



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmf.org

Atlantic Striped Bass Technical Committee and Plan Development Team Meeting Summary

Webinar
June 5, 2023

Technical Committee Members: Nicole Lengyel Costa (Chair, RI), Tyler Grabowski (Vice Chair, PA), Michael Brown (ME), Kevin Sullivan (NH), Gary Nelson (MA), Kurt Gottschall (CT), Caitlin Craig (NY), Brendan Harrison (NJ), Margaret Conroy (DE), Alexei Sharov (MD), Luke Lyon (DC), Ingrid Braun (PRFC), Josh McGilly (VA), Charlton Godwin (NC), Jeremy McCargo (NC), Steve Minkkinen (USFWS)

Plan Development Team Members: Nichola Meserve (MA), Nicole Lengyel Costa (RI), Caitlin Craig (NY), Brendan Harrison (NJ), Jordan Zimmerman (DE), Angela Giuliano (MD), Emilie Franke (ASMFC)

ASMFC Staff: Katie Drew, Emilie Franke, Toni Kerns

Public: Dennis Abbott (NH Board Proxy), Max Appelman (NOAA Board Member), Alan Bianchi (NCDMF), Mike Celestino (NJDEP-SAS Chair), Tony Friedrich, Jaclyn Higgins, Jesse Hornstein (NYDEC), Ray Kane (MA Board Member), Brooke Lowman (VMRC-SAS member), Shanna Madsen (VMRC), Will Poston, Charles Witek

Meeting Overview

The Atlantic Striped Bass Technical Committee (TC) and Draft Addendum II Plan Development Team (PDT) met via webinar on June 5, 2023 to discuss tasks supporting the 2023 Emergency Action and development of Draft Addendum II, which considers 2024 management options.

The TC and PDT will meet jointly again on June 28 via webinar to continue addressing these tasks. In the interim, the PDT will also meet on June 15 via webinar to continue work on Draft Addendum II.

The estimated 2023 removals, projected 2023 and 2024 reductions, and projections discussed in this summary are initial results. **The results will be updated prior to the June 28th TC-PDT call to reflect the following TC input and discussion.**

Estimating 2023 Removals Accounting for Emergency Action

Striped Bass Management Board Motion Approved May 2, 2023

Move that the Striped Bass Board, by emergency action as outlined in the Commission's ISFMP Charter, implement a 31" maximum size to all existing recreational fishery regulations where a higher (or no) maximum size applies, excluding the Chesapeake Bay trophy fisheries. All other

recreational size limits, possession limits, seasons, gear restrictions, and spawning protections remain in place. Jurisdictions are required to implement compliant measures as soon as possible and no later than July 2, 2023.

TC Task for Emergency Action

The TC discussed methods to estimate 2023 removals accounting for the emergency 31" maximum size limit implementation. An estimate of 2023 removals is needed to project what level of 2024 removals would achieve the fishing mortality target for Draft Addendum II development.

As a starting point for discussion, ASMFC staff conducted initial calculations using 2018-2019 data to simulate effects of a strong year-class moving from age-7 to age-8 in the fishery (i.e., using the 2011-year class in 2018-2019 as a proxy for the 2015 year-class in 2022-2023). The TC discussed this past strong year-class estimation method (Method #1), and also recommended an additional method to estimate removals based on projections of the 2023 population (Method #2).

Method #1: Past Strong Year-Class Estimation

Method #1 estimates 2023 removals using 2018-2019 data to simulate fish availability and recreational catch when a strong year class (2011-year class as proxy) moves from age-7 to age-8 in the fishery, just as the 2015s are moving from age 7-8 from 2022-2023. This approach used the same assumptions and methods as were used to develop options for Addendum VI to Amendment 6.

2022 and 2023 recreational size limits were applied to 2018 and 2019 data, respectively, to simulate what recreational removals would have been under those measures. It was assumed the 2023 emergency 31" maximum size limit measures were effective starting in Wave 3 for the ocean region, and Wave 4 for the Chesapeake Bay in order to avoid counting large fish harvested during the Chesapeake Bay trophy season, which are exempt from the 31" maximum size limit.

