



Mid-Atlantic Fishery Management Council

800 North State Street, Suite 201, Dover, DE 19901

Phone: 302-674-2331 | FAX: 302-674-5399 | www.mafmc.org

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

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 $\frac{1}{2} SSB_{MSY\ proxy} = \frac{1}{2} SSB_{35\%} = 54.63$ 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 $SSB_{MSY\ proxy} = 109.26$ 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 ($F_{MSY\ proxy} = F_{35\%} = 0.451$; 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

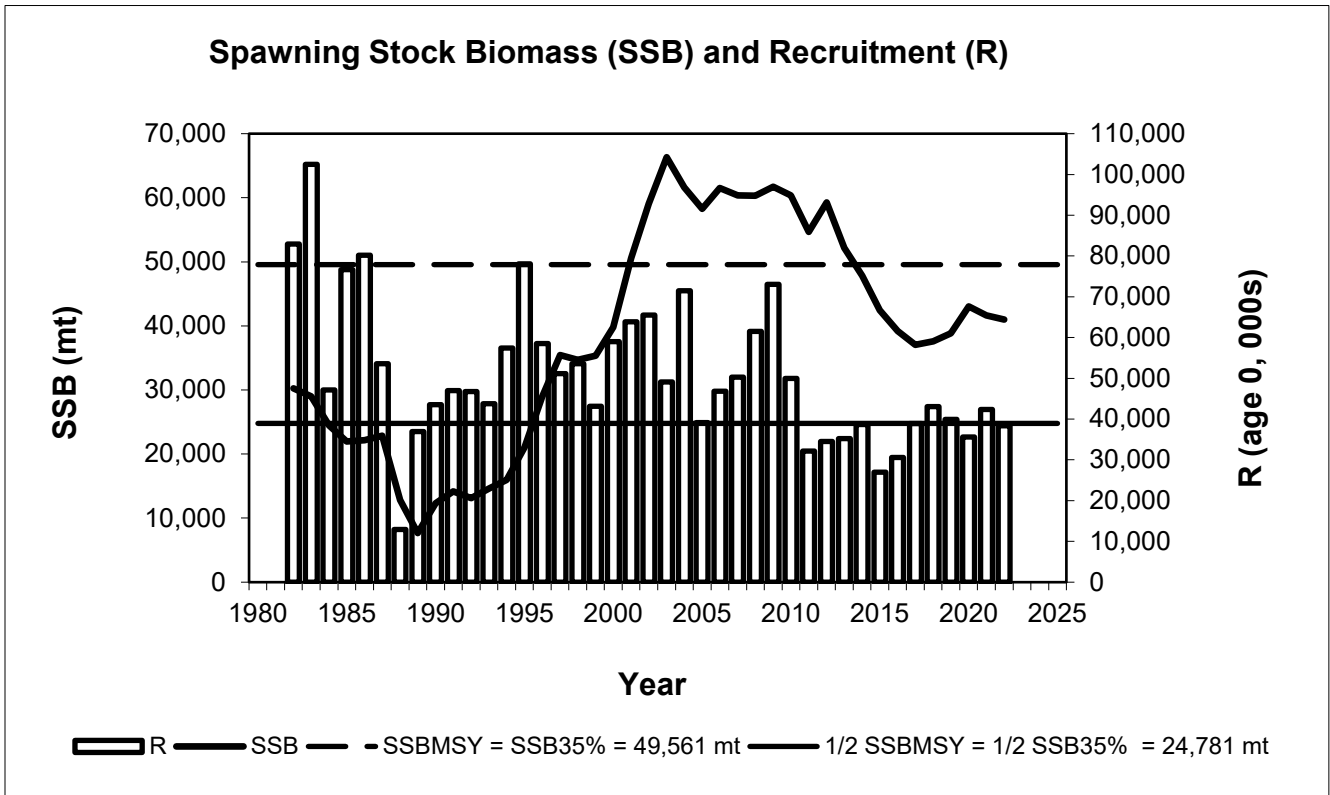


Figure 1: Summer flounder spawning stock biomass (SSB; solid line) and recruitment at age 0 (R; vertical bars), 1982-2022. The horizontal dashed line is the updated target biomass reference point. The horizontal solid line is the updated threshold biomass reference point. Source: 2023 management track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

