



Mid-Atlantic Fishery Management Council
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MEMORANDUM

Date: November 8, 2023
To: Chris Moore, Executive Director
From: Hannah Hart, Staff
Subject: Scup Recreational Management Measures for 2024-2025

Summary

This memo provides information to assist the Monitoring Committee (MC), Advisory Panels, the Mid-Atlantic Fishery Management Council (Council), and the Atlantic States Marine Fisheries Commission's (Commission's) Summer Flounder, Scup, and Black Sea Bass Management Board (Board) in developing recommendations for scup recreational measures (i.e., bag, size, and season limits) for 2024-2025.

The target level of harvest that 2024-2025 measures must aim to be achieved will be determined using the Percent Change Approach, as required by Framework 17/Addendum XXXIV. This is the first year that two-year measures will be considered for scup under this approach. As described in more detail below, the harvest target will be defined based on expectations of 2024-2025 harvest under 2023 measures compared to the average 2024-2025 RHL, as well as considerations about stock biomass.

A model referred to as the Recreational Demand Model (RDM) has been developed by the Northeast Fisheries Science Center (NEFSC). The RDM was used to set 2023 recreational scup measures. As described in more detail in the next section, the RDM remains the best currently available tool for predicting recreational scup harvest in upcoming years under different management measures. As such, it should be used to define the appropriate harvest target and resulting measures for scup. The RDM predicts that an 80% confidence interval around estimated 2024-2025 harvest under 2023 measures is entirely above the average 2024-2025 RHL. Given the very high biomass of scup, **the Percent Change Approach requires a 10% reduction in harvest in 2024**. Additional runs of the RDM are necessary to determine the appropriate measures to achieve this reduction.

As described in more detail below, an Accountability Measure (AM) has been triggered based on an overage of the average 2020-2022 recreational Annual Catch Limit (ACL). For stocks with biomass above the target level, as is the case for scup, the regulations require adjustments to the recreational measures; however, they do not specify how the measures should be modified. In a letter dated October 30, 2023, the NOAA Fisheries Regional Administrator stated that no additional action is required in 2024 to address the recent scup overages, given the reductions implemented for 2023 as well as the improvements made to the RDM which will be used for setting management measures for 2024.

The MC is tasked with recommending recreational scup management measures for 2024-2025. For scup, the Council and Board agree to federal waters recreational management measures that apply throughout federal waters from Maine through North Carolina. State waters measures are typically determined separately through the Commission process; however, the combination of both federal waters and state waters measures must achieve the specified percent change as defined through the Percent Change Approach. This year, the MC will also reconsider the shortened federal recreational scup season (May 1 – December 31) adopted at the December 2022 joint Council/Board meeting. Given the required 10% reduction in harvest required in 2024 based on the results of the Percent Change Approach, a removal of the May 1 – December 31 federal season for 2024 may not be appropriate, however, if desirable the Monitoring Committee could consider recommending alternative measures that achieve the same reduction in place of the federal waters season.

Recreational Demand Model

The RDM uses trip attributes such as expected harvest and costs, as well as the availability of different sizes of fish, to estimate the likelihood that an angler will go fishing under a given set of regulations. The RDM is informed by a 2022 survey of anglers from Maine through Virginia as well as recent size distribution information from the stock assessment. The RDM can predict harvest and discards of scup at the trip, state, wave, and mode level under different sets of recreational measures. The RDM also predicts how regulations for summer flounder and black sea bass may impact harvest and discards of scup. Additional information about this model can be found in this overview document: <https://www.mafmc.org/s/fluke-RDM-overview-final-report.pdf>.

The RDM was used to set 2023 scup recreational measures. Prior to 2023, scup recreational measures were informed by Marine Recreational Information Program (MRIP) data and the Monitoring Committee's expert judgement. The RDM represents a major improvement over prior methods for setting recreational measures in that it accounts for factors such as angler preferences and varying year class strength, which could not be explicitly accounted for under the previous methods. The RDM is based on peer-reviewed models for other species and was reviewed by the Council's Scientific and Statistical Committee (SSC) in September 2022. Several improvements have been made since the SSC review. The Monitoring and Technical Committees have also discussed the RDM several times over the past few years and several additional improvements have been made in response to Monitoring and Technical Committee feedback.^{1,2} For all these reasons, the RDM is the best tool currently available for use in determining the harvest target and the associated recreational measures for 2024-2025.

