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## MEMORANDUM

**DATE:** July 8, 2014

**TO:** Chris Moore, Executive Director

**FROM:** Kiley Dancy, Staff

**SUBJECT:** Review of Summer Flounder Management Measures for 2015

### **Executive Summary**

In 2013, two-year specifications were implemented for summer flounder, establishing management measures for the 2014 and 2015 fishing years. Catch and landings limits are already in place for 2015 and may remain unchanged if the Scientific and Statistical Committee (SSC), Council, and ASMFC's Summer Flounder, Scup, and Black Sea Bass Board determine that the previously recommended Acceptable Biological Catch (ABC) for 2015 (22.77 mil lb; 10,329 mt) is still appropriate. Similarly, the Monitoring Committee will review recent fishery performance and make a recommendation to the Council and Board regarding any necessary modifications to the implemented 2015 commercial management measures.

Based on the results of the benchmark stock assessment conducted in July 2013, the summer flounder stock was not overfished and overfishing was not occurring in 2012. The model-estimated spawning stock biomass (SSB) was 112.96 million lb (51,238 mt) in 2012 (82% of the biomass at maximum sustainable yield,  $SSB_{MSY}$ ).

Staff recommends maintaining the specified ABC (22.77 mil lb) as the basis for management measures in 2015. This ABC resulted in a commercial Annual Catch Limit (ACL) of 13.34 million lb (6,049 mt), and a recreational ACL of 9.44 million lb (4,280 mt). Based on the recommendation of the Monitoring Committee, both the commercial Annual Catch Target (ACT) and the recreational ACT were set equal to their respective sector ACLs for 2015. Last year, the Council recommended that up to 3% of the commercial and recreational quotas be reserved for research set-aside (RSA) in 2015.<sup>1</sup> After adjusting for projected discards and 3% RSA, the 2015 commercial quota is 10.74 mil lb, and the recreational harvest limit is 7.16 mil lb (Table 1).

Staff does not recommend any changes to the current minimum fish size (14 inch total length), gear requirements, or exemption programs (small mesh and North Carolina flynet). States that allocate 15% of their commercial quota to bycatch fisheries should continue to do so, and all other states should consider measures which reduce bycatch.

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<sup>1</sup>The Council is scheduled to have a separate discussion at the August 2014 meeting regarding the future of the RSA program.

**Table 1:** Current multi-year catch and landings limits for summer flounder in 2014 and 2015.

Management Measure	2014		2015		Basis
	mil lb.	mt	mil lb.	mt	
ABC	21.94	9,950	22.77	10,329	Projections
ABC Landings Portion	18.06	8,191	18.45	8,368	Projections
ABC Discards Portion	3.88	1,759	4.32	1,961	Projections
Commercial ACL (=ACT)	12.87	5,837	13.34	6,049	60% of ABC landings portion (per FMP) + 52% of ABC discards portion
Comm. discards (projected)	2.03	923	2.27	1,028	52% of ABC discards portion, based on 2010-2012 average % discards by sector
RSA deduction (3%)	0.33	147	0.33	151	3% of pre-RSA Comm. Quota
Commercial quota (adjusted)	10.51	4,767	10.74	4,870	Comm. ACT less discards and RSA
Recreational ACL (=ACT)	9.07	4,113	9.44	4,280	40% of ABC landings portion (per FMP) + 48% of ABC discards portion
Rec. discards (projected)	1.84	836	2.06	933	48% of ABC discards portion, based on 2010-2012 average % discards by sector
RSA deduction (3%)	0.22	98	0.22	100	3% of pre-RSA RHL
Recreational Harvest Limit (adjusted)	7.01	3,178	7.16	3,247	Rec. ACT less discards and RSA

## **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 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 Committees established by the Fishery Management Plan (FMP) are responsible for developing recommendations for management measures designed to achieve the recommended catch limits.

Multi-year specifications may be set for summer flounder for up to three years at a time. For fishing year 2015, the SSC previously recommended an ABC for summer flounder as part of multi-year specifications for the 2014 and 2015 fishing years. The SSC recommended an ABC that addresses scientific uncertainty, while the Monitoring Committee recommended an annual catch target (ACT) and management measures that address management uncertainty. Both the SSC and Monitoring Committee will review the measures currently implemented and determine if any changes may be warranted. Based on the SSC and Monitoring Committee recommendations, the Council will make a recommendation to the National Marine Fisheries Service (NMFS) Greater Atlantic Regional Administrator, if changes are believed to be warranted.

