



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • asmfc.org

MEMORANDUM

TO: Tautog Management Board

FROM: Tautog Technical Committee (TC) and Stock Assessment Subcommittee (SAS)

DATE: April 20, 2026

SUBJECT: Reductions to Achieve F Target and DMV Regional Fishery Independent Surveys

Reductions to Achieve F Target

The 2025 stock assessment update for tautog found that overfishing was occurring in the New Jersey-New York Bight (NJ-NYB) and DelMarVa (DMV) regions (ASMFC 2025). The Tautog Fishery Management Plan (FMP) requires that the Board implement measures to reduce F to the F target within a timeframe specified by the Board. The Board may choose the level of risk for the TC/SAS to use in the projections, but it must be at least 50%.

Therefore, the Board tasked the TC/SAS with conducting projections that would result in a 50% probability of F being at or below the F target in 2028 or 2030. In addition, the Board tasked the TC/SAS with continuing the pilot testing of the Commission's Risk and Uncertainty Decision Tool and providing the results for Board consideration.

Projection Methods and Results

The projections were conducted in AgePro, using the output of the base ASAP run for each region. The age-specific Mohn's rho was used to apply a retrospective adjustment to the abundance-at-age estimates in the first year of the projections. Removals for 2025-2026 were assumed equal to the most recent three-year average (2022-2024) for each region. Removals for 2027-2030 were assumed constant and iterated over to find the value that results in the desired probability of being at or below the F target in 2028 or 2030. The percent reduction needed was calculated relative to the 2022-2024 average removals.

For the NJ-NYB region, a 44% reduction was needed to have a 50% probability of achieving the F target in 2028, and a 40% reduction was needed to have a 50% probability of achieving the F target in 2030 (Table 1). In the DMV region, maintaining status quo removals (i.e., removals equal to the 2022-2024 average) would result in a greater than 50% probability of being at or below the F target in both 2028 and 2030, meaning no reduction was needed. This was likely due to the very strong year-classes in 2020-2023 that will be moving into the exploitable size classes over the next few years and that the three-year average of removals was lower than the 2021-2023 removals, which were recent highs.

M26-45

If NJ-NYB removals remain at status quo levels, SSB will decline below the threshold by 2030. If F is reduced to the F target by 2028 or 2030, SSB will remain at or above the SSB target (Figure 1). In the DMV, if removals remain at status quo levels, SSB will decline slightly from 2025-2027 and then increase as recent strong year-classes mature (Figure 2); however, by 2030, there will still be only be a 12% chance that SSB will be at or above the SSB target.

Sources of Uncertainty

Future removals under status quo management are the major source of uncertainty for these projections. The TC/SAS highlighted the fact that tautog removals are variable from year to year, with higher PSEs than some other recreationally important species, even under constant regulations. Both the NJ-NYB region and the DMV region saw an increase in total removals from 2020-2023 followed by a drop in 2024. If removals continue to decline into the future, then the reductions projected to be necessary here would be overestimated, but if the increasing trend in removals continues after 2024, then the reductions could be underestimated. Preliminary MRIP estimates for 2025 were slightly lower than 2024 for the NJ-NYB region, but higher than 2024 for the DMV region, at approximately the three-year average of recreational removals (Figure 3). Commercial landings for 2025 are not yet available for comparison. Anecdotal evidence from both regions suggest effort has increased in recent years.

In addition, the TC/SAS noted that the assessments for both regions exhibited a significant retrospective pattern that warranted an adjustment according to the Commission's guidelines. For the NJ-NYB region, the adjustment did not change stock status, but for the DMV region, it did, increasing the terminal year estimate of F above the F threshold and decreasing the terminal year estimate of SSB below the SSB threshold. While the adjustment can be carried through in the projections, it represents the pattern that has been observed in the past, and since the direction and magnitude of the pattern may change in the future, it represents an additional source of uncertainty in the projections.

