



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 7, 2020

TO: Chris Moore, Executive Director

FROM: Karson Coutre, Staff

SUBJECT: Review of 2021 Scup Specifications

Executive Summary

In 2019, specifications for scup were set for 2020 and 2021 based on the results of an operational stock assessment which was peer reviewed and accepted in August 2019. This assessment incorporated fishery catch and fishery-independent survey data through 2018, including revised recreational catch data provided by the Marine Recreational Information Program (MRIP) for 1989-2018.

The 2019 assessment indicates that the scup stock was not overfished, and overfishing was not occurring in 2018 relative to the updated biological reference points calculated through the assessment. Spawning stock biomass (SSB) was estimated to be about 411 million pounds (186,578 mt) in 2018, about 2 times the SSB_{MSY} proxy reference point (i.e. $SSB_{40\%}$) of 207 million pounds (94,020 mt). Fishing mortality (F) on fully selected age 3 scup was 0.158 in 2018, about 73% of the F_{MSY} proxy reference point ($F_{40\%}$) of 0.215. The 2015 year class is estimated to be the largest in the time series at 326 million fish, while the 2016-2018 year classes are estimated to be below average.¹

The Council and the Atlantic States Marine Fisheries Commission's (ASMFC's) Summer Flounder, Scup, and Black Sea Bass Management Board (Board) adopted 2020-2021 annually varying specifications at their October 2019 meeting. These catch and landings limits (Table 1) were implemented via final rule May 15, 2020 (85 FR 29345), replacing the interim 2020 measures adopted in mid-2019 (84 FR 54041).

The 2021 measures currently implemented include an Acceptable Biological Catch (ABC) of 30.67 million lb or 13,913 mt, which is 14% lower than the 2020 ABC. This ABC and the corresponding sector-specific catch and landings limits for 2021 may remain unchanged if the Scientific and Statistical Committee (SSC), Council, and Board determine that no changes are warranted. However, the Council adopted revisions to their risk policy in December 2019. The SSC should consider whether the 2021 scup ABC should be revised based on the new risk policy.

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 2021 commercial and

¹ A prepublication copy of the August 2019 operational stock assessment report prepared for the Council and the SSC is available at: <http://www.mafmc.org/ssc-meetings/2019/september-9-11>

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 currently implemented 2020 and 2021 catch and landings limits are shown in Table 1. The methods used to derive these measures are described in more detail later in this memo.

As described below, staff recommend modifying the currently implemented catch and landings limits for 2021 to reflect recent changes to the Council's risk policy adopted in December 2019. Staff recommend no changes to the commercial measures for the scup fishery, including the minimum fish size, mesh size requirements and associated incidental possession limits, or pot/trap gear requirements for 2021.

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

² The Fishery Information Document and Fishery Performance Report are available at: <https://www.mafmc.org/council-events/2020/july-ssc-meeting>.

Table 1: Currently implemented 2020 and 2021 scup catch and landings limits based on the varying ABC approach.

Management measure	2020 (revised)		2021		Basis
	mil lb	mt	mil lb	mt	
OFL	41.17	18,674	35.30	16,012	Assessment projections
ABC	35.77	16,227	30.67	13,913	Assessment projections & risk policy
ABC discards	7.03	3,190	7.26	3,295	Assessment projections
Commercial ACL	27.90	12,657	23.92	10,852	78% of ABC (per FMP)
Commercial ACT	27.90	12,657	23.92	10,852	Set equal to commercial ACL (staff recommendation)
Projected commercial discards	5.67	2,574	5.86	2,659	80.7% of ABC discards (avg. % of dead discards from commercial fishery, 2016-2018)
Commercial quota	22.23	10,083	18.06	8,194	Commercial ACT minus discards
Recreational ACL	7.87	3,570	6.75	3,061	22% of ABC (per FMP)
Recreational ACT	7.87	3,570	6.75	3,061	Set equal to recreational ACL (staff recommendation)
Projected recreational discards	1.36	616	1.40	636	19.3% of the ABC discards (avg. % of dead discards from rec. fishery, 2016-2018)
RHL	6.51	2,954	5.34	2,424	Recreational ACT minus discards

Table 2: Staff recommended revisions to 2021 scup catch and landings limits based on the revised Council risk policy recommended in December 2019.

Management measure	2021		Basis
	mil lb	mt	
OFL	35.30	16,012	Assessment projections
ABC	34.81	15,791	Assessment projections & revised risk policy
ABC discards	7.26	3,295	Proportion from assessment projections applied to revised ABC
Commercial ACL	27.15	12,317	78% of ABC (per FMP)
Commercial ACT	27.15	12,317	Set equal to commercial ACL (staff recommendation)
Projected commercial discards	6.65	3,018	80.7% of ABC discards (avg. % of dead discards from commercial fishery, 2016-2018)
Commercial quota	20.50	9,299	Commercial ACT minus discards
Recreational ACL	7.66	3,474	22% of ABC (per FMP)
Recreational ACT	7.66	3,474	Set equal to recreational ACL (staff recommendation)
Projected recreational discards	1.59	722	19.3% of the ABC discards (avg. % of dead discards from rec. fishery, 2016-2018)
RHL	6.07	2,752	Recreational ACT minus discards

Introduction

The Magnuson-Stevens Act (MSA) requires that the Council’s SSC provide scientific advice for fishery management decisions, including recommendations for ABCs, prevention of overfishing, and achieving maximum sustainable yield (MSY). The SSC must recommend ABCs that address scientific uncertainty. The MSA mandates that the Council's catch limit recommendations cannot exceed the ABCs recommended by the SSC.

