee first considered discard projections under the revised catch-based allocations, the group discussed a few different methods for generating projected dead discards by sector. One option considered by the Monitoring Committee, but not applied, was a linear regression approach examining sector dead discards as a function of sector catch, ACLs, or landings (not selected due to a lack of strong correlations for summer flounder). Another option that was not adopted was a simple moving average (e.g., 3 years) of discards in pounds for each sector (not applied due to how much discard levels can vary based on availability of different size classes as well as regulations).

Staff recommend that for 2024-2025, sector discards continue to be calculated by applying the 3-year moving average proportion of discards by sector to total projected dead discards. These projected sector discards are then removed from the sector-specific ACTs. This approach relies on projections of total discards from the NEFSC which account for age structure of the population (Table 8). Under the assumption of averaged 2024-2025 ABCs, staff recommend the previous approach of averaging the very slight differences in total projected dead discards over 2024-2025 to ensure that all limits would be held constant over the two years.

Table 8: ABC projections split into projected total projected landings and discards, for both annual and averaged 2024-2025 ABCs.

Annual						
Year	ABC Total Catch		ABC Landings		ABC Discards	
	mil lb	mt	mil lb	mt	mil lb	mt
2023	33.12	15,023	26.16	11,867	6.96	3,156
2024	17.88	8,111	13.99	6,347	3.89	1,764
2025	20.75	9,411	16.32	7,401	4.43	2,010
Averaged (staff recommendation)						
Year	ABC Total Catch		ABC Landings		ABC Discards	
	mil lb	mt	mil lb	mt	mil lb	mt
2023	33.12	15,023	26.16	11,867	6.96	3,156
2024	19.31	8,761	15.10	6,851	4.21	1,910
2025	19.31	8,761	15.17	6,881	4.14	1,880

Evaluating the proportion of discards by sector from 2020-2022, 56% of dead discards came from the recreational fishery and 44% from the commercial fishery. Applying these proportions to the averaged total projected dead discards of 4.18 million pounds (1,895 mt) in each year under the averaged ABC approach, the resulting projected commercial dead discards are 1.83 million pounds (831 mt) and projected recreational dead discards are 2.35 million pounds (1,064 million pounds; (Table 1).

Commercial Quotas and Recreational Harvest Limits

Subtracting these projected dead discards from the staff recommended commercial and recreational ACTs results in a staff recommended commercial quota of 8.79 million pounds (3,987 mt) and an RHL of 6.35 million pounds (2,879 mt; (Table 1). These values represent a 42% decrease in the commercial quota and a 40% decrease in the RHL compared to the 2023 limits.

The commercial quota is divided among the states based on the allocation percentages specified in the FMP, and each state sets measures to achieve their state-specific commercial quotas (including but not limited to the measures described below that are required by the joint FMP). The commercial allocations to the states were modified via Amendment 21, which became effective on January 1, 2021. The allocation system modifies the state-by-state commercial quota allocations in years when the annual coastwide commercial quota exceeds the specified trigger of 9.55 million pounds. Annual coastwide commercial quota of up to 9.55 million pounds is distributed according to the pre-Amendment 21 state allocations. In years when the coastwide quota exceeds 9.55 million pounds, the *additional* quota amount beyond this trigger is distributed in equal shares to all states except Maine, Delaware, and New Hampshire, which split 1% of the additional quota (Table 9). The total percentage allocated annually to each state is dependent on how much additional quota beyond 9.55 million pounds, if any, is available in any given year. This allocation system is designed to provide for more equitable distribution of quota when biomass is relatively higher, while also considering the historic importance of the fishery to each state.

Table 9: Allocation of summer flounder commercial quota to the states (effective January 2021 via Amendment 21).

State	Total state allocation = baseline quota allocation + additional quota allocation	
	Allocation of baseline quota ≤9.55 mil lb	Allocation of <u>additional</u> quota <u>beyond</u> 9.55 mil lb
ME	0.04756%	0.333%
NH	0.00046%	0.333%
MA	6.82046%	12.375%
RI	15.68298%	12.375%
CT	2.25708%	12.375%
NY	7.64699%	12.375%
NJ	16.72499%	12.375%
DE	0.01779%	0.333%
MD	2.03910%	12.375%
VA	21.31676%	12.375%
NC	27.44584%	12.375%
Total	100%	100%

Commercial Management Measures

Commercial measures that can be modified during specifications are discussed in the sections below, including the commercial minimum fish size, gear regulations, minimum mesh sizes, and exemptions. These measures have remained generally constant since 1999.

Commercial Gear Regulations and Minimum Fish Size

The minimum fish size and mesh requirements may be changed through specifications based on the recommendations of the Monitoring Committee. The current commercial minimum fish size is 14 inches total length and has been in place since 1997. Current trawl gear regulations require a 5.5-inch diamond or 6.0-inch square minimum mesh in the entire net for vessels possessing more than the threshold amount of summer flounder, i.e., 200 lb in the winter (November 1-April 30) and 100 lb in the summer (May 1-October 31).

In September 2019, the Monitoring Committee revisited the 2018 mesh selectivity study for summer flounder, scup, and black sea bass by Hasbrouck et al. (2018)⁷, which suggested that, in general, the current minimum mesh sizes are effective at releasing catch of most undersized and immature fish. For summer flounder, this study showed a selectivity curve for 6.0" square mesh that did not appear to be equivalent to that of the 5.5" diamond. Results suggested that phasing out the use of the 6.0" square mesh could potentially reduce discards of undersized summer flounder. The Monitoring Committee identified additional analyses and input needed from industry before recommending changes to the mesh size regulations.

⁷ Hasbrouck et al. 2018 is available at: http://www.mafmc.org/s/Tab08_SFSBSB-Mesh-Selectivity-Study-Apr2018.pdf. The Monitoring Committee discussion document from September 2019 is available at <https://www.mafmc.org/s/F5B-Mesh-Size-Issues-Overview-Sept-2019.pdf>, and the MC report from that discussion can be found at: https://www.mafmc.org/s/SFSBSB_MC_Summary_Sept_2019_FINAL.pdf. T

As described in more detail in a supplemental memo for the Monitoring Committee on “Summer Flounder Mesh Regulation Issues,” staff is currently further exploring the 5.5” diamond vs. 6.0” mesh regulation issue based on input provided by the Monitoring Committee in previous discussions, with the intent of revisiting this issue with the Monitoring Committee and Council/Board later in 2023. This will be done in conjunction with the contracted review of mesh size exemptions, as described below. Any potential changes to the existing mesh regulations, if adopted following this later discussion, would likely become effective in 2025 at the earliest. As such, staff recommend to no changes to the minimum mesh size regulations for 2024. Staff also recommend no changes to the current 14-inch minimum fish size, or seasonal possession thresholds triggering the minimum mesh size for 2024-2025.

Minimum Mesh Size Exemptions

This year, the Council has contracted a more in-depth review of the following minimum mesh size exemptions for summer flounder:

- **Small Mesh Exemption Program:** Vessels landing more than 200 lb of summer flounder east of longitude 72° 30.0'W, from November 1 through April 30, and using mesh smaller than 5.5-inch diamond or 6.0-inch square are required to obtain a small mesh exemption program (SMEP) permit from NMFS. The exemption is designed to allow vessels to retain some bycatch of summer flounder while operating in other small-mesh fisheries.
- **Flynet Exemption:** Vessels fishing with a two-seam otter trawl flynet are also exempt from the minimum mesh size requirements. Exempt flynets have large mesh in the wings that measure 8 to 64 inches, the belly of the net has 35 or more meshes that are at least 8 inches, and the mesh decreases in size throughout the body of the net, sometimes to 2 inches or smaller. The bulk of flynet landings in the Greater Atlantic region have historically originated from North Carolina, though the flynet fishery in North Carolina is small. Flynet landings in North Carolina have declined in recent years, and summer flounder have not been landed in the flynet fishery in several years.

The contractor, Andy Loftus, is evaluating these mesh exemptions for further review by the Monitoring Committee and Council/Board later in 2023. The supplemental memo for the Monitoring Committee on “Summer Flounder Mesh Regulation Issues” describes these exemptions and the questions being explored in more detail. Given this evaluation in progress, staff recommend no changes to either mesh size exemption for 2024. The Monitoring Committee and Council/Board will review this issue in more detail later in 2023. Any modifications adopted as the result of these conversations would likely be effective in 2025 or later.

Recreational Management Measures

Recreational management measures for 2024-2025 will be developed later this fall, using the Percent Change Approach. The Monitoring Committee will meet in the fall of 2023 to review available recreational data and Recreational Demand Model estimates of recreational harvest under current measures, and to make recommendations for any adjustments that may be needed to recreational bag, size, and season limits. This will be the first year that multi-year recreational measures (2024-2025) will be considered as specified under the Percent Change Approach.



Mid-Atlantic Fishery Management Council

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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman

Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: July 18, 2023
To: Chris Moore, Executive Director
From: Kiley Dancy and Hannah Hart, Staff
Subject: Summer Flounder Mesh Regulation Issues: Overview and Update on Further Evaluation in 2023

Introduction

Two summer flounder mesh regulations topics are being reviewed in more detail in 2023 for Council and Board consideration in December. The first is the equivalence of the current two allowable summer flounder trawl gear minimum mesh sizes (5.5-inch diamond or 6.0-inch square). As described below, a study completed in 2018 suggests that the selectivity of the 6.0" square mesh is not equivalent to that of the 5.5" diamond mesh and the 6.0" square mesh may be retaining too many undersized summer flounder. Council staff has been working to analyze this topic and is planning to discuss with the Monitoring Committee in further detail later this fall for Council/Board review in December.

The second topic includes two summer flounder mesh size exemptions, including a) the small mesh exemption program (SMEP) and b) the flynet exemption. A contractor has been hired to analyze this component and focus on the questions and data analysis described in detail below, with a report to the Council and Board expected in December.

Pending these evaluations, staff recommend no changes to the minimum mesh size or mesh exemption programs for 2024. If potential changes are adopted in December as a result of these evaluations, they would likely become effective in 2025 or later.

Component I: Minimum Mesh Size Requirements

The minimum fish size and mesh requirements may be changed through specifications based on the recommendations of the Monitoring Committee. The current commercial minimum fish size is 14 inches total length (TL) and has been in place since 1997. Current trawl gear regulations require a 5.5-inch diamond or 6.0-inch square minimum mesh in the entire net for vessels possessing more than the threshold amount of summer flounder, i.e., 200 pounds in the winter (November 1-April 30) and 100 pounds in the summer (May 1-October 31).

In 2016-2017, a mesh size selectivity study for summer flounder, scup, and black sea bass was funded by the Mid-Atlantic Fishery Management Council to address the Council's research priority to "determine mesh selectivity for summer flounder and/or black sea bass and to quantify selectivity at a range of mesh sizes, shapes, and configurations."

The Hasbrouck et al. study report was presented to the Council in April 2018, and is available at: http://www.mafmc.org/s/Tab08_SFSBSB-Mesh-Selectivity-Study-Apr2018.pdf. Study results indicated that the current minimum mesh sizes for summer flounder of 5.5" diamond or 6.0" square do not appear to be equivalent to each other in terms of selectivity. The 6.0" square mesh releases less than 50% of fish at or below the minimum size, and its selectivity appears more similar to a 5.0" diamond mesh (Figure 1).

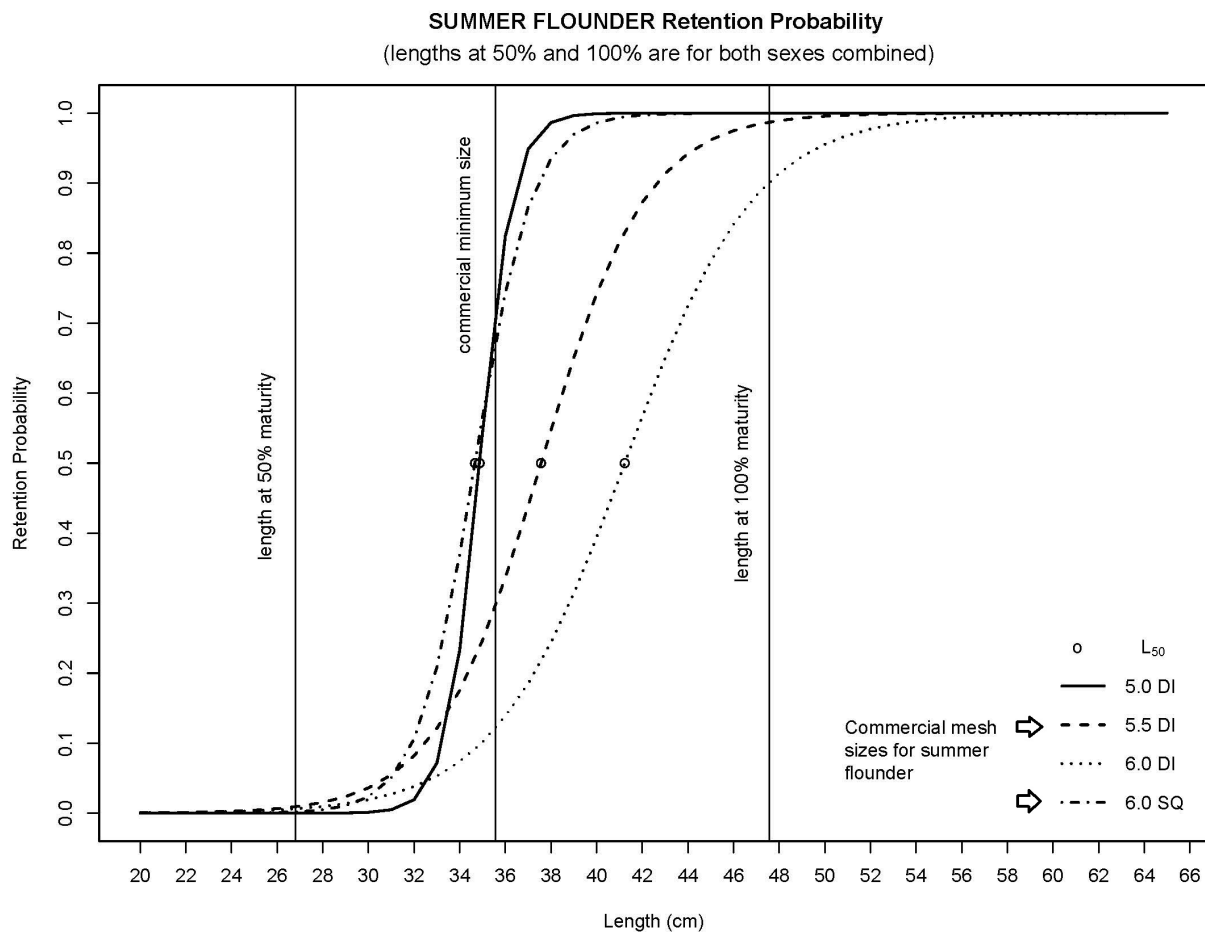


Figure 1: Logistic selective curve for summer flounder catches with 5 codends (4.5" diamond, 5" diamond, 5.5" diamond, 6" diamond, 6" square). Additional details can be found in the study report (Hasbrouck et al., 2018).

The Monitoring Committee identified concerns with the amount of undersized summer flounder caught with the 6.0" square mesh and recommended exploring phasing out the use of 6.0" square mesh to reduce discards of undersized fish. Additional details can be found in the [September 2019 Mesh Size Issue Overview](#).

Preliminary Questions and Potential Data Analysis

The following questions are based on an expanded version of questions the MC previously identified for additional exploration.

- What is the extent of use of 6” square vs. 5.5” diamond? How can we characterize this use by area, fishery/fleet, vessel type, etc.?
- What factors influence the choice of mesh? Are there regional differences and/or circumstances where square mesh is preferred?
- Is a square mesh regulation still needed? If so, what is a more appropriate square mesh equivalent to 5.5” diamond?
 - The Hasbrouck study did not include an alternative square mesh in its experimental mesh sizes (only 6.0” square). What would be needed to identify an alternative square mesh regulation?
- Can we characterize discard rates for summer flounder with 6” square vs. 5.5” diamond?
- What are the biological benefits of phasing out 6” mesh?
- What are industry perspectives on the diamond and square mesh regulations?
- If the mesh size regulations were to change, how long would an appropriate phase out period be?
- What are the costs to industry of changing mesh sizes?