Risk and Uncertainty Decision Tool

The Board also tasked the TC with applying the Commission's Risk and Uncertainty Decision Tool. The Risk and Uncertainty Decision Tool provides a recommended probability of success that management actions should attempt to achieve based on the level of uncertainty in the assessment and the socioeconomic considerations (ASMFC 2025b). Technical scores provided by the TC/SAS and the Commission's Committee on Economics and Social Sciences (CESS) are weighted based on the Board's determination of which factors are most important.

The Board and the TC/SAS started the process of applying the Risk and Uncertainty Decision Tool during the 2021 assessment update as part of a pilot study for the Tool, but because no management action was required at that time, the process was not completed.

For this task, the TC/SAS updated the scores for model uncertainty, management uncertainty, environmental uncertainty, and ecosystem importance for tautog in the NJ-NYB and DMV regions. The tool also used stock status scores from the most recent assessment update (ASMFC 2025a). These scores are summarized in Table 2. The weights the Board chose during the 2021 process were used to calculate the recommended probability of success for each

region based on the technical scores, which resulted in a preliminary recommended probability of 64% for the NJ-NYB region and 67% for the DMV region. The projections were re-run to calculate the reduction needed to have a 64% probability (for the NJ-NYB region) or a 67% probability (for the DMV region) that F would be at or below the F target in 2028 or 2030. The reductions needed to achieve the preliminary recommended probabilities were higher than the reductions needed to achieve the FMP's required 50% probability (Table 1).

Based on these reductions, the CESS provided scores reflecting the importance of the commercial and recreational tautog fisheries and the impacts the reductions required from the preliminary Risk & Uncertainty Tool scores would have. The CESS scores are summarized in Table 3.

The CESS scored the short-term impacts on the NJ-NYB tautog recreational fishery as negative and moderate (-3) and scored the long-term recreational impacts as positive and moderate (+3), because the status quo landings were projected to drive the stock below the SSB threshold in the long term. The CESS scored the short-term recreational impacts on the DMV as negative and very low to low (-1.2), and the long-term recreational impacts as positive but very low (+0.8). This is because the stock is projected to continue to increase under status quo landings for the DMV region. Because the Board weighted the long-term and short-term scores equally, the socioeconomic scores for the NJ-NYB region effectively cancel each other out and the final recommended probability and associated reductions remain the same for that region (Table 1). For the DMV region, the recommended probability decreased slightly, going from 67% to 66%; the impact on the final reductions associated with that probability was minimal (Table 1).

Timing of Next Steps

Based on Board guidance delivered at the upcoming Spring Meeting, the Tautog TC/SAS and PDT will develop options that meet the Board's reduction objectives. The timing of the delivery of these options is complicated by the pending recalibration of the MRIP time-series, which is currently anticipated to be complete in September. The assessment will not be updated with the new data due to workload constraints; instead, the new data will be incorporated into the 2029 benchmark assessment. As a result, the projections and the percent reductions needed for this addendum will not change as a result of the recalibrated data. However, the TC/SAS could use the recalibrated length frequencies and wave-level catch estimates to develop size limit, bag limit, and season closure options to achieve the reductions. If the Board chooses this approach, final action on the addendum will be delayed by one meeting cycle. By using the current, uncalibrated MRIP data, the TC/SAS could develop options to be incorporated into a draft addendum that the Board considers for approval for public comment in August with potential final action coming at Annual Meeting in November. If the Board prefers to inform the options using the recalibrated data, the draft addendum will not be ready for public comment until Annual Meeting, with final action coming at earliest at the Winter Meeting in February 2027, assuming there are no more delays in the release of the recalibrated numbers. Because the FMP requires measures to be implemented within two years of receiving the overfishing status, final action must be taken in 2027 for implementation no later than the start of 2028.

DelMarVa Fishery Independent Indices

The current stock assessment for the DMV region uses only one index of relative abundance, the MRIP CPUE, which is a fishery dependent index. Although there are a number of multi-species fishery independent indices in this region, none of them are well-suited to monitoring tautog, with the overall percent positive tows or hauls being well below 10%. However, since the 2015 benchmark, two new surveys have been initiated in the DMV region that have been more successful at capturing tautog. New indices cannot be incorporated into an assessment update, only a benchmark assessment, but the Board requested that the TC/SAS review and comment on the indices.