The Monitoring Committee is responsible for developing recommendations for management measures to achieve the ABCs recommended by the SSC. Specifically, the Monitoring Committee recommends ACTs that are equal to or less than the ACLs to address management uncertainty, and also recommends management measures designed to achieve these ACTs.

Summer flounder, scup, and black sea bass are cooperatively managed by the Council and the ASMFC under a joint Fishery Management Plan (FMP). The Council and the ASMFC’s Summer Flounder, Scup, and Black Sea Bass Management Board (Board) meet jointly each year to consider SSC and Monitoring

Committee recommendations before deciding on proposed scup catch limits and other scup management measures. The Council and Board may set specifications for scup for up to three years at a time. The Council and Board submit their recommendations to the National Marine Fisheries Service (NMFS), which is responsible for implementation and enforcement of federal fisheries regulations.

In 2019, the SSC recommended revised 2020 and new 2021 specifications based on the 2019 operational stock assessment results. The Council and Board adopted two-year specifications for 2020-2021 based on a varying ABC approach.

The SSC is asked to review the 2021 ABC and recommend changes if warranted. Similarly, the Monitoring Committee will review the previously implemented 2021 ACL and ACT recommendations, as well as the commercial quota and recreational harvest limit (RHL), recommending any changes as needed. 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). The Council will meet jointly with the Board in August 2020 to review the SSC, Monitoring Committee, and Advisory Panel recommendations.

Recent Catch and Landings

In 2019, the commercial scup fishery landed 13.78 million pounds (6,252 mt) of scup, about 57% of the 2019 commercial quota of 23.98 million pounds (10,877 mt, Table 3). Commercial dead discards were 6.13 million pounds (2,781 mt) in 2019, a 9% decrease from 2018. Total commercial removals in 2019 were 19.91 million pounds (9,031 mt), about 70% of the 2019 commercial ACL (28.42 million pounds/12,891 mt).³

According to revised MRIP data, estimated recreational landings in 2019 were 14.12 million pounds (6,405 mt). This estimate should not be compared to the 2019 RHL as the RHL was set using an assessment that did not include the revised MRIP estimates. Recreational dead discards totaled 1.24 million pounds in 2019 (562 mt). Recreational catch (harvest and discards) in 2019 based on the new estimation methodology was estimated to be 15.35 million pounds (6,963 mt).

The commercial scup quota is allocated among three quota periods: Winter I (January 1 – April 30, allocated 45.11% of the annual quota), Summer (May 1 – September 30, allocated 38.95% of the annual quota), and Winter II (October 1 – December 31, allocated 15.94% of the annual quota).⁴ Based on preliminary 2020 dealer data, about 44% of the 2020 Winter I commercial scup quota was landed. As of June 10, 2020, 17% of the Summer commercial scup quota had been landed (Table 4).

³ These estimates were generated by the NEFSC and may differ from commercial dead discard estimates generated by GARFO. The Northeast Regional Coordinating Council is working toward a unified database and methodology for estimating dead discards.

⁴ Prior to 2018, October was included in the summer quota period. The allocation percentages were the same as shown above.

Table 3: Scup commercial and recreational landings relative to quotas and RHLs (in millions of pounds), 2015-2019. The RHL overage/underage evaluation is based on recreational harvest estimates using the old MRIP-estimation methodology.

Year	Com. landings	Com. quota	Quota underage	Rec. harvest (old MRIP estimates)	RHL	RHL underage	Rec. harvest (new MRIP estimates)
2015	17.03	21.23	-20%	4.41	6.80	-35%	11.93
2016	15.76	20.47	-23%	4.26	6.09	-30%	10.00
2017	15.44	18.38	-16%	5.42	5.50	-1%	13.53
2018	13.37	23.98	-44%	5.61	7.37	-24%	12.98
2019	13.78	23.98	-43%		7.37		14.12

Table 4: Commercial scup landings during the 2020 Winter I and Summer quota periods (as of the week ending June 10, 2020), according to preliminary data from NMFS weekly landings reports. The Winter I quota is a coast-wide quota. The Summer period quota is allocated among states under the Commission’s FMP.

State	Winter I Landings (pounds) January 1 – April 29, 2020*	Summer Landings (pounds) May 1 – June 10, 2020*
Maine	N/A	0
New Hampshire		0
Massachusetts		50,335
Rhode Island		796,371
Connecticut		64,048
New York		502,545
New Jersey		9,286
Delaware		0
Maryland		0
Virginia		5,943
North Carolina		194
Other		0
Total landings		4,730,147
Quota	10,820,000	8,658,277
Percent of Quota	44%	17%

*Note: The Winter I period lasts from January 1 through April 30. The 2019 Summer period lasts from May 1 through September 30. Landings in this table are from the NMFS quota monitoring site, which reports landings by week, rather than by quota period; thus, the Winter I landings shown above do not account for 100% of the 2020 Winter I landings.