The Monitoring Committee should review the questions and information above and identify a) preliminary information that may address the questions above, if available, (including from the perspective of individual states if relevant information is available), and b) any additional questions that should be evaluated prior to a follow up meeting this fall.

Component II: Mesh Size Exemptions

Small Mesh Exemption Program

Vessels landing more than 200 pounds of summer flounder east of longitude 72° 30.0'W, from November 1 through April 30, and using mesh smaller than 5.5-inch diamond or 6.0-inch square are required to obtain a small mesh exemption program (SMEP) permit from NMFS. The exemption is designed to allow vessels to retain some bycatch of summer flounder while operating in other small-mesh fisheries.

The number of vessels issued a letter of authorization (LOA) for the small mesh exemption program has remained relatively stable since 2013, fluctuating around an average of 68 vessels (Figure 2).

Vessels with Summer Flounder Small Mesh Exemption Permits

By Sara Turner, NOAA GARFO APSD
6.30.2023

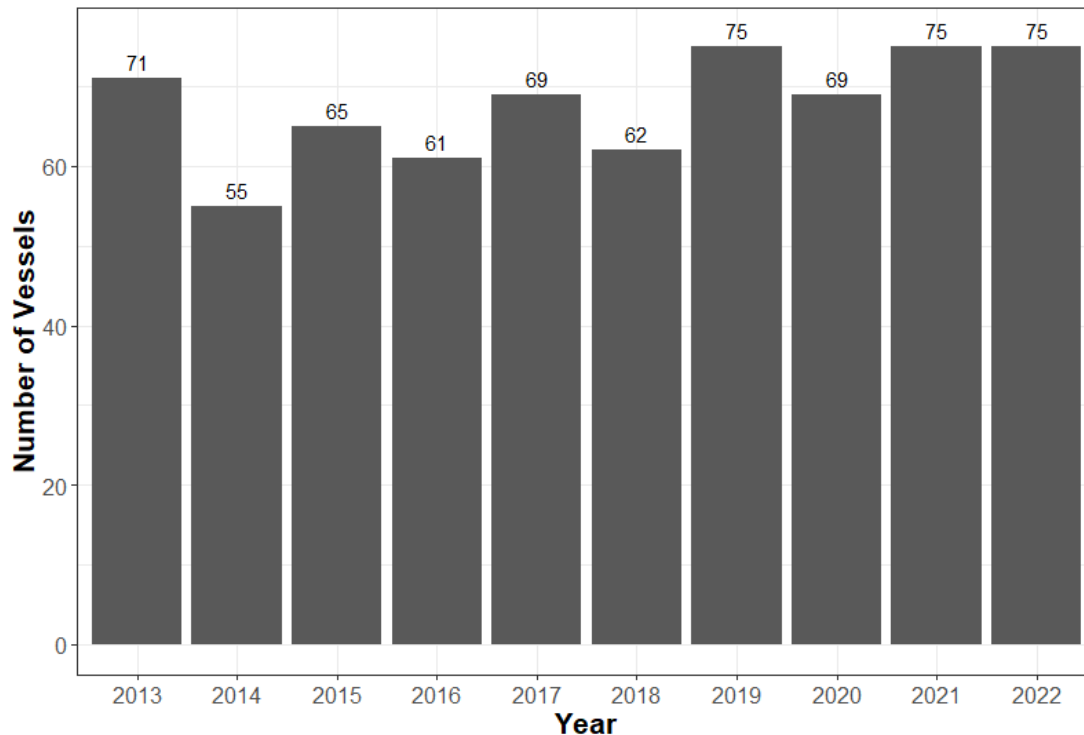


Figure 2: Number of vessels issued the small mesh LOA for the SMEP from fishing year 2013-2022. Source: Pers. Comm., GARFO Analysis & Program Support Division, June 30, 2023.

The FMP requires that observer data be reviewed annually to determine whether vessels fishing seaward of the SMEP line with smaller than the required minimum mesh size and landing more than 200 pounds of summer flounder are discarding more than 10% (by weight) of their summer flounder catch per trip. Typically, staff evaluate the Northeast Fisheries Observer Program (NEFOP) data for the most recent November 1-April 30 period for which complete observer data is available. Due to the timing of observer data availability, typically this means a year-long lag in the analysis is used.

The most recent analysis includes examination of observer data from November 1, 2021 through April 30, 2022 (Table 1). For this time period, a total of 190 trips with at least one tow were observed east of 72° 30.0'W, and of these, 99 trips used small mesh (less than the 5.5" diamond minimum mesh size for summer flounder; Table 1). Of those 99 trips, 50 trips (51%) reported landing more than 200 pounds of summer flounder. Of those 50 trips, 11 trips (22%) discarded more than 10% of their summer flounder catch. The percentage of trips that met all these criteria relative to the total number of observed trips east of 72° 30.0'W is 5.97% (11/190 trips; Table 1).

Although the amount of observed discards from these trips is low relative to the commercial catch limit, because these observed trips are a subset of the fishery operating under this exemption, the actual extent of discards under the exemption program is not known.

The contractor is exploring several questions to determine if changes to the exemption program may be warranted and if so, what changes might be appropriate. Preliminary questions and

potential data analysis include a number of topics as shown below. Industry perspectives will also be sought on the exemption program, including whether the program is still needed or whether changes are desired.

Monitoring Committee feedback on these preliminary questions and potential data analysis will provide guidance to the contractor over the next several months and identify if additional ideas should be explored.

Preliminary Questions and Potential Data Analysis

- What was the original intention of the regulation and how is that being served today?
- Are changes to the SMEP needed relative to the area, timing, possession limit, or other?
- How are vessels using the exemption and in which fisheries? Has use of the exemption program changed over time?
- What are industry perspectives and recommendations on the exemption program?
- Is the extent of summer flounder discards under this exemption a problem?
- Is the exemption program still needed?

Table 11: Numbers of observed trips that meet specific criteria based on NEFOP data from November 1-April 30 for 2014 through 2022.

Criteria		Nov. 1, 2015 – April 30, 2016	Nov. 1, 2016 – April 30, 2017	Nov. 1, 2017 – April 30, 2018	Nov. 1, 2018 – April 30, 2019	Nov. 1, 2019 ~March 19, 2020 ^a	Nov. 1, 2020 – April 30, 2021	Nov. 1, 2021 – April 30, 2022
A	NEFOP observed bottom trawl trips over this time frame (Nov-April)	398	398	741	657	403	151	232
B	Observed trips with at least one catch record east of 72° 30' W Longitude	302	302	598	534	322	122	190
C	That met the criteria in row B <u>and</u> used small mesh at some point during their trip	177	177	271	261	145	33	99
D	That met the criteria in rows B-C <u>and</u> landed more than 200 pounds summer flounder on whole trip	67	67	90	114	63	22	50
E	That met the criteria in rows B-D <u>and</u> discarded >10% of summer flounder catch east of 72° 30' W Longitude	12	12	35	33	18	4	11
F	% of observed trips with catch east of 72° 30' W Longitude that also used small mesh, landed >200 pounds of summer flounder, and discarded >10% of summer flounder catch (row E/row B)	3.97%	3.97%	5.85%	6.18%	5.59%	3.28%	5.79%
G	Total summer flounder discards (pounds) from trips meeting criteria in B-E	10,992	10,992	22,798	9,925	6,547	1,605	4,775
H	Total summer flounder landings (pounds) from trips meeting criteria in B-E	10,523	10,523	44,711	23,038	13,340	9,165	20,080
I	Total catch (pounds) from trips meeting criteria in B-E	21,515	21,515	67,508	32,963	19,887	10,770	24,856

^a Due to the COVID-19 pandemic, observer requirements were first waived on March 20, 2020. Due to the waived observer requirement, the full time period could not be evaluated and the analysis for that time period only examines observer data from November 1, 2019 through approximately March 19, 2020.

Flynet Exemption Program

Vessels fishing with a two-seam otter trawl flynet are also exempt from the minimum mesh size requirements. Exempt flynets have large mesh in the wings that measure 8 to 64 inches, the belly of the net has 35 or more meshes that are at least 8 inches, and the mesh decreases in size throughout the body of the net, sometimes to 2 inches or smaller. This exemption was created through Amendment 2 in 1993, as suggested by the South Atlantic Fishery Management Council and the State of North Carolina to accommodate flynet fisheries targeting other species and catching limited amounts of summer flounder. The NMFS Regional Administrator may withdraw the exemption if the annual average summer flounder catch in the flynet fishery exceeds 1% of the total flynet catch.

Typically, the Monitoring Committee reviews data from the North Carolina flynet fishery as the bulk of flynet landings in the Greater Atlantic region originate from North Carolina, though the flynet fishery in North Carolina is small. The memorandum provided by Lorena de la Garza dated June 30, 2023 (see Attachment) indicates that no summer flounder were landed in the North Carolina flynet fishery in 2022. Previous memos indicate that summer flounder have not been landed in this fishery since 2014, and have also noted that flynet landings in North Carolina have declined in recent years due to shoaling issues at Oregon Inlet.

Table 2: North Carolina flynet fishery summer flounder landings in pounds, as a percent of total North Carolina flynet landings, and as a percent of total North Carolina commercial summer flounder landings, 2005-2022. Some values are confidential but as denoted below are <2,000 lb in those years.

Year	Summer Flounder Flynet Landings (lb)	% of Total NC Flynet Landings	% of total NC commercial summer flounder landings
2005	4,102	0.05%	0.10%
2006	5,752	0.07%	0.15%
2007	7,067	0.13%	0.26%
2008	3,147	0.08%	0.07%
2009	2,842	0.05%	0.10%
2010	<2,000 lb	<0.05%	<0.06%
2011	<2,000 lb	<0.05%	<0.07%
2012	<2,000 lb	<0.05%	<0.18%
2013	0	0%	0.00%
2014	<2,000 lb	<0.05%	<0.07%
2015	0	0%	0.00%
2016	0	0%	0.00%
2017	0	0%	0.00%
2018	0	0%	0.00%
2019	0	0%	0.00%
2020	0	0%	0.00%
2021	0	0%	0.00%
2022	0	0%	0.00%

The flynet exemption was explored in more depth through the Monitoring Committee's 2015 comprehensive review of commercial management measures.¹ The Monitoring Committee determined at the time that other states, including Virginia, New Jersey, and Maryland may have small amounts of flynet landings; however, data were limited or unavailable for most other states and flynet landings of summer flounder in these states were believed to be insignificant.

A January 2020 public comment from a New Jersey fisherman² asserted that this exemption is being used more frequently than indicated by the Monitoring Committee analyses, and that many New Jersey vessels have been using this exemption to increase their flexibility to retain summer flounder on multispecies trips. He states that these vessels are using "high rise" nets that fall under the flynet definition, and as a result they are able to retain more than 200 pounds of summer flounder during the November 1-April 30 period without switching to summer flounder mesh sizes. He also requests a change in the definition of exempt flynet gear to include four-seam nets (in addition to two-seam nets) as well as some clarifying modifications to the regulatory language.

In response to this request, at their 2020 meeting, the MC noted that there is a need to better understand the use and configuration of flynet and high rise trawl nets as they relate to this exemption. Additional information provided by Board member Emerson Hasbrouck indicates that the use of two-seam nets is rare in the Mid-Atlantic and Southern New England winter offshore trawl fishery. This may indicate a possible compliance and enforcement issue if vessels that don't meet the regulatory definition (which specifies a two-seam net) believe they are fishing under the flynet exemption. However, the Monitoring Committee stated that additional evaluation is needed to verify this. The Committee also indicated a need to better understand the differences between a two-seam and four-seam net before commenting on whether an expansion of the flynet exemption definition is warranted. The group agreed that a change in this definition could lead to an increase in the number of vessels using this exemption and the consequences of this should be thoroughly understood before changes are adopted. The Monitoring Committee recommended exploration of the extent to which existing datasets allow for evaluation of specific trawl gear configurations, and noted the need for input from gear experts, industry, and enforcement on this issue.

Similar to the SMEP topic, a list of preliminary questions and potential data analysis has also been developed for the flynet exemption program and is provided below. The MC should provide feedback on these preliminary questions and potential data analysis to provide guidance to the contractor over the next several months and help identify if additional ideas should be explored.

Preliminary Questions and Potential Data Analysis

- What was the original intention of the regulation and how is that being served today?
- Better understand the use and configuration of 2-seam otter trawl flynet and high-rise trawl nets as they relate to this exemption.
 - Determine the extent to which the exemption is being applied.
 - Determine the extent to which 4-seam nets (which do not comply with the definition) and "high rise" nets that fall under the flynet definition are being used.
- The language in the current federal regulations regarding the evaluation criteria for this exemption is inconsistent with the original language and intent of the exemption.

¹ See the report at: http://www.mafmc.org/s/Tab11_SF-S-BSB-Commercial-Measures.pdf.

² See attachment at: <https://www.mafmc.org/s/Fluke-mesh-exemption-memo-MC-May-2020.pdf>.

- In the original implementation, the language specified that if the Regional Administrator “determines after a review of Sea Sampling, landing, or other data that the summer flounder catch in the fly net fishery exceeds 1% of the total catch in the fly net fishery, he may rescind the exemption.” However, the current regulations refer to evaluating whether “vessels fishing under the exemption, on average, are discarding more than 1 percent of their entire catch of summer flounder per trip.”
- What are industry perspectives and recommendations on the exemption?



Attachment

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

KATHY B. RAWLS
Director

Memorandum

To: Kiley Dancy, MAFMC

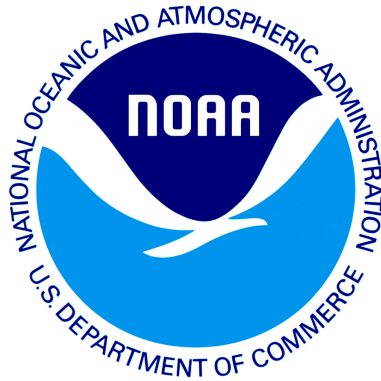
From: Lorena de la Garza, NCDMF

Date: June 30, 2023

Subject: Species composition and landings from the 2022 North Carolina flynet fishery

The 2022 North Carolina flynet fishery landed 22,366 pounds of finfish consisting of black sea bass, scup, monkfish (whole), weakfish, butterfish, and smooth dogfish. No summer flounder landings occurred from the flynet fishery in 2022. The 2022 North Carolina flynet fishery landings are not reported within a table because the data are confidential and cannot be distributed to sources outside the North Carolina Division of Marine Fisheries (North Carolina General Statute 113-170.3 (c)). Confidential data can only be released in a summarized format that does not allow the user to track landings or purchases to an individual. In general, the number of flynet trips and the overall landings across species has seen a significant decrease, particularly in the last decade. The decrease can be attributed to reduced fishing effort on targeted fish species and shoaling at Oregon Inlet continues to result in a low number of flynet boats landing in the northern ports of North Carolina.

draft working paper for peer review only



Summer flounder

2023 Management Track Assessment Report

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole, Massachusetts

Compiled 06-08-2023

This assessment of the Summer flounder (*Paralichthys dentatus*) stock is an update of the existing 2021 Management Track Assessment (NEFSC 2022). Based on the previous assessment the stock was not overfished and overfishing was not occurring. This 2023 Management Track Assessment updates fishery catch data, research survey indices of abundance, the ASAP assessment model, and biological reference points through 2022. Additionally, stock projections have been updated through 2025.

State of Stock: Based on this updated assessment, the Summer flounder (*Paralichthys dentatus*) stock is not overfished and overfishing is occurring (Figures 1-2). Retrospective adjustments were not made to the model results. Spawning Stock Biomass (SSB) in 2022 was estimated to be 40,994 mt which is 83% of the biomass target for this stock ($SSB_{MSY} proxy = 49,561$; Figure 1). The 2022 fully selected fishing mortality was estimated to be 0.464 which is 103% of the overfishing threshold proxy ($F_{MSY} proxy = 0.451$; Figure 2).

