



Mid-Atlantic Fishery Management Council

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

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

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

Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: November 8, 2023
To: Chris Moore, Executive Director
From: Julia Beaty, Staff
Subject: 2024 Black Sea Bass Recreational Measures

Summary

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

As described in more detail below, the target level of harvest that 2024 measures must aim to achieve will be determined using the Percent Change Approach, as required by Framework 17/Addendum XXXIV. The harvest target will be defined based on expectations of 2024 harvest under 2023 measures compared to the 2024 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 black sea bass measures. The RDM remains the best currently available tool for predicting recreational black sea bass harvest in upcoming years under different management measures. As such, it should be used to define the appropriate harvest target and the resulting measures for black sea bass. The RDM predicts that an 80% confidence interval around estimated 2024 harvest under 2023 measures is entirely above the 2024 RHL. Given the very high biomass of black sea bass, **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. It is anticipated that additional information from the RDM will be available prior to the Monitoring Committee's meeting on November 13-14, 2023 to inform the discussion of 2024 recreational measures.

As described in more detail below, an Accountability Measure has been triggered based on an overage of the average 2020-2022 recreational Annual Catch Limit. For stocks with biomass above the target level, as is the case for black sea bass, the regulations require adjustments to the recreational measures; however, they do not specify how the measures should be modified. In a letter to the Council dated October 30, 2023, the NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) Administrator stated that no additional action is required in 2024 to address the recent black sea bass 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 2024.¹

The Monitoring Committee is tasked with recommending either use of coastwide measures (i.e., identical measures in all states and federal waters) or conservation equivalency (state- or region-specific measures in state waters, and "non-preferred" coastwide measures that are waived in favor of the state measures). Under conservation equivalency, the Council and the Board must adopt non-preferred coastwide and precautionary default measures (described in more detail below). The combination of state/regional measures must achieve the same level of expected harvest as the non-preferred coastwide measures. For 2024, the combination of state/regional measures and the non-preferred coastwide measures must achieve the 10% reduction in harvest required by the Percent Change Approach. State/regional measures will be determined through the Commission process in early 2024.

Staff recommend continued use of conservation equivalency to waive federal waters recreational black sea bass measures in 2024. Depending on additional results of the RDM, which are not yet available, the current non-preferred coastwide measures may need to be modified. The Monitoring Committee should also consider if the current precautionary default measures are expected to be more restrictive than the measures any state will consider implementing in 2024 under the 10% reduction. If this is not the case, they may also need to be modified.

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 black sea bass at the trip, state, wave, and mode level under different sets of recreational measures. The RDM also predicts how regulations for summer flounder and scup may impact harvest and discards of black sea bass. 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 black sea bass recreational measures. Prior to 2023, black sea bass 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.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.

¹ The letter is available at https://www.mafmc.org/s/GARFO-to-MAFMC_2022-FSB-Catch-Accounting-Letter-and-Report-10-20-23.pdf.

² For example, see https://asmfc.org/uploads/file/64dbc727SFSBSB_TC_Report_May2023.pdf and <https://www.mafmc.org/s/Monitoring-Committee-9-20-23-Summary.pdf>.

Determining the Percent Change in Harvest Needed for 2024

Framework 17/Addendum XXXIV implemented a new process for setting recreational measures called the Percent Change Approach.³ Under this approach, measures must 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, recreational measures no longer aim to achieve but not exceed the RHL. Instead, measures aim to achieve a different level of harvest, which varies 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.

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 black sea bass in 2024 based on the information summarized 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, 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 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, but no higher than 150% of target)	No liberalization or reduction: 0%
	Low (below 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, 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 target stock size)	Reduction percent equal to difference between harvest estimate and 2-year avg. RHL, not to exceed 40%

³ Additional information is available at <https://www.mafmc.org/actions/hcr-framework-addenda>.

The Percent Change Approach 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. However, black sea bass measures will be set on a one-year cycle for 2024 as the previously anticipated 2023 management track assessment was postponed to the summer of 2024.