Stock Status and Biological Reference Points

A scup operational stock assessment was peer reviewed and accepted in August 2019. This assessment retained the model structure of the previous benchmark stock assessment, completed in 2015,⁵ and incorporated fishery catch and fishery-independent survey data through 2018, including revised recreational data provided by MRIP for 1981-2018. The following information is based on the prepublication draft of the August 2019 operational assessment prepared for use by the Council and SSC.⁶

The updated fishing mortality reference point is $F_{MSY} \text{ proxy} = F_{40\%} = 0.215$ and the updated biomass reference point is $SSB_{MSY} \text{ proxy} = SSB_{40\%} = 207.279$ million pounds (94,020 mt). The minimum biomass threshold of $\frac{1}{2} SSB_{MSY} \text{ proxy} = \frac{1}{2} SSB_{40\%} = 103.639$ million pounds (47,010 mt, Table 5).

According to the 2019 operational stock assessment, the scup stock north of Cape Hatteras, North Carolina extending north to the US-Canada border was not overfished and overfishing was not occurring in 2018. Spawning stock biomass (SSB) was estimated to be about 411 million pounds (186,578 mt) in 2018, about 2 times the $SSB_{MSY} \text{ proxy}$ reference point of 207 million pounds (94,020 mt, Figure 1), meaning that the stock was not overfished in 2018. Fishing mortality on fully selected age 3 scup was 0.158 in 2018, about 73% of the $F_{MSY} \text{ proxy}$ reference point of 0.215 (Figure 2), meaning that overfishing was not occurring in 2018. The 2015 year class is estimated to be the largest in the time series at 326 million fish, while the 2016-2018 year classes are estimated to be below average at 112 million fish, 93 million fish and 83 million fish, respectively (Figure 1).

In July 2020, Northeast Fisheries Science Center (NEFSC) provided a data update for 2020, including updated landings information as well as NEFSC trawl survey indices through 2019. From 2018 to 2019, survey indices of abundance decreased for the fall survey (4.35 to 2.24 kg/tow) and increased for the spring survey (1.24 to 2.59 kg/tow).⁷

⁵ 60th Northeast Stock Assessment Workshop (2015) assessment report and peer review summaries are available at: <https://www.nefsc.noaa.gov/saw/reports.html>

⁶ Available at: <http://www.mafmc.org/ssc-meetings/2019/september-9-11>

⁷ Available at: <https://www.mafmc.org/council-events/2020/july-ssc-meeting>

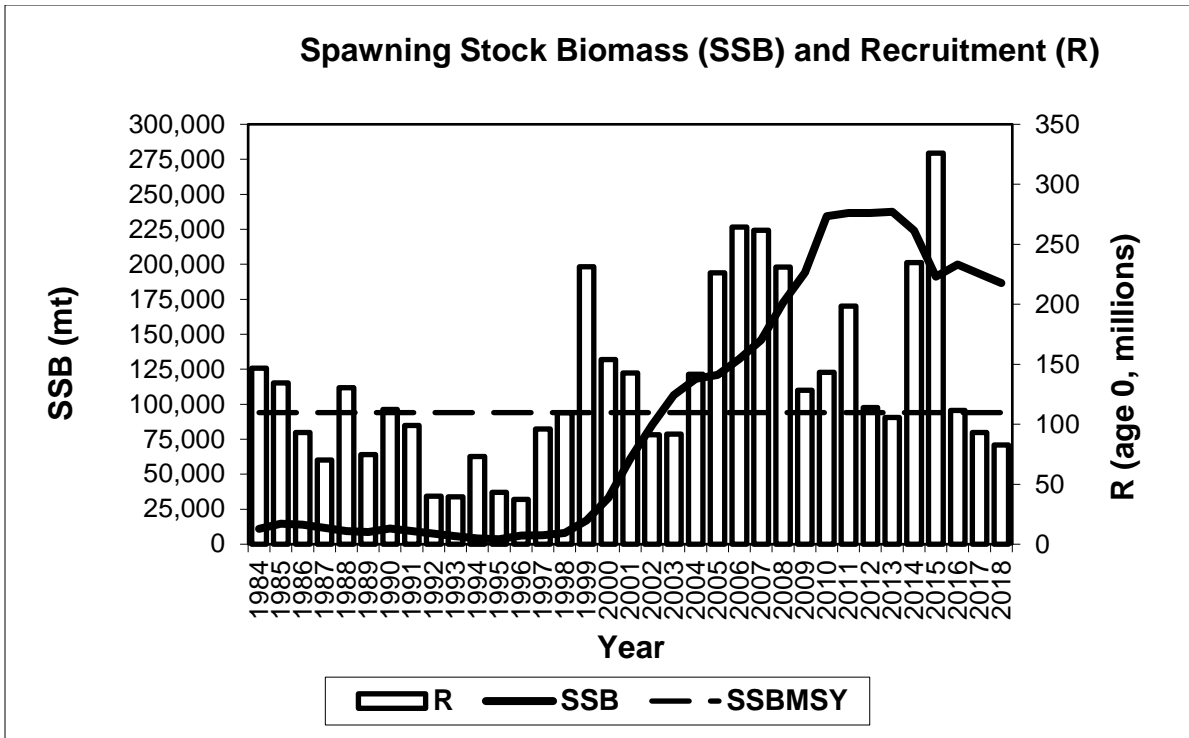


Figure 1: Scup SSB and recruitment at age 0, 1984-2018 from the 2019 operational stock assessment.