Determining the Percent Change in Harvest for 2024-2025

Framework 17/Addendum XXXIV implemented a new process for setting recreational measures called the Percent Change Approach.³ Under this approach, measures aim to achieve a specified percent change in harvest compared to the expectation of harvest in the upcoming year(s) under current measures. Unlike the previous process, the recreational measures no longer aim to achieve but not exceed the recreational

¹ Additional information at https://asmfc.org/uploads/file/64dbc727SFBSB_TC_Report_May2023.pdf.

² Additional information at <https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/6541443d28772b1877b0ab95/1698776125234/Monitoring+Committee+9-20-23+Summary.pdf>

³ See action documents and additional information at <https://www.mafmc.org/actions/hcr-framework-addenda>.

harvest limit (RHL). Instead, measures aim to achieve a different level of harvest, which will vary based on the following two factors:

- 1) A confidence interval (CI) around an estimate of expected harvest in the upcoming two years under current measures compared to the average RHL for the upcoming two years and
- 2) Biomass compared to the target level, as defined by the most recent stock assessment.

The resulting percent change in harvest that measures should aim to achieve is summarized in Table 1.

This process is intended to allow recreational measures to remain unchanged across two years, aligned with the timing of updated management track stock assessments, which are expected to be available every other year for scup. For 2023, measures were set for one year only given the schedule for the management track assessments. Thus, 2024-2025 is the first time this process will be used to set two-year measures.

Additional details about how this process will be applied for 2024-2025 are included below.

Table 1: Process for determining appropriate percent change in expected harvest when developing measures under the Percent Change Approach. Cells highlighted in yellow indicate the percent change in harvest needed for scup in 2024-2025 based on the information summarize on the next page.

<i>Column 1</i> Future RHL vs Estimated Harvest	<i>Column 2</i> Biomass compared to target level (SSB/SSB_{MSY})	<i>Column 3</i> Change in Harvest
Future 2-year average RHL is greater than the upper bound of the harvest estimate CI (harvest expected to be lower than the RHL)	Very high (greater than 150% of target)	Liberalization percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 40%
	High (at least the target level, but no higher than 150% of target)	Liberalization percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 20%
	Low (below the target stock size)	Liberalization: 10%
Future 2-year average RHL is within harvest estimate CI (harvest expected to be close to the RHL)	Very high (greater than 150% of target)	Liberalization: 10%
	High (at least the target level, but no higher than 150% of target)	No liberalization or reduction: 0%
	Low (below the target stock size)	Reduction: 10%
Future 2-year average RHL is less than the lower bound of the harvest estimate CI (harvest is expected to exceed the RHL)	Very high (greater than 150% of target)	Reduction: 10%
	High (at least the target level, but no higher than 150% of target)	Reduction percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 20%
	Low (below the target stock size)	Reduction percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 40%

Column 1: Compare Average 2024-2025 RHL to Expected Harvest Under 2023 Measures

The RDM was used to generate an estimate of expected 2024-2025 harvest under status quo (i.e., 2023) measures, with an associated 80% confidence interval.⁴ The median coastwide projected 2024-2025 harvest under 2023 measures is 15.29 million pounds, with an 80% CI of 14.07 – 16.29 million pounds. The average 2024-2025 scup RHL of 12.51 million pounds (average of the 2024 RHL of 13.18 million pound and the 2025 RHL of 11.84 million pound) is below this CI.

Column 2: Biomass Compared to Target Level

As shown in Table 1, the second step under the Percent Change Approach is to consider the most recent estimate of spawning stock biomass compared to the target level. According to the 2023 management track stock assessment (using data through 2022),⁵ scup is greater than 150% of the target stock size (estimated at 246% of the spawning stock biomass target). This puts scup in the “**very high**” stock size category for the Percent Change Approach (Table 1, Column 2).

