



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

MEMORANDUM

DATE: July 5, 2017

TO: Chris Moore, Executive Director

FROM: Kiley Dancy, Staff

SUBJECT: Review of Summer Flounder Management Measures for 2018

Executive Summary

In 2016, two-year specifications were implemented for summer flounder, revising the previously established catch and landings limits for 2017 and 2018. The measures currently implemented for 2018 include an Acceptable Biological Catch (ABC) of 13.23 million lb or 5,999 mt. This ABC and the corresponding sector-specific catch and landings limits may remain unchanged if the Scientific and Statistical Committee (SSC), Council, and Atlantic States Marine Fisheries Commission's (Commission) Summer Flounder, Scup, and Black Sea Bass Board (Board) determine that no changes are warranted. Alternatively, after reviewing the July 2018 data update for summer flounder, the SSC may determine that a revised ABC is warranted, or request additional information (such as an assessment update) to consider revisions to the 2018 ABC. Similarly, the Monitoring Committee will review recent fishery performance and make a recommendation to the Council and Board regarding any potential modifications to the implemented 2018 commercial and recreational Annual Catch Limits (ACLs) and Annual Catch Targets (ACTs) as well as the set of commercial management measures that can be modified through specifications.

The most recent stock assessment update was completed in July 2016. This update indicated that the summer flounder stock was not overfished, but overfishing was occurring in 2015. The model-estimated spawning stock biomass (SSB) was estimated to be 79.90 million lb (36,240 mt) in 2015, 58% of the spawning stock biomass at maximum sustainable yield, $SSB_{MSY} = 137.56$ million lb (62,394 mt). The fishing mortality rate (F) in 2015 was 0.390, 26% above the fishing mortality threshold reference point $F_{MSYPROXY} = F_{35\%} = 0.309$.

In July 2016, the SSC recommended two-year specifications based on biomass projections resulting from the 2016 assessment update. The resulting 2017-2018 SSC-recommended catch and landings limits, which were adopted by the Council and Board in August 2016 and subsequently implemented by the National Marine Fisheries Service (NMFS), are shown in Table 1.

Table 1: Currently implemented catch and landings limits for summer flounder for 2017-2018.

Management Measure	2017		2018		Basis
	mil lb.	mt	mil lb.	mt	
OFL	16.76	7,600	18.24	8,272	Stock assessment projections
ABC	11.30	5,125	13.23	5,999	Stock assessment projections/SSC recommendation
ABC Landings Portion	9.43	4,278	11.05	5,010	Stock assessment projections
ABC Discards Portion	1.87	847	2.18	989	Stock assessment projections
Commercial ACL	6.57	2,982	7.70	3,491	60% of ABC landings portion (per FMP allocation) + 49% of ABC discards portion
Commercial ACT	6.57	2,982	7.70	3,491	Monitoring Committee recommendation: no deduction from ACL for management uncertainty
Projected Commercial Discards	0.92	415	1.07	485	49% of ABC discards portion, based on 2013-2015 average % discards by sector
Commercial Quota	5.66	2,567	6.63	3,006	Commercial ACT, less projected commercial discards
Recreational ACL	4.72	2,143	5.53	2,508	40% of ABC landings portion (per FMP allocation) + 51% of ABC discards portion
Recreational ACT	4.72	2,143	5.53	2,508	Monitoring Committee recommendation; no deduction from ACL for management uncertainty
Projected Recreational Discards	0.95	432	1.11	504	51% of ABC discards portion, based on 2013-2015 average % discards by sector
Recreational Harvest Limit	3.77	1,711	4.42	2,004	Recreational ACT, less projected recreational discards

In June 2017, the Council received a data update for summer flounder¹, including updated catch and landings information as well as survey indices through 2016. No new stock projections or estimates of stock status are available. The data update indicates that there is little evidence to suggest a substantial change in stock status from the 2016 assessment update. Most state and federal survey indices of abundance, with the exception of Massachusetts, remain below their most recent peaks (generally 2009-2012). Many of the indices decreased slightly between 2015 and 2016. Recruitment indices in 2016 were highly variable.