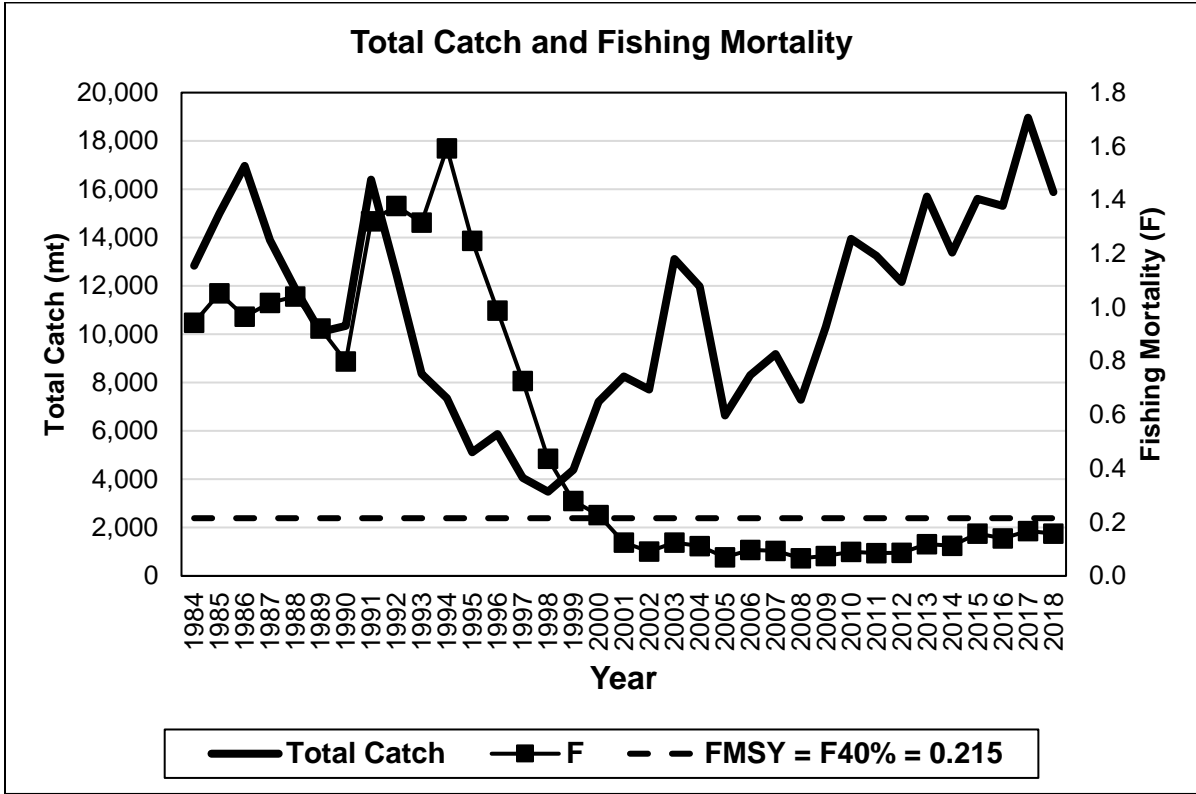


Figure 2: Scup total catch and fishing mortality, 1984-2018 from the 2019 operational stock assessment.

Table 5: Scup biological reference points from the 2015 benchmark stock assessment and 2019 operational stock assessment.

Reference Points and terminal year SSB and F estimates	2015 benchmark stock assessment⁸ Data through 2014	2019 operational stock assessment⁹ Data through 2018
SSB_{MSY proxy} = SSB_{40%} (biomass target)	192.47 mil lb/ 87,302 mt	207.28 mil lb/ 94,020 mt
½ SSB_{MSY} (biomass threshold defining an overfished status)	96.23 mil lb/ 43,651 mt	103.639 mil lb/ 47,010 mt
Terminal year SSB	403.26 mil lb/ 182,915 mt (2014) 210% of SSB _{MSY}	411 mil lb/186,578 mt (2018) 198% of SSB _{MSY}
F_{MSY proxy} = F_{40%} (threshold defining overfishing)	0.220	0.215
Terminal year F	0.127 (2014) 42% below F _{MSY}	0.158 (2018) 27% below F _{MSY}

Review of Prior SSC Recommendations

In September 2019, the SSC recommended, and the Council and Board adopted 2020 and 2021 ABCs for scup based on new stock status information and projections from the 2019 operational assessment. The revised 2020 measures were implemented via final rule May 15, 2020 (85 FR 29345).

The SSC recommended that a CV of 60% be applied to the OFL estimate to derive the ABC for scup. This decision came from the high data quality and giving high weight to the OFL CV criterion, as well as consistency of signals from surveys, catch at age, and model results. There was also a relatively low effect of revised MRIP estimates in the stock assessment; only minor retrospective patterns in the statistical catch-at-age model; and the unlikelihood that additional adjustments (e.g., for ecological factors or below-average recruitment in the past two years) would increase uncertainty. Several surveys show declines or low abundance in early years to record lows in the mid-1990s and increases in abundance thereafter. Age structure in surveys shows a decline or low abundance of older ages in survey catches in early years and increases in abundance of older ages in recent years. Age structure in commercial landings-at-age and recreational landings-at-age show similar trends of increasing abundance of older ages in the stock. Several large recruitment events have been indicated by survey indices. In combination, these trends are consistent with lower fishing mortality rates in recent years, and increasing stock abundance as indicated by model results. Although up to 40% of the catch weight is attributable to the recreational fishery, the increase in recreational catch related to new MRIP estimates is relatively low in comparison to other stocks.