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 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 2015 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.

### **Catch and Landings Update**

Reported 2013 landings in the commercial fishery were approximately 12.49 mil lb (5,665 mt), and recreational landings in 2013 were 7.01 mil lb (3,182 mt). The 2014 commercial landings as of the week ending June 21, 2014, indicate that 62% of the coastwide commercial quota has been landed (Table 2).

**Table 2:** The 2014 state-by-state quotas and the amount of summer flounder landed by commercial fishermen, in each state as of week ending June 21, 2014.

State	Cumulative Landings (lb)	Quota (lb) <sup>a</sup>	Percent of Quota (%)	Research Set-Aside Landings (lb)
ME	0	4,998	0	0
NH	3	48	6	0
MA	198,425	688,593	29	384
RI	1,116,165	1,648,193	68	79,799
CT	125,749	237,206	53	0
NY	358,924	724,301	50	28,147
NJ	830,537	1,765,169	47	0
DE	0	0	0	0
MD	105,203	214,298	49	0
VA	1,448,660	2,388,012	61	0
NC	2,258,807	2,729,195	83	0
Other	0	0	0	0
<b>Totals</b>	<b>6,442,473</b>	<b>10,400,013</b>	<b>62</b>	<b>108,330</b>

<sup>a</sup> Quotas adjusted for research set-aside and overages. Source: NMFS Weekly Quota Report for week ending June 21, 2014.

## **Biological Reference Points and Stock Status**

The most recent peer-reviewed assessment for summer flounder was a benchmark stock assessment conducted in the summer of 2013 at the Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC 57).<sup>2</sup> This assessment included updated biological reference points for summer flounder. The fishing mortality threshold is  $F_{MSY} = F_{35\%}$  (as the  $F_{MSY}$  proxy) = 0.309. The biomass reference point is  $SSB_{MSY} = SSB_{35\%}$  (as the  $SSB_{MSY}$  proxy) = 137.56 million lb (62,394 mt). The minimum stock size threshold, one-half  $SSB_{MSY}$ , is estimated to be 68.78 million lb (31,197 mt).

The 2013 benchmark assessment utilizes an age-structured assessment model called ASAP. Documentation on this assessment and previous stock assessments, such as reports on stock status, including annual assessment and reference point update reports, Stock Assessment Workshop (SAW) reports, and Stock Assessment Review Committee (SARC) panelist reports, are available online at the NEFSC website: <http://www.nefsc.noaa.gov/saw/>.

Results of the July 2013 benchmark assessment indicate that the summer flounder stock was not overfished and overfishing was not occurring in 2012 relative to the biological reference points from the 2013 SAW/SARC 57. The fishing mortality rate has been below 1.0 since 1997 and was estimated to be 0.285 in 2012, below the threshold fishing mortality reference point  $F_{MSY} = 0.309$ . SSB was estimated to be 113.0 million lb (51,238 mt) in 2012, about 82% of  $SSB_{MSY} = 137.6$  million lb (62,394 mt). NMFS declared the summer flounder stock rebuilt in 2010, based on the 2011 assessment update.

## **Regulatory Review**

In September 2013, the SSC met to reconsider a previously implemented ABC for summer flounder for fishing year 2014, and consider specifying multi-year ABCs for up to three years. The SSC recommended three-year ABCs for summer flounder, for fishing years 2014-2016. However, the Council and Board recommended only two years of specifications (2014-2015), in order to align multi-year specifications timelines for summer flounder, scup, and black sea bass.

The 2014 overfishing limit (OFL) was determined to be 26.76 million lb (12,138 mt), based on an  $F_{MSY}$  proxy of  $F = 0.309$  ( $F_{35\%}$ ) and 2013 projected biomass. The approach used for specifying ABC assumes that the ABC would be caught in the preceding year. The SSB in the current year is then updated based on the presumed catch, and the resulting SSB estimate is multiplied by the  $F_{MSY}$  proxy to provide the OFL for the current year. The Council's risk policy was applied to the OFL to calculate the ABC. For 2014, the ABC associated with the OFL is 21.94 million lb (9,950 mt), based on the 2013 projected  $B/B_{MSY} = 91\%$ , Council risk policy  $P^* = 0.360$ , and a lognormal distribution with a CV = 60%.

