Atlantic States Marine Fisheries Commission

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Atlantic Striped Bass Technical Committee and Stock Assessment Subcommittee Meeting Summary

Webinars
March 20, March 25, and March 28, 2025

TC-SAS Members in Attendance: Tyler Grabowski (TC Chair, PA), Mike Celestino (SAS Chair, NJ), Michael Brown (ME), Gary Nelson (MA), Nicole Lengyel Costa (RI), Kurt Gottschall (CT), Caitlin Craig (NY), Brendan Harrison (NJ), Margaret Conroy (DE), Alexei Sharov (MD), Luke Lyon (DC), Ingrid Braun-Ricks (PRFC), Shakira Goffe (VA), Brooke Lowman (VA), Jeremy McCargo (NC), Charlton Godwin (NC), John Sweka (USFWS)

ASMFC Staff in Attendance: Katie Drew, Emilie Franke, Samara Nehemiah, Toni Kerns

Others in Attendance: Gerard Addonizio, Bayleigh Albert, Max Appelman, Mike Armstrong, Rick Bellavance, Alan Bianchi, Sean Briggs, David Borden, Robert T. Brown, Jack Buchanan, Allison Colden, Russell Dize, Eric Durell, Glen Fernandes, Corrin Flora, Brandon Foor, Tony Friedrich, Angela Giuliano, Charles Green, Brian Hardman, Jesse Hornstein, Bob Humphrey, Nick Jones, Ray Kane, Carrie Kennedy, Elise Koob, Mike Luisi, Dan McKiernan, Nichola Meserve, Michael Pirri, Will Poston, Jason Seman, David Sikorski, Jeff Swayze, Kristen Thiebault, Beth Versak, Megan Ware, Mike Waine, Michael Woods, Jordan Zimmerman, Erik Zlokovitz

The Striped Bass Technical Committee (TC) and Stock Assessment Subcommittee (SAS) met via webinar on March 20, March 25, and March 28, 2025 to discuss the following items:

- Draft Addendum III Projections and 2026 Reduction
- Draft Addendum III Size and Season Closure Analysis
- Maryland Recreational Season Baseline Methods
- Terms of Reference for the 2027 Benchmark Stock Assessment
- Massachusetts Conservation Equivalency Proposal for the Commercial Fishery

Draft Addendum III Projections and 2026 Reduction

Per the Board's motion from December 2024, Draft Addendum III will consider potential reductions for 2026 based on projections incorporating preliminary estimates of 2024 removals. The Board requested projections and associated reductions for both a 50% and 60% probability of rebuilding stock by 2029. The TC used the model from the 2024 Stock Assessment Update for these projections. For fishing mortality (F) input for 2024-2029, the TC calculated a preliminary estimate of F2024 and discussed what assumptions should be used for F2025 and F2026-2029.

To estimate preliminary 2024 removals and F2024, the TC used preliminary 2024 MRIP estimates (released in February 2025) and assumed an estimated 7% decrease in commercial removals relative to 2023 due to the Addendum II quota reduction of 7%. The resulting preliminary estimate of recreational removals based on full-year 2024 data is within the range of previously projected estimates of 2024 recreational removals based on partial-year data (Figure 1).

In 2025, with no management change from 2024, F is predicted to increase as the above-average 2018 year-class enters the current ocean slot limit. The TC agreed the best assumption to use for the F2025 increase is +17% relative to 2024 based on the observed +17% increase from 2021 to 2023 when part of the 2015 year-class was still in the newly reduced ocean slot limit. The TC notes the magnitude of increase may be overestimated since the 2018 year-class is not as strong as the 2015 year-class was. The TC did discuss potentially modifying the F2025 estimate by changing or resampling the F2025 distribution to sample more heavily from the lower end of the distribution, but the TC ultimately determined this will likely not have much impact on the results and that 17% is the best assumption based on observed history. The TC continues to emphasize the uncertainty of predicting future fishing mortality.

For F2026-2029, five scenarios with different assumptions for F2026-2029 were run:

1. F2026-2029 = F_rebuild 50% (constant F for 2026-2029 necessary for SSB to be at or above the rebuilding target in 2029 with a 50% probability)
2. F2026-2029 = F_rebuild 60% (constant F for 2026-2029 necessary for SSB to be at or above the rebuilding target in 2029 with a 60% probability)
3. F2026-2029 = F2024 (normal distribution)
4. F2026-2029 = F2024 (skewed distribution)
5. F2026-2029 = Variable_F (draw from 2021-2024 Fs)

Per TC discussion in January 2025, the “variable F” scenario was included for exploration for F2026-2029. This scenario is based on TC concerns that a constant F scenario for 2026-2029 was unrealistic and a scenario with more variability in F would be more likely. For the variable F scenario, instead of drawing F from a distribution centered around F_2024 or F_rebuild (constant F scenarios), F in each year was drawn from recently observed F point estimates (F2021-2024) as a starting point for TC discussion. The TC noted that including 2021-2023 in the variable F scenario is not representative of conditions in 2026-2029. First, the ocean slot limit was seven inches in 2021-2023 vs. the current three-inch slot. Second, the strong 2015 year-class available to the ocean fishery in 2021-2023 was stronger than the 2018 year-class. Third, the resulting median F for the 2021-2024 variable F scenario would be an increase relative to 2025. This is counter to the TC’s predicted decrease in F from 2025 to 2026 as the 2018 year-class starts to grow out of the ocean slot limit. For these reasons, the TC decided the variable F scenario should not move forward for Draft Addendum III projections.