Table 1: Catch and model results for Summer flounder. All weights are in (mt), recruitment is in (000s), and F_{Full} is the fishing mortality on fully selected age 4. Model results are unadjusted values from the current updated ASAP assessment.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<i>Data</i>										
Commercial landings	5,696	4,989	4,858	3,537	2,644	2,787	4,109	4,282	4,936	5,683
Commercial discards	863	830	703	772	906	979	783	1,163	873	680
Recreational landings	8,806	7,364	5,366	6,005	4,565	3,447	3,537	4,571	3,092	3,916
Recreational discards	2,119	2,092	1,572	1,482	1,496	1,003	1,379	1,141	997	1,336
Catch for Assessment	17,483	15,275	12,498	11,796	9,611	8,216	9,808	11,157	9,898	11,615
<i>Model Results</i>										
Spawning Stock Biomass	52,155	47,841	42,424	39,209	37,040	37,599	38,846	43,024	41,615	40,994
F_{Full}	0.473	0.439	0.427	0.428	0.345	0.304	0.37	0.417	0.371	0.464
Recruits (age 0)	35,208	38,700	27,000	30,551	38,876	43,028	39,933	35,629	42,323	38,371

Table 2: Comparison of biological reference points estimated in the previous assessment and from the current assessment update. An $F_{35\%}$ proxy was used for the overfishing threshold and SSB and MSY proxies were based on long-term stochastic projections.

	2021	2023
$F_{MSY} proxy$	0.422	0.451
SSB_{MSY} (mt)	55,217	49,561 (38,181 - 64,301)
MSY (mt)	15,872	14,097 (11,020 - 18,114)
Median recruits (age 1) (000s)	49,954	46,966
<i>Overfishing</i>	No	Yes
<i>Overfished</i>	No	No

Projections: Short term projections of catch (OFL) and Spawning Stock Biomass (SSB) were derived by sampling from an empirical cumulative distribution function of the 12 most recent recruitment estimates from the ASAP model results (2011-2022). The annual fishery selectivity, maturity ogive, and mean weights at age used in projections are the most recent 5 year averages; no retrospective adjustments were applied in the projections.

Table 3: Short term projections of total fishery catch (OFL) and Spawning Sstock Biomass (SSB) for Summer flounder based on a harvest scenario of fishing at F_{MSY} proxy between 2024 and 2025. Catch in 2023 was assumed to be 15,023 (mt).

Year	Catch (mt)	SSB (mt)	F_{Full}
2023	15,023	37,233 (30,000 - 46,000)	0.622
Year	Catch (mt)	SSB (mt)	F_{Full}
2024	10,422	38,541 (32,000 - 46,000)	0.451
2025	10,839	39,127 (33,000 - 46,000)	0.451

Special Comments:

- What are the most important sources of uncertainty in this stock assessment? Explain, and describe qualitatively how they affect the assessment results (such as estimates of biomass, F, recruitment, and population projections).

Declining trends in growth rates and changes in the sex-ratio at age may change the productivity of the stock and in turn affect estimates of the biological reference points. Changes in growth, maturity, and recruitment may be environmentally mediated but mechanisms are unknown.

- Does this assessment model have a retrospective pattern? If so, is the pattern minor, or major? (A major retrospective pattern occurs when the adjusted SSB or F_{Full} lies outside of the approximate joint confidence region for SSB and F_{Full})

The 7-year Mohn's ρ , relative to SSB, was 0.03 in the 2021 assessment and was 0.06 in 2022. The 7-year Mohn's ρ , relative to F, was 0.01 in the 2021 assessment and was 0.03 in 2022. No retrospective adjustment of SSB or F in 2022 was required.

- Based on this stock assessment, are population projections well determined or uncertain? If this stock is in a rebuilding plan, how do the projections compare to the rebuilding schedule?

Population projections for Summer flounder are reasonably well determined.

- Describe any changes that were made to the current stock assessment, beyond incorporating additional years of data and the effect these changes had on the assessment and stock status.

No major changes, other than the addition of three years of data, were made to the Summer flounder assessment for this update. Minor changes to the survey input CVs and fishery and survey input Effective Sample Sizes improved model diagnostics but had limited affects on the model results.

- If the stock status has changed a lot since the previous assessment, explain why this occurred.

Overfishing status has changed since the last assessment for Summer flounder. The stock status remains as not overfished but overfishing is occurring.

- Provide qualitative statements describing the condition of the stock that relate to stock status.

The current fishing mortality rate is near the threshold, and so recent near-average recruitment has resulted in relatively stable SSB. SSB is projected to remain relatively stable in the short term at current fishing rates.

- Indicate what data or studies are currently lacking and which would be needed most to improve this stock assessment in the future.

The Summer flounder assessment could be improved with more intensive and comprehensive sampling of the fishery catch by sex.

- Are there other important issues?

Sufficient length and age sampling of the fishery catch needs to be maintained.

References:

NEFSC. 2022. Northeast Fisheries Science Center. Management Track Assessment June 2021. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 22-10; 79 p. <http://www.nefsc.noaa.gov/publications/crd/crd2210/>.

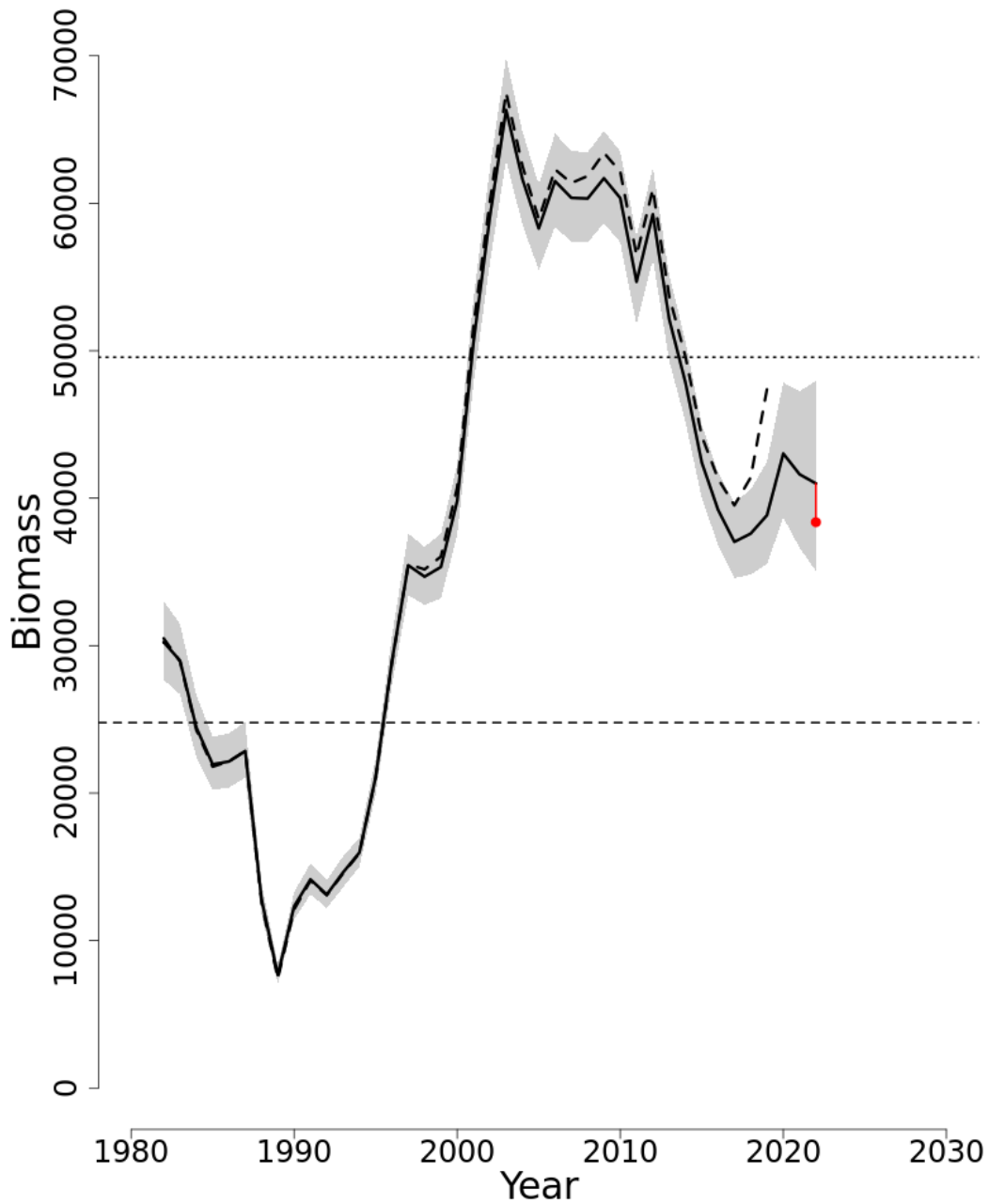


Figure 1: Trends in spawning stock biomass of Summer flounder between 1982 and 2022 from the current (solid line) and previous (dashed line) assessment and the corresponding $SSB_{Threshold}$ ($\frac{1}{2} SSB_{MSY}$ proxy; horizontal dashed line) as well as SSB_{Target} (SSB_{MSY} proxy; horizontal dotted line) based on the 2023 assessment. Biomass adjusted for a retrospective pattern is shown in red, but not used for stock status or projections. The approximate 90% lognormal confidence intervals are shown.

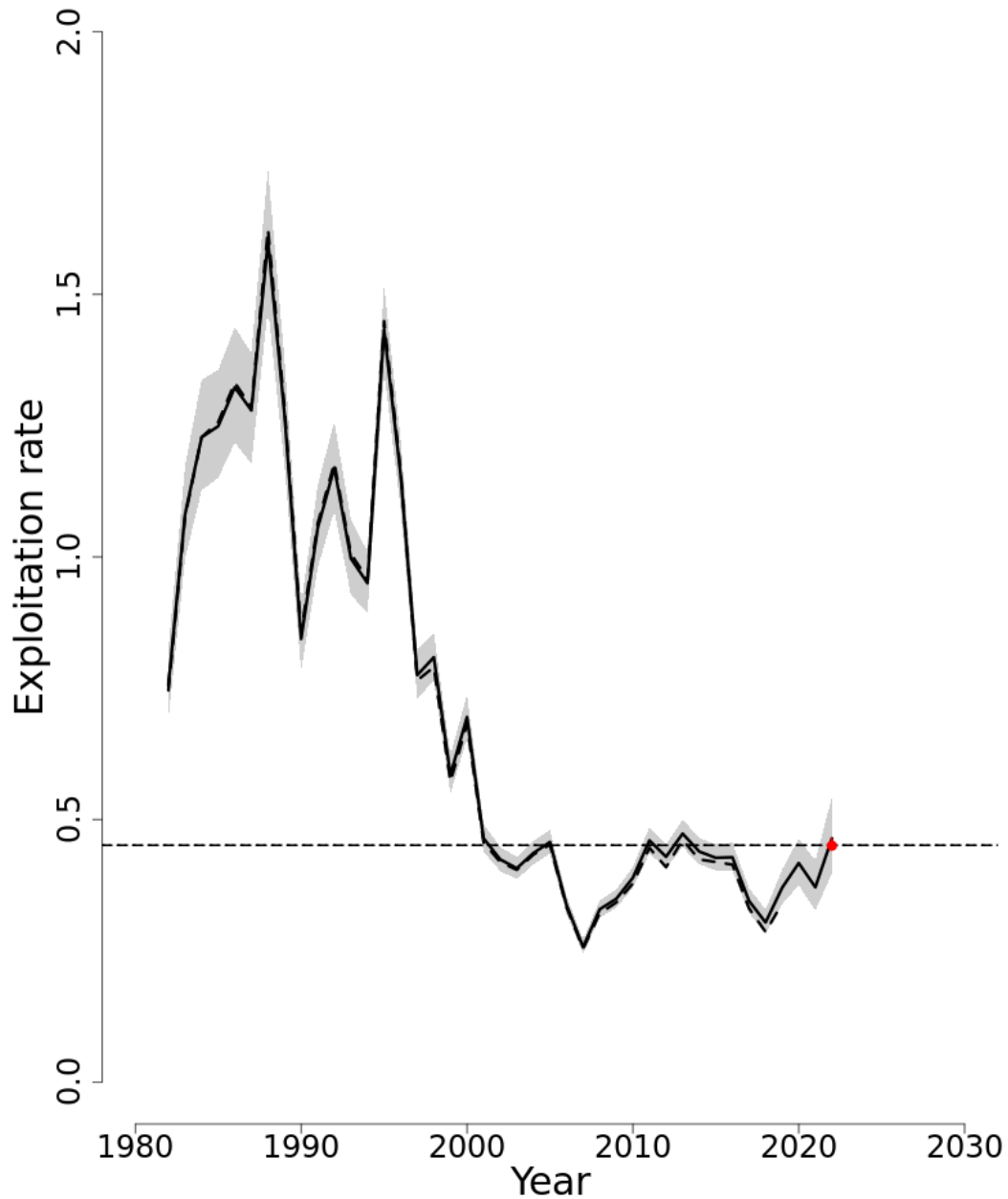


Figure 2: Trends in the fully selected fishing mortality (F_{Full}) of Summer flounder between 1982 and 2022 from the current (solid line) and previous (dashed line) assessment and the corresponding $F_{Threshold}$ (F_{MSY} proxy=0.451; horizontal dashed line). F_{Full} adjusted for a retrospective pattern is shown in red, but not used for status or projections. The approximate 90% lognormal confidence intervals are shown.

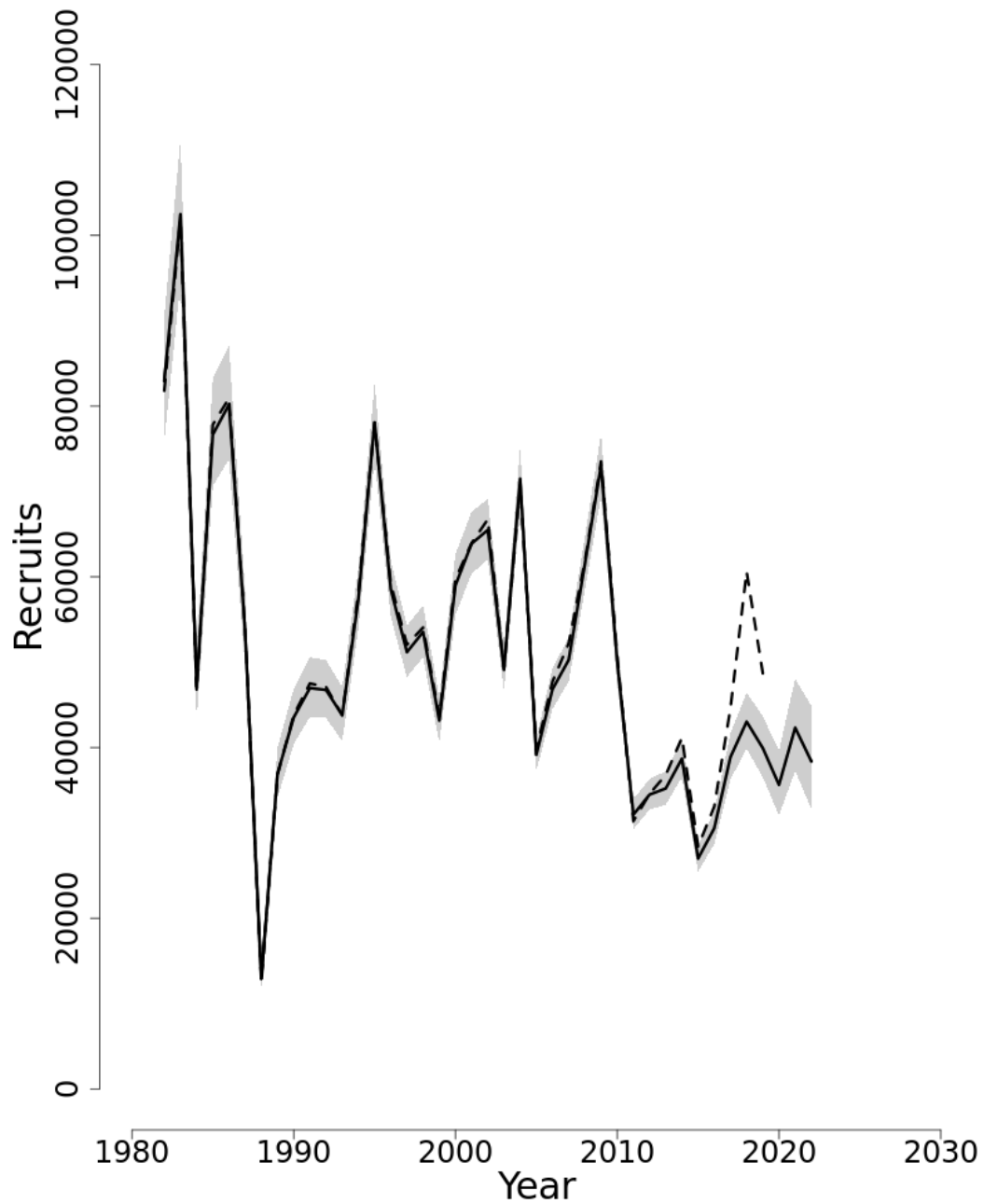


Figure 3: Trends in Recruits (age 0) (000s) of Summer flounder between 1982 and 2022 from the current (solid line) and previous (dashed line) assessment.