For 2015, the overfishing limit (OFL) was determined to be 27.06 million lb (12,275 mt), based on an  $F_{MSY}$  proxy of  $F = 0.309$  ( $F_{35\%}$ ) and 2014 projected biomass. The Council's risk policy was applied to the OFL to calculate the ABC. For 2015, the ABC associated with the OFL is 22.77 million lb (10,329 mt), based on the 2014 projected  $B/B_{MSY} = 95\%$ , Council risk policy  $P^* = 0.378$ , and a lognormal distribution with a CV = 60%.

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<sup>2</sup> 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 SSC considered summer flounder to be a level 3 assessment. In past level 3 assessments, the SSC has used a default CV for the OFL of 100%, based on a meta-analysis of statistical catch-at-age models. However, the SSC noted that the latest summer flounder stock assessment is considerably more accurate than other assessments of Mid-Atlantic stocks and, therefore, use of the default CV=100% was likely inappropriate. Accordingly, the SSC determined that it would use a CV = 60%.

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

- The potential for sex-specific differences in life history parameters.
- The existence of spatially distinct size distributions.
- NEFSC surveys and PMAFS fishery sampling confirm sexually-dimorphic and time-varying spatial differences in growth that are not fully accounted for in the stock assessment because not all fishery and survey catches are fully and independently sampled by sex.
- Landings from commercial fishery assume no under-reporting of summer flounder landings so should be considered minimal estimates.
- The current assumption for M remains an ongoing source of uncertainty. M is highly influential on assessment results and impacts nearly all aspects of the assessment and evaluation of status.
- The stock-recruitment relationship could not be defined internally in the model and thus an  $F_{MSY}$  proxy was used to calculate the OFL.

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.

### **Basis for 2015 Staff Recommendation**

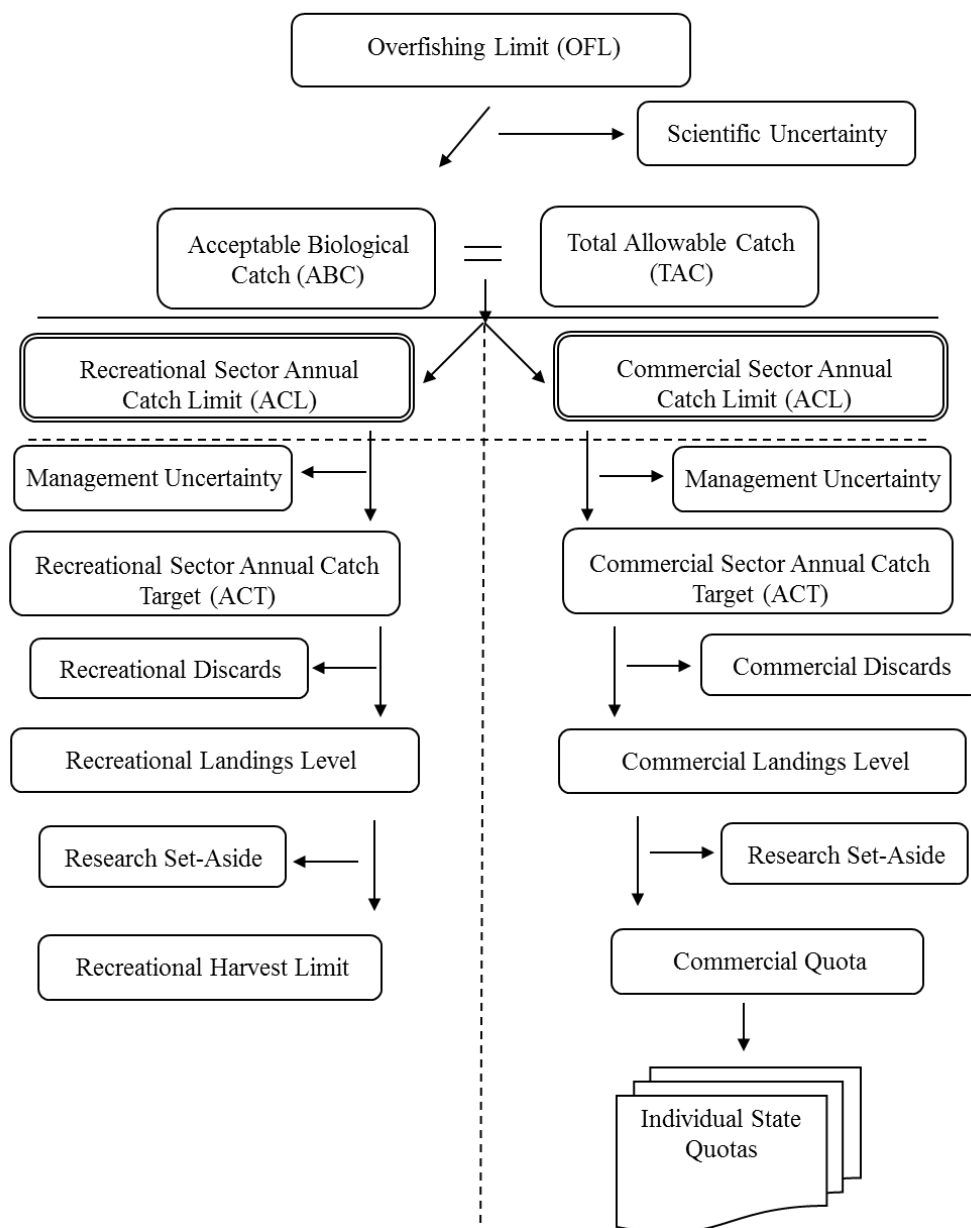
Input from the Council's Visioning and Strategic Planning processes as well as from the Advisory Panel Fishery Performance Reports highlight stakeholder interest in increasing the stability of fishery management measures. Last year, multi-year specifications were set for summer flounder for 2014 and 2015, with the understanding that recent fishery data would be reviewed in 2014 to identify any potentially critical issues in the fishery or problems with maintaining the implemented measures. Available data described in this memo as well as in the staff Fishery Information Document, the Advisory Panel Fishery Performance Report, and the 2014 Summer Flounder Data Update do not suggest any major issues that would necessitate revising the current measures. Therefore, staff recommends summer flounder catch limits and commercial management measures remain unchanged from those previously specified for 2015.