The TC agreed that assuming F2026-2029=F2024 is a reasonable assumption under the same narrow slot limit and as an above-average year-class grows out of the slot. However, TC decided to explore a modified projection by changing the distribution of F2024 that the projection is drawing from. The TC agreed to explore a skewed distribution for the F2024 scenario with a wider distribution to encompass a wider range of F values and to skew toward higher F values in the distribution (i.e., a longer "tail" on the higher end increasing the probability of a higher F value) that would still be centered on the F2024 value (Figure 2). This results in wider confidence intervals skewed to encompass more higher F values (Figure 3), which results in a slightly lower probability of rebuilding and slightly higher required percent reduction (Table 1).

Table 1. Probability of rebuilding by 2029 under different F scenarios and the reduction in 2026 removals needed to achieve a 50% or 60% probability of rebuilding. The projection selected by the TC-SAS for Draft Addendum III reduction is shaded in green.

Scenario	Prob. of Rebuild by 2029	2026 Removals	2026 Reduction in Removals to achieve F_rebuild 50%	2026 Reduction in Removals to achieve F_rebuild 60%
F2026-2029 = F_rebuild 50% = 0.122	50%	3.50 million fish	0%	-6%
F2026-2029 = F_rebuild 60% = 0.114	60%	3.29 million fish	NA	0%
F2026-2029 = F2024 = 0.123 (normal distribution)	**48.7%**	**3.54 million fish**	**-1%**	**-7%**
F2026-2029 = F2024 = 0.123 (skewed distribution)	43.6%	3.66 million fish	-4%	-10%

The TC-SAS discussed which projection should be used for Draft Addendum III, the normal or skewed distribution. First, the TC-SAS notes the projection results are very similar. While the skewed distribution does encompass more of the higher F values, the TC-SAS noted some concern that the skewed distribution might be too wide, encompassing F values even above the F threshold. The TC-SAS reiterated rationale for moving forward with the F2024 assumption in the first place, and the credible prediction that F is likely to be similar to F2024 levels. **So, the TC-SAS agreed the F2024 normal distribution is the most appropriate to move forward for Draft Addendum III.**

The TC-SAS notes both F2024 scenarios result in reductions of 10% or less, and the TC-SAS re-emphasizes previous guidance on small percent reductions. The outcome of management

changes designed to achieve small changes (i.e., reductions or liberalizations of less than 10%) would be difficult to measure given the uncertainty in the MRIP estimates. Total removals are not known to within 10%, so a reduction of less than 10% would not be statistically distinguishable from no reduction at all (i.e., status quo measures). In addition, the effectiveness of measures estimated to achieve a small percent reduction on paper for the recreational fishery would be overwhelmed by uncertainty in the reduction calculations themselves, including uncertainty around fish availability, effort, and angler behavior.

The TC-SAS also continues to highlight several major sources of uncertainty in the projections including the magnitude of the increase in F in 2025 that is expected to occur, and the F rate that the population will experience from 2026-2029.

Draft Addendum III Size and Season Closure Analysis

The same methods previously used to calculate 2025 management options (see December 2024 TC Report) are being applied to develop Draft Addendum III 2026 management options with some updates, including pooling additional data years for season closure analysis, exploring mode split options, exploring seasonal closures split between two waves, and using different data years for ocean size limit analysis to reflect 2026 fish availability.

The Plan Development Team (PDT) asked for TC input on three specific questions regarding size and season analysis for Draft Addendum III:

a. Which data year(s) should be used for ocean size limit analysis?
b. How should an outlier MRIP estimate in seasonal closure analysis be addressed?
c. Should the issue of weekday vs. weekend catch rates be further pursued?

Data for Ocean Size Limit Analysis

In previous January 2025 discussion, the TC identified a few possible data years to use for the 2026 ocean size limit analysis. In 2026, the above-average 2018 year-class will be age-8 but is preceded/followed by below-average year-classes. The TC previously identified the 2004 year-class, 2011 year-class, and 2014 year-class as possible proxies since they were above-average year-classes mostly followed by below-average year-classes and were a similar level of year-class strength as the 2018 year-class. These potential proxy year-classes would be age-8 in 2012, 2019, and 2022, respectively. The challenge with all of these potential proxy years is avoiding the impact of other strong year-classes in the length frequency data (e.g., 2015s following the 2014s).

The TC asked whether the PDT had any input on the proxy years (Figure 4). Since the Board would like to explore size limits above 35", the PDT needs proxy year data that allow such analysis. This eliminates the 2022 length frequency data from consideration since the 28"-<35" slot limit was in place in 2022, which does not allow analysis of any size limits above 35". Given that, the TC focused discussion on the 2012 and 2019 proxy years.