Column 3: Determining Necessary Percent Change in Harvest

As shown in Table 1, Column 3, the two comparisons described above indicate that the Percent change Approach requires a 10% reduction in expected harvest in 2024. This change in harvest is relative to the projected 2024-2025 harvest under status quo (2023) measures as estimated by the RDM. As such, the target level of harvest that 2024-2025 measure must aim to achieve is 13.76 million pounds (10% reduction from 15.29 million pounds).

Accountability Measures

Federal regulations include reactive accountability measures (AMs) for when the recreational scup annual catch limit (ACL) is exceeded. This can include paybacks of ACL overages depending on stock status and the magnitude of the overage, as described below. ACL overages in the recreational fishery are evaluated by comparing the most recent 3-year average recreational ACL against the most recent 3-year average of recreational dead catch (i.e., landings and dead discards). If average dead catch exceeds the average ACL, then the appropriate AM is determined based on the criteria listed below. This reflects minor revisions to the AMs made through Framework 17.

1. If the stock is overfished ($B < \frac{1}{2} B_{MSY}$), under a rebuilding plan, or the stock status is unknown: The exact amount, in pounds, by which the most recent 3-year average recreational ACL has been exceeded, will be deducted in the following fishing year, or as soon as possible once catch data

⁴ In May 2023, the Monitoring and Technical Committees recommended the use of an 80% CI around the harvest estimate for development of 2024-2025 measures. See the meeting report at: https://asmfc.org/uploads/file/64dbc727SFSBSB_TC_Report_May2023.pdf.

⁵ Available at: https://static1.squarespace.com/static//e_Scup_2023_MTA_2023_06_05.pdf.

are available. This payback may be evenly spread over two years if doing so allows for use of identical recreational management measures across the upcoming two years.

2. If biomass is above the threshold, but below the target ($\frac{1}{2} B_{MSY} < B < B_{MSY}$), and the stock is not under a rebuilding plan:
 - a. If only the recreational ACL has been exceeded, then adjustments to the recreational management measures, taking into account the performance of the measures and conditions that precipitated the overage, will be made in the following fishing year, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.
 - b. If the most recent estimate of total fishing mortality exceeds F_{MSY} (or the proxy), then an adjustment to the recreational ACT will be made as soon as possible as a payback that will be scaled based on stock biomass. The calculation for the payback amount in this case is: (3-year average overage amount) * $(B_{msy}-B)^{1/2} B_{msy}$. This payback may be evenly spread over two years if doing so allows for the use of identical recreational management measures across the upcoming two years. If an estimate of total fishing mortality is not available for the most recent complete year of catch data, then a comparison of total catch relative to the ABC will be used.
3. If biomass is above the target ($B > B_{MSY}$): Adjustments to the recreational management measures, taking into account the performance of the measures and conditions that precipitated the overage, will be made in the following fishing year, or as soon as possible thereafter, once catch data are available, as a single-year adjustment.

Based on a comparison of 2020-2022 average recreational dead catch to the 2020-2022 average ACLs, recreational AMs have been triggered for scup (Table 2). Given scup biomass is above the biomass target, the regulations require adjustments to the recreational measures. The regulations do not specify how the measures should be modified.

Recreational measures for scup were restricted in 2022 with the goal of reducing harvest by the required 10% under the Percent Change Approach. These restrictions included a decreased federal recreational possession limit of 40 fish and shortened the federal-waters season from May 1 – December 31 open season. States specific regulations were also modified and are shown in Table 5. These restrictions are not accounted for in the 2020-2022 comparisons which triggered an AM for 2023. The impacts of the 2023 restrictions on harvest cannot be fully evaluated with currently available preliminary partial year MRIP data. It is also worth noting that several states did not implement the restrictions until mid-year in 2023; therefore, the restrictions may not have their full intended effect in 2023.

In a letter dated October 30, 2023, the NOAA Fisheries Regional Administrator stated that no additional action is required in 2024 to address the recent scup overage, given the recent 10% reduction in harvest adopted by the Council and Board as well as the improvements made to the RDM which will be used for setting management measures for 2024.