Given this change in the timing of the assessment, the 2024 overfishing limit, acceptable biological catch limit (ABC), recreational annual catch limit (ACL), and recreational annual catch target (ACT), from which the RHL is derived, were all set equal to the 2023 values. The 2024 RHL (6.27 million pounds) differs from the 2023 RHL (6.57 million pounds) only due to the use of updated discard data in the calculations.⁴ Framework 17/Addendum XXXIV did not contemplate a situation where the RHL would change without updated stock assessment information. As shown in Table 1, the Percent Change Approach only allows for status quo measures when the upcoming RHL is within the harvest estimate CI and biomass is “high” (i.e., at least the target, but no higher than 150% of the target). Black sea bass is currently in the “very high” biomass category; therefore, the Percent Change Approach does not allow for status quo measures. The Monitoring Committee should consider what changes in measures may be needed in 2024 due to the change in the RHL from 2023 to 2024.

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

The RDM was used to generate an estimate of expected 2024 harvest under 2023 measures, with an associated 80% CI.⁵ The median coastwide projected 2024 harvest under 2023 measures is 8.40 million pounds, with an 80% CI of 7.72 – 9.08 million pounds. The 2024 RHL of 6.27 million pounds 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. The 2021 management track stock assessment remains the most recent stock assessment information for black sea bass.⁶ According to this assessment, black sea bass was 210% of the target stock size in 2019. This puts black sea bass in the “very high” stock size category for the Percent Change Approach.

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 harvest under 2023 measures as estimated by the RDM. As such, the target level of harvest that 2024 measures must aim to achieve is 7.56 million pounds.

Accountability Measures

Federal regulations include reactive accountability measures (AMs) for when the recreational black sea bass 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

⁴ For more information, see the tab 4 briefing materials available at <https://www.mafmc.org/briefing/august-2023>.

⁵ 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.

⁶ Available at: https://apps-nefsc.fisheries.noaa.gov/saw/reviews_report_options.php.

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 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) * $(B_{MSY} - B) / \frac{1}{2} B_{MSY}$. 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. 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.

According to data provided by GARFO, average 2020-2022 recreational dead catch exceeded the 2020-2022 average recreational ACL by 64% (Table 2). Given that the most recent stock assessment indicates that black sea bass spawning stock biomass is above the target level, the regulations require adjustments to the recreational measures. The regulations do not specify how the measures should be modified.

Recreational measures for black sea bass were restricted in 2023 with the goal of reducing harvest by 10% compared to the RDM prediction of 2023 harvest under 2022 measures. These restrictions are not accounted for in the 2020-2022 comparisons which triggered an AM for 2024. The impacts of the 2023 restrictions on harvest cannot be fully evaluated with currently available preliminary partial year MRIP data.

As previously noted, in a letter to the Council dated October 30, 2023, the GARFO Administrator stated that no additional action is required in 2024 to address the recent black sea bass 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.

Table 2: Evaluation of black sea bass recreational AMs using the 2020-2022 average recreational ACL compared to the 2020-2022 average recreational dead catch based on data provided by GARFO.

Year	Recreational Harvest (mil lb)	Recreational Dead Discards (mil lb)	Total Dead Recreational Catch (mil lb)	Recreational ACL (mil lb)	% Over/ Under ACL
2020	9.05	3.46	12.50	8.09	55%
2021	11.97	4.20	16.16	7.93	104%
2022	8.34	3.59	11.92	8.76	36%
Average	9.78	3.75	13.53	8.26	64%

Past Management Measures

Joint Council and Commission management of the recreational black sea bass fishery began in 1998. Until 2010, identical measures were used in state and federal waters, as dictated by the FMP at the time. From 2011 through 2018, the Commission developed a series of addenda to enable state-specific and regional measures to be used in state waters under a process referred to as “ad hoc regional management.” With approval of the Commission’s Addendum XXXII in 2018, an addendum is no longer needed to modify the state measures.

Under the ad hoc approach, Delaware through North Carolina (north of Cape Hatteras) set measures that were generally consistent with federal measures while Massachusetts through New Jersey set state-specific measures that were more restrictive than the federal waters measures.

State and federal waters measures remained unchanged during 2018-2021 with the exception of minor season adjustments in Massachusetts, Virginia, and North Carolina which were intended to maintain status quo levels of harvest. The Council and Board agreed to leave the recreational black sea bass measures in all states and federal waters unchanged in 2020 and 2021 despite expected RHL overages. This was viewed as a temporary solution to allow more time to consider how to fully transition the management system to use of the revised MRIP data,⁷ including further development of the then ongoing Commercial/Recreational Allocation Amendment (Amendment 22) and the Recreational Harvest Control Rule Framework/Addenda (Framework 17/Addendum XXXIV). Given the resulting RHL and ACL overages (Table 3), and expected continued overages under status quo measures, the Council and Board required states to restrict their measures in 2022 to collectively achieve a 20.8% reduction in harvest compared to 2018-2021 average harvest with the goal of preventing an overage of the 2022 RHL. The Council and Board required measures to be restricted again in 2023. Following the Percent Change Approach, all states modified their measures with the goal of achieving a 10% reduction in harvest compared to the RDM estimate of 2023 harvest under 2022 measures (Table 4).