Table 6 shows the previously approved OFLs and ABCs. ABCs are based on projections that assume the ABC will be fully caught in each year; recruitment is sampled from 1984-2018. OFL total catches are

⁸ 60th Northeast Stock Assessment Workshop (2015) assessment report and peer review summaries are available at: <https://www.nefsc.noaa.gov/saw/reports.html>

⁹ A prepublication copy of the August 2019 operational stock assessment report prepared for the Council and the SSC is available at: <http://www.mafmc.org/ssc-meetings/2019/september-9-11>

catches in each year fishing at $F_{MSY} = 0.215$, prior to calculation of the associated annual ABC. The ABC projections were based on application of the Council’s risk policy for a stock with a typical life history, resulting in an ABC P^* of 40% in each year. As previously stated and described in more detail below, the Council has since revised their risk policy.

Table 6: Previously approved 2020 and 2021 OFLs and ABCs, as well as the associated fishing mortality rate, P^* , and SSB projections (Source: personal communication, Mark Terceiro, Northeast Fisheries Science Center).

Year	OFL total catch		ABC total catch		ABC F	ABC P^*	SSB	
	mil lb	mt	mil lb	mt			mil lb	mt
2020	41.17	18,674	35.77	16,227	0.185	0.40	362.73	164,530
2021	35.30	16,012	30.67	13,913	0.185	0.40	335.80	152,318

The SSC considered the following to be the most significant sources of uncertainty in the 2019 operational assessment:¹⁰

- Following the record 2015 year class, recruitments in 2016, 2017, and 2018 have all been below the time series mean. If this trend continues, short-term projections, which assume random values from the recruitment distribution over the 1984-2018 time series, may overestimate allowable catches absent additional high recruitments. However, the stock is currently above the target level, so reduction back to the target biomass would be expected.
- The scup Statistical Catch at Age uses multiple selectivity blocks. The final selectivity block (2006-2018) is the longest in the model. The applicability of the most recent selectivity block to the current fishery condition is uncertain. If the fishery selectivity implied in this block changes, estimates of stock number, spawning stock biomass, and fishing mortality become less reliable.
- Most of the fishery-independent indices used in the model provide estimates of the abundance of scup < age 3. One consequence is that much of the information on the dynamics of scup of older ages arise largely from the fishery catch-at-age and from assumptions of the model, and are not conditioned on fishery-independent observations. As a result, the dynamics of these older fish remain uncertain. Knowledge of the dynamics of these older age classes will become more important as the age structure continues to expand.
- The projection on which the ABC was determined is based on an assumption that the quotas would be landed in 2019, 2020, and 2021.

The SSC also retained the following sources of uncertainty from the 2015 benchmark assessment:¹¹

- Uncertainty exists with respect to the estimate of natural mortality used in the assessment.
- Uncertainty exists as to whether the MSY proxies ($SSB_{40\%}$, $F_{40\%}$) selected and their precisions are appropriate for this stock.
- Survey indices are particularly sensitive to scup availability, which results in high inter-annual variability. Efforts were made to address this question in the Stock Assessment Workshop and Stock Assessment Review Committee (SAW/SARC) that should be continued.

¹⁰A summary of the September 2019 SSC meeting is available at: <https://www.mafmc.org/ssc-meetings/2019/september-9-11>

¹¹A summary of the July 2015 SSC meeting is available at: <http://www.mafmc.org/ssc-meetings/2015/july-21-23>

Revisions to the Council's Risk Policy

The Council first implemented a risk policy and ABC control rule in 2011 to comply with the 2006 re-authorization of the MSA. In 2017, the Council expressed interest in more comprehensively considering economic and social factors in addition to biological factors in its risk policy. In 2019, a workgroup comprised of NOAA Fisheries staff, SSC members, academics and Council staff was formed and tasked with developing and analyzing various risk policy alternatives in order to assess the short and long-term trade-offs between stock biomass protection and economic yield and benefits. Members of the workgroup built off their existing biological and economic management strategy evaluation (MSE) models.

The Council considered nine different risk policy alternatives at its December 2019 meeting, ultimately approving a combination of two alternatives described in the document.¹² The approved risk policy allows for increased risk under high stock biomass conditions (increased P^* at most biomass levels, compared to the previous risk policy; Figure 3). The change is greatest for stocks with biomass above the target level (B_{MSY}). The revised risk policy retains the previous stock replenishment threshold (i.e., biomass levels where $P^*=0$) of $B/B_{MSY} \leq 0.1$. The policy uses a linear ramping for B/B_{MSY} values less than 1.0 up to a maximum P^* of 0.45 when stock biomass is at its target. For stocks with B/B_{MSY} values over 1.0, a second linear ramp is used up to a maximum P^* of 0.49 for stocks at or above $B/B_{MSY} = 1.5$.

