



Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: Coastal Pelagics Management Board
FROM: Cobia Technical Committee
DATE: October 9, 2024
SUBJECT: Cobia Recreational Measures for the Northern Region

The Cobia Technical Committee (TC) met via webinar on September 13 and September 25, 2024 to discuss methods for calculating recreational management measures for the Northern Region to meet its harvest target. This memorandum outlines those methods and resulting management options for the Northern Region for implementation in 2025.

TC Members in Attendance: Angela Giuliano (Chair, MD), Nichole Ares (RI), Zach Schuller (NY), Jamie Darrow (NJ), Brooke Lowman (VA), Melinda Lambert (NC), Justin Yost (SC), Chris Kalinowsky (GA), Michael Larkin (NOAA)

ASMFC Staff: Emilie Franke

Others in Attendance: Chris Batsavage (NC, Board Proxy), Alan Bianchi (NC), CJ Schlick (SC), Jesse Hornstein (NY), Shanna Madsen (VA), Will Poston

Regional Allocations and 2021-2023 Harvest Evaluation

Addendum II to Amendment 1 of the Atlantic Cobia Fishery Management Plan (FMP) implements a new regional allocation framework which allocates the total 2024-2026 recreational harvest quota of 76,908 fish to two regions: Northern Region (RI-VA) and Southern Region (NC-GA). With implementation of new regional harvest targets, each region's average harvest from 2021-2023 was compared to its harvest target to determine if management changes are needed for 2025. Addendum II specifies using a rolling average of up to five years of harvest estimates under the same management measures to determine each region's average harvest. Since management measures were changed in some states in 2021, this evaluation only includes harvest estimates from 2021 through 2023.

Each region's harvest target, 2021-2023 average harvest, and resulting management implication is outlined in Table 1. Since the Northern Region average harvest is above its target, management changes are needed to reduce harvest to the target (15.9%). Since the Southern Region average harvest is below its target, states in that region maintain status quo measures. Addendum II does not allow regions to consider liberalizing measures before completion of the ongoing stock assessment SEDAR 95.

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Table 1. Regional recreational harvest targets, 2021-2023 average harvest, and required management change per Addendum II.

Region	Recreational Harvest Target	2021-2023 Average Recreational Harvest	Difference from Target	Management Change
Northern Region RI-VA	52,825 fish	62,832 fish	10,007 fish over target	15.9% reduction
Southern Region NC-GA	24,083 fish	23,474 fish	609 fish under target	Status Quo

FMP Requirements for Regional Management Measures

As the Northern Region implements the 15.9% reduction for 2025 measures, the current state-by-state measures will change to a set of regional measures. All states in a region must have the same size and vessel limits, but seasons may vary by state. The regional minimum size limit cannot be below 40” total length (36” fork length) as required by the FMP. Current recreational management measures for the Northern Region states are listed in Table 2 for reference. The rest of this report will refer to size limits in total length (TL) since states in the Northern Region implement regulations using TL.

Table 2. 2024 Recreational Management Measures for States in the Northern Region.

	2024 Size Limit	2024 Vessel Limit	2024 Season
RI, NY, NJ, DE	37” TL	1 fish	All Year
MD, PRFC, VA	40” TL (Virginia allows only 1 fish >50” per vessel)	2 fish	June 15 – September 15

Methods for New Management Measure Analysis

To achieve the required 15.9% reduction, managers could consider changing the size limit, vessel limit, season, or changing multiple measures simultaneously. The TC agreed on methods to address each type of management measure and potential combinations. The TC used MRIP data pooled across 2021, 2022, and 2023 for all analyses. Potomac River Fisheries Commission harvest is included as part of Maryland and Virginia’s harvest estimates.

Size Limit

First, the TC recognized the initial requirement for *de minimis* states that currently have a 37” minimum size limit (RI, NY, NJ, DE) to increase their minimum size to 40” per the FMP requirements. There is very little MRIP data for these four states given the limited, pulse nature of cobia in their state waters. Further, of the very few length samples available for these four states, none were <40”, so any potential reduction associated with RI, DE, NY, and NJ moving to a higher size limit cannot be quantified.