Staff recommend maintaining the previously implemented specifications for 2018. A benchmark assessment for summer flounder is tentatively scheduled for the second half of 2018, pending the changes to the recreational time series of catch and effort, which are expected to be available for

¹ Posted at <http://www.mafmc.org/council-events/2017/july-2017-ssc-meeting>.

assessment use in 2018. In mid-2018, catch limits will need to be developed for 2019. These measures will likely be revised based on the results of the next benchmark assessment.

The Council and Commission's Monitoring and Technical Committees conducted a thorough review of current commercial management measures in 2015. No changes were adopted; however, Council and Board members indicated that additional exploration of some measures may be warranted, as described under "Other Management Measures" in this document. Additional data and analyses are needed to address the questions raised, and staff will continue to work with the Monitoring and Technical Committees on these issues. At this time, staff do not recommend any changes to the current measures, including the minimum fish size (14 inches total length), gear requirements, seasonal possession thresholds triggering gear requirements, and minimum mesh size exemption programs (small mesh exemption area and North Carolina flynet exemption).

Introduction

The Magnuson-Stevens Act (MSA) requires each Council's Scientific and Statistical Committee (SSC) to provide ongoing scientific advice for fishery management decisions, including recommendations for ABC, 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. In addition, the Monitoring Committee established by the Fishery Management Plan (FMP) is responsible for developing recommendations for management measures designed to achieve the recommended catch limits. The SSC is responsible for recommending ABCs that address scientific uncertainty, while the Monitoring Committee recommends ACTs that address management uncertainty and management measures to constrain landings to the ACTs.

In 2016, the SSC revised their previously recommended 2017-2018 ABCs that were originally implemented as part of multi-year specifications for the 2016-2018 fishing years. The revised 2017-2018 measures were based on the 2016 stock assessment update and implemented by NMFS in late 2016.

Both the SSC and Monitoring Committee will review the measures currently implemented for 2018 and determine if any changes may be warranted. Based on the SSC and Monitoring Committee recommendations, the Council will make a recommendation to the NMFS Greater Atlantic Regional Administrator, if changes are needed. Because the FMP is cooperatively managed with the Atlantic States Marine Fisheries Commission, the Commission's Summer Flounder, Scup, and Black Sea Bass Board will meet jointly with the Council in August 2017 to revisit summer flounder management measures. In this memorandum, information is presented to assist the SSC and Monitoring Committee in developing recommendations for the Council and Board to consider for the 2018 fishing year for summer flounder.

Additional relevant information about the fishery and past management measures is presented in the Fishery Performance Report for summer flounder developed by the Council and Commission Advisory Panels, as well as in the corresponding Summer Flounder Fishery Information Document prepared by Council staff.²

² Available at: <http://www.mafmc.org/council-events/2017/july-2017-ssc-meeting>.

Recent Catch and Landings

Reported 2016 landings in the commercial fishery were approximately 7.81 million lb (3,542 mt), about 4% under the commercial quota of 8.12 million lb (3,685 mt). The 2017 commercial landings as of the week ending June 24, 2017, indicate that 62% of the 2017 coastwide commercial quota has been landed (Table 2).

Recreational landings in 2016 were 6.18 million (2,804 mt), about 14% above the recreational harvest limit (5.42 million lb or 2,457 mt).

Table 2: The 2017 state-by-state commercial quotas and the amount of summer flounder landed by commercial fishermen, in each state as of week ending June 24, 2017.

State	Cumulative Landings (lb)	Quota (lb)^a	Percent of Quota (%)
ME	101	2,692	4
NH	0	26	0
MA	192,894	385,988	50
RI	621,167	887,542	70
CT	60,295	127,734	47
NY	247,941	432,764	57
NJ	473,082	946,512	50
DE	0		0
MD	40,936	115,398	35
VA	675,027	1,219,912	55
NC	1,178,860	1,539,693	77
Other	0		0
Totals	3,490,303	5,658,261	62

^a Quotas adjusted for overages. Source: NMFS Weekly Quota Report for week ending June 24, 2017.