Table 2: Evaluation of scup recreational AMs using the 2020-2022 average recreational ACL compared to the 2020-2022 average recreational dead catch.

	Recreational Harvest (mil lbs.)	Recreational Dead Discards (mil lbs.)	Total Dead Recreational Catch (mil lbs.)	Recreational ACL (mil lbs.)	% Over/Under ACL
2020	12.91 ^a	1.19 ^a	14.10	7.87	79%
2021	16.62	1.44	18.06	7.66	136%
2022	17.36	1.63	18.99	7.06	169%
Average	15.63	1.42	17.05	7.53	126%

^a 2020 recreational estimates were developed using imputation methods (incorporating 2018 and 2019 data) to account for missing 2020 APAIS data.

Federal Waters Recreational Season Adopted in December 2022

At the joint December 2022 meeting, the Council and Board agreed to reduce the federal recreational possession limit from 50 to 40 fish and shorten the federal-waters season from a year-round open season to a May 1 – December 31 open season. Due to the timing of federal rule making, the modified federal season would not go into effect until 2024, therefore having no impact on 2023 harvest. Although the Council and Board approved the modified federal scup season, there was some discussion about how the May 1 – December 31 open season may disproportionately impact some states. Specifically, members from some southern states like New Jersey voiced concern about federal waters being closed at the start of the year given the importance of waves 1 and 2 (January – April) to the for-hire sector. Northern states however, expressed the need for the modified season since those states would take the bulk of the required reduction in state waters and there was a desire to maintain some consistency between state and federal waters regulations. There was also concern about the accuracy of wave 1⁶ and 2 MRIP data and how in past years a single trip has greatly inflated harvest estimates for those waves.

At the March 2023 Board meeting, the Board reviewed proposed measures for state waters. After determining that the proposed state adjustments met virtually the full 10% reduction in coastwide harvest required under the Percent Change Approach, the Board questioned if the scup federal waters closure (January 1 – April 30) was still needed and requested it be reconsidered.

This topic was further discussed at April 2023 Council meeting. After much discussion, the Council agreed to revisit the discussion later this year after updated stock and recreational catch information is available.

This topic again came up at the joint Council/Board August 2023 meeting. The NOAA Fisheries Regional Administrator indicated that if the forthcoming recreational management measures setting process, including the results from the Percent Change Approach, indicates that a shortened season is no longer needed or if alternative measures could be recommended in place of the shortened federal recreational season, then NOAA Fisheries could publish a rule by the end of 2023 to modify the federal season for 2024.

⁶ Within the scup management unit wave 1 (January – February) Marine Recreational Information Program (MRIP) data is only available for North Carolina due to survey coverage.

As noted above, the RDM estimate for 2024-2025 harvest under 2023 measures, combined with the most recent estimate of biomass compared to the target level indicate that a 10% reduction in harvest is required under the Percent Change Approach. Given these results, removal of the federal waters shortened season for 2024 would not be appropriate. **However, if desirable, the MC could consider recommending alternative measures that achieve the same reduction in place of the January – April federal waters closure.**

Past Management Measures

Scup RHLs were first implemented in 1996. Since then, the RHL varied from a low of 1.24 million pounds in 1999 and 2000 to a high of 13.18 which is the expected RHL for 2024. Performance relative to RHLs through 2019 can only be evaluated using pre-revision ("old") MRIP data, since past RHLs were set using assessments that incorporated the previous MRIP time series.

Until 2002, the recreational scup fishery was managed with coastwide measures as dictated by the FMP at the time. These measures included a common minimum fish size, possession limit, and open season that were implemented in both state and federal waters. Since 2003, the Commission has applied a regional management approach to recreational scup fisheries in state waters, where New York, Rhode Island, Connecticut, and Massachusetts develop regulations intended to achieve 97% of the RHL. Federal waters regulations have been updated occasionally since 2003; however, from 2015 – 2021 federal waters measures remained unchanged (Table 3).