As a strong year class moves from age-7 to age-8, this method estimated a 50% decrease in ocean recreational harvest and a 25% decrease in Chesapeake Bay recreational harvest occurring during Waves 3-6 and Waves 4-6, respectively, under the 31" maximum size limit. This method estimates an 8% decrease in ocean live releases and 4% decrease in Chesapeake Bay live releases for the same time period under the 31" maximum size limit.

To estimate 2023 removals, those percent reductions were applied to 2022 Waves 3-6 ocean recreational removals and Waves 4-6 Chesapeake Bay recreational removals. Recreational removals during the earlier waves and total commercial removals were assumed to be the same as 2022. Overall, the preliminary estimate is a 29% reduction in 2023 total removals relative to 2022 due to the emergency 31" maximum size limit.

TC Discussion on Method #1

The TC noted this method and assumptions are reasonable to estimate 2023 removals. The benefit is this is an empirical approach based on past observed data. One noted assumption is this method assumes any change in effort from 2018 to 2019 would also occur from 2022 to 2023. The TC noted the unpredictability of effort from year-to-year, so making any new or different assumptions about effort would be difficult. Similarly, TC members noted it would be difficult to make any new or different assumptions about how live releases might change with a narrower slot. For previous reduction calculations, the TC has assumed a 1:1 change in harvest and releases; in this case, any 31-35" fish that would have been harvested (prior 100% chance of dying) would be a new release (9% change of dying). No additional assumptions were made regarding potential increased fishing effort and live releases to find a fish within the slot.

A TC member requested staff consider applying the emergency 31" maximum size limit to at least part of the Chesapeake Bay Wave 3 recreational removals. The trophy fishery only occurs during two weeks of that wave, and the emergency 31" maximum size limit was effective for the other Chesapeake Bay recreational fisheries for the remainder of the wave. Staff will examine the length frequencies from that wave to consider this change, but did note the difficulty of separating out the trophy fish harvest, which are unaffected by the emergency action. Overall, this requested calculation change would likely have a very small impact on the results.

The TC discussed why live releases were estimated to decrease under the 31" maximum size limit. Last year in 2022, when the strong 2015 year-class was age-7, part of that abundant year class was above 28", and so available in the slot. But part of that abundant year class was still below 28" and therefore sub-legal. So it is possible that many 2022 releases were releases of under-size fish. In 2023, when the strong 2015 year-class is age-8, most of that abundant year class is above 28", and so directly within the 28-35" slot. So even if there are increased releases of fish over 31" due to the emergency action, there may be fewer sub-legal fish caught/ released. Figure 1 shows the size distribution of age-7 fish vs. age-8 fish (i.e., the predicted size distribution of the 2015 year-class in 2022 vs. 2023) relative to the Addendum VI ocean slot and the emergency action maximum size limit. It was noted that in the ocean in 2019, live releases decreased while harvest increased relative to 2018 as the strong 2011 year-class moved from age-7 to age-8.

Recommendation to Add Method #2: Projection-Based Estimation

In addition to Method #1, the TC requested a second estimation of 2023 removals using a projection-based method (Method #2). Method #2 will use the stock assessment model to project 2023 numbers-at-age and apply growth curves to estimate numbers-at-size in 2023. The change in size distribution and number of fish available from 2022 to 2023 will then be used to estimate how removals would change. Effort is assumed constant. Staff noted one challenge is determining what selectivity to use for the projection. Staff and TC members will work on completing Method #2 for review by the TC and PDT later this month.

The TC will then compare the estimated 2023 removals observation-based Method #1 to the projection-based Method #2. If the estimates are vastly different, the TC will determine which method to move forward with, or if the results should be averaged in some way. If the estimates result in different reduction calculations for 2024 measures in Draft Addendum II, the PDT requested clear guidance from the TC on what reduction level to achieve.

Draft Addendum II Guidance for 2024 Management Options

Striped Bass Management Board Approved Motion May 2, 2023

Move to initiate an Addendum to implement commercial and recreational measures for the ocean and Chesapeake Bay fisheries in 2024 that in aggregate are projected to achieve F -target from the 2022 stock assessment update ($F = 0.17$). Potential measures for the ocean recreational fishery should include modifications to the Addendum VI standard slot limit of 28-35" with harvest season closures as a secondary non-preferred option. Potential measures for Chesapeake Bay recreational fisheries, as well as ocean and Bay commercial fisheries should include maximum size limits. The addendum will include an option for a provision enabling the Board to respond via Board action to the results of the upcoming stock assessment updates (e.g., currently scheduled for 2024, 2026) if the stock is not projected to rebuild by 2029 with a probability greater than or equal to 50%.