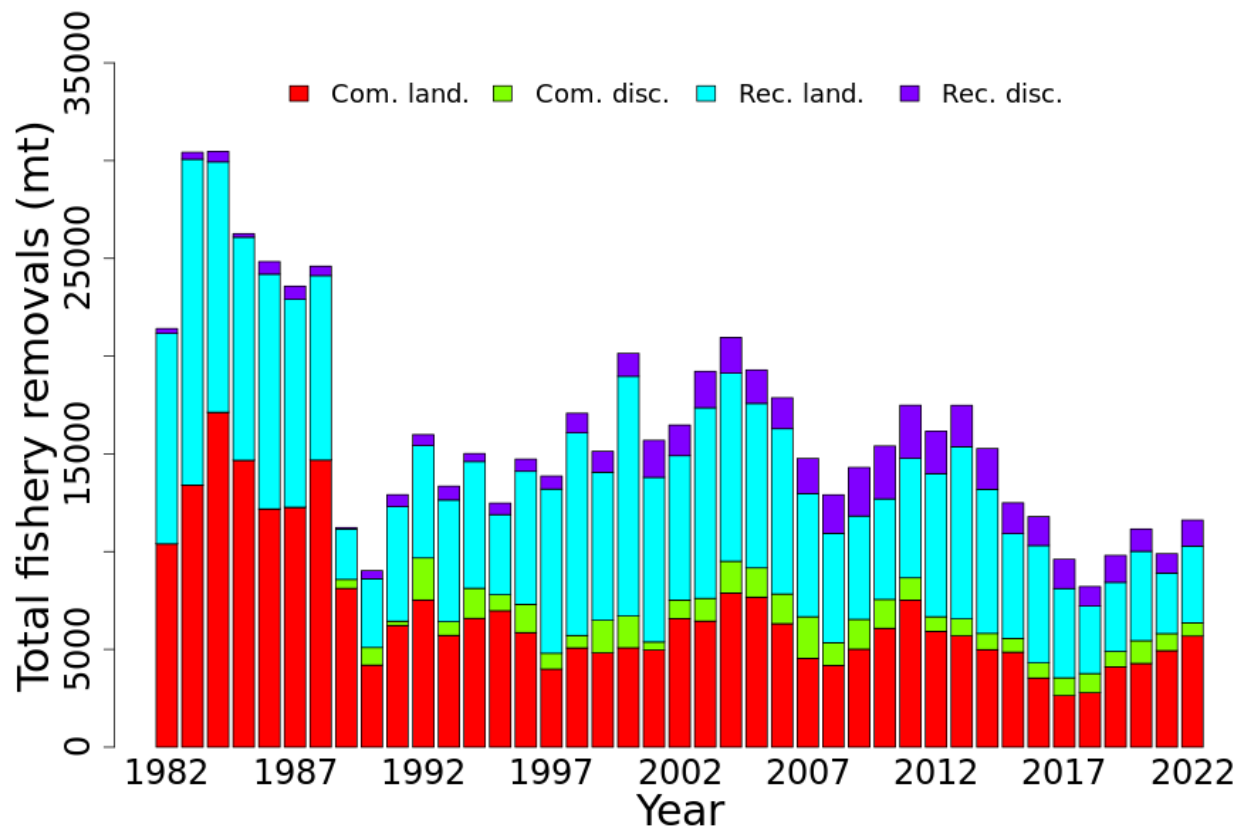


Figure 4: Total catch of Summer flounder between 1982 and 2022 by fishery (commercial and recreational) and disposition (landings and discards).

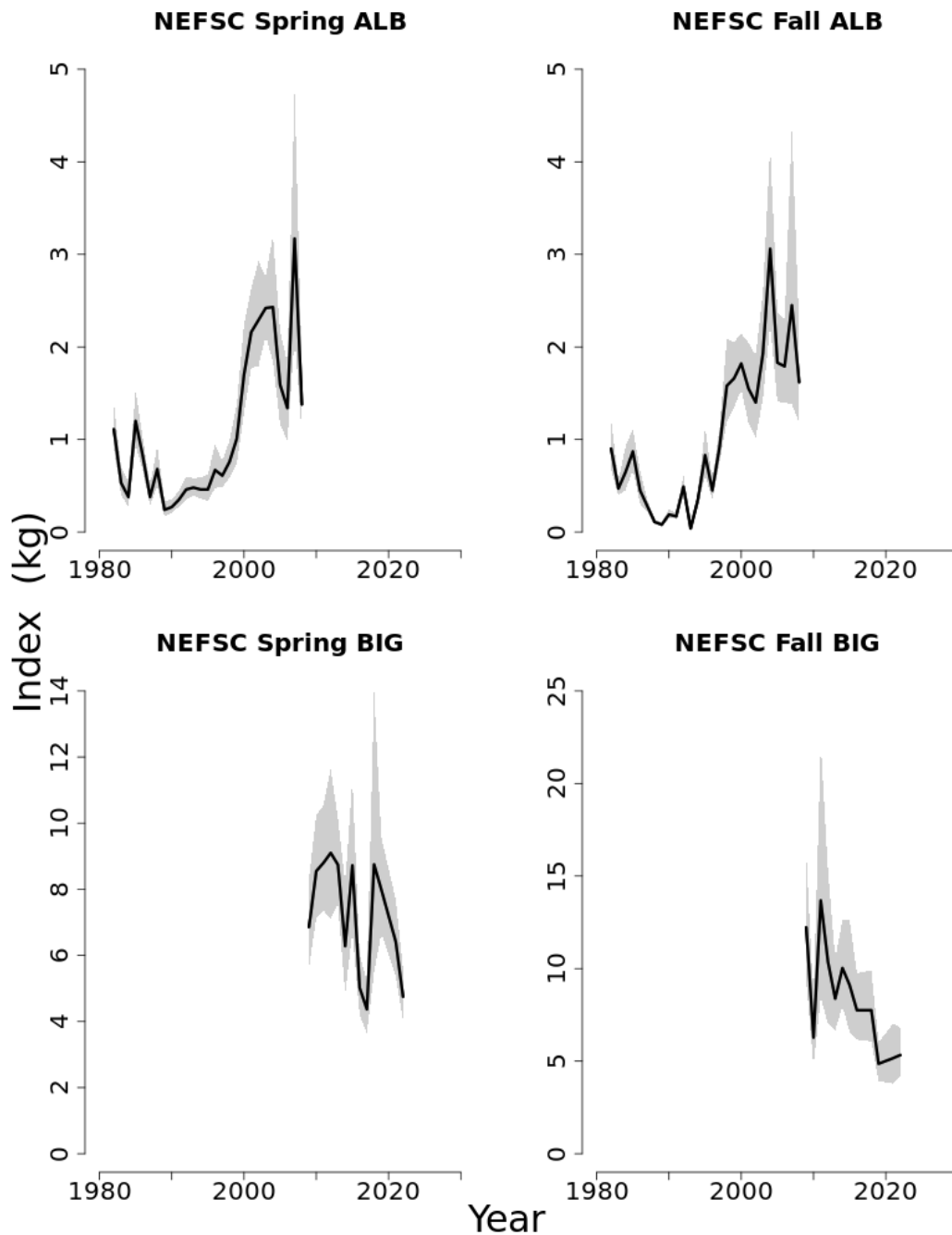


Figure 5: Indices of biomass for the Summer flounder between 1982 and 2022 for the Northeast Fisheries Science Center (NEFSC) Albatross IV (ALB) and Henry B Bigelow (BIG) spring and fall research bottom trawl survey series. The approximate 90% lognormal confidence intervals are shown.



Summer Flounder, Scup, and Black Sea Bass Fishery Performance Report June 2023

The Mid-Atlantic Fishery Management Council's (Council's) Summer Flounder, Scup, and Black Sea Bass Advisory Panel (AP) met jointly with the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass AP on June 21, 2023 to review the Fishery Information Documents and develop the following Fishery Performance Report for all three species. The primary purpose of this report is to contextualize catch histories for the Scientific and Statistical Committee (SSC) by providing information about fishing effort, market trends, environmental changes, and other factors.

Please note: Advisor comments described below are not necessarily consensus or majority statements.

Additional comments provided by advisors via email are attached to this document but are not incorporated into the summary below.

Council Advisory Panel members present: Katie Almeida (MA), Carl Benson (NJ), Joan Berko (NJ), Frank Blount (RI)*, Eric Burnley (DE), Joseph Devito (NY), James Fletcher (NC), Jeremy Hancher (PA), Victor Hartley (NJ), Greg Hueth (NJ), Bob Pride (VA), George Topping (MD), Mike Waine (NC), Harvey Yenkinson (PA)

Commission Advisory Panel members present: Frank Blount (RI)*, Phil Michaud (MA), Bill Shillingford (NJ)

*These individuals serve on both the Council and Commission APs.

Others present: Chris Batsavage, Tracey Bauer, Julia Beaty, John Boreman, Haley Clinton, Sarah Cvach, Kiley Dancy, Jason Didden, Steve Doctor, Michelle Duval, Mark Grant, Hannah Hart, Mark Holliday, Jesse Hornstein, José Montañez, Adam Nowalsky, Phil Simon, Chelsea Tuohy, two unidentified participants via phone only.

Discussion questions

1. What factors influenced recent catch (markets/economy, environment, regulations, other factors)?
2. Are the current fishery regulations appropriate? How could they be improved?
3. What would you recommend as research priorities?
4. What else is important for the Council to know?

Summer Flounder

Fishery Performance

One advisor said he appreciated the Overfishing Limit (OFL) and Acceptable Biological Catch (ABC) performance information in the Fishery Information Documents and presentation this year. He asked whether it's typical for catch to be approximately 30% below the OFL on a regular basis. Staff said several factors impact how close catch gets to the OFL, including the buffer between the OFL and the ABC and the fishery performance relative to the ABC. The buffer between the OFL and ABC for summer flounder is larger than it is for scup and black sea bass due to summer flounder stock status. The commercial and recreational fisheries have each been below their respective ACLs in most or all recent years. These underages could be driven by a combination of factors including regulations, other drivers of effort, and/or availability.

This advisor requested the addition of fishing mortality or F/Fmsy estimates to the table once the new assessment is available. He also said he struggles to understand the conservation need for leaving such a large underage on the table, especially for the recreational sector. He questioned whether the information reviewed by and provided by advisors was meant to check a box or if it could be used to improve management and provide more fishing access.

Stock Availability and Trends

Another advisor suggested that catch is so far under the limits because the fishery is controlling itself, in that the fish are less available and therefore landings are down. While he appreciates that regulations for summer flounder have gotten less restrictive, he thought it would be better to tighten the regulations for summer flounder while loosening them for scup and black sea bass, which have frequent overages because they are so abundant. He noted that fishermen are still catching a lot of summer flounder, but most of them are not keepers, and that harvest is way down due to low availability of larger fish.

Another advisor agreed that the summer flounder stock may not be as robust as we think. He noted that given underages of the catch limits for so many years, we would expect more stock growth than we are currently seeing. He thought part of that was due to low recruitment, but questioned whether part of it could also be that the stock's natural mortality is higher than we are assuming.

A commercial advisor mentioned that he fishes for horseshoe crabs, and normally this time of year they would be catching one or two flounders per tow. This year, they are noting many more smaller 16-20 inch flounders being caught, up to 50-70 pounds per tow. One advisor said he heard that the NEAMAP survey bottom temperature observations are 6-10 degrees colder than the last 20 years, impacting the seasonal availability of target species. From his perspective, this year everything seems to be running about two weeks behind schedule in terms of where and when they would usually find certain species.

Another advisor connected this comment to the "Squid Squad," which is a scientist and industry partnership group that meets weekly to discuss oceanographic conditions and correlate them to patterns observed in the *Illex* squid fishery. She suggested it may be worth trying to conduct a similar exercise for the summer flounder fishery.

Market/Economic Conditions and Commercial Fishery Issues

One advisor noted that industry members at the Town Dock (out of Rhode Island) have reported terrible market prices this year. Industry members did not mention possible drivers of the low market prices, but this advisor said she could inquire further.

Another advisor also noted very low prices for summer flounder, as low as \$0.46 per pound recently in Maryland. This, in combination with high fuel costs, has resulted in a decrease in fishing activity. It is not worth spending \$10,000 to \$15,000 on trip costs to catch \$5,000 worth of fish.

A commercial fisherman from Massachusetts noted that in the last 3-5 years he has seen mostly medium size fluke and very few large and jumbos. The medium fish at approximately 16-18 inches shoot through the 6.5-inch codends they are using, so summer flounder are not caught very efficiently using that size mesh. However, this year, he is now seeing many large and jumbos which is exciting, although it's not clear why this is happening.

Recreational Fishery Issues

Two advisors commented on the recreational slot limit in New Jersey (two fish allowed at 17-17.99 inches and one fish above 18 inches). One advisor shared his concerns that it has not been successful in lowering the harvest of female fish in the recreational fishery. Based on his observations, less than 5% of harvest is male. Another advisor expressed his support for the slot limit regulations, but thought they should be modified to either a single slot, or two slot limits with one fish allowed in each. This advisor also supported further discussions on sector separation for the for-hire sector.

Research Recommendations

One advisor emphasized the importance of understanding why the center of biomass is shifting north. His perspective is that the oceanographic data (such as temperature and pH) do not explain the magnitude of this shift, because the changes are well within the preferred habitat parameters of summer flounder. If this movement continues, it will have serious implications for both the commercial and recreational fisheries, so the drivers of distribution changes should be better understood. He believes it is related to asymmetric fishing pressure along the coast. He also supports prioritizing research into why summer flounder recruitment has been below average.

This advisor also expressed concern that we don't know as much as we should about the migration patterns of summer flounder beyond a general East-West pattern. Finally, this advisor recommended that we find better ways to conduct population surveys than trawl surveys, which disturb fish and their habitat and kill a lot of fish. Newer and better technology may exist to conduct surveys without killing the fish and destroying vulnerable habitats.

Scup

Stock Availability and Trends

Multiple advisors suggested that the overages in scup catch were likely due to the abundance of the stock, contrasting this with summer flounder which has underages and lower availability. One advisor said we are overregulating the fishery and the current management system seems

backwards. This advisor recommended loosening regulations for abundant stocks, like scup and black sea bass, and tightening regulations for the less abundant stocks, like summer flounder.

Market/Economic Conditions and Commercial Fishery Issues

One advisor noted that he could viably target scup if he used a smaller codend and if regulations allowed the fishery to operate during the night. The advisor said scup are plentiful in certain areas around Massachusetts but the lack of a market for scup discourages him from targeting the species.

Recreational Fishery Performance and Fishery Issues

Some advisors questioned the significant increase in recreational scup catch and expressed disbelief in MRIP estimates. One advisor noted he is not trying to pick on MRIP, but questioned where this significant increase in scup catch is coming from, and questioned if it was from that 2015-year-class or other factors. One advisor noted that if over 17 million scup were landed last year, then we should be seeing that level of catch come to shore and questioned if state agencies, especially New York, are seeing that level of scup harvest. The advisor also noted that it is hard to believe that the amount of scup harvest coming out of New York alone is greater than the entire coastwide harvest of summer flounder. The advisor expressed the need to get a better understanding of scup harvest and questioned if other AP members were seeing this level of catch on the water. One advisor noted that headboats out of New York are catching large quantities of scup but was unsure if it was as high as the level estimated through MRIP. Another advisor noted that he has not experienced the level of scup harvest estimated through MRIP out of New Jersey and said for-hire boats were not regularly catching scup last year until around August/September and scup catch dropped off significantly in the late fall.