The TC noted the benefit of using multiple years of data, but was concerned about pooling 2012 and 2019 data together given the very high catch in 2012 likely associated with the very strong 2003 year-class, which would overtake the 2019 data. Instead **the TC recommended averaging the reductions calculated individually from the 2012 data and 2019 data.**

The TC also noted the 2019 length frequency data includes a high estimate in the 19" size bin. The TC recommended the PDT further investigate whether the estimate is an outlier by considering whether the estimate is a result of a few heavily weighted intercepts (would indicate an outlier) and whether that size class appears to progress through the sizes in following years (would indicate they are 'real' fish). If the investigation indicates this estimate is most likely an outlier, the TC recommends the PDT address the outlier estimate with an appropriate method.

Outlier: Rhode Island 2021 Wave 2 Recreational Live Releases

The PDT identified an outlier MRIP estimate included in seasonal closure analysis data. The Rhode Island 2021 Wave 2 release estimate is very high (by an order of magnitude) compared to RI Wave 2 estimates from other years (Table 2). The 2021 estimate is 1.7 million live releases, while the other estimates over the past several years range from approximately 79,000 to 493,000 live releases.

Table 2. Rhode Island Wave 2 Released Alive Estimates from MRIP.

Year	RI Wave 2 Released Alive (B2) Number of Fish	PSE
2017	176,244	69.2
2018	166,784	61.4
2019	493,117	34.7
2020	247,945	33.8
2021	**1,753,954**	**66.3**
2022	196,509	56.8
2023	251,865	58.5
2024	79,530	45.7

This Wave 2 outlier estimate is included in the ocean seasonal closure analysis. RI estimates are pooled across years and pooled with other states to comprise regions, so the impact of this one outlier may be minimized. Or, the estimate could be dropped from the analysis, but the PDT is interested in whether there are other ways to address the outlier estimate.

Initial investigation during the webinar revealed neighboring states did not see a similar Wave 2 increase, the effort estimates did not increase to the same degree, and there are a few heavily-weighted intercepts with high releases. This indicates the estimate is likely an outlier, but **the TC recommends the PDT further investigate the MRIP intercepts and then take appropriate steps to address the RI outlier estimate if indicated.** Options could include removing the estimate from the analysis, removing the outlier intercepts, or replacing the estimate with an average or value from another year.

Weekends and Weekdays in Seasonal Closure Analysis

Seasonal closure analysis assumes a constant daily savings of harvest and/or releases. The TC has acknowledged that catch is not constant per day, especially between weekdays and weekends/holidays (i.e., weekends/holidays tend to have higher effort and catch). In January 2025, the TC requested investigation into MRIP data to understand the differences between type of day (Figure 5). MRIP categorizes Monday-Thursday as weekdays and Friday-Sunday + Federal Holidays as weekends. Generally, removals are higher per day on weekends vs. weekdays, and the pooled average removals per day used in seasonal closure analysis (i.e., summed across both types of days) is somewhere in the middle.

The TC-SAS recognizes the practical difficulties of incorporating weekends vs. weekdays in the analysis, and notes the seasonal closure analysis results may not change much if weekend vs. weekday is added, especially if closures are at least 14 days long (encompassing eight weekdays and six weekend days). However, it was noted the weekend catch rate is almost double the weekday catch rate in some waves, so incorporating the weekend vs. weekday analysis should at least be explored. **The TC-SAS agreed a case study example incorporating weekend vs. weekday would be informative to compare to the current analysis and determine how adding this weekend/weekday aspect would impact the results.**

Maryland Recreational Season Baseline Methods

The Maryland Department of Natural Resources (MDDNR) is working with stakeholders to develop a proposal to change Maryland's baseline recreational season (i.e., shift the timing and/or type of closures throughout the year). In order to be equivalent to the current season, the new season baseline option cannot exceed 2024 removals. This proposal is separate from any potential reduction in Draft Addendum III, and any required seasonal closure in Draft Addendum III would be in addition to the new baseline season.

MDDNR was seeking TC input on the methods for quantifying changes to recreational closures throughout the year with two specific questions:

- Which proposed method should be used to estimate the increase in releases from opening a no-targeting closure to allow catch-and-release?
- Should the analysis incorporate varying release mortality rates by Wave? Or should the analysis apply the current standard 9% for the entire year?

On the release mortality rate, the TC-SAS agreed the current standard 9% release mortality rate should be applied. This would maintain consistency with all other striped bass analyses and

current assessment which use the 9% rate. Applying varying release mortality rates may be considered through the 2027 Benchmark Assessment, but until then all analyses should use the same rate of 9% for the entire year.

MDDNR presented two methods for estimating the increase in releases from opening a current no-targeting closure to allow catch-and-release. One method is based on 2015-2018 data from past Addendum VI analysis and the other method is based on 2024 release rates for March, which is currently a catch and release season. To estimate how releases would increase if April were opened to catch and release from the current no targeting closure, the TC-SAS agreed the March data approach should be used, but the data should be expanded to pool 2021-2024 data and the ratio of March to April releases should be calculated based on those four years of data. The same method should be applied to calculate increased releases in May if May 1-15 is opened to catch and release from the current no targeting closure. The TC-SAS emphasized the need to pool data across multiple years for this proposal, especially considering the data being used are sometimes below even the Wave level (e.g., by month).