Stock Status and Biological Reference Points

The last peer-reviewed benchmark stock assessment was conducted in the summer of 2013 at the Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC 57).³ The SAW/SARC 57 biological reference points include a fishing mortality threshold of $F_{MSY} = F_{35\%}$ (as the F_{MSY} proxy) = 0.309, and a biomass reference point of $SSB_{MSY} = SSB_{35\%}$ (as the SSB_{MSY} proxy) = 137.56 million lb = 62,394 mt. The minimum stock size threshold ($1/2 SSB_{MSY}$), is estimated to be 68.78 million lb (31,197 mt).

³ Northeast Fisheries Science Center. 2013. 57th Northeast Regional Stock Assessment Workshop (57th SAW) Assessment Summary Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 13-14; 39 p.

The most recent stock assessment update was completed in July 2016, using data through 2015.⁴ This assessment update uses the model from the 2013 benchmark stock assessment, which is an age-structured assessment model called ASAP.

Results from the 2016 assessment update indicate that the summer flounder stock was not overfished, but overfishing was occurring in 2015 relative to the biological reference points from the 2013 SAW/SARC 57. Fishing mortality on the fully selected age 4 fish ranged between 0.799 and 1.775 during 1982-1996 and then decreased from 0.871 in 1997 to 0.288 in 2007. Since 2007 the fishing mortality rate has increased and was 0.390 in 2015, 26% above the 2013 SAW 57 F_{MSY} proxy = $F_{35\%}$ = 0.309. The 90% confidence interval for F in 2015 was 0.292 to 0.490.

SSB was estimated to be 79.90 million lb (36,240 mt) in 2015, about 58% of SSB_{MSY} = 137.6 million lb (62,394 mt), and 16% above the 2013 SAW 57 $\frac{1}{2} SSB_{MSY}$ proxy = $\frac{1}{2} SSB_{35\%}$ = 68.78 million lb (31,197 mt). A rebuilding plan would be triggered in the event that estimated biomass falls below the minimum stock size threshold. Figures showing the trends in F and SSB over time are provided in the 2017 Summer Flounder Fishery Information Document.

The 2016 assessment updates indicates that while catches in recent years have not been substantially over the ABCs, the projected fishing mortality rates have been exceeded and projected spawning stock biomass has not been achieved. The assessment update shows a moderate internal model retrospective pattern with continued recent underestimation of F and overestimation of SSB. A historical retrospective analysis, comparing model estimates from the 1990-2015 assessments, likewise indicates the same trend since the 2011 assessment update. These results appear to be largely driven by poor recruitment from 2010-2015. The assessment continues to show a consistent recent retrospective pattern in recruitment averaging +22%. The update shows that recruitment of age 0 fish was below the time series average (41 million fish at age 0; 1982-2015) each year from 2010 through 2015. Recruitment of age 0 fish in 2015 was estimated at 23 million fish.

The June 2017 data update for summer flounder includes updated fishery independent survey indices of abundance through 2016. No new stock projections or estimates of stock status are available. The data update includes little evidence to suggest a substantial change in stock status from that indicated in the 2016 assessment update. Most state and federal survey indices of abundance, with the exception of Massachusetts, remain below their most recent peaks (generally 2009-2012). Many of the indices decreased slightly between 2015 and 2016. Recruitment indices in 2016 were highly variable.

Review of Prior SSC Recommendations

In July 2016, the SSC recommended, and the Council and Board adopted, revised two-year ABCs for summer flounder. These recommendations represented a revision to the SSC's previous recommendations for 2017-2018, based on a review of new stock status information and projections from the 2016 assessment update.

⁴ Northeast Fisheries Science Center. 2015. Stock Assessment Update of Summer Flounder for 2015. US Dept Commer, Northeast Fish Sci Cent; 17 p.

Because the assessment model was unchanged from SAW/SARC 57, the SSC did not alter its categorization of the assessment as an assessment requiring an “SSC-modified OFL (overfishing limit) probability distribution,” formerly referred to as a “level 3” assessment.⁵ In this type of assessment, the SSC provides its own estimate of uncertainty in the distribution of the OFL. The SSC concluded that no new information was presented that would cause the SSC to deviate from using the previously applied OFL CV of 60%.⁶

For 2017, the OFL was determined to be 16.76 million lb (7,600 mt), based on an F_{MSY} proxy of $F = 0.309$ ($F_{35\%}$) and 2016 projected biomass. For 2018, assuming fishing at F_{MSY} , the OFL was determined to 17.52 million lb (7,946 mt).