### **Other Management Measures**

#### ***Recreational and Commercial ACLs***

As defined by the Omnibus ACLs and AMs Amendment, the ABC is equivalent to the total allowable catch (TAC), and is equal to the sum of the commercial and recreational ACLs (Figure 1). The ABC for 2015 is comprised of both landings and discards. 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 contribution from each fishing sector using a 3-year moving average percentage; from 2010-2012, on average, 48% of dead discards were attributable to the recreational fishery, and 52% to the commercial fishery (Table 1).

### Summer Flounder Flowchart



**Figure 1:** Flowchart for summer flounder catch and landings limits.

### ***Annual Catch Targets***

The Summer Flounder Monitoring Committee is responsible for recommending Annual Catch Targets (ACTs) for the Council to consider. The relationships between the recreational and commercial ACTs and other catch components are given in Figure 1. The Monitoring Committee may provide other recommendations relevant to setting catch limits consistent with the Magnuson-Stevens Act. 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 would be described and provided to the Council.

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 consistently been below the recreational harvest limits for the past five years (Table 3). The commercial fishery has reported landings levels generally very near the commercial quotas for the last several years, with the exception of a slightly higher than average overage in 2013 (Table 3). The quota monitoring systems in place are typically effective in allowing timely reactions to landings levels that approach quotas. Staff recommends no modifications to the current ACTs, which are set equal to the sector-specific ACLs for 2015.

**Table 3:** Summer flounder commercial and recreational fishery performance relative to quotas and harvest limits, 2009-2013.

<b>Year</b>	<b>Commercial Landings (mil lb)<sup>a</sup></b>	<b>Commercial Quota (mil lb)</b>	<b>Percent Overage(+)/ Underage(-)</b>	<b>Recreational Landings (mil lb)<sup>b</sup></b>	<b>Recreational Harvest Limit (mil lb)</b>	<b>Percent Overage(+)/ Underage(-)</b>
<b>2009</b>	11.05	10.74	+3%	6.03	7.16	-16%
<b>2010</b>	13.55	12.79	+6%	5.11	8.59	-41%
<b>2011</b>	16.57	17.38	-5%	5.96	11.58	-49%
<b>2012</b>	12.91	12.73	+1%	6.49	8.49	-24%
<b>2013</b>	12.49	11.44	+9%	7.01	7.63	-8%
<b>5-yr Avg.</b>	-	-	+3%	-	-	-28%

<sup>a</sup> Source: NMFS dealer data as of June 3, 2014. <sup>b</sup> Source: NMFS MRIP database as of June 25, 2014.