Several advisors voiced frustration with the 2023 recreational scup season in New Jersey and felt the August 1 start date was too restrictive and unfair given neighboring states are opening their season several months prior. One advisor emphasized that New Jersey's recreational landings constitutes such a small percentage of the total coastwide harvest, making the late start date seem disproportionate. Some advisors said the late New Jersey start date was particularly damaging to the for-hire industry given scup has been an important target species early in the year. One advisor expressed concern about the ripple effect the restrictive regulations will have on businesses beyond the for-hire sector, such as tackle shops and marinas. Another advisor questioned the rationale behind connecting scup and black sea bass in determining New Jersey's regulations and advocated for better alignment with regulations in other states.

Two advisors stressed the importance of keeping scup open year-round for the for-hire sector, especially for those not targeting summer flounder or during black sea bass closures. These advisors requested recreational sector separation to ensure continued fishing opportunities for for-hire boats. One for-hire advisor also noted the importance of keeping scup open in New Jersey due to the decline in ling (red hake) catch.

Black Sea Bass

Recreational Fishery Issues

One advisor noted that Rhode Island has more restrictive recreational black sea bass measures than most other states. He noted that uniform proportional reductions in harvest across all states have been normalized in recent years, but are especially hard on states with the most restrictive measures

to start with. He said it feels like some states are being penalized for conservation measures taken in the past. He appreciated that the for-hire sector in Rhode Island and Connecticut didn't need to take another big cut this year, but they are currently operating under a very restrictive two fish possession limit.

Another advisor who fishes out of southern New Jersey cautioned against liberalizing measures to allow increased harvest of black sea bass given that stock assessment is not a perfect science. He said fisheries for other species have been lost after having very high abundance. He said it's nice for anglers to be able to catch black sea bass every time they go out, unlike summer flounder, which only the best fishermen tend to catch. He recommended managing the black sea bass stock for continued high abundance.

A for-hire captain based in New Jersey disagreed and said it feels like the recreational black sea bass fishery is continually penalized despite the robustness of the stock. He said the for-hire sector needs to be managed separately from the private recreational sector, noting that for-hire catch can be tracked with vessel trip reports. He hoped implementing separate management would lead to more favorable open seasons for the for-hire sector, enabling them to increase their income. He expressed concern about reduced fishing opportunities for striped bass due to recent actions taken by the Atlantic States Marine Fisheries Commission. He hoped that black sea bass could have a longer open season given that they are so abundant.

Another recreational fishing advisor disagreed with the previous recommendation to manage for abundance and expressed concern that management may miss an opportunity to take advantage of the currently high biomass given that it is declining from a peak. He noted that past high year classes are phasing out of the biomass and stock dynamics are not just driven by the fishery, but are also impacted by environmental factors. He recommended that the fisheries be allowed to take advantage of this high biomass, especially given that black sea bass is a food fish, as opposed to some other species which have a greater catch and release component to the recreational fisheries. He also noted that the stock assessment does not assume a relationship between stock size and recruitment; therefore, being more conservative than necessary now may not lead to increased biomass in the future. He added that the currently restrictive regulations feel very disconnected from the high biomass.

Another recreational fishing advisor from New Jersey noted that the black sea bass stock was rebuilt under much higher possession limits and much smaller minimum sizes than the current measures. He noted that the recreational minimum size in New Jersey decreased from 13 to 12.5 inches in 2023, which helped reduce discards. Anglers didn't have to fish as long or discard as many fish before they caught a keeper compared to in 2022 under the higher minimum size limit.

Another recreational fishery advisor from Delaware recommended consideration of lowering the minimum fish size to 12.5 inches in additional states to achieve similar benefits as previously described (i.e., reduce discards, achieve the possession limit faster, and end the fishing day sooner).

A recreational fishery advisor from Rhode Island expressed concern about previous comments related to high abundance and restrictive regulations. He reminded the group that the regulations are so restrictive because black sea bass are so easy to catch. If the regulations were less restrictive, the recent recreational overages would be even greater. He said when abundance is high, effort also increases. He added that he did not disagree with the recommendations for sector separation,

but struggled to understand what other changes advisors had in mind when they suggested regulations should be less restrictive due to high biomass.

One commercial fishery advisor said all recreational fishermen should be required to report their catches through a cell phone application. He also recommended that the recreational fishery be managed with a total cumulative length limit (i.e., all fish are retained until the combined length of those fish adds up to a specified limit), a prohibition on discards, and larger hook sizes.

Market/Economic Issues

One recreational fishing advisor from New Jersey said the continued restrictions on black sea bass hurt the economy. For example, they impact support businesses such as fuel dealers in addition to impacting fishermen.

Commercial Fishery Issues

One advisor speaking from the recreational fishing perspective said management should reward fisheries with lower bycatch. He noted that a previous analysis, not presented during this meeting, showed an increasing proportion of commercial landings from trawl gear. He noted that trawl gear has much higher levels of dead discards than pots/traps.

Another recreational fishing advisor recommended consideration of separate quotas for trawl and pot/trap commercial fisheries.

General Comments on AP Participation and Input

The topic of attendance came up and it was noted that about 12 out of 24 Council AP members were present and 3 out of 31 were present for the Commission. This generated some discussion about AP participation and the process of seeking advisor input.

One advisor asked for additional guidance on what information from advisors would be the most useful to contribute to the decision-making process. This advisor thought the input is solicited late in the process, and also expressed concern that the new data expected after this meeting negates the AP input almost automatically. He suggested thinking about how to get advisor input into the system earlier, for example, by using an online form that advisors could respond to earlier in the year. Then, during this meeting to develop Fishery Performance Reports, advisors would have more ideas and information to react to provided by other advisors. This advisor would like to find ways to encourage advisors to talk more and engage in more meaningful discussions.

Several advisors supported occasional in-person AP meetings, while acknowledging that not everyone would be able to travel to these meetings. In-person meetings would likely get better participation if held earlier in the year, in late winter or spring. For webinar meetings, evenings may work better for many advisors. One AP member also suggested breaking the species up into separate meetings to potentially give more people an opportunity to participate and to lower the time commitment for an individual meeting.

One advisor suggested that providing more information about each advisors' background, for example on the website, would be helpful for increased awareness about where other advisors are coming from and provide information to the public on who may be helpful to call if they have feedback on the topic. Others suggested that casual pre-meeting calls or email threads between individual advisors can be helpful for preparing for the meetings.

Public Comments

One individual who is on other Council Advisory Panels, but not this Advisory Panel, noted that the tables shown in the presentation suggest a pattern of increasing commercial landings and stable recreational landings, with increasing overall dead catch for all three species. He said this trend needs to be addressed. He noted that there were major revisions to the recreational fishing data to address previous issues which were identified as fatal flaws; however, the new data is not much of an improvement. He thought a closer look at the estimation methodology is warranted. Perhaps effort is over-estimated.

This individual also noted that although the staff presentations showed evidence of poor recruitment in some recent years, the number of juvenile summer flounder and black sea bass in estuaries has not declined, suggesting that preservation of female fish has not been an issue. Survival of juveniles in estuaries should be given greater attention. For example, research could focus on oxygen levels, prey availability, and other factors influencing survival in estuaries. This individual also agreed with previous comments about catch being reflective of stock status. He noted that the recreational summer flounder fishery is not doing well this year and the recreational measures should be re-evaluated, for example to allow a longer open season under lower possession limits.

Additional AP Comments Provided Outside of the Meeting

Steve Witthuhn

Comments provided to Council staff over the phone in June and July 2023.

- **General comments**
 - The June 2023 Advisory Panel meeting took place during a busy time of year for fishing.
 - The Marine Recreational Information Program (MRIP) data are flawed and inaccurate.
 - Recreational fishermen are so frustrated with the restrictive regulations that they don't care anymore and are not complying with the regulations. This is especially true for black sea bass given the stock is so abundant.
 - Recreational anglers are concerned that discards will count against them.
 - Fishing reports sometimes embellish the amount of fish caught. This is problematic and could have unintended consequences if it's used against fishermen.
 - Regulations should be more consistent across states. For example, Connecticut and the north shore of Long Island should be treated as a region with the same regulations. Summer flounder and tautog have the same measures for New York and Connecticut in Long Island Sound. The same approach should be used for black sea bass and other species as well.
 - The recreational fishery is not catching many summer flounder because biomass is low. Those regulations remain unchanged. In contrast, black sea bass catch is high because that stock is more than double the target level. Those regulations are being restricted. This makes it feel like the recreational fishery is being penalized for catching more and rewarded for catching less.

- Fuel prices are still decent.
- Young people aren't getting involved in the fisheries and they aren't getting involved in the management process, including on the Advisory Panels.
- With climate change, we are seeing more southern species such as cobia and triggerfish. Triggerfish are almost a targeted species now.
- **For-hire sector**
 - The overall attitude in the for-hire sector has changed. People are very frustrated and fed up with management. This increases non-compliance.
 - The for-hire regulations need to allow customers to take home some fish. Customers are catching lots of fish, but aren't able to take any home due to the size limits.
 - A full day charter costs a lot of money. Customers want to have a good day on the water catching fish and they also want something to take home.
 - If you see a party boat that's always full of people, it's because they are taking something home.
 - Management should consider for-hire boat limits. For example, a limit of three striped bass per charter boat would allow each of the six customers to take home one fillet.
 - I'm not doing many for-hire trips yet because the black sea bass season isn't open yet. We can't catch as many striped bass under the new regulations. Fluke availability is down, and people don't want to eat bluefish.
 - Another advisor has suggested a cumulative length limit as a way to reduce discards. That has some similarities to what we are already doing for striped bass and black sea bass. When we get our limit, we stop fishing for that species and move on to something else.
- **Black sea bass**
 - Recreational fishermen in New York are very upset by the increase in the black sea bass minimum fish size to 16.5 inches. This will result in very high discards and less fish to take home. The minimum size used to be 14 inches. How is management doing a good job if the minimum size keeps increasing?
 - The 16.5 inch minimum size and the late start to the recreational black sea bass season will lead to increased non-compliance. We're already seeing lots of bad behavior. People not waiting for black sea bass to open. The fluke season started out bad. The only thing we're catching is black sea bass, so people are keeping them so their customers can take something home. This is not a good way to run a business.
 - It is frustrating that the for-hire sector wasn't able to keep a 16 inch minimum size this year, but we were told we'd have to open in July to allow that.
 - In the past, black sea bass has bailed me out. Now the for-hire season in New York doesn't open until June 23.
 - The three fish recreational possession limit at the start of the season in New York is something, but it is frustrating that the minimum size had to increase to 16.5 inches to allow this.
 - It is frustrating that New York has more restrictive recreational measures than neighboring states. New Jersey has a much smaller minimum size than New York and has four different seasons throughout the year. How was New Jersey able to get this through? Connecticut has a 16 inch minimum size. People are aware of this and are frustrated. Neighboring states should have the same measures.

- The black sea bass commercial season opens way before the recreational season. Recreational fishermen complain that all the commercial pinhookers catch all the black sea bass. The commercial sector gets a better price for big fish. The recreational fishermen are concerned that they'll only get the small throw backs, which are below the recreational minimum size of 16.5 inches.
- In the commercial fishery, jumbo black sea bass (3-4 pounds) go for the highest prices, but they are hard to find.
- It is disappointing that the black sea bass research track assessment peer review has been delayed. Do we need to dedicate more funding to this assessment to help it get done well and on time?
- **Summer flounder**
 - This is one of the worst years so far for fluke.
 - I heard there was a good body of fluke that moved north to Massachusetts before they could be caught off New York. My contacts in the commercial fishery are also saying the market is getting fluke from Massachusetts. I've heard they are catching shorts in Massachusetts and we're not getting shorts in New York.
 - The price for fluke in New York was higher this year, but no one was catching them.
- **Scup**
 - The commercial ex-vessel price for scup has decreased.
- **Bluefish**
 - There's a very large body of bluefish off Montauk. They are feeding on squid, herring, anchovy, and sand eels. It's surprising that we had such a good sand eel hatch with the mild winter.
 - This is the best start to a bluefish season I've ever seen. There were 8-12 pound bluefish in May. That keeps us busy. Tackle shops like that. Bluefish bite off tackle.
 - How old is a 10 pound bluefish? What size are the spawners that we want to save?
 - There used to be snapper derbies for bluefish. There haven't been enough snappers recently for those derbies to come back.
 - The bag limit changes for bluefish have been helpful for the for-hire sector.
 - The bluefish price is down to \$0.40 per pound, which is extremely low. It should be more like \$1.00 per pound. Shipping a box of bluefish costs more than the price we are paid for the fish in the box.
 - The low price is contributing to landings falling below the quota.
 - The commercial possession limit for bluefish in New York should not have been increased from 500 to 1,500 pounds. It should have stayed lower to help improve the price.
- **Striped bass**
 - The additional black sea bass restrictions are happening at the same time as the emergency ruling for striped bass, which changed the slot limit to 28-31 inches. This is a big blow to the recreational fishery. It will also increase discards.
 - It is frustrating that management did not act more proactively to prevent the need for emergency striped bass measures. Managers should have foreseen this situation with the 2015 year class. There had been a downward trend for four years and then the MRIP estimate for 2022 showed extremely high harvest. It's not an emergency, it's a failure of the whole system and the recreational fishing industry has to pay the price.

- All states should have similar measures to help rebuild the stock. It does not make sense for one state to keep their trophy fish when others could not. Trophy fish should only be allowed if there's an upward trend in the stock.
- The fishery should be closed during spawning to help with rebuilding.
- It would have been better to keep the for-hire sector at their previous slot limit and further restrict the private recreational sector given that they are responsible for most of the discard mortality.
- A few states opened their commercial striped bass fishery, which caused a decrease in the price in New York.
- There have been more striped bass in federal waters recently.
- Night fishing increases the catch of large fish. Even with catch and release, there are still concerns about discard mortality.
- Restrictions could be considered to prohibit taking big fish out of the water, as is done for tarpon. If people want to take a picture before they release the fish, they should keep the fish in the water.

Bonnie Brady

Comments provided to Council staff in June 2023.

- The biggest issue last year were horrible prices.

Joan Berko

From: fishthewizard (null)

To: Beaty, Julia

Subject: AP meeting

Date: Wednesday, June 21, 2023 4:51:28 PM

Hi Julia:

I had trouble getting sound with my Mac so used my Ipad. Logged in as JB. Last years BSB prices were low, mostly below \$1 for mediums. The average price of \$2.60 sounds high. Fuel averaged well over \$4.

Joan Berko

Sent from my iPad

James Fletcher

From: [James Fletcher](#)
To: [Beaty, Julia](#); [Hart, Hannah](#); [Andrew Petersen](#)
Subject: Re: INFORMATION FOR 21 DISCUSSION
Date: Thursday, June 22, 2023 5:27:54 PM

Because my comment could not be included::: I Believe BOFFFF (BIG OLD FAT FECUND FEMALE FISH "SCIENCE" IS IGNORED FOR ALL THREE SPECIES! Management & NMF Science by allowing by catch has INTENTIONALLY destroyed the genetic superior breeding fish. A policy for recreational KEEP WHAT YOU CATCH with hook size regulations would have allowed the deprived shore side recreational fishers food to take home & enjoyment from recreational fishing.

A policy / regulatory consideration for total length retention SHOULD BE A PART OF THE A.P. REPORT !

also cell phone for recreational **MUST BE IMPLEMENTED! BLUEFIN DATA HAS SYSTEM FOR CELL PHONE REPORTING! PLEASE NOTE IN REPORT!**

CALL BLUFFIN AT (225-407-9192 TO CONFIRM APPLICATION IS AVAILABLE
PLEASE NOTE IN REPORT!