Note: For measures beyond 2024, the Board noted their intent to consider the results of the upcoming 2024 stock assessment update to inform subsequent management action.

TC Task for Draft Addendum II

The TC will conduct projections to determine the level of removals (and resulting percent reduction from 2022) to achieve F target in 2024, as is the Board's intent with Draft Addendum II. After a percent reduction is determined, the PDT will develop management options to meet the reduction in 2024 relative to 2022 removals. The TC will provide guidance on option calculation methods and assumptions.

Projections to Achieve F -target in 2024

Projections are conducted using the 2022 stock assessment model configuration. To project the starting 2023 and 2024 populations, age-1 recruitment was estimated using the Maryland juvenile abundance index, and estimates of 2022 and 2023 removals were used.

Incorporating the Method #1 estimate of 2023 removals (described above), initial projections indicate 2024 removals would need to be 5.7 million fish to achieve F -target in 2024. This is a 16% reduction from 2022 levels. Projections will be re-run incorporating the Method #2 estimate of 2023 removals for comparison.

To estimate the probability of rebuilding to the spawning stock biomass target, projections were initially run using a constant catch assumption for 2024-2029 as a starting point for discussion. However, the TC recommended using a constant F assumption for 2024-2029. TC members noted the constant F assumption is more appropriate than a constant catch

assumption because catch would not remain constant if fewer fish are available to the fishery. Constant F takes into account removals in relation to fish availability. Projections will be re-run using a constant F assumption. Finally, TC members noted that neither a constant catch nor constant F projection is entirely reliable given changes in effort, fish availability, etc. that result in varying recreational removals from year-to-year.

TC Discussion on Draft Addendum II Options

For ocean recreational fishery options to modify the slot limit, the TC discussed effort assumptions and concerns about release mortality. TC members reiterated the difficulty of making any new or different assumptions about the scale of live releases since changes in effort and angler behavior are difficult to predict. TC members also noted that changing the harvestable size limit does not address recreational release mortality, which is still a large portion of fishing mortality. TC members noted the Board needs to consider addressing overall effort, including the catch-and-release fishery, in the management program. It was also noted that if seasons are considered, a consistent season will be difficult to implement since the timing of fish availability varies by state.

For both ocean and Chesapeake Bay recreational fishery options, TC members posed questions about long-term management strategy, and whether the goal should continue to be protecting specific year classes over time (e.g., 2015s and 2018s) or to focus on achieving the required level of overall removals without consideration of year-class strength. The 2024 stock assessment could be an opportunity for this more in-depth discussion on management approaches and the use of slot limits in the future.

For all recreational fishery options, TC members recommended conducting the option analysis using length frequencies from 2020, when the strong 2011 year-class was age-9, to provide comparable fish availability to 2024 when the 2015 year-class will be age-9, as well as to continue to explore the projection-based Method #2 for comparison. Using 2022 length frequencies could also be explored as a comparison.

For commercial fishery options for maximum size limits, TC members noted the loss of future reproductive capacity resulting from harvesting more smaller fish under a maximum size limit. The TC was also concerned about the potential to increase the overall number of fish killed due to increased discarding of oversize fish and the smaller average size of fish in the harvest combined with a weight-based quota. The TC noted quotas could be adjusted for the change in size limits using spawner-per-recruit/yield-per-recruit analysis that has been used for previous commercial size limit changes.

Next Steps

- Estimates of 2023 removals will be calculated using the projection-based Method #2, and will be refined as needed using Method #1. The two estimates will be compared.
- Projections will be re-run using Method #1 2023 estimate, Method #2 2023 estimate, and a constant F assumption for 2024-2029.

- The PDT will meet June 15 to continue developing 2024 management options.
- The TC-PDT will meet jointly on June 28 to re-visit these topics and option calculations.