Assuming all states in the region would begin at a 40” minimum size, the TC compiled MRIP length frequencies for Rhode Island through Virginia to explore various size limit options and

associated reductions. The TC considered using only non-imputed (i.e., observed) length data, however, the sample size was much smaller than the sample size for combined non-imputed and imputed length data. The TC decided to include imputed data in the analysis to have a larger sample size. MRIP data were converted from fork length to total length based on cobia length data from the VMRC Sportfish Collection Program. The TC considered different ways to categorize the individual length datapoints into length bins to ensure the length bins matched with how regulations would be written (e.g., a 41" minimum size limit includes fish greater than or equal to 41.0"; a 53" maximum size limit includes fish up to and including 53.0"). The results of both length bin approaches were the same, and the 'floored' length bins (41" bin is 41.0" to 41.99") were ultimately used. For reduction calculations, fish no longer harvested under the new size limit of interest were assumed to be released, and the resulting additional release mortality was accounted for in the analysis. A 5% release mortality rate was used from the previous stock assessment SEDAR 58. Length datapoints under the current legal size of 40" were not counted toward the reduction as that non-compliance harvest is assumed to continue.

Vessel Limit

If the Northern Region implements a 1-fish vessel limit, there would be a reduction from Maryland, Virginia, and the Potomac River Fisheries Commission decreasing from their current 2-fish vessel limit. MRIP trip-level intercepts for Maryland and Virginia private vessel and charter boat trips were compiled to determine harvest per vessel trip and number of anglers on the vessel. Head boat harvest has been zero in recent years, and the vessel limit does not apply to shore harvest (subject to 1-fish bag limit), so shore harvest was assumed status quo. The TC assumed all trips would still occur under the lower vessel limit, but trips that previously harvested two fish would now harvest one fish and release the other. Those new releases were accounted for in the reduction calculation using the 5% release mortality rate noted previously.

If the Northern Region implements a 2-fish vessel limit, there would be a potential increase in harvest from Rhode Island, New York, New Jersey, and Delaware increasing from their current 1-fish vessel limit. There is not sufficient MRIP intercept data from these four states to calculate the potential increase, so the TC identified an upper and lower bound of potential increase. The upper bound (greatest potential increase) would be if RI-DE harvest doubles with the increased vessel limit, resulting in an increase of the northern region harvest of 2.5%. The lower bound would be if RI-DE harvest stays the same with the increased vessel limit, resulting in a 0% increase. The average increase would be 1.3%. The TC applied the upper bound 2.5% increase and the average 1.3% increase to all option calculations and there was only one option combination that differed between the two scenarios (noted in the option table below).

Season

The TC calculated estimated harvest by date (month, day) using combined 2021-2023 Maryland and Virginia MRIP data to explore various season date options and associated reductions. This method of using harvest at a daily level has been used for past cobia season analyses due to the short season duration and pulse nature of the fishery (i.e., catch may be much higher per day at the beginning of the season than at the end of the short season and may only occur for part of

a wave). Reductions could only be calculated for Maryland and Virginia season changes because there are not enough MRIP data for Rhode Island, New York, New Jersey, and Delaware to estimate reductions associated with season changes. Any available MRIP data for those states are typically for one year only (e.g., New York's estimated harvest in 2022 was 3,462 fish but was zero in 2021 and 2023). So, any change to season for those four states would not be credited toward the reduction.

Calculations for lengthening the Maryland and Virginia seasons were also calculated. If the vessel limit was reduced to 1 fish, the associated reduction would exceed the required 15.9%. To compensate, Maryland and Virginia could lengthen their season. Since there are no recent data for a season beyond the current June 15 through September 15 season, the TC calculated the daily harvest rate for the current season and assumed that constant daily rate for any additional days added to the season. The TC noted this was the only method available to conduct this analysis and there is a considerable amount of uncertainty, including varying daily catch rates across weekdays vs. weekends/holidays and the potential for cobia to be available earlier or later in the season as compared to previous years as the exact timing of fish arriving to particular state waters changes from year-to-year.