On 6/22/2023 2:46 PM, Beaty, Julia wrote:

Hi James,

I reached out to my coworker Tori for help with this question. I am not sure if you've interacted with Tori much yet. She has a strong background in spatial analysis. See below for her calculations of rough estimates of the area covered by several surveys.

Julia Beaty
Fishery Management Specialist
Mid-Atlantic Fishery Management Council 800
N. State Street, Suite 201
Dover, DE 19901
302-526-5250
jbeaty@mafmc.org Pronouns:
She/her/hers

From: Kentner, Tori <tkentner@mafmc.org>
Sent: Wednesday, June 21, 2023 5:17 PM **To:**
Beaty, Julia <jbeaty@mafmc.org>
Cc: Didden, Jason <jdidden@mafmc.org>; Moore, Christopher <cmoore@mafmc.org>
Subject: Re: INFORMATION FOR 21 DISCUSSION

Hi Julia,

I don't have shapefiles for the NEAMAP strata or any of the state surveys on hand. I'm not even sure if strata shapefiles exist for most surveys. Despite extensive searching

online I couldn't come up with any official resources. As a solution I applied a method called concave hull analysis to draw polygons around the survey points for each trawl, creating an initial shapefile. From this, I've estimated the areas in square nautical miles.

Just want to stress this is a very rough estimate and for a more precise picture I'd recommend reaching out to NEAMAP or the state agencies directly. I'm actually planning on doing this for the EFH analysis, but I probably won't get responses for at least a few weeks/months. I can update this list at that time if there is still interest.

Tori

Survey	NM SQ
NEAMAP Bottom Trawl	3,500
Maine-New Hampshire Inshore Trawl	5,200
New Jersey Ocean Stock Assessment	1,900
Connecticut Long Island Sound Trawl	750
Massachusetts Bottom Trawl	1,700
Rhode Island Narragansett Bay Trawl	225

-----Original Message-----

From: James Fletcher <unfa34@gmail.com>

Sent: Tuesday, June 20, 2023 10:56 AM

To: Beaty, Julia <jbeaty@mafmc.org>; Moore, Christopher <cmoore@mafmc.org>; Didden, Jason <jdidden@mafmc.org>

Subject: INFORMATION FOR 21 DISCUSSION

I have following (ATTACHED sq MILE ESTIMATE OF NEFSC TRAWL SURVEY sq miles / acres for National Marine Fisheries survey.

Would you attempt to acquire area of NEMAP survey? Then attempt gain State water areas not surveyed?

THE REASON FOR THOUGHT! OUR 11 MILLION TO 18 MILLION ACL OR ANY NUMBER USED **** WOULD ONLY BE A PERCENTAGE OF POUNDS OF FISH PER ACRE.

Knowing if I fish an acre of bottom will catch many times what survey shows. NEED DISCUSSION OF WHAT SCIENCE WE ARE USING.

PLEASE ACQUIRE AREA COVER BY NEMAP. AND STATE WATERS NOT COVERED BY ANY SURVEY, THANK YOU;

Carl Benson

From: flukeman@aol.com

Sent: Monday, June 26, 2023 12:42 PM

To: Beaty, Julia

Cc: Kiley Dancy; Hart, Hannah; tbauer@asmfc.org; Chelsea Tuohy; Mark Grant

Subject: Re: Briefing materials for June 21 webinar meeting

Attachments: FSB_AP_21June2023_Agenda.pdf; Fluke AP FPR Info Doc_2023.pdf;

Scup_info_doc_2023.pdf;

BSB_fishery_info_doc_2023.pdf

Thanks for the presentation. I had mic problems with online and phone call in. Convenient that James and I have the problems. (LOL)

The best suggestion I heard was to create a site where advisors could respond to threads that you started. Maybe advisors could also add threads that they wish to discuss.

A comment that could change my priority concerned size of fluke recruitment vs size of fish reaching one year of age. Very interesting comment.

Which method of rebuilding stock is correct? Striped Bass-protect spawning females vs Summer Flounder - harvest females.

Revisit commercial discards (14" was 13"). Commercial discards are counted against total harvest becoming scavenger food vs harvest those fish, becoming people food. These fish would fit well into ethnic markets as whole fish to compete with imports (tilapia, etc).

Thanks

Carl Benson



Summer Flounder Fishery Information Document

June 2023

This document provides a brief overview of the biology, stock condition, management system, and fishery performance for summer flounder (*Paralichthys dentatus*), with an emphasis on 2022. Data sources include unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), and permit data, as well as Marine Recreational Information Program (MRIP) data¹ and stock assessment information. All 2022 data should be considered preliminary. For more resources on summer flounder management, including previous Fishery Information Documents, please visit <http://www.mafmc.org/sf-s-bsb>.

Key Facts:

- Current stock status is based on a 2021 management track stock assessment, which found that in 2019, summer flounder was not overfished and overfishing was not occurring. A new management track assessment will be peer reviewed in late June 2023.
- Recruitment for summer flounder was generally below-average from 2011-2017. Recruitment in 2018 was above average and the largest year class estimated since 2009; however, 2019 recruitment was estimated to be below average. Updated recruitment estimates for 2020-2022 will be provided in the 2023 management track assessment.
- 2022 recreational summer flounder harvest was estimated at 8.83 million pounds, about 85% of the harvest limit of 10.36 million pounds. This is a 29% increase from the 2021 recreational harvest estimate of 6.82 million pounds, which was the lowest estimate since 1989.
- Commercial landings in 2022 (12.47 million pounds; 80% of commercial quota) increased by about 18% from 2021 landings (10.56 million pounds; 85% of commercial quota).
- Average commercial ex-vessel price decreased from \$3.10 in 2021 to \$2.44 in 2022. Average price per pound has decreased in recent years from its peak in 2017 (\$4.98 per pound in 2022 dollars).

¹ In July 2018, MRIP released revisions to their time series of recreational catch and landings estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). The revised estimates of catch and landings are higher than the previous estimates for shore and private boat modes. Most recreational estimates in this document reflect revised MRIP estimates except where otherwise noted.

Basic Biology

Summer flounder spawn during the fall and winter over the open ocean areas of the continental shelf. From October to May, larvae and postlarvae migrate inshore, entering coastal and estuarine nursery areas. Juveniles are distributed inshore and in many estuaries throughout the range of the species during spring, summer, and fall. Adult summer flounder exhibit strong seasonal inshore-offshore movements, normally inhabiting shallow coastal and estuarine waters during the warmer months of the year and remaining offshore during the colder months.

Summer flounder habitat includes pelagic waters, demersal waters, saltmarsh creeks, seagrass beds, mudflats, and open bay areas from the Gulf of Maine through North Carolina. Summer flounder are opportunistic feeders; their prey includes a variety of fish and crustaceans. While the natural predators of adult summer flounder are not fully documented, larger predators (e.g., large sharks, rays, and monkfish) probably include summer flounder in their diets.

Spawning occurs during autumn and early winter, and the larvae are transported toward coastal areas by prevailing water currents. Development of post larvae and juveniles occurs primarily within bays and estuarine areas (Packer et al. 1999). Most fish are sexually mature by age 2. The largest fish are females, which can attain lengths over 90 cm (36 in) and weights up to 11.8 kg (26 lb). The Northeast Fisheries Science Center (NEFSC) commercial fishery sampling in 2018 observed the oldest summer flounder collected to date, a 57 cm (22.4 in) fish (likely a male) estimated to be age 20. Also sampled were two age 17 fish, at 52 cm (20.5 in; likely a male) and at 72 cm (28.3 in; likely a female). Two large (likely female) fish at 80 and 82 cm (31.5 and 32.3 in) were both estimated to be age 9, from the 2009 year class (the 6th largest of the 36 year modeled time series). These samples indicate that increased survival of summer flounder over the last two decades has allowed fish of both sexes to grow to the oldest ages estimated to date (NEFSC 2019).

Status of the Stock

The information below is based on the most recent stock assessment information available as of the completion of this document. An updated management track stock assessment will be available in late June/July 2023.

In June 2021, the NEFSC provided a management track assessment (NEFSC 2021) for summer flounder with data through 2019, providing estimates of spawning stock biomass (SSB) and fishing mortality (F). Given data gaps for 2020 related to COVID-19 and the time required to address those gaps, 2020 data could not be incorporated into the 2021 management track assessment. Assessment results indicate that the summer flounder stock was not overfished and overfishing was not occurring in 2019. SSB has generally decreased since 2003, and in 2019 was estimated to be about 86% of the biomass target reference point and about 72% above the overfished threshold which is equivalent to ½ of the biomass target (Table 1; Figure 1). Fishing mortality in 2019 was estimated to be 19% below the fishing mortality threshold reference point (Table 1; Figure 2).

Average recruitment from 1982 to 2019 was estimated at 53 million fish at age 0. Recruitment of juvenile summer flounder was below-average from 2011-2017, ranging from 31 to 45 million fish and averaging 36 million fish. The driving factors behind this period of below average recruitment have not been identified. The 2018 year class is above average at an estimated 61 million fish, which is largest recruitment estimate since 2009, while the 2019 year class is below average at 49 million fish.

In 2022, the NEFSC provided a data update which included 2020 and 2021 landings information as well as NEFSC trawl survey data from 2021 through spring 2022 (2020-2021 dead discard estimates were not available at the time and no NEFSC trawl surveys were conducted in 2020 due to COVID). The NEFSC spring survey index of summer flounder stock biomass decreased by 41% from 2019 to 2022; the fall index increased by 6% from 2019 to 2021 (NEFSC 2022).

Table 1: Biomass and fishing mortality rate reference points and terminal year estimates for summer flounder from the 2021 management track assessment (NEFSC 2021).

	Spawning stock biomass	Fishing mortality rate (F)
Terminal year estimate (2019)	104.49 million lb (47,397 mt)	0.340
Target	121.73 mil lb (55,217 mt)	N/A
Threshold	60.87 million lb (27,609 mt)	0.422
Status	Not overfished	Not overfishing

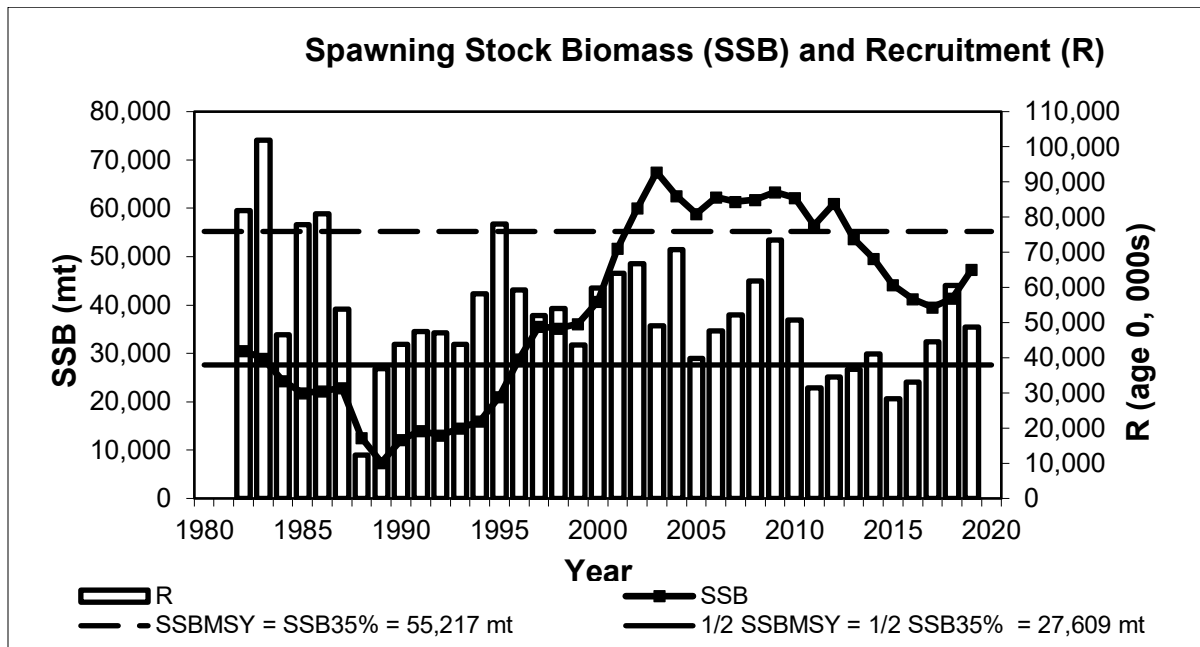


Figure 1: Summer flounder spawning stock biomass (SSB; solid line with square markers) and recruitment at age 0 (R; vertical bars), 1982-2019. The horizontal dashed line is the target biomass level. The horizontal solid line is the threshold biomass level defining an overfished condition. Source: NEFSC 2021.

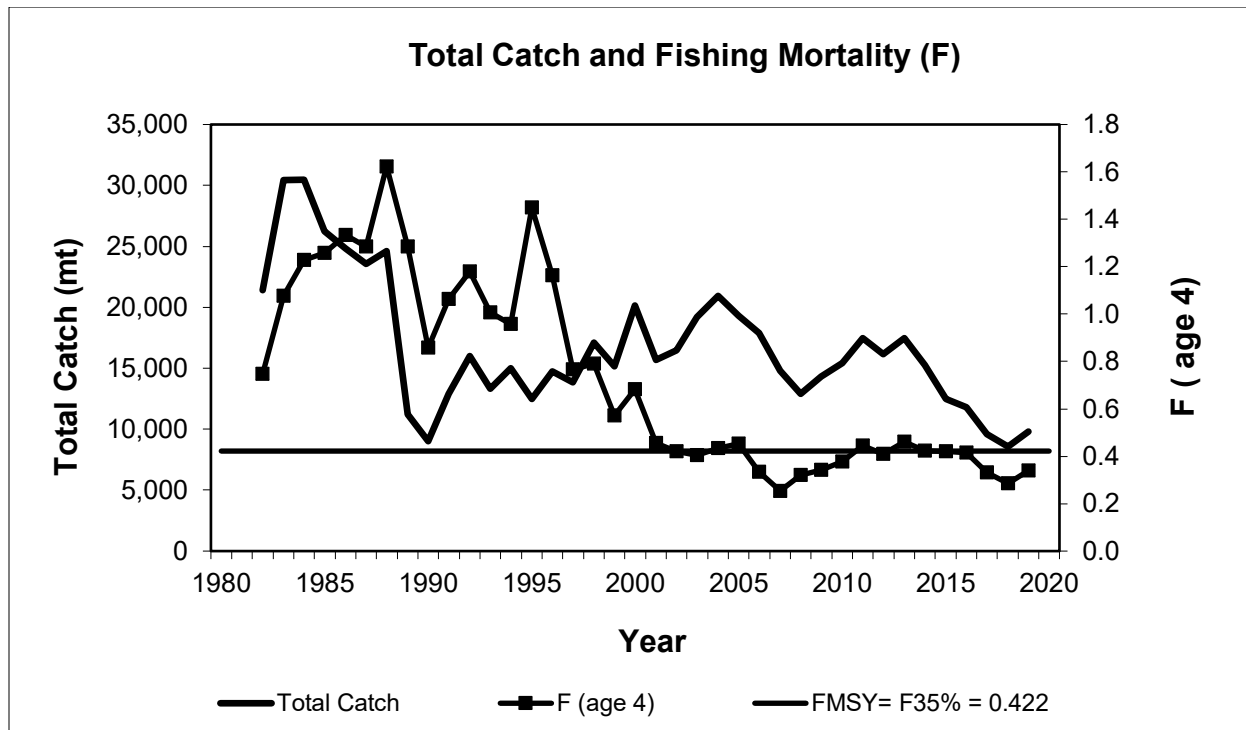


Figure 2: Total fishery catch (metric tons; mt; solid line) and fully-recruited fishing mortality (F, peak at age 4; squares) of summer flounder, 1982-2019. The horizontal solid line is the fishing mortality reference point. When F exceeds this threshold, overfishing is occurring. Source: NEFSC 2021.

Management System and Fishery Performance

Management

The Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission (Commission) work cooperatively to develop fishery regulations for summer flounder off the east coast of the United States. The Council and Commission work in conjunction with NMFS, which serves as the federal implementation and enforcement entity. This cooperative management endeavor was developed because a significant portion of the catch is taken from both state (0-3 miles offshore) and federal waters (3-200 miles offshore, also known as the Exclusive Economic Zone, or EEZ).