In 2015, the Council requested the SSC provide multi-year ABC specifications that phased in its recommended ABCs over a three-year period (2016-2018); this was a deviation from the Council’s risk policy that was intended to mitigate negative economic and social impacts of large cuts in the ABC. Under the SSC’s 2015 recommendation, the intention was for the 2017 ABC to be 80% of the OFL. However, with the revised 2017 OFL derived from the 2016 update, the original ABC for 2017 (7,193 mt) would have been 95% of the revised OFL and represented a probability of overfishing (P^*) of 46%.

The revised understanding of the stock status produced by the assessment update indicated reductions in the estimates of SSB, and increases in the estimates of annual F . In light of these trends, the SSC expressed the following concerns at their July 2016 meeting:

- a) The retrospective patterns on SSB and F in the model are close to levels at which the NEFSC typically applies corrections in the assessment. If such corrections are applied the stock is closer to the overfished threshold and annual F s would be substantially over the F_{MSY} reference point.
- b) With the exception of 2007, the update assessment reinforces a consistent pattern of overfishing since 1981, albeit at a greatly reduced level in last 15 years.
- c) An evaluation of the reliability of stock projections since 2008 indicated that projections of stock status have been consistently over-optimistic. A definitive understanding of the sources of the bias in projections lacking, but assuming that implemented F policies are actually achieved and the lack of accounting for all sources of catch may be contributing factors.
- d) A downward trend is evident in the majority of stock indices, including recruitment, since 2011.

The SSC concluded that the patterns in the survey and recruitment indices indicated a longer-term decline in stock performance and required additional caution compared to the phased-in approach adopted in 2015. Accordingly, the SSC recommended against continuation of the phased-in approach, and recommended revised ABCs for 2017 and 2018 based on a return to its standard approach for implementing the Council’s risk policy.

⁵ Based on SSC and Council discussions in March/April 2015, the “level 3” assessment designation is now known as the “SSC-modified OFL probability distribution.”

⁶ This CV has been used for summer flounder since 2013, when the SSC noted that the 2013 summer flounder stock assessment was considerably more accurate than other assessments of Mid-Atlantic stocks and, therefore, use of the default CV=100% for stocks of this assessment level was likely inappropriate. The SSC adopted the 60% CV based on a presentation of the distribution of CVs in published simulation experiments in which the assessment model fully reflected the underlying population dynamics.

Assuming an OFL with a lognormal distribution and a 60% CV, and a stock status lower than BMSY, the Council's risk policy is to use a $P^*=0.239$. This yielded an ABC for 2017 of 11.30 million lb, or 5,125 mt. For 2018, the standard procedure resulted in a $P^*=0.267$ and an ABC of 13.23 million lb (5,999 mt).

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

- Retrospective patterns were evident in the assessment update that have substantial implications for the reliability of model projections and inferences regarding the status of the stock. The causes of the retrospective pattern are unknown, but might include changes in the following:
 - 1) Sources of mortality that are not fully accounted in the assessment. These could include:
 - Under-estimation of discards in both the commercial and recreational fisheries and lower estimates of mortality rates applied to the discards than are actually occurring; and
 - Under-reported landings.
 - 2) Natural mortality, which may be underestimated – but the presence of older male flounder in the population suggest this is unlikely.
 - 3) Availability or catchability of fish due to changes in stock distribution.
- Changes in life history are apparent in the population.
- Potential changes in availability of fish to some surveys and to the fishery as a result of changes in the distribution of the population.