In addition to the changes described above, the Council also approved removing the typical/atypical designation associated with the current risk policy.

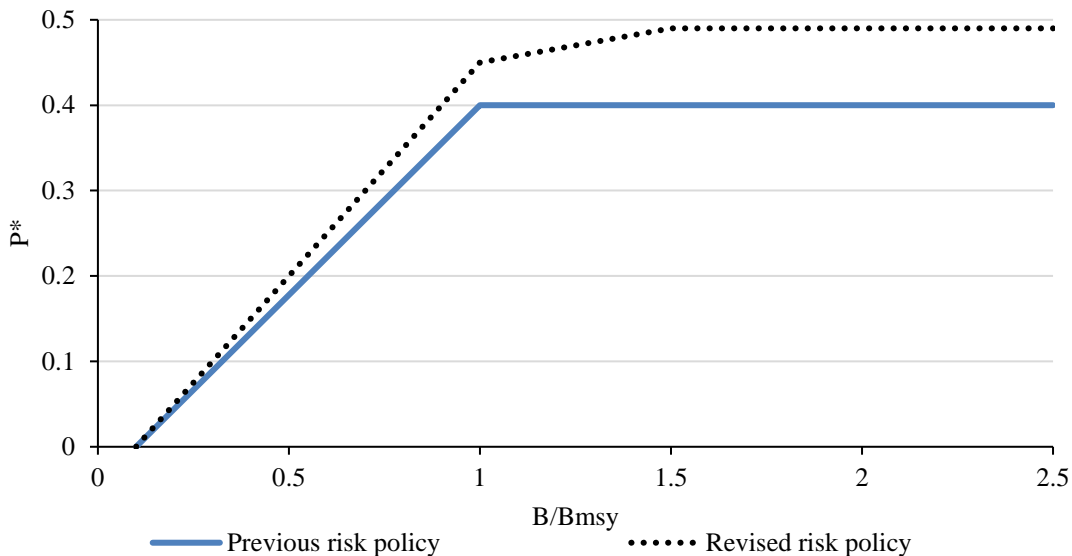


Figure 3: Acceptable probability of overfishing (P^*) at different biomass levels under the Council's previous and revised risk policies.

¹² Alternatives 2 and 8 described in the December 2019 discussion document available at <http://www.mafmc.org/briefing/december-2019>.

Staff Recommendation for 2021 ABC

Staff recommend revising the previously implemented specifications for scup for the 2021 fishing year based on the recent revisions to the Council's risk policy, as described in Table 2 and Table 7. This would revise the 2021 ABC from 30.67 million pounds (13,912 mt) to 34.81 million pounds (15,790 mt). This represents a 13% increase in the ABC. Recommended revisions were calculated based on the Council's revised risk policy using the currently implemented 2021 OFL of 35.30 million pounds (16,012 mt), a projected 2021 B/Bmsy of 1.63, and the SSCs currently applied OFL CV of 60%.

Table 7: Current and staff recommended 2021 ABCs and P* values.

Measure	2021: Current	2021: Staff Recommendation
ABC	30.67 mil lb (13,913 mt)	34.81 mil lb (15,791 mt)
P*	0.40	0.49

Other Management Measures

Commercial and Recreational Annual Catch Limits (ACLs)

As specified in the FMP, 78% of the ABC is allocated to the commercial fishery as a commercial ACL and 22% is allocated to the recreational fishery as a recreational ACL (Figure 3). ACLs include both landings and discards. The ABC allocation percentages were implemented through Amendment 8 (1996) and first came into effect in 1997. These allocations were based on the proportions of commercial and recreational catch during 1988-1992 and cannot be modified without an FMP action such as an amendment.

If the SSC adopts the revised 2021 ABC recommended in the previous section, the 2021 commercial ACL would be 27.15 million pounds (12,317 mt) and the 2021 recreational ACL would be 7.66 million pounds (3,474 mt).