However, due to recreational overages in 2019-2020 and expected overages in 2021 the Council and Board required a 1-inch increase to the scup recreational minimum size in state and federal waters for 2022. In federal waters, this resulted in a 10-inch total length minimum size limit (Table 3). Management measures in state waters vary by state, mode (e.g., private, for-hire), and season, but like federal waters, the minimum size limit in each state was increased by 1 inch resulting in a 10-inch size limit in most northern states and a 9-inch minimum size limit in most southern states (Table 4). Implementation of the state specific 1-inch minimum size limit increase varied by state, but all states regulations were updated prior to July 1, 2022.

In December 2022, the Council and Board met jointly to consider scup recreational measures for 2023. As noted above this was the first time setting recreational management measures using the new Percent Change Approach in conjunction with results from the RDM. Using the RDM, the Percent Change Approach required a 10% reduction in recreational harvest of scup in 2023. The Council and Board agreed to reduce the federal recreational possession limit from 50 to 40 fish and shorten the federal-waters season from a year-round open season to a May 1 – December 31 open season. These measures did not achieve the full 10% reduction in harvest required; therefore, the Council and Board also agreed that the states would further modify state measures through the Commission process to achieve the full 10% coastwide harvest reduction. State specific management measures adopted in 2023 are shown in Table 5.

Table 3: Summary of federal management measures for the scup recreational fishery, 1997-2025. ABCs, TACs, ACLs, RHLs, and harvest are in millions of pounds. Recreational harvest values are for Maine through North Carolina and old and revised MRIP estimates are shown.

Year	TAC/ABC	Rec. ACL	RHL	Rec. harvest (Old MRIP)	% over/under RHL ^a	Rec. harvest (New MRIP)	Bag limit (# of fish)	Size limit (inches, total length)	Open season
1997	9.10	-	1.95	1.20	-38%	2.54	-	7	1/1 - 12/31
1998	7.28	-	1.55	0.87	-44%	1.82	-	7	1/1 - 12/31
1999	5.92	-	1.24	1.89	+52%	4.63	-	7	1/1 - 12/31
2000	5.92	-	1.24	5.44	+339%	11.39	-	-	1/1 - 12/31
2001	8.37	-	1.76	4.26	+142%	9.77	50	9	8/15 - 10/31
2002	12.92	-	2.71	3.62	+34%	6.23	20	10	7/1 - 10/2
2003	18.65	-	4.01	8.48	+111%	17.21	50	10	1/1 - 2/28 7/1 - 11/30
2004	18.65	-	3.99	7.28	+82%	12.83	50	10	1/1 - 2/28 9/7 - 11/30
2005	18.65	-	3.96	2.69	-32%	4.30	50	10	1/1 - 2/28 9/18 - 11/30
2006	19.79	-	3.99	3.72	-7%	5.93	50	10	1/1 - 2/28 9/18 - 11/30
2007	13.97	-	2.74	4.56	+66%	7.10	50	10	1/1 - 2/28 9/18 - 11/30
2008	9.9	-	1.83	3.79	+107%	5.76	15	10.5	1/1 - 2/28 9/18 - 11/30
2009	15.54	-	2.59	3.23	+25%	6.28	15	10.5	1/1 - 2/28 10/1 - 10/31
2010	17.09	-	3.01	5.97	+98%	12.48	10	10.5	1/1 - 2/28 10/1 - 10/31
2011	31.92	-	5.74	3.67	-36%	10.32	10	10.5	6/6 - 9/26
2012	40.88	31.89	8.45	4.17	-51%	8.27	20	10.5	1/1 - 12/31
2013	38.71	30.19	7.55	5.37	-29%	12.57	30	10	1/1 - 12/31
2014	35.99	28.07	7.03	4.43	-37%	9.84	30	9	1/1 - 12/31
2015	33.77	26.35	6.8	4.41	-35%	11.93	50	9	1/1 - 12/31
2016	31.11	6.84	6.09	4.26	-30%	10.00	50	9	1/1 - 12/31
2017	28.4	6.25	5.50	5.42	-1%	13.54	50	9	1/1 - 12/31
2018	39.14	8.61	7.37	5.61	-24%	12.98	50	9	1/1 - 12/31
2019	36.43	8.01	7.37	5.40 ^b	-27%	14.12	50	9	1/1 - 12/31
2020	35.77	7.87	6.51	N/A	+98%	12.91	50	9	1/1 - 12/31
2021	34.81	7.66	6.07	N/A	+174%	16.62	50	9	1/1 - 12/31
2022	32.11	7.06	6.08	N/A	+186%	17.36	50	10	1/1 - 12/31
2023	29.67	10.39	9.27	-	-	-	40	10	5/1 - 12/31
2024 ^c	43.82	15.34	13.18	-	-	-	TBD	TBD	TBD
2025 ^c	39.74	13.91	11.84	-	-	-	TBD	TBD	TBD