Staff Recommendations for 2018 ABC

Staff recommend maintaining the previously implemented specifications for summer flounder for the 2018 fishing year, as described in Table 1, based on a 2018 ABC of 13.23 million lb (5,999 mt). The data update indicates little evidence to suggest that stock condition has changed substantially from what was indicated in the 2016 assessment update. A benchmark stock assessment for summer flounder is being prioritized as one of the first assessments completed upon availability of the revised Marine Recreational Information Program (MRIP) time series of recreational catch. As mentioned above, placeholder specifications will likely need to be developed in mid-2018 for the beginning of the 2019 fishing year, in order to have catch limits in place by January 1, 2019. Those catch limits could then be revised based on the benchmark assessment if completed as planned in the second half of 2018.

Other Management Measures

Recreational and Commercial Annual Catch Limits

As defined by the Omnibus ACLs and AMs Amendment (Amendment 15 to the Summer Flounder, Scup, and Black Sea Bass FMP), the ABC includes both landings and discards, and is equal to the sum of the commercial and recreational ACLs for summer flounder (Figure 1). Based on the allocation percentages in the FMP, 60% of the landings are allocated to the commercial fishery, and 40% to the recreational fishery. Discards are apportioned based on the discards contribution from each fishing sector using a 3-year moving average percentage. When 2017-2018 specifications were revised in 2016, the most recent three-year period was 2013-2015, during which 51% of dead discards were attributable to the recreational fishery, and 49% to the commercial fishery on average (Table 1). According to the 2017 data update, these discard proportions are nearly the same over 2014-2016 (approximately 50% of discards attributable to each sector).