One TC member noted concern about the different estimated changes in releases in Wave 6 for expanding the harvest season vs. shortening the harvest season. Two different ratios of harvest to releases are being applied when it seems like the same ratio should be applied to both scenarios.

The TC-SAS discussed concerns about high PSEs for this type of analysis at the Wave level (and sub-Wave) and discussed whether the Amendment 7 CE standards should apply (no PSEs over 40 and uncertainty buffer must be applied for PSEs between 30-40). Staff clarified this proposal would not be considered CE (see below). The TC-SAS broadened the discussion to note concerns about PSEs for all the options in Draft Addendum III (e.g., regional ocean options) and recommended the Draft Addendum and Maryland's season proposal include PSE estimates for the options being presented to the Board. The TC-SAS noted there is a tradeoff of implementing management measures on a state-, region-, Wave-, or mode- level with less precision and higher uncertainty around those management measures.

Regarding FMP process, there were questions about whether this Maryland option would be considered conservation equivalency (CE). If the Draft Addendum includes this option for Maryland to change their baseline, then it would not be CE because it would be written into the Addendum. It is a Board decision whether the Addendum should include this option.

Terms of Reference for the 2027 ASMFC Atlantic Striped Bass Benchmark Stock Assessment

The TC-SAS developed the attached proposed terms of reference (TORs) for the 2027 Benchmark Stock Assessment for consideration by the Striped Bass Management Board. The proposed TORs are largely based on the TORs from the 2019 Benchmark Stock Assessment with some modifications and some newly added TORs, as summarized below.

TOR #1 is a new TOR to consider relevant ecosystem and climate influences on the stock, characterize uncertainty of the associated data sources, and link to stock dynamics. This TOR is

included in the Northeast Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC) generic TORs, and the TC-SAS agreed it should be added to the striped bass assessment.

TOR #2 on fisheries independent and dependent data sets was modified to explicitly address the spatial and temporal distribution of the data, characterizing the uncertainty, and justifying whether or not a dataset is used in the assessment. The SAW/SARC generic TORs include this level of specificity, and the TC-SAS agreed it would be helpful to add to this TOR.

TOR #4 on model development was modified to explicitly state that if multiple models are being considered, the model results and performance should be compared and rationale provided on the choice of preferred model. The TC-SAS noted the possibility of exploring multiple models and acknowledging that in the TOR. This TOR was also modified to explicitly note model diagnostics will be provided. The TC-SAS notes model diagnostics are always included, but it should be explicitly included in the TOR as it is in the SAW/SARC general TORs.

TOR #7 on projections was modified to include exploring new methods to predict future catch or fishing mortality. The TC-SAS noted the challenges and recent frequency of requests from the Board for short-term projections and analysis of new management measures. The TC-SAS noted there are new methods, such as model-based methods explored for other species (e.g., Recreational Demand Model and Recreational Fleet Dynamics Model), that could be explored for application to striped bass.

TOR #8 is a new TOR explaining procedure if a minority report is filed. Based on experience with other species, the TC-SAS agreed that while they do not expect a minority report to be filed, this TOR would be beneficial in the event that occurs.

Massachusetts Conservation Equivalency Proposal for the Commercial Fishery
Note: The CE proposal has since been withdrawn by Massachusetts.

Massachusetts submitted a conservation equivalency (CE) proposal to consider changing its commercial size limit in 2025 and adjust the commercial quota accordingly based on maintaining equivalent spawning potential analysis. Massachusetts' current commercial size limit is 35" minimum, and this proposal included a range of options to implement a commercial slot limit. TC input was needed to evaluate proposed methods for the associated quota adjustment. Massachusetts outlined two methods for adjusting the commercial quota: 1) adjusting the quota to account for changes to the minimum size only, or 2) adjust the quota to account for changes to both the minimum and maximum size.

Massachusetts' proposal noted that the current spawning potential analysis does not take into account the value of large females to the stock, which are currently harvested in the Massachusetts commercial fishery. Implementing a commercial slot limit would protect those larger females from harvest, and due to the unquantified value of those large females, Massachusetts proposed not adjusting the quota for adding a maximum size limit, and only

adjusting the quota for changes to the minimum size limit. Massachusetts' proposal also noted that during Addendum IV to Amendment 6 approved in 2014, the TC guidance at the time was that establishing a maximum size limit was more conservative and did not require a quota adjustment as long as they were also increasing their minimum size back to 28".

While the TC recognized the conservation principle of protecting large females, the TC noted the most current spawning potential analysis reviewed by the TC during development of Addendum II to Amendment 7 (September 2023 TC Memo 23-85) requires adjusting the quota for changes to both the minimum and maximum size to account for changes in the size of fish harvested. **Therefore, the TC determined that in order to achieve equivalency, Massachusetts would need to adjust their quota for changes to both the minimum and maximum size limits.**

The TC recommends future discussion on how to account for the higher contribution of large females in spawning potential analysis. The TC also recommends considering how to account for discard mortality in future spawning potential analysis, as the TC noted concern about higher discards when implementing a new maximum size limit.