MD DNR Submerged Aquatic Vegetation Habitat Survey

MD DNR initiated a haul seine survey in SAV habitat in Sinepuxent Bay in 2012, with methods standardized in 2015. The survey has been successful in capturing young-of-year (YOY) tautog, with 65% of all hauls positive for tautog. The index showed an increasing trend from 2015-2024, suggesting stronger year-classes from 2021-2024, although 2025 was low and more in line with the 2016-2018 values (Figure 5).

Overall, the trend is very similar to what the stock assessment predicted for recruitment in recent years, with an increasing trend in recruitment starting in 2019, peaking in 2022 (aligning with the peak of the assessment's estimate of age-1 abundance in 2023), followed by a drop in 2023 that was mirrored in the assessment's drop in age-1 abundance in 2024 (Figure 6).

DE Ventless Trap Survey

DE has been conducting a ventless trap survey in Delaware Bay and in the Atlantic Ocean near the mouth of the Delaware Bay since 2018. Traps are set in both high relief habitat (i.e., artificial reefs) and low relief habitat (i.e., sandy bottom), with traps in the high relief habitats having 64% percent positive sets in the Bay and 83% positive sets in the ocean. The length frequency indicates the survey is capturing juvenile and adult tautog, with most of the catch ranging from 8" to 17" (Figure 7).

The index in both regions has been variable without a significant trend from 2018-2025 (Figure 8). It did not show a strong correlation with the assessment estimates of abundance (Figure 9), but selectivity effects and the age-structured nature of the index and the total abundance estimates makes a direct comparison harder than the comparison of the YOY index and the age-1 recruitment estimates.

TC/SAS Discussion

The MD index is very promising for YOY tautog in this region and should be brought forward for inclusion in the upcoming benchmark assessment. The MD YOY index was well correlated with the assessment model's estimates of recruitment, with both showing an increasing trend in recruitment since the last assessment update that peaked in 2022.

The DE index of larger, older fish was flatter than the assessment's estimates of age-2+ abundance and spawning stock biomass, suggesting that the assessment's strongly increasing population trajectory in the most recent few years might be overly optimistic. This index is also

promising and should be further developed and brought forward for inclusion in the upcoming benchmark assessment.

References

ASMFC. 2025a. 2025 Tautog Regional Stock Assessment Update. Arlington, VA. 488p. Available online at: <https://asmfc.org/resources/stock-assessment/2025-tautog-regional-stock-assessment-update/>

ASMFC. 2025b. Risk and Uncertainty Policy. Arlington, VA. 3p. Available online at: <https://asmfc.org/resources/science-guiding-document/asmfc-risk-and-uncertainty-policy/>

Tables

Table 1. Reductions needed to have a specific probability of achieving F target in the target year.

NJ-NYB Region			
Target Year	Probability Definition	Probability of Achieving <i>F</i> Target	Percent Reduction in Removals Needed
2028	FMP Minimum	50%	44%
2030	FMP Minimum	50%	40%
2028	Preliminary R&U Tool without Socioeconomic scores	64%	50%
2030	Preliminary R&U Tool without Socioeconomic Scores	64%	44%
2028	Final R&U Tool with Socioeconomic scores	64%	50%
2030	Final R&U Tool with Socioeconomic scores	64%	44%
DMV Region			
Target Year	Probability Definition	Probability of Achieving <i>F</i> Target	Percent Reduction in Removals Needed
2028	FMP Minimum	50%*	0%
2030	FMP Minimum	50%*	0%
2028	Preliminary R&U Tool without Socioeconomic scores	67%	9%
2030	Preliminary R&U Tool without Socioeconomic Scores	67%	4%
2028	Final R&U Tool with Socioeconomic scores	66%	8%
2030	Final R&U Tool with Socioeconomic scores	66%	4%

*: Projections for the DMV indicate that status quo removals will have a 54% probability of being at or below the *F* target in 2028 and a 61% probability of being at or below the *F* target in 2030.