^a Based on a comparison with old MRIP estimates through 2019 and new MRIP estimates starting in 2020.

^b Old MRIP estimates provided to the National Marine Fisheries Service Greater Atlantic Regional Fisheries Office by the Northeast Fisheries Science Center.

^c Pending approval and implementation by NMFS.

Table 4: State recreational fishing measures for scup in 2022.

State	Minimum Size (inches)	Possession Limit	Open Season
MA (private & shore)	10	30 fish; 150 fish/vessel with 5+ anglers on board	April 13-December 31
MA (party/charter)	10	30 fish	April 13-April 30; July 1- December 31
		50 fish	May 1-June 30
RI (private & shore)	10	30 fish	January 1-December 31
RI shore program (7 designated shore sites)	9		
RI (party/charter)	10	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1-October 31
CT (private & shore)	10	30 fish	January 1-December 31
CT shore program (45 designed shore sites)	9		
CT (party/charter)	10	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1-October 31
NY (private & shore)	9	30 fish	January 1-December 31
NY (party/charter)	9	30 fish	January 1-August 31; November 1-December 31
		50 fish	September 1- October 31
NJ	10	50 fish	January 1- December 31
DE	9	50 fish	January 1-December 31
MD			
VA		30 fish	
NC, North of Cape Hatteras (N of 35° 15'N)		50 fish	

Table 5: State recreational fishing measures for scup in 2023.

State	Minimum Size (inches)	Possession Limit	Open Season
MA (private vessel)	10.5	30 fish	May 1 – December 31
MA (shore)	9.5		
MA (party/charter)	10.5	40 fish	May 1 – June 30
		30 fish	July 1 – December 31
RI (private vessel)	10.5	30 fish	May 1 – December 31
RI (shore)	9.5		
RI (party/charter)	10.5 ⁴	30 fish	May 1 – August 31; November 1 – December 31
		40 fish	September 1 – October 31
CT (private vessel)	10.5	30 fish	May 1 – December 31
CT (shore)	9.5		
CT (Authorized For-Hire Monitoring Program Vessels)	10.5	30 fish	May 1 – August 31; November 1 – December 31
		40 fish	September 1 – October 31
NY (private vessel)	10.5	30 fish	May 1 – December 31
NY (shore)	9.5		
NY (party/charter)	10.5	30 fish	May 1 – August 31; November 1 – December 31
		40 fish	September 1 – October 31
NJ	10	30 fish	August 1 – December 31
DE	9	40 fish	January 1 – December 31
MD			
VA			
NC, North of Cape Hatteras (N of 35° 15'N)			

Recreational Catch and Harvest Trends

Table 6 provides the annual MRIP time series of recreational harvest (in number of fish and weight), dead discards (in weight), and catch (in number of fish) for 2009-2022, as well as the estimates for waves 1-4 for 2023. Since 1981, estimated recreational scup catch fluctuated from a peak of 41.20 million fish in 2017 to a low of 6.60 million fish in 1997. Estimated harvest fluctuated from a high of 30.43 million scup (about 14.18 million pounds) in 1986 to a low of 2.74 million scup (about 1.82 million pounds) in 1998. In 2022, recreational harvest was about 17.71 million fish (about 17.36 million pounds), and approximately 36.02 million scup were caught, with a release rate of 51% (Table 6).