Summer Flounder Flowchart

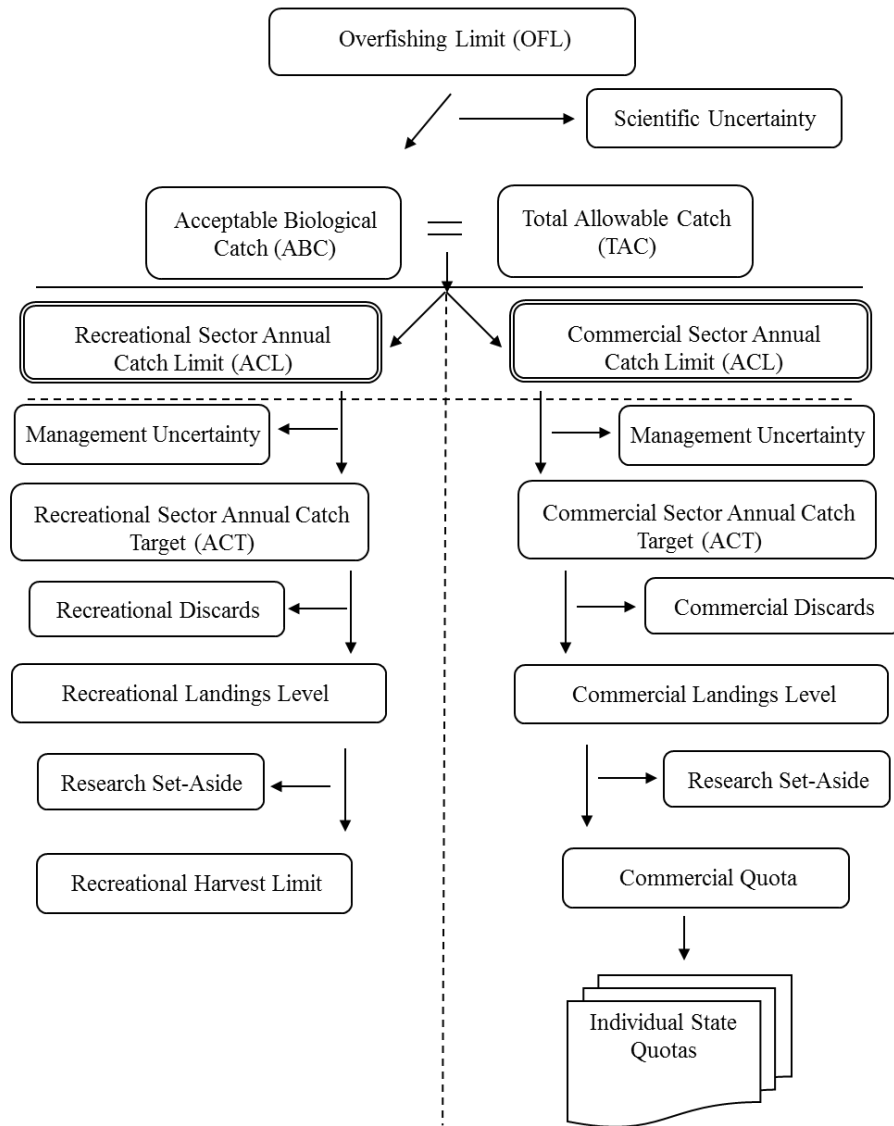


Figure 1: Flowchart for summer flounder catch and landings limits. Note: the RSA program was suspended in 2014.

Annual Catch Targets

The Summer Flounder Monitoring Committee is responsible for recommending Annual Catch Targets (ACTs), which are intended to account for management uncertainty, for the Council and Board's consideration. The Monitoring Committee is responsible for considering all relevant sources of management uncertainty in the summer flounder fishery and providing the technical basis, including any formulaic control rules, for any reduction in catch when recommending an ACT. The ACTs, technical basis for ACT recommendations, and sources of management uncertainty should be described and provided to the Council. The relationships between the recreational and commercial ACTs and other catch components are given in Figure 1.

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 bycatch) or because of a lack of management precision (i.e., the ability to constrain catch to desired levels).

The sector-specific landings performance for recent years indicates that recreational fishery landings have fluctuated fairly widely in relation to the recreational harvest limits for the past five years. Over the past three years (2014-2016), despite nearly constant recreational measures in all states, harvest varied substantially (Table 3). This illustrates the substantial uncertainty around predicting recreational harvest, which results in occasionally large underages and overages. Given recent substantial underages, staff believe a reduction in the recreational ACL to an ACT is not necessarily the appropriate management response. Instead, the Technical and Monitoring Committees should continue ongoing work to incorporate estimates of uncertainty in the recreational data and more fully consider various factors that may influence recreational catch and harvest. For example, the impacts of management changes on recreational discards and the impacts of year class size and trends in biomass projections should be more thoroughly considered with the goal of better predicting impacts of management measure changes. The Council and Board are currently considering both short-term and long-term modifications to the recreational management system to address some of these uncertainties in recreational management, and achieve a balance of flexibility and stability in the recreational measures. For example, the Council is considering funding a proposal to evaluate moving to an F-based management system for the recreational summer flounder fishery. This type of management would fundamentally alter the approach to recreational management.

The commercial fishery has reported landings generally very near the commercial quotas for the last several years. Although the commercial overages were higher than average in 2013 and 2014, landings have been below the commercial quota the past two years (Table 3). The NMFS Regional Administrator has in-season closure authority for the commercial summer flounder fishery, and commercial quota monitoring systems in place are typically effective in allowing timely reactions to landings levels that approach quotas. For 2018, staff recommend maintaining ACTs set equal to the ACLs, such that no reduction in catch is taken for management uncertainty.

Table 3: Summer flounder commercial and recreational fishery performance relative to quotas and harvest limits, 2012-2016.

Year	Commercial Landings (mil lb) ^a	Commercial Quota (mil lb)	Percent Overage(+)/ Underage(-)	Recreational Landings (mil lb) ^b	Recreational Harvest Limit (mil lb)	Percent Overage(+)/ Underage(-)
2012	13.04	12.73	+2%	6.49	8.49	-24%
2013	12.44	11.44	+9%	7.36	7.63	-4%
2014	11.00	10.51	+5%	7.39	7.01	+5%
2015	10.68	11.07	-4%	4.72	7.38	-36%
2016	7.81	8.12	-4%	6.18	5.42	+14%
5-yr Avg.	-	-	+2%	-	-	-9%

^a Source: NEFSC data update for summer flounder, June 2017. ^b Source: NMFS MRIP database as of May 12, 2017. Recreational landings from Maine through North Carolina.

Commercial Quotas and Recreational Harvest Limits

Projected discards are removed from the sector-specific ACTs to derive landings limits, which include annual commercial quotas and recreational harvest limits (Table 1). The sum of the commercial quota and recreational harvest limit is equivalent to the total allowable landings in a given year. The commercial quota is divided amongst the states based on the allocation percentages given in the FMP, shown in Table 4.