### ***Commercial Quota, Recreational Harvest Limit, and Research Set-Aside***

The landings-based allocations (i.e., commercial 60%, recreational 40%) were maintained in the derivation of the sector-specific ACLs and ACTs, such that the sum of the sector-specific landings levels (total allowable landings or TALs) is equal to overall TAL (Table 1). Based on the implemented ACLs and ACTs given above and a 3% research set-aside deduction, the adjusted commercial quota in 2015 is 10.74 mil lb (4,870 mt), and the adjusted recreational harvest limit is 7.16 mil lb (3,247 mt). The commercial quota is divided amongst the states based on the allocation percentages given 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
<b>Total</b>	<b>100</b>

Specific management measures that will be used to achieve the harvest limit for the recreational fishery in 2015 will not be determined until after the first four waves of 2014 recreational landings are reviewed. These data will be available in October 2014. The Monitoring Committee will meet in November to review these landings data and make recommendations regarding any necessary changes in the recreational management measures (i.e., possession 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 ACT while preventing the recreational ACL from being exceeded.

### ***Commercial Gear Regulations and Minimum Fish Size***

Amendment 2 to the Summer Flounder FMP contains provisions that allow for changes in the minimum fish size and minimum net mesh provisions. Current regulations require a 14-inch total length (TL) minimum fish size in the commercial fishery and a 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 in the winter and 100 lb in the summer. The minimum fish size and mesh requirements may be changed through specifications based on the recommendations of the Monitoring Committee. Staff does not recommend any changes to the minimum fish size or mesh provisions.



### ***Exemption Programs***

Vessels landing more than 200 lb of summer flounder, east of longitude 72° 30.0'W, from November 1 through April 30, and not using a 5.5" minimum mesh (diamond) or 6" minimum mesh (square) net, are required to obtain a small mesh exemption program (SMEP) permit from NMFS. The FMP requires that sea sampling data be reviewed annually to determine if vessels fishing seaward of the line, with smaller than the required minimum mesh size and landing more than 200 lb of summer flounder, are discarding more than 10% of their summer flounder catch. Staff evaluated the available Northeast Fisheries Observer Program (NEFOP) data for the period from November 1, 2013 to March 25, 2014 (at the time of analysis, observer data were not yet available for trips taken after this date). These data indicate that a total of 343 trips were observed east 72° 30.0'W; 109 of these trips landed summer flounder (Table 5). Of those 109 trips that landed summer flounder, 38 reported using small mesh and 25 landed more than 200 lb of summer flounder. Of those 25 trips, 7 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 2.0% (7 trips/343 trips). The prior year percentage of trips that met the criteria was about 1.6%. Based on this information, staff recommends no change in the SMEP program.

In addition, vessels fishing with a two-seam otter trawl flynet are exempt. Specifically, 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 Tom Wadsworth dated June 25, 2014 indicates that no summer flounder were landed in the North Carolina flynet fishery in 2013, and overall flynet landings were low compared to previous years. Therefore, staff recommends no change to this exemption program.

**Table 5:** Numbers of trips that meet specific criteria based on observer trips from November 1, 2013 to March 25, 2014. Note: Small mesh exemption program permits are required from November 1- April 30; however, data are not yet available for this entire time frame for 2013-2014.

<b>November 1, 2013 – March 25, 2014</b>	<b>Trips</b>
<i>Trips with tows east of 72° 30' W Longitude</i>	343
<i>That landed summer flounder</i>	109
<i>That used small mesh</i>	38
<i>That landed more than 200 lb of summer flounder</i>	25
<i>Number that discarded &gt;10% of summer flounder catch</i>	7
<i>Total discards (lb) from those 7 trips</i>	2,167
<i>Total landings (lb) from those 7 trips</i>	8,151
<i>Total catch (lb) from those 7 trips</i>	10,318

### ***Bycatch***

Fishermen from a few states have indicated that the commercial regulatory discards associated with the summer flounder quotas are a problem. As such, the states that allocate 15% of their quota to bycatch fisheries should continue to do so, and all other states should consider measures to reduce bycatch.