The joint Fishery Management Plan (FMP) for summer flounder became effective in 1988 and established the management unit for summer flounder as U.S. waters from the southern border of North Carolina northward to the U.S.-Canadian border. The FMP also established measures to ensure effective management of summer flounder fisheries, which currently include catch and landings limits, commercial quotas, recreational harvest limits (RHLs), minimum size limits, gear regulations, permit requirements, and other provisions as prescribed by the FMP. The Summer Flounder FMP, including subsequent Amendments and Frameworks, are available on the Council website at: <http://www.mafmc.org/fisheries/fmp/sf-s-bsb>.

There are large commercial and recreational fisheries for summer flounder. These fisheries are managed primarily using output controls (catch and landings limits). The Council’s Scientific and Statistical Committee (SSC) recommends annual Acceptable Biological Catch (ABC) levels for summer flounder. The ABC is divided into commercial and recreational Annual Catch Limits (ACLs), which include both allowable landings and expected dead discards. Through 2022, 60% of the total allowable landings (calculated by subtracting total expected dead discards from the ABC) were allocated to the commercial fishery as a commercial quota and 40% was allocated to the recreational fishery as an RHL. Starting with 2023, the ABC is now allocated 55% to the commercial fishery as a commercial ACL and 45% to the recreational fishery as a recreational ACL.²

Fishery Catch Summary

Table 2 shows summer flounder total catch and catch limits from 2014 through 2023, as well as the overfishing limit (OFL) from which the ABC is derived. The ABC is set less than or equal to the OFL to account for scientific uncertainty. The OFL for summer flounder has not been exceeded in the last ten years (based on total dead catch estimates that use the prior time series of MRIP through 2018, and corresponding OFLs based on assessments that did not account for the revised MRIP data). The summer flounder ABC has not been exceeded since 2017 (Table 2).

Table 2: Total summer flounder dead catch (i.e., commercial and recreational landings and dead discards) compared to the OFL and ABC. All values are in millions of pounds. Total dead catch calculations use “old” MRIP data through 2018, and “new” MRIP data for 2019-2022.

Year	Total dead catch ^a	OFL	OFL overage/underage	ABC	ABC overage/underage
2014	22.27	26.76	-17%	21.94	+2%
2015	18.22	27.06	-33%	22.57	-19%
2016	17.16	18.06	-5%	16.26	+6%
2017	12.00	16.76	-28%	11.30	+6%
2018	12.65	18.69	-32%	13.23	-4%
2019	21.63	30.00	-28%	25.03	-14%
2020	24.27	30.94	-22%	25.03	-3%
2021	21.50	31.67	-32%	27.11	-21%
2022	25.55	36.28	-30%	33.12	-23%
2023	--	34.98	--	33.12	--

^a See Table 3 and Table 10 for the commercial and recreational data contributing to the total catch estimates.

² For more information on these allocation revisions, see the fact sheet at: <https://www.mafmc.org/s/SFSBSB-Allocation-FAQs.pdf>.

Figure 3 shows commercial and recreational landings and dead discards from 1993 through 2022. Total (commercial and recreational combined) summer flounder catch during this time period peaked in 2004, generally declining to a low in 2018, with a slight increase since then.

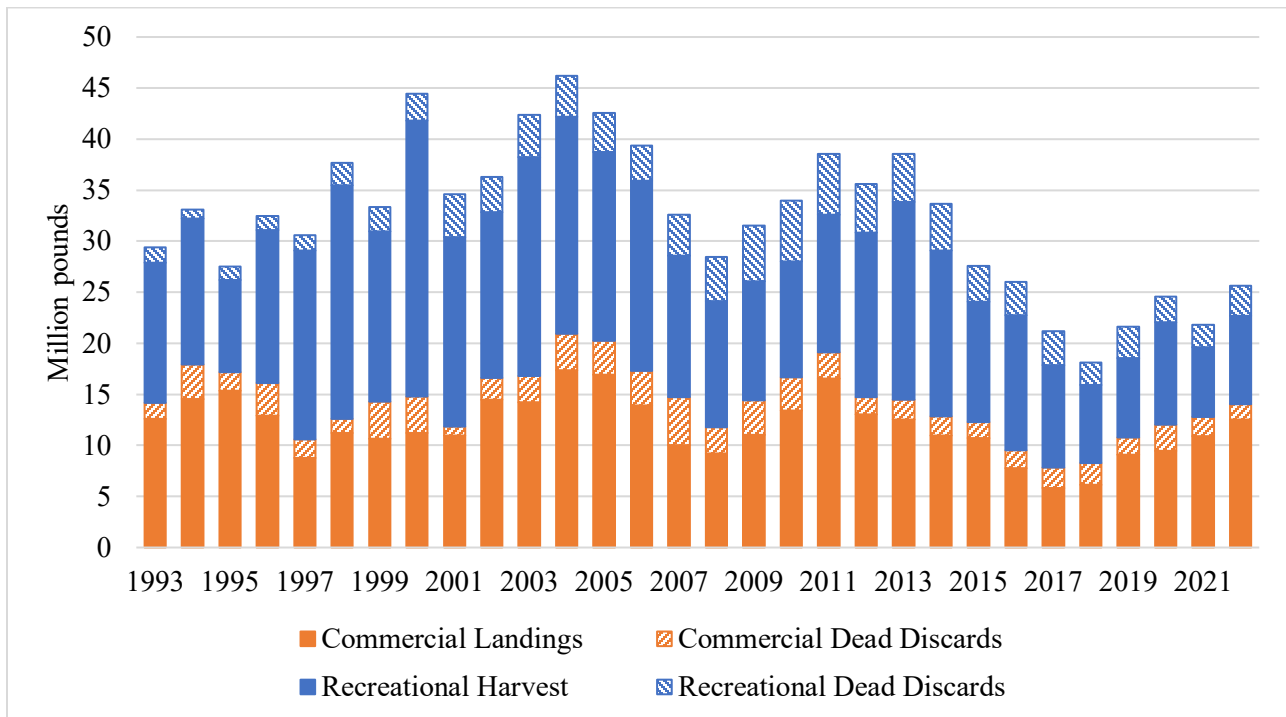


Figure 3: Commercial and recreational summer flounder landings and dead discards in millions of pounds, Maine-North Carolina, 1993-2022, based on federal dealer data, MRIP data, and NEFSC provided discard data.

Commercial Fishery

Commercial landings of summer flounder peaked in 1984 at 37.77 million pounds and reached a low of 5.87 million pounds in 2017 (Figure 3). In 2022, dealer data indicate that commercial fishermen from Maine through North Carolina landed 12.47 million pounds of summer flounder, about 82% of the commercial quota (15.53 million pounds). Commercial dead catch has not exceeded the commercial ACL since 2018. Where commercial ACL overages have occurred, they are generally caused by higher-than-expected dead discards, as commercial fishery landings for summer flounder are typically well controlled to the commercial quota (Table 3).

Table 3: Summer flounder commercial landings, dead discards, and dead catch compared to the commercial quota and commercial ACL, 2014-2023. All values are in millions of pounds.

Year	Com. landings ^a	Com. quota	Quota overage/ underage	Com. dead discards ^a	Com. dead catch ^a	ACL	ACL overage/ underage
2014	11.00	10.51 ^b	5%	1.83	12.83	12.87	0%
2015	10.71	11.07	-3%	1.55	12.26	13.34	-8%
2016	7.80	8.12	-4%	1.7	9.5	9.43	1%
2017	5.87	5.66	4%	2.0	7.87	6.57	20%
2018	6.17	6.63	-7%	2.16	8.33	7.70	8%
2019	9.06	10.98	-17%	1.73	10.79	13.53	-20%
2020	9.11	11.53	-21%	2.56	11.67	13.53	-14%
2021	10.56	12.49	-15%	1.92	12.48	14.63	-15%
2022	12.47	15.53	-20%	1.5	13.97	18.48	-24%
2023	--	15.27	--	--	--	18.21	--

^a Commercial landings based on NMFS dealer data; commercial dead discards from NEFSC 2021 and M. Terceiro, personal communication, June 2023.

^b The 2014 commercial quota was adjusted for Research Set Aside (RSA). Quotas for 2015-2023 do not reflect an adjustment for RSA due to the suspension of the program in 2014. Commercial quotas also reflect deductions from prior year landings overages and discard-based Accountability Measures.

The commercial quota is divided among the states based on the allocation percentages specified in the FMP. Each state sets measures to achieve their state-specific commercial quotas. Two or more states may transfer or combine their summer flounder commercial quota under mutual agreement and with the approval of the NMFS Regional Administrator. The commercial allocations to the states were modified via Amendment 21, which became effective on January 1, 2021. This allocation system specifies that coastwide commercial quota up to 9.55 million pounds will be distributed according to the baseline allocations specified in Table 4 below (based on the pre-2021 state allocation percentages). When the coastwide quota exceeds 9.55 million pounds, the first 9.55 million pounds will be allocated according to the baseline percentages, but the *additional* quota amount beyond this trigger will be distributed by equal shares to all states except Maine, Delaware, and New Hampshire, which would split 1% of the additional quota (Table 4). The total percentage allocated annually to each state is dependent on how much additional quota beyond 9.55 million pounds, if any, is available in any given year. This allocation system is designed to provide for more equitable distribution of quota when stock biomass is higher, while also considering the historic importance of the fishery to each state.

Table 4: Allocation of summer flounder commercial quota to the states.

State	Total state commercial quota allocation = baseline quota allocation + additional quota allocation	
	Allocation of baseline quota ≤ 9.55 mil lb	Allocation of additional quota beyond 9.55 mil lb
ME	0.04756%	0.333%
NH	0.00046%	0.333%
MA	6.82046%	12.375%
RI	15.68298%	12.375%
CT	2.25708%	12.375%
NY	7.64699%	12.375%
NJ	16.72499%	12.375%
DE	0.01779%	0.333%
MD	2.03910%	12.375%
VA	21.31676%	12.375%
NC	27.44584%	12.375%
Total	100%	100%

For 1994 through 2022, NMFS dealer data indicate that summer flounder total ex-vessel revenue from Maine to North Carolina ranged from a low of \$24.84 million in 1996 to a high of \$40.90 million in 2005 (values adjusted to 2022 dollars to account for inflation). The mean price per pound ranged from a low of \$2.11 in 2002 to a high of \$4.98 in 2017 (both values in 2022 dollars). In 2022, 12.46 million pounds of summer flounder were landed generating \$30.45 million in total ex-vessel revenue (an average of \$2.44 per pound; Figure 4).

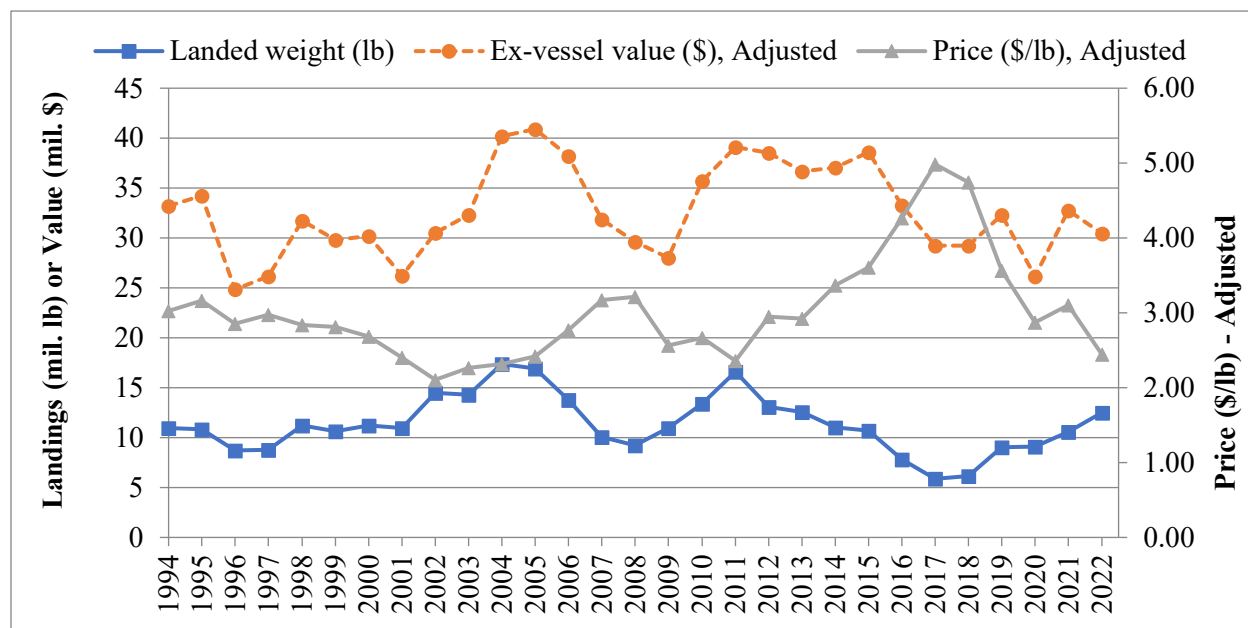


Figure 4: Landings, ex-vessel value, and price per pound for summer flounder, Maine through North Carolina, 1994-2022. Ex-vessel value and price are adjusted to real 2022 dollars using the Gross Domestic Product Price Deflator (GDPDEF).

VTR data indicate that 99% of summer flounder landings in 2021 were taken by bottom otter trawls. Current regulations require a 14-inch total length minimum fish size in the commercial fishery. Trawl nets are required to have 5.5-inch diamond or 6-inch square minimum mesh in the entire net for vessels possessing more than the threshold amount of summer flounder (i.e., 200 lb from November 1-April 30 and 100 lb from May 1-October 31).

According to federal VTR data, statistical areas 537 and 616 were responsible for the highest percentage of commercial summer flounder catch in 2022 (29% and 22% respectively; Table 5; Figure 5). Statistical areas 613 and 539 had the highest number of trips that caught summer flounder (1,653 and 1,626 trips, respectively; Table 5).

Over 167 federally permitted dealers from Maine through North Carolina bought summer flounder in 2022. More dealers from New York bought summer flounder than any other state (Table 6). All dealers combined bought approximately \$30.45 million worth of summer flounder in 2022.

Since 1993, a moratorium permit has been required to fish commercially for summer flounder in federal waters. In 2022, 718 vessels held such permits.

Federal dealer data indicate that at least 100,000 pounds of summer flounder were landed by commercial fishermen in 20 ports in 8 states in 2022. These ports accounted for 93% of all 2022 commercial summer flounder landings. Point Judith, RI and Pt. Pleasant, NJ were the leading ports in 2022 in pounds of summer flounder landed, while Point Judith, RI was the leading port in number of vessels landing summer flounder (Table 7). Detailed community profiles developed by the Northeast Fisheries Science Center’s Social Science Branch can be found at www.mafmc.org/communities/.

Table 5: Statistical areas that accounted for at least 5% of the total summer flounder catch in 2022, with associated number of trips, from federal VTR data. Federal VTR data do not capture landings by vessels only permitted to fish in state waters.