To combine reductions from multiple management changes (e.g., changing the size limit and season), the TC used the following equation $A + B + (A*B)$. This equation has been used to calculate cumulative reductions for cobia in the past, as well as for other species.

Options to Achieve the Reduction

Table 3 outlines the sets of management options that are estimated to achieve the 15.9% reduction based on the methods described above. The table is not an exhaustive list of possible options; there are combinations of other slot limits and other seasons the TC could provide. For example, for some size limits the table only includes seasons in 5-day increments (e.g., Sep 1, 2, 3, 4 not listed between August 31 and September 5).

The TC emphasizes there are many sources of uncertainty and management considerations, including:

- Analysis assumes fish availability, size frequencies, and angler effort are the same in future years as was observed in 2021-2023.
- If cobia's range continues to expand, more fish could become available to northern states and harvest could increase despite management measures to reduce harvest.
- Regarding what size fish are available, if some states are seeing primarily larger fish, a maximum slot limit could limit the fish available for harvest.
- The season expansion analysis assumes a constant daily harvest due to lack of recent data outside of the current seasons.
- It is very difficult to measure large cobia due to their size, so the process of measuring a large fish to comply with a maximum size limit or with a much higher minimum size limit could result in injury to the fish and a resulting increase in dead releases. Additionally, the effect of gaffing on release mortality may not be fully captured in the assumed release mortality rate. Note Virginia has prohibited gaffing since 2021.

- Virginia’s current size limit allows only 1 of the 2-fish per vessel to be over 50”. If this provision is implemented for the coast, there is the potential for high grading. If this provision is removed in favor of a slot limit with a 2-fish vessel limit, there could potentially be more harvest of larger fish (e.g., 2 fish harvested up to 53”). However, in 2021-2023 only one-third of the MD-VA trips intercepted by MRIP harvested the full 2-fish vessel limit. Overall, it is difficult to quantify any potential impacts of this particular provision.

Table 3. Management options (not an exhaustive list) estimated to achieve at least a 15.9% reduction in harvest for the Northern Region. Each option includes three components: size limit, vessel limit, and season. This table lists options that were closest (but not below) 15.9%. Each season option includes two possibilities: shortening the beginning of the season or shortening the end of the season. Note: The 2-fish vessel limit options assume the upper bound increase of RI-DE harvest due to increasing their vessel limit (2.5% increase to regional harvest).

Size Limit for RI-VA (TL)	Vessel Limit for RI-VA	Season for MD-VA*	Total Estimated Cumulative Reduction
40” minimum	1-fish	June 8 – September 15, OR June 15 – September 22	-16.6%
40” minimum	2-fish	June 15 – August 25**, OR June 30 – September 15	-16.7% -24.4%
41” minimum	2-fish	June 15 – August 31, OR June 27 – September 15	-17.5% -17.1%
42” minimum	2-fish	June 15 – August 31, OR June 27 – September 15	-20.4% -20.1%
43” minimum	2-fish	June 15 – September 15	-20.5%
40” – 51” slot	2-fish	June 15 – September 15	-16.4%
40” – 52” slot	2-fish	June 15 – August 31, OR June 20 – September 15	-23.4% -17.3%
40” – 54” slot	2-fish	June 15 – August 31 OR June 27 – September 15	-19.3% -18.9%
40” – 55” slot	2-fish	June 15 – August 27, OR June 30 – September 15***	-18.3% -27.4%
41” – 52” slot	2-fish	June 15 – September 15	-19.1%
42” – 54” slot	2-fish	June 15 – September 15	-17.8%

*Seasons implemented for RI, NY, NJ, DE would not be credited toward reduction due to lack of data for analysis.

**All options in the table, including this end date of August 25 were calculated assuming the upper bound of RI-DE increasing their vessel limit (2.5%). If the average 1.3% increase for RI-DE increasing their vessel limit was applied, this season end date could be August 27 with a cumulative estimated reduction of 16.0%.

***All options in the table, including this start date of June 30 were calculated assuming the upper bound of RI-DE increasing their vessel limit (2.5%). If the average 1.3% increase for RI-DE increasing their vessel limit was applied, the season start date would be one day earlier on June 29 with a cumulative estimated reduction of 16.1%.