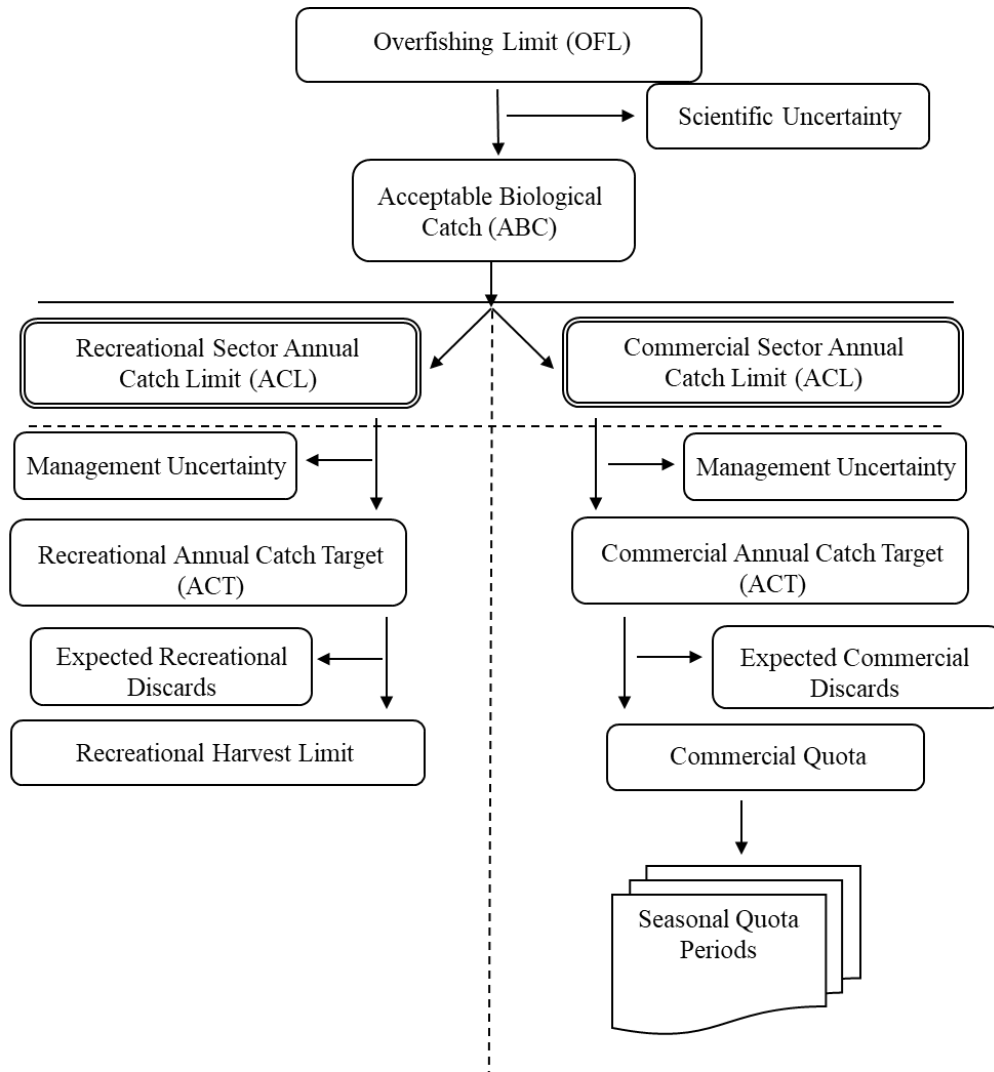


Figure 4: Scup catch and landings limit calculation methodology.

Annual Catch Targets (ACTs)

The Monitoring Committee recommends ACTs for the Council and Board’s consideration. ACTs may be either equal to the ACLs or reduced from the ACLs to account for management uncertainty. Management uncertainty can include uncertainty in the ability of managers to control catch and uncertainty in quantifying the true catch (i.e. estimation errors). This can occur due to a lack of sufficient information about catch (e.g. due to late reporting, under-reporting, and/or misreporting of landings or discards) or due to a lack of management precision (i.e. the ability to constrain catch to desired levels).

The sector-specific landings performance for recent years is shown in Table 3; however, note that the recreational fishery data includes the old MRIP estimates given that past RHLs were set with assessment information based on the pre-calibration recreational time series. For this reason, the new MRIP data cannot reasonably be compared to past RHLs. From 2015-2018, commercial and recreational landings have been consistently below the quota and RHL. MRIP data using the old methodology is unavailable for 2019; therefore, RHL performance cannot be evaluated for 2019. The commercial quota monitoring

system is timely and typically successful in constraining landings to the commercial quota.

In recent years, the Monitoring Committee and the Commission's Technical Committee have spent a great deal of time developing new and alternative methodologies to evaluate management uncertainty in the recreational fishery, the predictability and uncertainty in recreational catch estimates, and the influence of recreational regulations on harvest. These Committees plan to continue to work to make improvements to the evaluation process for recreational measures. For 2021, staff recommend no reduction in catch from the recreational or commercial ACLs so that each sector's ACT is set equal to the ACL.

Commercial Quotas and Recreational Harvest Limits (RHLs)

Staff recommend maintaining the currently implemented split of the ABC into expected discards (24%) and landings (76%), which was included in the NEFSC's 2021 ABC projections, and applying these proportions to the revised 2021 ABC to project discards. While this split does not impact the sector-specific ACLs which are derived using the catch-based allocation, total projected discards are used to derive the commercial quotas and RHLs for scup by subtracting projected discards from the sector-specific ACTs. Projected discards from the stock assessment are typically apportioned between commercial and recreational fisheries using the average percent of dead discards attributable to each sector over the past three years (Figure 4, Table 1). This requires the assumption that patterns in discards will be similar in future years as in past years. Changes in regulations, availability, year class strength, market demand, and other factors can impact discards from one year to the next.

The currently implemented 2021 specifications assume that 80.7% of total dead discards will come from the commercial fishery and 19.3% from the recreational fishery based on 2016-2018 data (Table 1). While the MC had recommended using a 10 year average instead, the Council and Board adopted limits based on a 3 year average. The increase in the proportion attributable to the recreational fishery compared to previous years (e.g., 12.7% during 2014-2016)¹³ is based in part on the revisions to the MRIP data which suggest that recreational catch, harvest, and discards are higher than previously thought.

After subtracting projected discards from the recommended commercial ACT, the recommended 2021 commercial quota under the revised ABC is 20.50 million pounds (9,299 mt; Table 2). Under this recommended commercial quota, the 2021 Winter I quota would be 9.25 million pounds (4,194 mt), the Summer quota would be 7.99 million pounds (3,622 mt), and the Winter II quota would be 3.27 million pounds (1,483 mt). All Winter II quotas are prior to any quota rollover from Winter I, if applicable.