Table 2. Technical scores for the Risk & Uncertainty Decision Tool

Stock Status	NJ-NYB	DMV	Board Weight
Is the stock overfished (below the SSB threshold)?	0	1	0.13
Is the stock below the SBB target?	1	1	0.10
Is overfishing occurring (F above the F threshold)?	1	1	0.13
Is F above the F target?	1	1	0.11
Additional Sources of Uncertainty	NJ-NYB	DMV	Board Weight
Model Uncertainty	3.71	4.11	0.11
Management Uncertainty	3.67	3.00	0.10
Environmental Uncertainty	3.00	3.00	0.07
Risk Considerations	NJ-NYB	DMV	Board Weight
Ecosystem Importance	2.40	2.00	0.06

Table 3. Socioeconomic scores for the Risk & Uncertainty Decision Tool

Socioeconomic Considerations	NJ-NYB	DMV	Board Weight
What is the short-term socioeconomic effect of changes to the comm fishery? (-5 to 5 scale)	-1.00	-0.60	0.09
What is the long-term socioeconomic effect of changes to the comm fishery? (-5 to 5 scale)	1.00	0.40	0.09
What is the short-term socioeconomic effect of changes to the rec fishery? (-5 to 5 scale)	-3.00	-1.20	0.10
What is the long-term socioeconomic effect of changes to the rec fishery? (-5 to 5 scale)	3.00	0.80	0.10