2023 recreational catch and landings data from MRIP are currently available as preliminary estimates for the first four waves (January – August). Preliminary MRIP estimates indicate that through August 2023, 19.89 million scup were caught and 9.91 million scup (about 9.46 million pounds) were harvested from Maine through North Carolina (Table 6). The preliminary 2023 wave 1 – 4 harvest estimate is about 1.46 million pounds less than the 2019-2022 average wave 1 – 4 harvest estimates.

Table 6: Recreational scup catch (i.e., harvest and live and dead discards) and harvest by year, ME - NC, 2012-2023 based on new MRIP estimates. 2023 values are preliminary and are for waves 1-4 only.

Year	Catch (mil of fish)	Harvest (mil of fish)	Harvest (mil lbs.)	Dead discards^a (mil lbs.)	% Released (released alive)	Avg. weight of landed fish (lbs.)
2012	21.24	7.33	8.27	1.40	65%	1.13
2013	25.88	11.55	12.64	1.25	55%	1.09
2014	20.88	9.49	10.27	1.06	55%	1.08
2015	25.15	11.50	12.17	1.28	54%	1.06
2016	31.49	9.14	10.00	1.90	71%	1.09
2017	41.20	13.82	13.53	2.38	66%	0.98
2018	30.37	14.55	12.98	1.42	52%	0.89
2019	28.67	14.95	14.12	1.23	48%	0.94
2020	27.27	14.49	12.91	1.19	47%	0.89
2021	31.70	16.60	16.62	1.44	48%	1.00
2022	36.02	17.71	17.36	1.63	51%	0.98
2023 (wave 1-4 only)	19.89	9.91	9.46	--	50%	0.95

^aDead discards from the 2023 management track assessment.

Total landings by state in recent years are shown in Table 7, including full year estimates for 2018 – 2022 and wave 1 – 4 estimates for 2023. On average, recreational scup harvest (in pounds) from 2018 – 2022 accounted for about 5% in federal waters and 95% in state waters (**Figure 1**). During 2018 – 2022 about 10% of recreational harvest was from party/charter vessels, 25% was from shore-based anglers, and 65% was from private/rental boats (**Figure 2**).

Table 7: Recreational scup harvest (in pounds) by state for all waves (January – December) 2017-2022. 2023 values are preliminary and are for waves 1-4 only.

State	2018	2019	2020	2021	2022	2023 (w1-4)
ME	0	0	0	0	0	0
NH	0	0	0	0	0	0
MA	3,021,958	1,924,202	1,174,793	3,763,514	2,098,575	776,243
RI	2,030,259	2,856,459	1,330,397	2,467,932	2,898,790	1,582,362
CT	2,574,308	2,242,549	2,951,959	2,856,535	1,822,874	1,697,575
NY	4,906,041	6,970,873	6,253,478	7,177,770	10,249,645	5,330,495
NJ	443,700	118,830	1,200,943	194,092	284,678	68,995
DE	362	0	316	1,179	1,757	0
MD	369	444	578	331	2,211	0
VA	0	229	0	157,454	0	0
NC	420	2,637	1,346	2,831	2,848	2,978
Total	12,977,417	14,116,223	12,913,810	16,621,638	17,361,378	9,458,648