There was also a question about high-grading and whether that is a particular concern with a new maximum size limit in place. It was noted that a small portion of trips actually reach the daily limit on number of fish in Massachusetts so high-grading is not a specific concern, and generally high-grading is not necessarily more prevalent when there is a maximum size in place.

The TC noted the importance of communicating why quota adjustments are implemented when commercial size limits are changed, and in particular, why quotas decrease when a maximum size limit is implemented. In the commercial fishery, when the minimum size decreases (e.g., change from 35" minimum to 32" minimum) and/or when a maximum size is implemented (e.g., change from 35" minimum to 35"-40" slot), the average size of harvested fish decreases. Without a quota adjustment, total removals in numbers of fish would likely increase resulting in more smaller fish being harvested. In addition, discards of oversized fish will increase. The spawning potential calculations account for this by calculating an adjusted quota to keep a state's commercial impact on the overall spawning potential of the stock the same under the new size limits (i.e., no additional spawning potential is lost from harvesting more, smaller fish). Any state that implements a lower minimum size limit or any maximum size limit must reduce their quota to maintain equivalency.

On the other hand, if a commercial fishery increases the minimum size (e.g., change from 28" minimum to 34" minimum), spawning potential calculations allow an increase in quota since the size of harvested fish will increase (i.e., fewer fish under the same quota amount). So, a state that increases their commercial minimum size limit would increase their quota to maintain equivalency. If the state chooses to increase the commercial minimum size limit without increasing the quota, that would be more conservative.

Figures

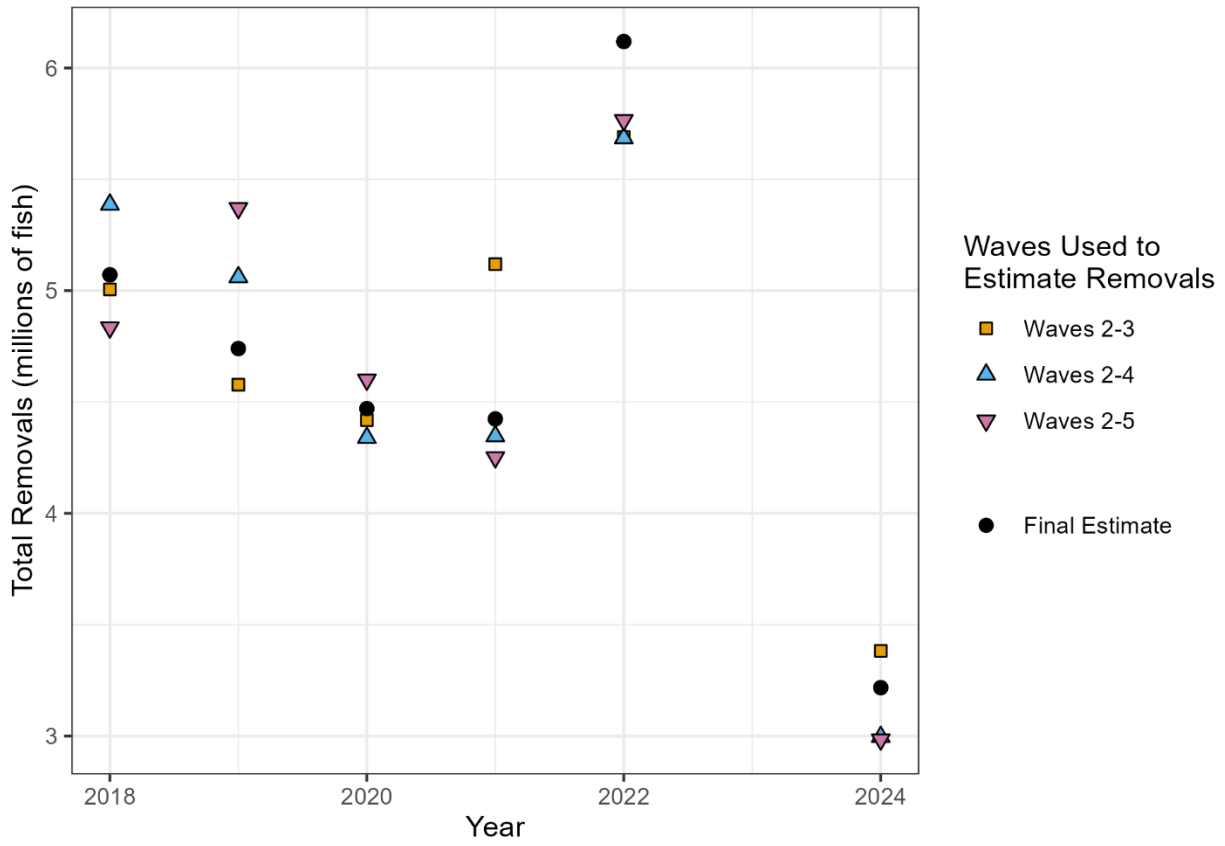

Figure 1. Comparison of estimates of MRIP removals from partial wave data compared to the final estimate using all waves of data. 2024 "Final Estimates" are preliminary but based on the full year of data.