Figure

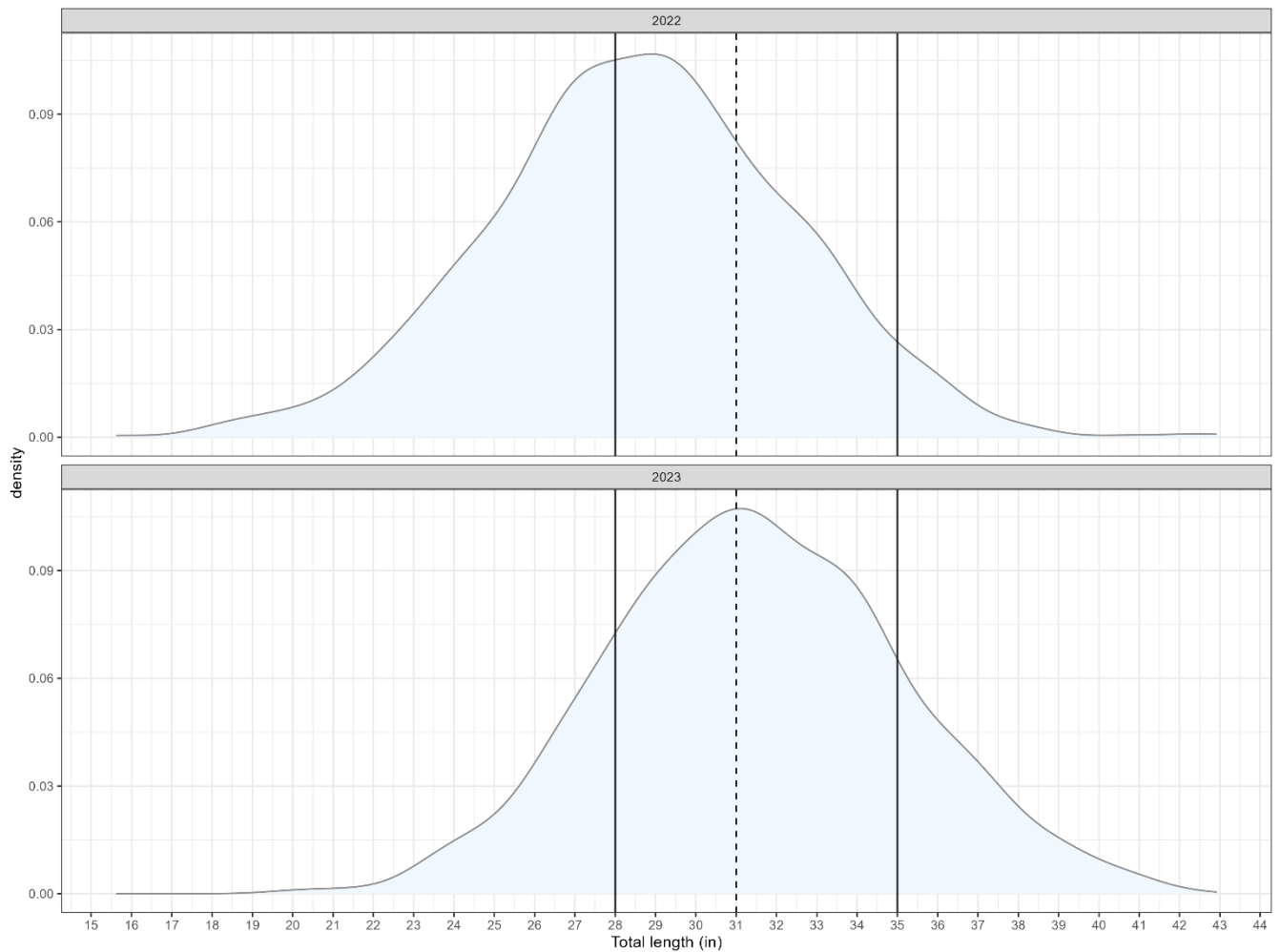


Figure 1. Size distribution of age-7 fish vs. age-8 fish (i.e., the predicted size distribution of the 2015 year-class in 2022 vs. 2023). Note that this figure is not scaled by abundance, so it does not show the decrease in abundance of this year-class as it moves from 2022 to 2023, but it does show the high proportion of the 2015 year-class that was just below the size limit in 2022, and the lower proportion that will be undersize in 2023.