After subtracting projected discards from the recommended recreational ACT, the recommended 2021 RHL is 6.07 million pounds (2,752 mt; Table 2).

Commercial Winter I and Winter II Quota Period Possession Limits

Commercial possession limits are designed to help constrain landings to the seasonal period quotas. The Winter I possession limit is 50,000 pounds. After 80% of the Winter I quota is landed, the possession limit drops to 1,000 pounds. The Winter II possession limit is initially set at 12,000 pounds. If the Winter I quota is not fully harvested, as has been the case in recent years, the Winter II possession limit increases by 1,500 pounds for every 500,000 pounds of scup not landed during the Winter I period. There are no

¹³ Scup Assessment Update for 2017 is available at: <http://www.mafmc.org/ssc-meetings/2017/july-19-20>

federal possession limits during the Summer quota period; however, there are state possession limits.

Most commercial scup trips in recent years landed well below the Winter I and Winter II possession limits. These possession limits have not been modified since 2012, when the Winter I limit increased from 30,000 to 50,000 pounds and 2014 when the initial Winter II limit increased from 2,000 to 12,000 pounds. In 2018, the Council and Commission moved October from the Summer period to the Winter II period, resulting in a higher trip limit being in effect during that month. Staff recommend no changes to the Winter I and Winter II possession limits for 2021.

Commercial Minimum Fish Size

The minimum size for retention of scup in the commercial fishery is 9 inches total length. This regulation applies to all commercial landings of scup, including landings of incidental catch. This measure was first implemented in 1996, when scup were first managed by the Council and Commission. The Council and Board considered modifying this measure in 2005, 2012, and in 2015. After reviewing this measure in detail 2015, the Monitoring Committee, Council, and Board all recommended no changes. The rationale for this recommendation is described in the Summer Flounder, Scup, and Black Sea Bass Commercial Management Measures Review document from 2015.¹⁴ In the past, advisors have expressed differing opinions on the commercial minimum fish size for scup. Staff recommend that this regulation remain unchanged in 2021.

Commercial Trawl Mesh Size

Trawl vessels which possess more than 1,000 pounds of scup from October 1 through April 14, more than 2,000 pounds of scup from April 15 through June 15, and more than 200 pounds of scup from May 1 through August 31 must use a minimum mesh size of 5.0 inches. These regulations were modified in 2015 (effective in 2016) and 2018 (effective in 2019). In late 2015, the Council approved an increase in the November-April incidental limit from 500 to 1,000 pounds in recognition of the substantial increase in SSB and expansion of the age structure of the population since this measure was last modified in 2004. In August 2019, the Council approved an increase in the incidental scup possession limit during April 15-June 15 to 2,000 pounds to decrease discards in the spring inshore squid fisheries.

The Council recently funded a project which analyzed 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. Results confirmed that the current minimum mesh sizes for all three species are effective at releasing most fish smaller than the commercial minimum sizes (i.e., 14 inches total length for summer flounder, 9 inches total length for scup, and 11 inches total length for black sea bass). The study was not able to identify a common mesh size for all three species that would be effective at minimizing discards under the current minimum fish size limits. However, the authors concluded that a common mesh size of 4.5 or 5 inches diamond for scup and black sea bass would be effective at releasing undersized fish.

The Monitoring Committee reviewed the results of this study in 2018 and recommended no changes to the commercial minimum mesh sizes for 2019. They recommended clarification of the objectives of the Council regarding consideration the mesh sizes (e.g., establishing a common minimum mesh size,

¹⁴ The Summer Flounder, Scup, and Black Sea Bass Commercial Management Measures Review is available at: <http://www.mafmc.org/briefing/december-2015>

minimizing discards, and/or maintaining or increasing catches of legal-sized fish). Input from the commercial fishing industry should be sought before any minimum mesh size changes are considered.

Staff will continue to work with the Monitoring Committee and Advisory Panel in 2020 to further analyze and consider potential changes to mesh size regulations. Currently, staff recommend no changes to the scup minimum mesh sizes and associated possession limits for 2021.

Commercial Pot and Trap Regulations

NMFS dealer data show that pots/traps accounted for about 5% of scup commercial landings in 2019. Pots and traps used in the commercial scup fishery must have either a circular escape vent with a 3.1 inch minimum diameter or square or rectangular escape vents with each side being at least 2.25 inches in length. The Council and Commission hosted a workshop in 2005 to review several studies on vent size. Workshop participants did not recommend any changes in the vent sizes for the commercial scup fishery. The Monitoring Committee reviewed these measures in 2015 and recommend no changes. Staff recommend no changes to these measures for 2021.

Recreational Seasons, Possession Limits, and Minimum Size

The Council and Board will discuss 2021 recreational scup seasons, possession limits, and minimum fish sizes at their joint meeting in December 2020. Data from the first four “waves” (i.e. the two-month reporting increments for recreational data) of 2020 recreational landings are expected to be available in October 2020. The Monitoring Committee will meet in November to review these landings data and make recommendations for any necessary changes in recreational management measures. Staff have no recommendations for 2021 recreational management measures at this time.