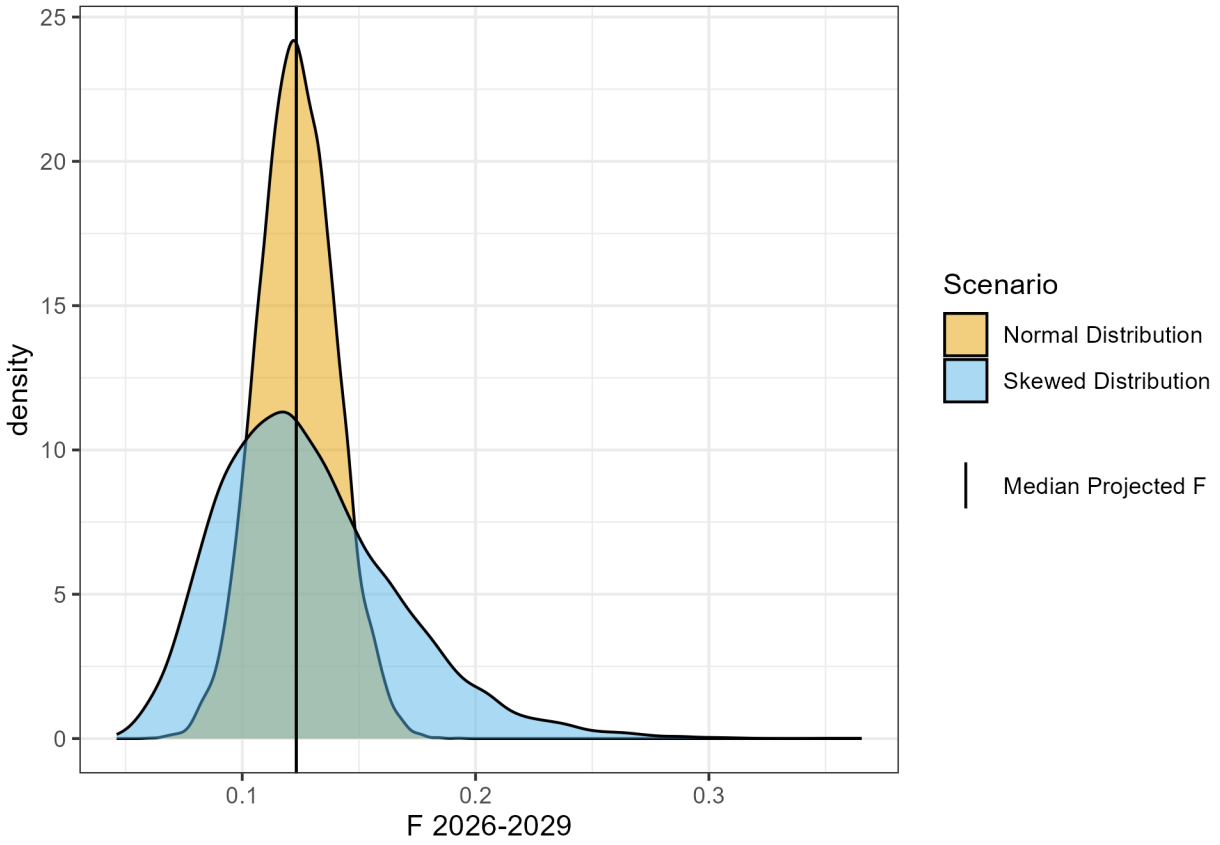

Figure 2. Distributions of F values explored for F2026-2029: F2024 normal distribution (yellow) and F2024 skewed distribution (blue).