The conservation equivalency process for waiving federal waters measures was used for black sea bass for the first time in 2022. The Council and Board agreed to continue use of this approach in 2023. Under conservation equivalency, the Council and Board must adopt two associated sets of measures: non-preferred coastwide measures, and precautionary default measures. The non-preferred coastwide measures are a set of measures that would be expected to

⁷ In July 2018, MRIP released revisions to their time series of recreational catch and landings estimates based on adjustments for a revised angler intercept methodology and a new effort estimation methodology (i.e., a transition from a telephone-based effort survey to a mail-based effort survey). Recreational data included in this memo reflect revised MRIP data except where otherwise stated.

constrain harvest to the appropriate coastwide target⁸ if implemented on a coastwide basis (i.e., the same measures in all states and in federal waters). The coastwide measures are included in the federal regulations but waived in favor of state waters measures if the combination of state measures can be demonstrated to collectively constrain harvest to the same coastwide target as the non-preferred coastwide measures. **The non-preferred coastwide measures for 2023 include a 15 inch minimum size, a 5 fish possession limit, and a May 15 – September 8 open season.**

The precautionary default measures would be implemented in any state or region that failed to develop adequate measures to constrain landings as required by the conservation equivalency guidelines. **The precautionary default measures in 2023 include a 16 inch minimum size, a 2 fish possession limit, and a June 1 – August 31 open season.**

Starting in 2018, the Council and Board provided states the opportunity to open their recreational black sea bass fisheries during February for the first time since 2013 under specific constraints. Participating states may need to adjust their measures during the rest of the year to account for February harvest to help ensure participation in this opening does not increase the chances of the coastwide target level of harvest being exceeded. Proposals for February openings must be reviewed by the Commission’s Technical Committee and approved by the Board. To date, only Virginia and North Carolina have participated in the February opening. North Carolina ended their participation after 2020 and has indicated that they do not intend to participate in future years. Virginia participated every year except 2022 and has expressed an interest in participating in 2023. Any relevant proposals for the February 2024 fishery will be considered by the Commission’s Technical Committee and the Board at a later date.

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⁸ Through 2022, the target level of harvest was the RHL. Starting with 2023, the target level of harvest is defined by the Percent Change Approach.

Table 3: Black sea bass recreational landings, dead discards, and dead catch compared to the RHL and recreational ACL, 2014-2024. Values are provided in the “old” MRIP units for 2014-2019 and the “new” MRIP units for starting in 2020 as the ACLs and RHLs did not account for the revised MRIP data until 2020. Therefore, overage/underage evaluations must be based in the old MRIP units through 2019 and the new MRIP units starting in 2020. All values are in millions of pounds. *Harvest in 2023 is preliminary and based on waves 1-4 (January – August) only.*

Year	Version of MRIP data	Rec. harvest ^a	RHL	RHL over/under	Rec. dead discards ^c	Rec. dead catch	ACL	ACL over/under
2014	Old MRIP (pre-revision)	3.67	2.26 ^b	+62%	0.84	4.51	2.90	+56%
2015		3.79	2.33	+63%	0.82	4.61	2.90	+59%
2016		5.19	2.82	+84%	1.21	6.40	3.52	+82%
2017		4.16	4.29	-3%	1.27	5.43	5.38	+1%
2018		3.82	3.66	+4%	1.10	4.92	4.59	+7%
2019		3.46	3.66	-5%	0.50	3.96	4.59	-14%
2020 ^d	New MRIP (post-revision)	9.05	5.81	+56%	3.46	12.51	8.09	+55%
2021		11.97	6.34	+89%	4.20	16.17	7.93	+104%
2022		8.34	6.74	+24%	3.59	11.93	8.76	+36%
2023		4.86 <i>prelim. W 1-4</i>	6.57	--	--	--	9.16	--
2024		--	6.27	--	--	--	9.16	--

^a Values for 2018 -2019 were provided by GARFO. All other values are from MRIP.