Statistical Area	Percent of 2022 Commercial Summer Flounder Catch	Number of Trips
537	29%	1,461
616	22%	508
613	14%	1,653
612	7%	758
539	6%	1,626
615	5%	393
622	5%	134

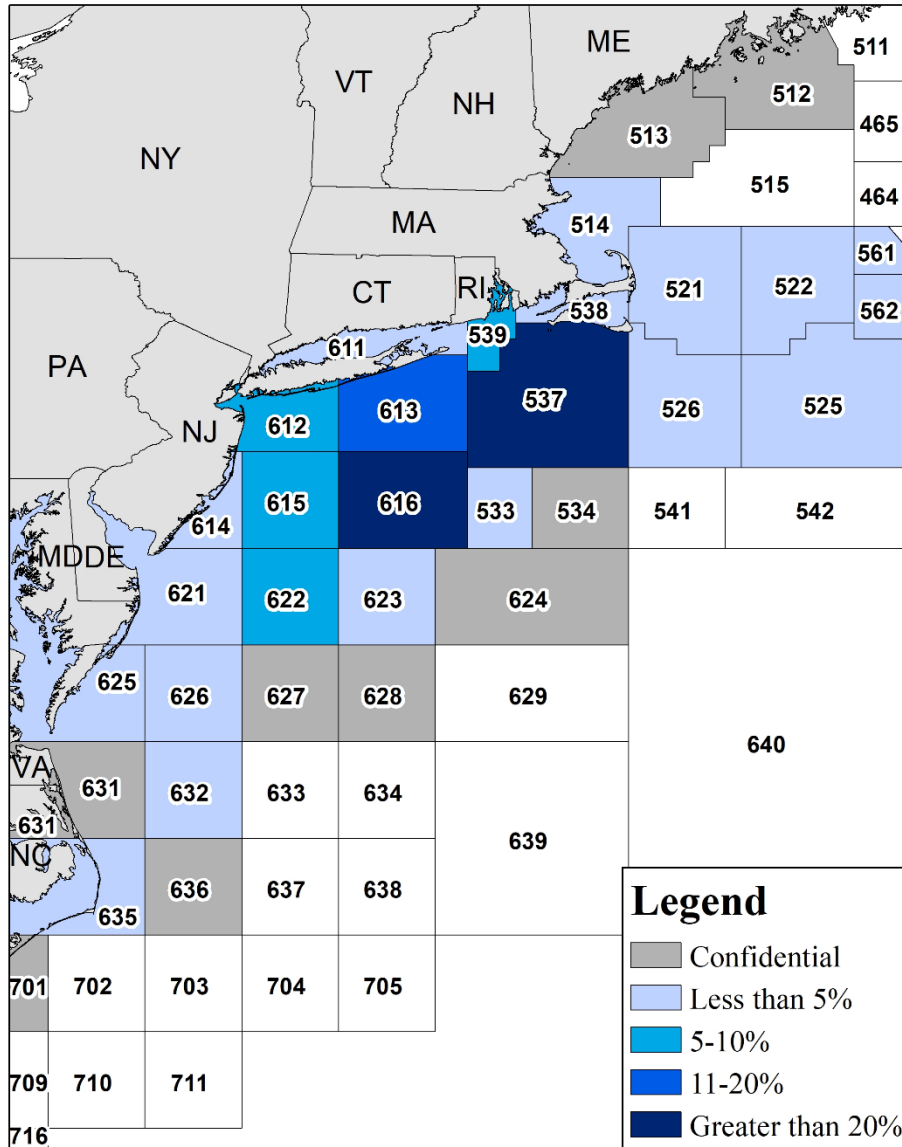


Figure 5: Proportion of commercial summer flounder catch (all vessel reported landings and discards) by NMFS statistical area in 2022 based on federal VTR data. Statistical areas marked “confidential” are associated with fewer than three vessels and/or dealers. The amount of catch not reported on federal VTRs (e.g., catch from vessels permitted to fish only in state waters) is unknown.

Table 6: Number of dealers per state which reported purchases of summer flounder in 2022. C = Confidential.

State	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC
# of Dealers	0	30	24	14	46	26	C	3	11	13

Table 7: Ports reporting at least 100,000 pounds of commercial summer flounder landings in 2022, based on federal dealer data.

Port	Commercial summer flounder landings (lb)	% of total	Number of vessels
POINT JUDITH, RI	1,921,868	15	107
PT. PLEASANT, NJ	1,475,985	12	39
BEAUFORT, NC	1,285,732	10	28
NEWPORT NEWS, VA	1,133,724	9	32
HAMPTON, VA	854,395	7	34
MONTAUK, NY	600,918	5	52
CAPE MAY, NJ	553,444	4	34
ENGELHARD, NC	535,408	4	6
NEW BEDFORD, MA	529,055	4	54
STONINGTON, CT	446,181	4	17
HAMPTON BAYS, NY	388,412	3	25
OCEAN CITY, MD	336,852	3	15
EAST HAVEN, CT	300,663	2	7
SHINNECOCK, NY	222,777	2	13
BELFORD, NJ	218,201	2	13
WANCHESE, NC	206,655	2	5
ORIENTAL, NC	202,688	2	4
CHINCOTEAGUE, VA	141,968	1	8
BARNEGAT LIGHT, NJ	127,249	1	13
WOODS HOLE, MA	102,589	1	8

The top non-target species in the commercial summer flounder fishery were identified based on raw data from Northeast Fisheries Observer Program (NEFOP) observed trips from 2017-2022 where summer flounder made up at least 75% of the landings by weight. Using this definition of a directed trip, the most common non-target species in the summer flounder fishery include little skate, Northern sea robin, and winter skate (Table 8).

Table 8. Percent of non-target species caught in observed trawls where summer flounder made up at least 75% of the observed landings, 2017-2022. Only those non-target species comprising at least 2% of the aggregate non-target catch are listed.

Species	% of total catch on summer flounder observed directed trips, 2017-2022 ^a
SKATE, LITTLE	19.5%
SEA ROBIN, NORTHERN	6.4%
SKATE, WINTER (BIG)	6.3%
SKATE, CLEARNOSE	4.6%
DOGFISH, SPINY	4.5%
MONKFISH (GOOSEFISH)	2.7%
SCUP	2.6%
SKATE, BARNDOOR	2.5%
DOGFISH, SMOOTH	2.3%
SKATE, NK	2.1%

^a Percentages shown are aggregate totals over 2017-2022 and do not reflect the percentages of non-target species caught on individual trips. This analysis describes only observed trips and has not been expanded to the fishery as a whole.

Recreational Fishery

There is a significant recreational fishery for summer flounder, primarily in state waters when the fish migrate inshore during the warm summer months. The Council and Commission determine annually whether to manage the recreational fishery under coastwide measures or conservation equivalency. Under conservation equivalency, state- or region- specific measures are developed through the Commission’s management process and submitted to NMFS. The combined state or regional measures must achieve the same level of harvest as a set of coastwide measures developed to adhere to the overall RHL. If NMFS considers the combination of the state- or region- specific measures to be "equivalent" to the coastwide measures, they may then waive regulations in federal waters. Anglers fishing in federal waters are then subject to the measures of the state in which they land summer flounder.

The recreational fishery has been managed using federal conservation equivalency each year since 2001. Since 2014, a regional approach has been used, under which the states within each region must have identical size limits, possession limits, and season length. Table 9 shows the 2023 and regional conservation equivalency measures, which remained unchanged from 2022.

Table 9: Summer flounder recreational fishing measures 2022-2023, by state, under regional conservation equivalency. Conservation equivalency regions (highlighted in alternating colors) include: 1) Massachusetts, 2) Rhode Island, 3) Connecticut and New York, 4) New Jersey, 5) Delaware, Maryland, The Potomac River Fisheries Commission, and Virginia, and 6) North Carolina.

State	Minimum Size (inches)	Possession Limit	Open Season
Massachusetts	16.5	5 fish	May 21-September 19
Rhode Island (Private, For-Hire, and all other shore-based fishing sites)	18	4 fish	May 3-December 31
RI 7 designated shore sites	18	2 fish ^a	
	17	2 fish ^a	
Connecticut	18.5	4 fish	May 1-October 9
CT Shore Program (45 designated shore sites)	17		
New York	18.5		
New Jersey	17-17.99 slot limit	2 fish	May 2-September 27
	18	1 fish	
NJ Shore program site (ISBSP)	16	2 fish	
New Jersey/Delaware Bay COLREGS	17	3 fish	
Delaware	16	4 fish	January 1-December 31
Maryland			
PRFC			
Virginia			
North Carolina	15	1 fish	September 1-September 30 ^b

^a Rhode Island's shore program includes a combined possession limit of 6 fish, no more than 2 fish at 17-inch minimum size limit.

^b North Carolina has restricted their recreational season in recent years for all flounders in North Carolina (southern, gulf, and summer flounder) due to the need to end overfishing on southern flounder. North Carolina manages all flounder in the recreational fishery under the same regulations.

MRIP estimates indicate that recreational summer flounder harvest peaked in 1983, with 25.78 million fish landed, totaling 36.74 million pounds. Recreational harvest in numbers of fish reached a low in 2021 with 2.32 million fish landed (6.82 million pounds), while recreational harvest in pounds was lowest in 1989 at 5.66 million pounds (3.10 million fish). Recreational catch (harvest plus live and dead discards) peaked in 2010 with 58.89 million fish caught, and was lowest in 1989 with 5.06 million fish caught (Figure 6).

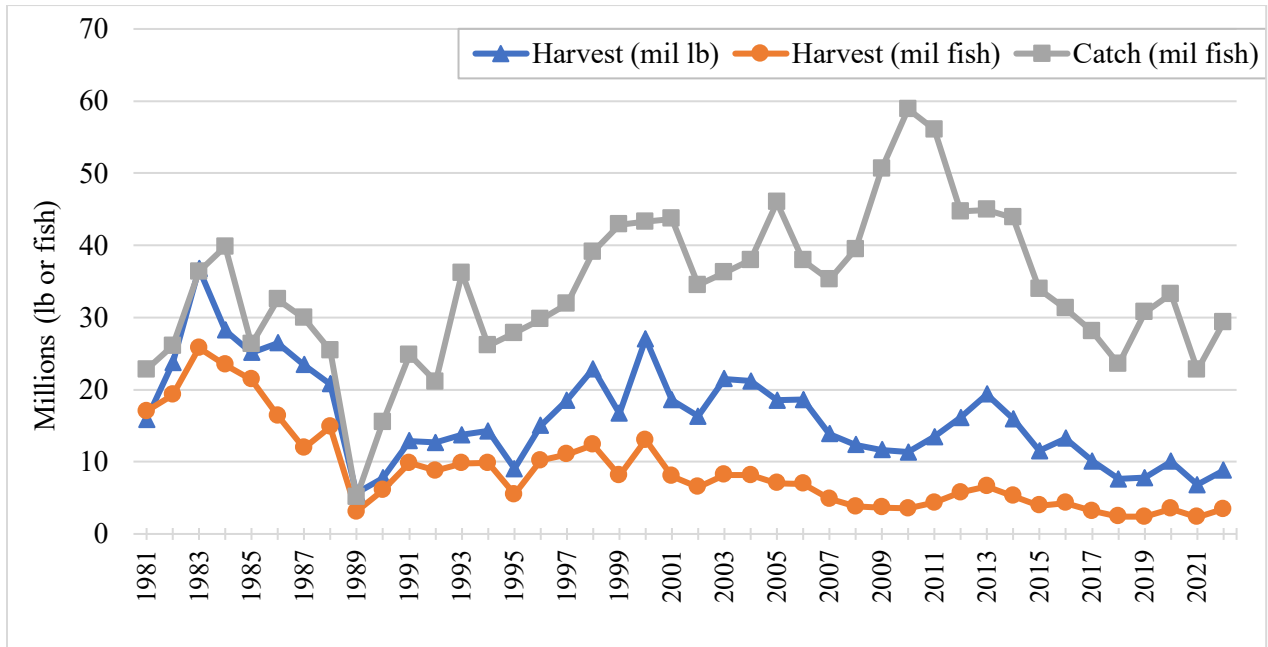


Figure 6: MRIP estimates of recreational summer flounder harvest in numbers of fish and pounds and catch in numbers of fish, ME - NC, 1981-2022. All values are in new MRIP currency.

Table 10: Summer flounder recreational landings, dead discards, and dead catch compared to the RHL, projected recreational dead discards, and recreational ACL, 2014-2023. Information is provided in the “old” MRIP units for 2014-2018, and in the “new” MRIP units for 2019-2022. For summer flounder, ACLs and RHLs did not account for the revised MRIP data until 2019. Therefore, overage/underage evaluations must be based in the old MRIP units through 2018 and the new MRIP units starting in 2019. All values are in millions of pounds.

Year	Version of MRIP data used	Rec. harvest ^a	RHL	RHL over/under	Rec. dead disc. ^a	Rec. dead catch	ACL	ACL over/under
2014	Old MRIP (pre-revision)	7.39	7.01 ^b	5%	2.05	9.44	9.07	4%
2015		4.72	7.38	-36%	1.24	5.96	9.44	-37%
2016		6.18	5.42	14%	1.48	7.66	6.84	12%
2017		3.19	3.77	-15%	0.94	4.13	4.72	-13%
2018		3.35	4.42	-24%	0.97	4.32	5.53	-22%
2019	New MRIP (post-revision)	7.80	7.69	1%	3.04	10.84	11.51	-6%
2020 ^c		10.07	7.69	31%	2.52	12.60	11.51	9%
2021		6.82	8.32	-18%	2.20	9.02	12.48	-28%
2022		8.83	10.36	-17%	2.95	11.58	14.64	-21%
2023		--	10.62	--	--	--	14.9	--

^a Recreational harvest data from MRIP; recreational dead discards from NEFSC 2021 and M. Terceiro, personal communication, June 2023.

^b For 2014, the RHL was adjusted for Research Set Aside (RSA). RHLs for 2015-2023 do not reflect an adjustment for RSA due to the suspension of the program in 2014.

^c Recreational harvest estimates for 2020 were impacted by temporary suspension of shoreside intercept surveys due to COVID-19. NMFS used imputation methods to fill gaps in 2020 catch data with data collected in 2018 and 2019. For summer flounder, the 2020 harvest estimate relied on approximately 19% imputed data. For more information on imputation methods see: <https://www.mafinc.org/s/1-2020-Marine-Recreational-Catch-Estimates-QA-52121.pdf>]

For-hire vessels carrying passengers in federal waters must obtain a federal party/charter permit. In 2022, 961 vessels held summer flounder federal party/charter permits. Many of these vessels also hold recreational permits for scup and black sea bass.

On average, an estimated 77% of the recreational landings (in numbers of fish) occurred in state waters over the past ten years (Table 11). Most summer flounder are typically landed in New York and New Jersey (Table 12).

About 81% of recreational summer flounder harvest from 2020-2022 was from anglers who fished on private or rental boats. About 4% was from party or charter boats, and about 15% was from anglers fishing from shore (Table 13).

The top non-target species in the recreational fishery were identified by a species guild approach that identifies species with the strongest associations on recreational trips from 2017-2021 (2021 MRIP data used here were preliminary and excluded wave 6). Sea robins, black sea bass, scup, smooth dogfish, and bluefish were highly correlated with summer flounder in the recreational fishery (J. Brust, personal communication March 2022).

Table 11: Estimated percentage of summer flounder recreational landings (in numbers of fish) from state vs. federal waters, Maine through North Carolina, 2013-2022.

Year	State ≤ 3 mi	EEZ > 3 mi
2013	77%	23%
2014	78%	22%
2015	82%	18%
2016	79%	21%
2017	80%	20%
2018	83%	17%
2019	79%	21%
2020	61%	39%
2021	66%	34%
2022	80%	20%
Avg. 2013- 2022	77%	23%
Avg. 2020 - 2022	69%	31%

Table 12: State contribution (as a percentage) to total recreational landings of summer flounder (in numbers of fish), from Maine through North Carolina, 2020-2022.

State	2020	2021	2022	2020-2022 average
Maine	0%	0%	0%	0%
New Hampshire	0%	0%	0%	0%
Massachusetts	2%	2%	3%	2%
Rhode Island	3%	2%	3%	3%
Connecticut	4%	5%	5%	5%
New York	21%	15%	26%	21%
New Jersey	57%	58%	47%	54%
Delaware	6%	4%	3%	4%
Maryland	2%	3%	3%	3%
Virginia	4%	10%	11%	8%
North Carolina	1%	1%	0%	1%
Total	100%	100%	100%	100%

Table 13: The percent of summer flounder landings (in number of fish) by recreational fishing mode, Maine through North Carolina, 2013-2022.

Year	Shore	Party/Charter	Private/Rental	Total number of fish landed (millions)
2013	11%	4%	85%	6.60
2014	7%	8%	84%	5.36
2015	7%	7%	86%	4.03
2016	8%	4%	89%	4.30
2017	13%	4%	83%	3.17
2018	11%	6%	84%	2.41
2019	10%	3%	87%	2.38
2020	18%	2%	80%	3.49
2021	11%	7%	82%	2.32
2022	15%	4%	81%	3.38
% of Total, 2013-2022	11%	5%	84%	--
% of Total, 2020-2022	15%	4%	81%	--

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