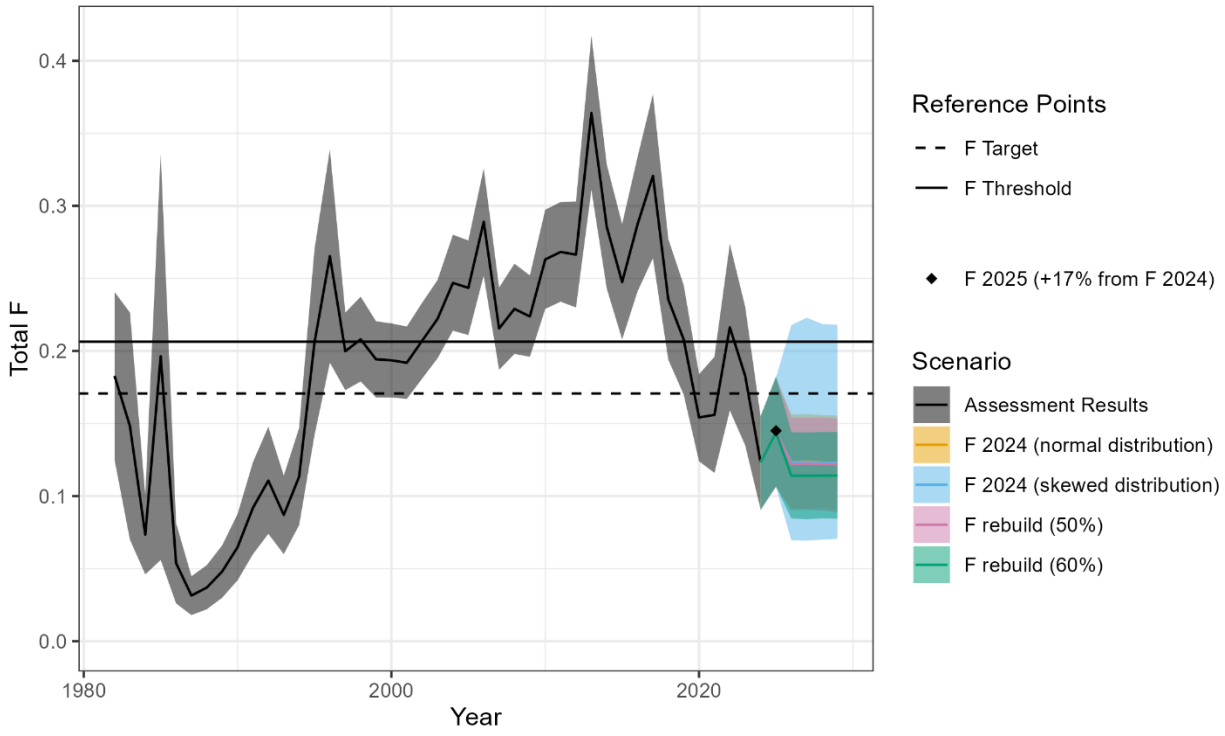

Figure 3. F trajectories used in the projection scenarios plotted with the time-series of F estimated by the assessment model. Shaded areas indicate 95% confidence intervals.