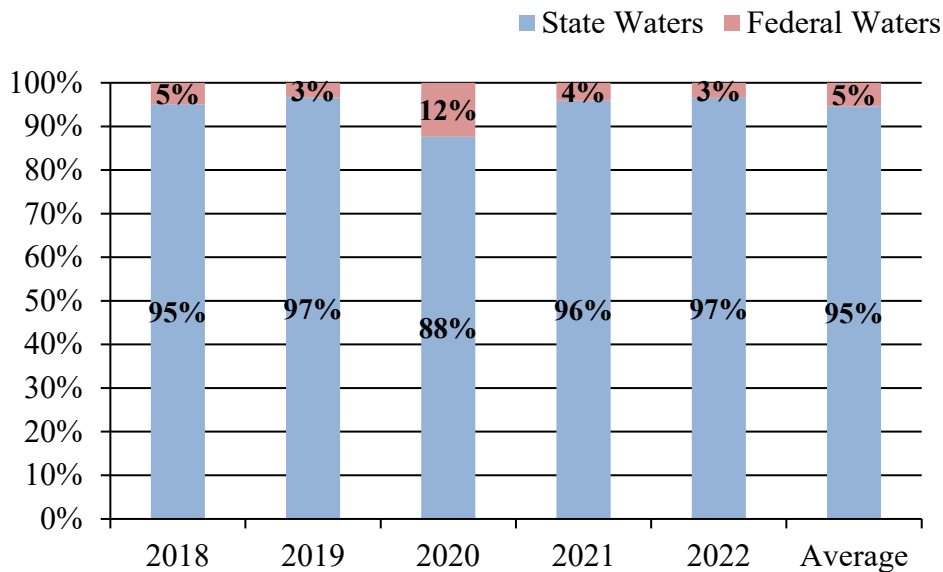


Figure 1: Proportion of 2018 – 2022 recreational harvest (in pounds) in state and federal waters, ME-NC. *Note: area information is self-reported based on the area where the majority of fishing activity occurred on each trip.*

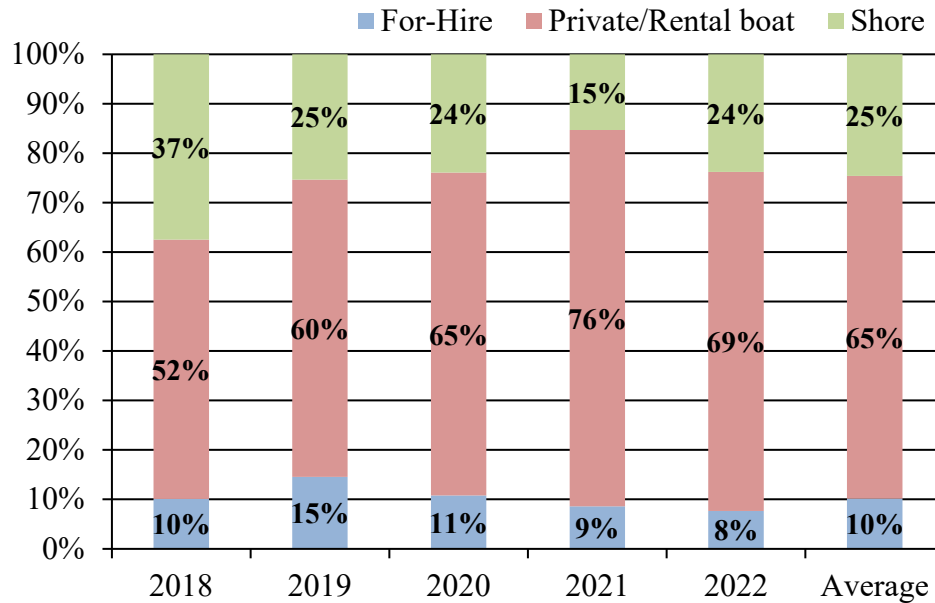


Figure 2: Proportion of 2018 – 2022 recreational harvest (in pounds) by mode.

2024-2025 Staff Recommendation

As noted above, the RDM estimate for 2024-2025 harvest under 2023 measures, combined with the most recent estimate of biomass compared to the target level indicate that a 10% reduction in harvest is required under the Percent Change Approach. The 10% reduction is applied to the RDM estimate of 2024-2025 harvest under 2023 measures (i.e., 15.29 million pounds). As such, the target level of harvest that 2024-2025 measures must aim to achieve is 13.76 million pounds.

The MC is tasked with developing recommendations for recreational bag, size, and season limits for federal waters for 2024-2025. The MC may also preliminarily consider what adjustments may be needed to state measures; however, state waters measures will be developed separately through the Commission process. As described above, federal and state water measures should collectively achieve the 10% reduction required under the Percent Change Approach. Given on average federal waters only account for about 5% of total harvest, and the RDM cannot estimate harvest in federal waters separately from state waters, staff recommend continued use of the current federal water measures as shown in Table 3 and adjustments to state waters measures made through the Commission process to achieve the full 10% reductions.