Table 4: The summer flounder allocation formula for the commercial fisheries in each state.

State	Allocation (%)
ME	0.04756
NH	0.00046
MA	6.82046
RI	15.68298
CT	2.25708
NY	7.64699
NJ	16.72499
DE	0.01779
MD	2.03910
VA	21.31676
NC	27.44584
Total	100

Specific management measures that will be used to achieve the harvest limit for the recreational fishery in 2018 will not be determined until after the first four waves of 2017 recreational landings are reviewed. These data will become available in October 2017. The Monitoring Committee will meet in November to review these data and make recommendations regarding any necessary changes in the recreational management measures (i.e., bag limit, minimum size, and season). Given the performance of the recreational fishery relative to the recreational harvest limit in recent years, management measures (i.e., minimum size, possession limits, and seasons) should be implemented that are designed to achieve the recreational harvest limit while preventing the recreational ACL from being exceeded.

Commercial Gear Regulations and Minimum Fish Size

Management measures in the commercial fishery other than quotas and harvest limits (i.e., minimum fish size, gear requirements, etc.) have remained generally constant since 1999.

Amendment 2 to the Summer Flounder FMP contains provisions that allow for changes in the minimum fish size and minimum mesh size provisions. The current commercial minimum fish size is 14 inches total length (TL). The 14-inch minimum size was implemented in 1997 and represented an increase from the previous minimum size of 13 inches TL.

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). The minimum fish size and mesh requirements may be changed through specifications based on the recommendations of the Monitoring Committee. The 5.5 inch diamond or 6.0 inch square minimum mesh size requirements were first implemented in 1993 under Amendment 2 to the FMP, but at the time applied only to the net's codend. Under Amendment 10 to the FMP, effective in 1998, the minimum mesh requirements were modified to apply throughout the whole net.

In the fall of 2015, the Council and Commission's Monitoring and Technical Committees conducted a thorough review of current commercial management measures. The Committees, and subsequently the Council and Board, indicated that further exploration of some of these measures may be warranted. Specifically, for summer flounder, this included assessing the feasibility of a common minimum mesh size for summer flounder, scup, and black sea bass, as well as summarizing past studies on mesh sizes and pot/trap configuration requirements for all three species. Stemming from this discussion, the Council funded a proposal received under the Council's 2016-2017 Collaborative Fisheries Research Program. This project proposes to analyze the selectivity of multiple codend mesh sizes relative to summer flounder, black sea bass and scup retention in the commercial bottom trawl fishery in the Mid-Atlantic region.⁷ The results of this study may inform future consideration of adjustments to the summer flounder, scup, and/or black sea bass mesh sizes. At this time, staff do not recommend any changes to the current 14-inch minimum fish size, gear requirements, or seasonal thresholds.

Minimum Mesh Size Exemption Programs

Small Mesh Exemption Area

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 minimum mesh (diamond) or 6.0 inch minimum mesh (square) are required to obtain a small mesh exemption program (SMEP) permit from NMFS. The exemption is designed to allow vessels to retain a bycatch of summer flounder while operating in other small-mesh fisheries.

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 lb 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 period from November 1 in the previous year to April 30 in the current year. However, staff has increasingly run into data availability issues when conducting this analysis in early July, when observer data is typically not

⁷ Proposal and background documents available at: <http://www.mafmc.org/collaborative-research/>.

yet available through the end of April in the current year. As such, a year-long lag in the analysis is required this year and may be continued in the future.

Staff evaluated NEFOP data for November 1, 2015 through April 30, 2016 (as well as for the prior year, November 1, 2014 through April 30, 2015). Data for 2015-2016 indicate that a total of 414 trips with at least one tow were observed east of 72° 30.0'W, and of these, 172 of these trips used small mesh (Table 6). Of those 172 trips, 97 trips reported landing more than 200 lb of summer flounder. Of those 97 trips, 20 trips 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 4.8% (20/414 trips). The prior year percentage of trips that met the criteria, also shown in Table 6, was about 4.7%.