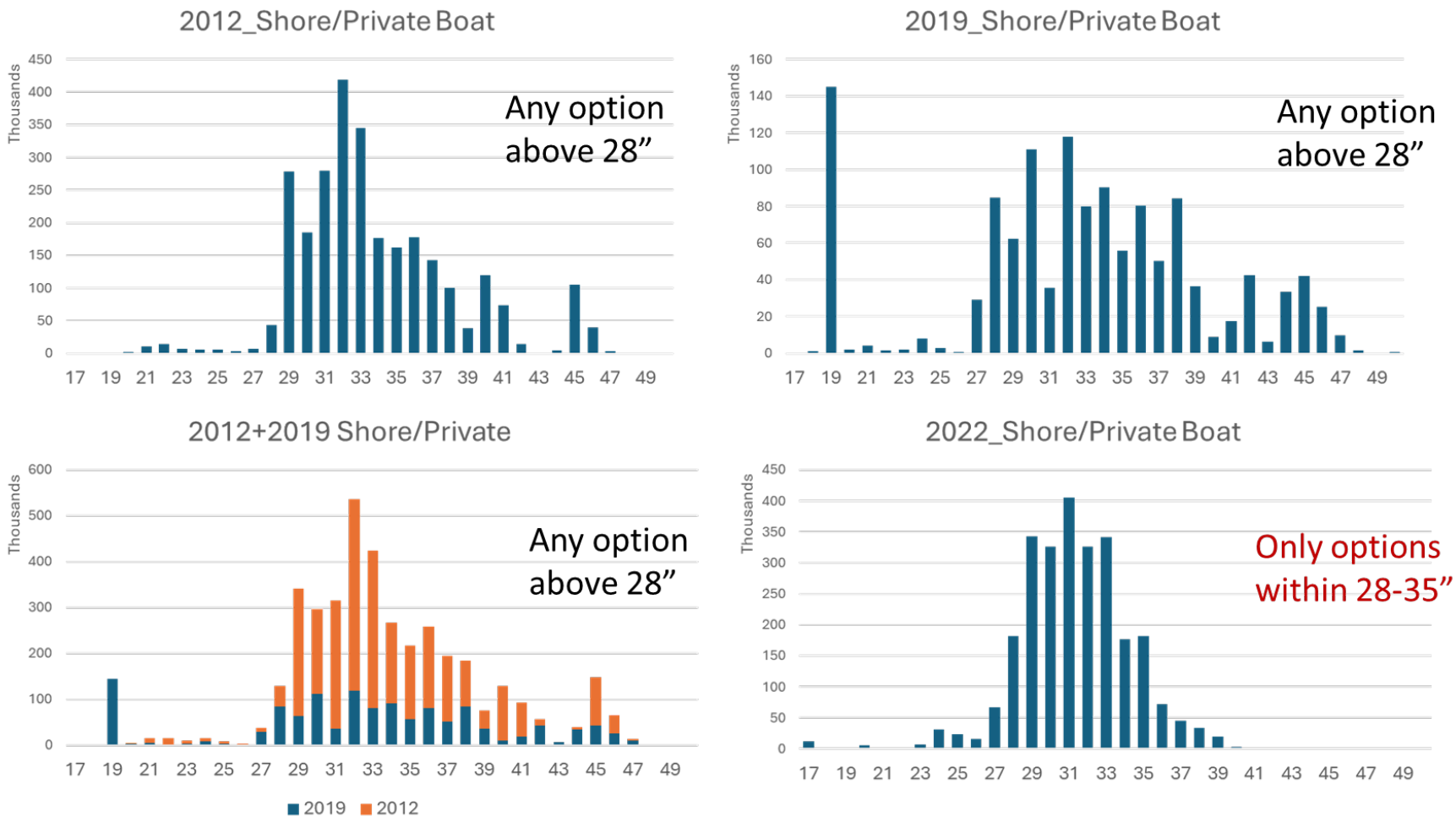

Figure 4. Length frequencies for 2026 proxy candidate years for Ocean fish availability with an above average age-8 year-class. Text indicates what type of size limit options could be explored for each proxy year.

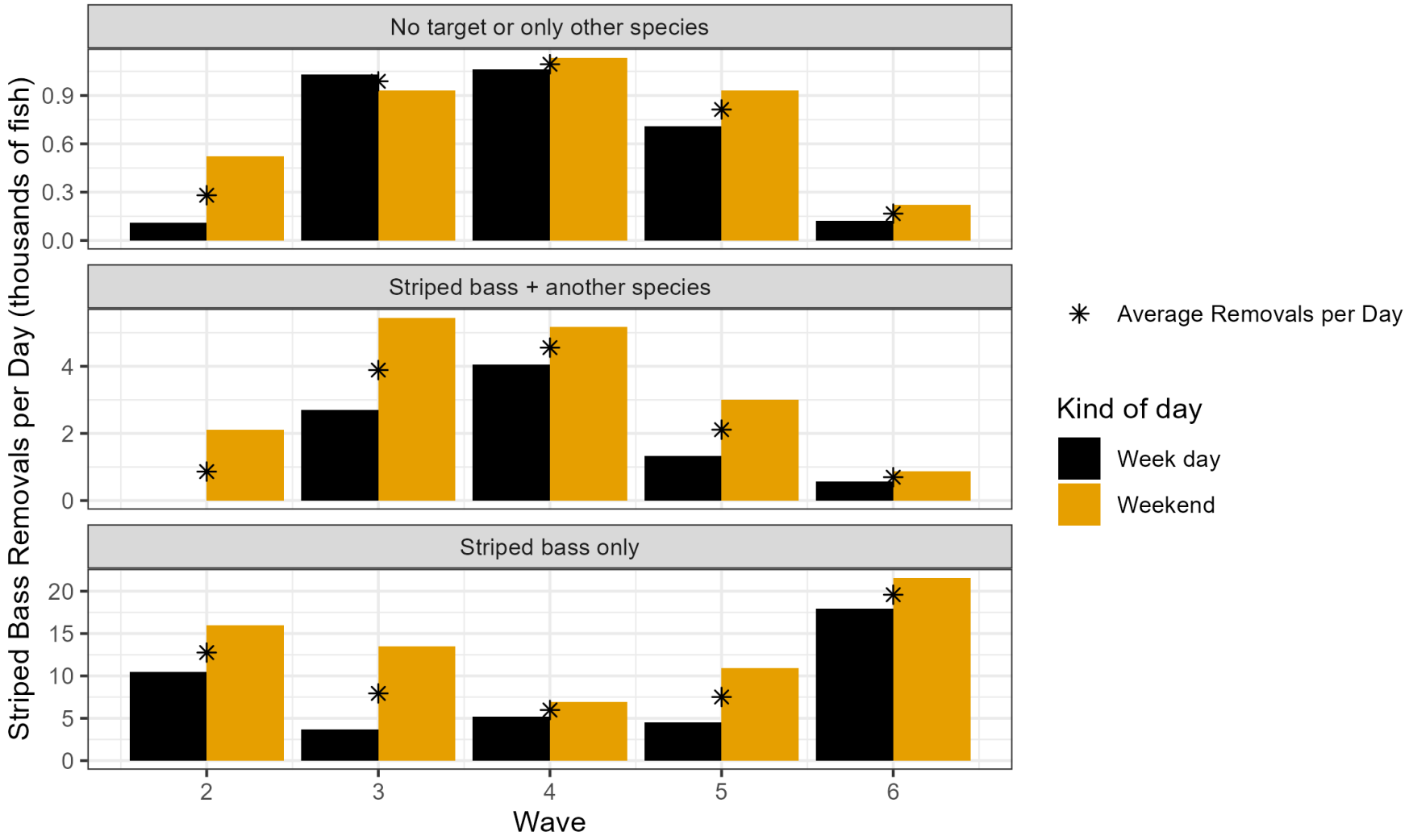

Figure 5. Ocean striped bass removals per day for weekdays (Monday-Thursday) and weekends (Friday, Saturday, Sunday, Federal Holidays). Average removals per day used in seasonal closure analysis shown with asterisk.