^b The 2014 RHL reflects a 3% deduction for Research Set Aside.

^c Estimates for 2014-2017 are from data update provided by the NEFSC in 2018 (most recent data from NEFSC in “old” MRIP units; available at <https://www.mafmc.org/ssc-meetings/2018/july-17-18>). Values for 2018 -2022 were provided by GARFO.

^d Recreational harvest estimates for 2020 were impacted by temporary suspension of shoreside intercept surveys due to COVID-19. NMFS used imputation methods to fill gaps in 2020 catch data with data collected in 2018 and 2019. For black sea bass, the 2020 harvest estimate for Maine-Virginia relied on approximately 17% imputed data. For more information on imputation methods see: <https://www.mafmc.org/s/1-2020-Marine-Recreational-Catch-Estimates-QA-52121.pdf>.

Table 4: 2023 state waters black sea bass recreational measures.

STATE	Size Limit	Possession Limit	Open Season
Maine	13"	10 fish	May 19-September 21, October 18-December 31
New Hampshire	16.5"	4 fish	January-December 31
Massachusetts	16.5"	4 fish	May 20-September 7
Rhode Island private & shore	16.5"	2 fish	May 22-August 26
		3 fish	August 27-December 31
Rhode Island for-hire	16"	2 fish	June 18-August 31
		6 fish	September 1-December 31
Connecticut private & shore	16"	5 fish	May 19-June 23, July 8-December 1
CT authorized for-hire monitoring program vessels		5 fish	May 19-August 31
		7 fish	September 1-December 31
New York	16.5"	3 fish	June 23-August 31
		6 fish	September 1-December 31
New Jersey	12.5"	10 fish	May 17-June 19
		1 fish	July 1-August 31
		10 fish	October 1-October 31
		15 fish	November 1-December 31
Delaware	13"	15	May 15-September 30, October 10-December 31
Maryland	13"	15	May 15-September 30, October 10-December 31
Virginia	13"	15	February 1-28, May 15-July 6, August 9-December 31
North Carolina North of Cape Hatteras (35° 15'N)	13"	15	May 15-September 30, October 10-December 31

Recreational Catch and Landings Trends

Table 3 in the previous section shows a recent time series of recreational black sea bass harvest, dead discards, and dead catch in weight. Recreational black sea bass harvest in 2022 (the most recent complete year of data) totaled 8.14 million pounds, a decrease from the estimate of 11.97 million pounds in 2021 and 9.05 million pounds in 2020.

MRIP data for 2023 are currently incomplete and preliminary. Preliminary estimates for the first four waves (January - August) of 2023 are currently available. These data suggest that 4.86 million pounds of black sea bass were harvested from Maine through Cape Hatteras, North Carolina during January - August 2023. Although this is the lowest wave 1-4 estimate since 2014, it is only 15% below the 2013-2022 average wave 1-4 harvest (5.70 million pounds). During 2013-2022, waves 1-4 accounted for 52-69% of annual harvest (average of 63%). The

contribution of waves 5-6 harvest to the annual total can vary from year to year; therefore, it is not possible to predict the full year 2023 harvest based on preliminary wave 1-4 data with confidence.

On average over the most recent three complete years (2020-2022), New York accounted for the greatest proportion of recreational black sea bass harvest in weight (25%), followed by New Jersey (20%), Massachusetts (17%), Connecticut (13%), Rhode Island (11%), Virginia (7%), Delaware (3%), Maryland (2%), and North Carolina (less than 1%; Figure 1).

Most recreational black sea bass harvest in Massachusetts through New York occurs in state waters, while most harvest in New Jersey through North Carolina occurs in federal waters (Table 5).

On average across 2020-2022, 89% of black sea bass harvest in weight from Maine through North Carolina occurred on private/rental boats, followed by 9% on party/charter boats, and 2% from shore.