In the fall of 2015, the Monitoring and Technical Committees examined trends in this analysis over the past 5 years, and noted that this exemption program does not appear to be negatively impacting the summer flounder stock and appears to be serving its intended purpose of reducing discards of summer flounder in traditional small mesh offshore fisheries. It does not appear that many vessels are fishing with small mesh east of longitude 72° 30.0'W from November 1 to April 30, landing more than the incidental 200-pound limit of summer flounder, and discarding more than 10% of total summer flounder catch.

For an unrelated action earlier this year, GARFO staff compiled the number of vessels issued a letter of authorization (LOA) for the small mesh exemption program in recent years, shown in Table 5, indicating that an average of 65 summer flounder permit holders have requested this LOA from 2012 through 2016.

Based on the information described above, staff recommend no change in the SMEP program.

Table 5: Number of vessels issued the small mesh LOA from fishing year 2012-2016. Source: personal communication, GARFO, 2017.

Year	Vessels Enrolled
2012	71
2013	71
2014	55
2015	65
2016	61

Table 6: Numbers of trips that meet specific criteria based on observed trips from November 1, 2014 to April 30, 2015 and November 1, 2015 to April 30, 2016.

Criteria		Observed Trips	
		Nov. 1, 2014 – April 30, 2015	Nov. 1, 2015 – April 30, 2016
A	Observed trips with at least one catch record east of 72° 30' W Longitude	489	414
B	That met the criteria in row A <u>and</u> used small mesh at some point during their trip	160	172
C	That met the criteria in rows A-B <u>and</u> landed more than 200 pounds summer flounder on whole trip	102	97
D	That met the criteria in rows A-C <u>and</u> discarded >10% of summer flounder catch east of 72° 30' W Longitude	23	20
E	% 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 D/row A)	4.7%	4.8%
F	Total summer flounder discards (pounds) from trips meeting criteria in A-D	17,922	16,780
G	Total summer flounder landings (pounds) from trips meeting criteria in A-D	27,997	24,995
H	Total catch (pounds) from trips meeting criteria in A-D	45,919	41,775

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 to 2 inches or smaller. Only North Carolina has a flynet fishery at present. The supplemental memo from T.D. VanMiddlesworth dated June 14, 2017 (see Attachment) indicates that no summer flounder were landed in the North Carolina flynet fishery in 2016. In 2015, as part of the review of commercial measures, the Monitoring and Technical Committees reviewed information indicating that summer flounder landings in this fishery have generally declined since 2007, and have been under 2,000 lb since 2010. Based on this information, staff recommend no change to this exemption program.

ATTACHMENT



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

BRAXTON C. DAVIS
Director

Memorandum

To: Kiley Dancy, MAFMC

From: Todd Daniel VanMiddlesworth, NCDMF

Date: June 14, 2017

Subject: Species composition and landings from the 2016 North Carolina fly net fishery

The 2016 North Carolina fly net species composition and landings in pounds are provided in Table 1. Individual landings listed as “Other Species” are not reported 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. Summer flounder were not landed in the 2015 or 2016 fly net fishery. Note that fly net landings for most species were lower in 2016 than in 2015. However, total fly net landings in 2016 were higher than those in 2015 which was likely due to increased effort on targeted fish species and less shoaling at Oregon Inlet resulting in greater access of fly net boats to North Carolina ports.



Table 1. Species composition and landings for 2016 North Carolina fly net fishery. Species with confidential landings are listed under “Other Species”.

Species	Weight (lb)	Percent
Atlantic Croaker	147,652	73.89
Other Species*	50,564	25.30
Loligo Squid	948	0.47
Bluefish	245	0.12
Sea Mullet (Kingfish, Whiting)	242	0.12
Monkfish (Whole)	98	0.05
Gray Trout	76	0.04
Total	199,825	100.00

*Those species with confidential landings included Atlantic Menhaden (Bait), Black Sea Bass, Brown Shrimp (Summer) mixed, Butterfish, Cutlassfish (Ribbonfish), Puffer (Sea Chicken), Scup, and Spot.