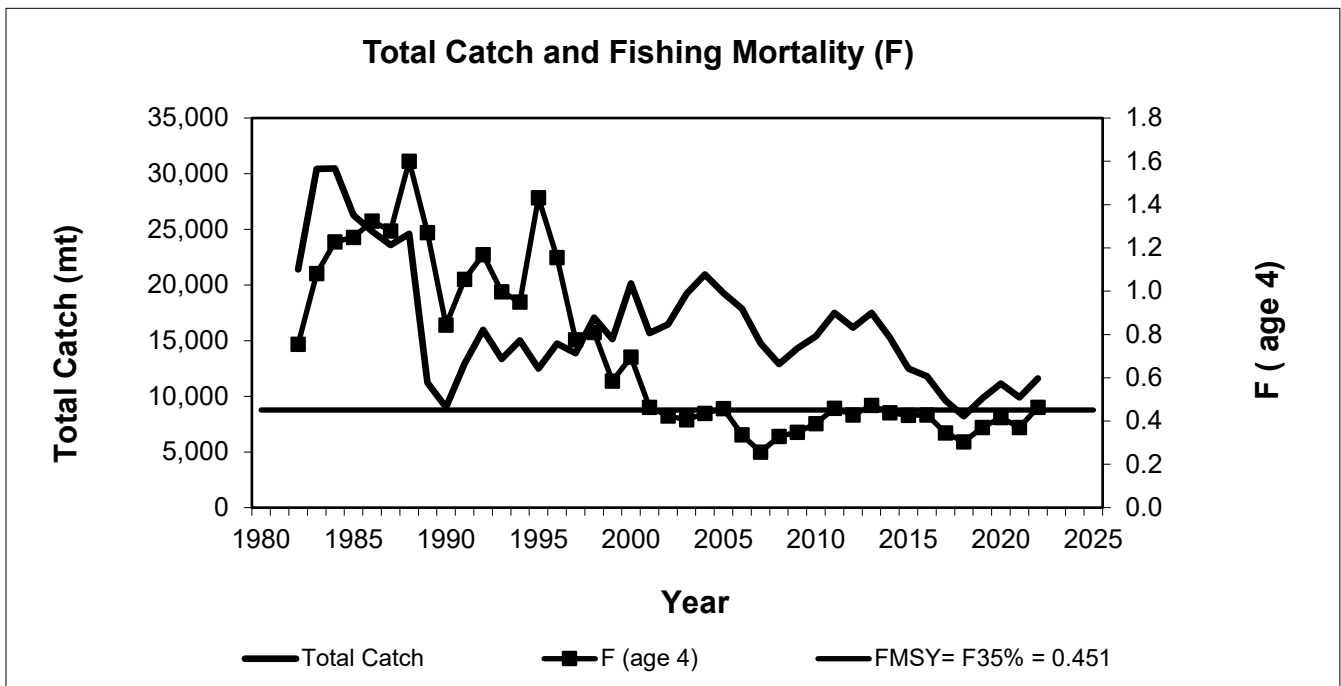


Figure 2: Total fishery catch (metric tons; mt; solid line) and fully-recruited fishing mortality (F, peak at age 4; squares) of summer flounder, 1982-2022. The horizontal solid line is the updated fishing mortality reference point. Source: 2023 management track assessment.

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).

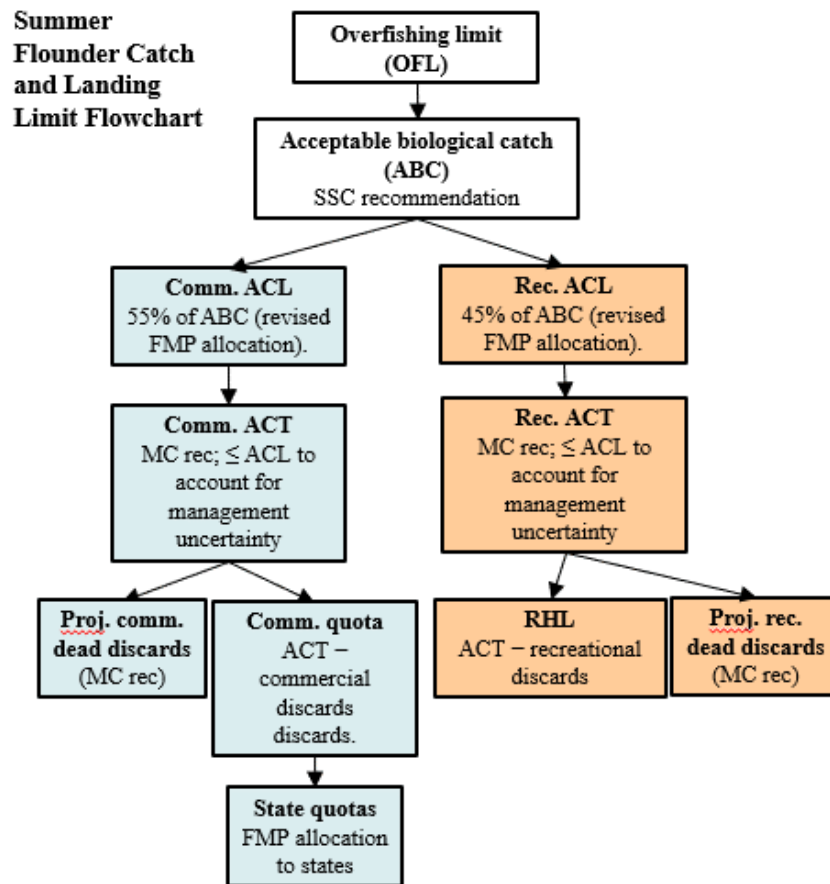


Figure 3: The current catch and landings limit flowchart for summer flounder, updated to reflect commercial/recreational allocation revisions that became effective in 2023.

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/FSB-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.