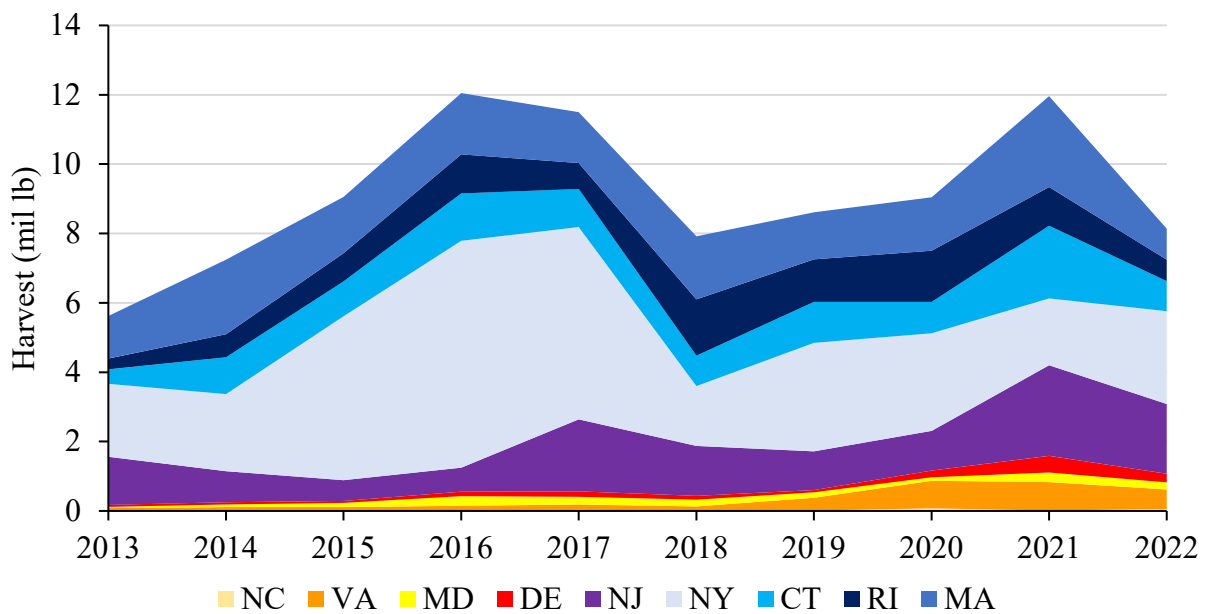


Figure 1: Recreational black sea bass harvest by state, 2013-2022. North Carolina values are north of Cape Hatteras only.

Table 5: Average proportion of black sea bass recreational harvest in weight from federal and state waters, 2020-2022.

State	Federal waters	State waters
MA	8%	92%
RI	30%	70%
CT	24%	76%
NY	35%	65%
NJ	66%	34%
DE	84%	16%
MD	99%	1%
VA	95%	5%
NC	79%	21%

Staff Recommendations for 2024 Measures

As noted above, the RDM estimate for 2024 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 harvest under 2023 measures (i.e., 8.40 million pounds). As such, the target level of harvest that 2024 measures must aim to achieve is 7.56 million pounds. Additional RDM runs are needed to determine specific measures which may be appropriate to achieve this reduction.

Staff recommend continued use of regional conservation equivalency for black sea bass in 2024. As previously described, under conservation equivalency, the Council and Board must adopt a set of non-preferred coastwide measures. If implemented in all states and in federal waters, these measures must be expected to constrain coastwide harvest to the harvest target. The current non-preferred coastwide measures include a 15 inch minimum size, a 5 fish possession limit, and a May 15 – September 8 open season. Due to timing constraints related to improvements made to the RDM in 2024, estimates of expected harvest under the current non-preferred coastwide measures are not currently available. It is anticipated that these estimates will be available prior to the Monitoring Committee’s meeting on November 13-14, 2023. The Monitoring Committee will use these results to inform recommendations for modifications to the non-preferred coastwide measures which may be necessary to achieve the 10% reduction in harvest.

The precautionary default measures in 2023 include a 16 inch minimum size, a 2 fish possession limit, and a June 1 – August 31 open season. The precautionary default measures are intended as a deterrent against states/regions implementing measures inconsistent with the conservation equivalency guidelines and are not associated with any particular harvest target. They are intended to be more restrictive than the measures any state or region would consider implementing. It is not yet known how states will modify their measures to achieve a 10% reduction in 2024. Massachusetts currently has the most restrictive black sea bass measures, with a 16.5 inch minimum size limit, a 4 fish bag limit, and an open season of May 20-September 7 (Table 4). If the Monitoring Committee believes the current precautionary default measures are more restrictive than any state will consider implementing in 2024, then it may be appropriate to leave these measures unchanged.