Figures

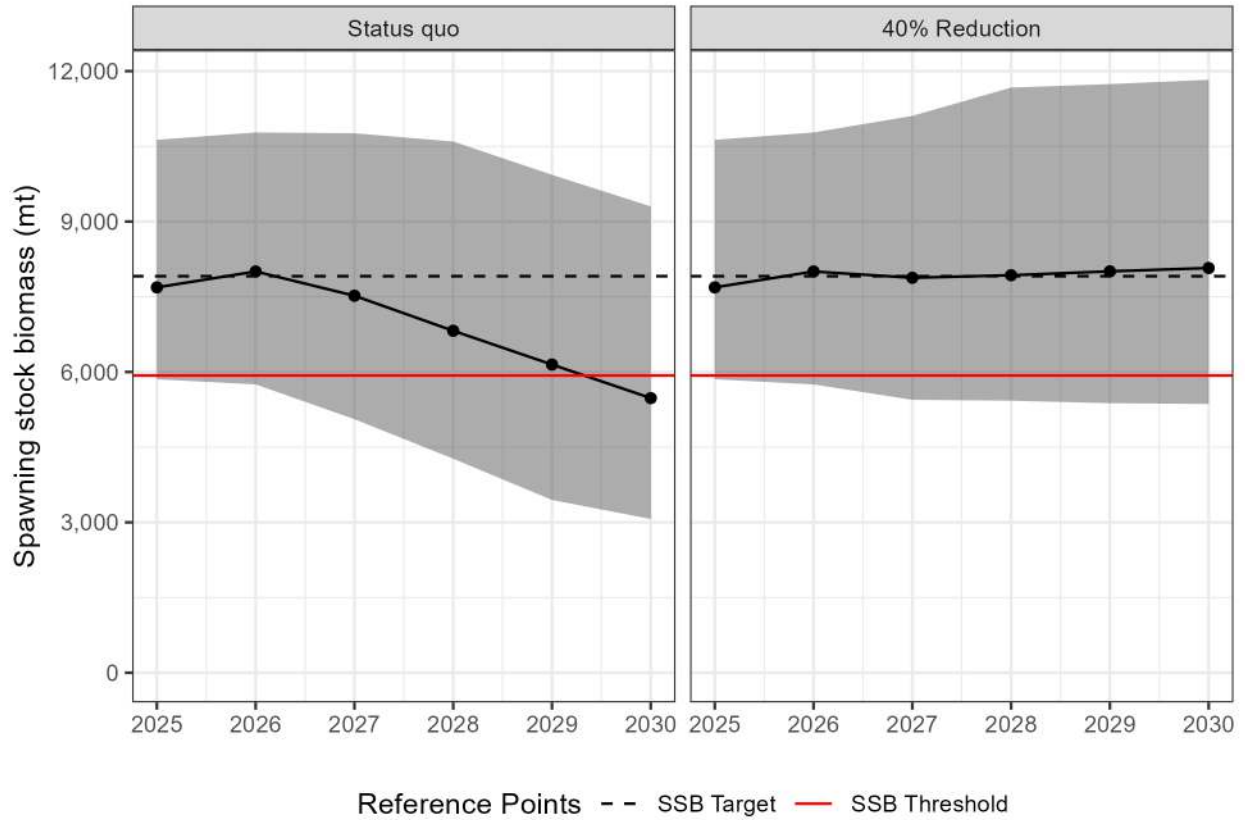


Figure 1. NJ-NYB SSB trajectory if removals remain at status quo levels, i.e., the 2022-2024 average (left) or are reduced by 40% (right).

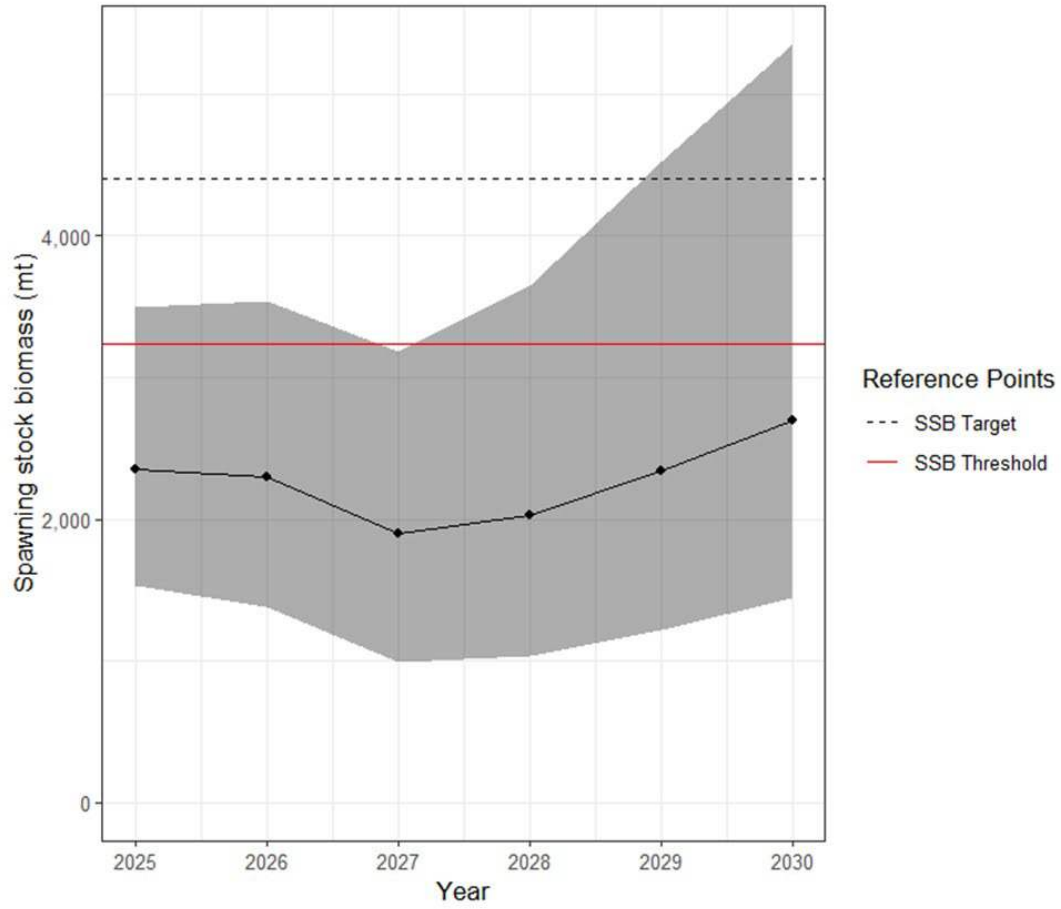


Figure 2. DMV SSB trajectory if removals remain at the 2022-2024 average.

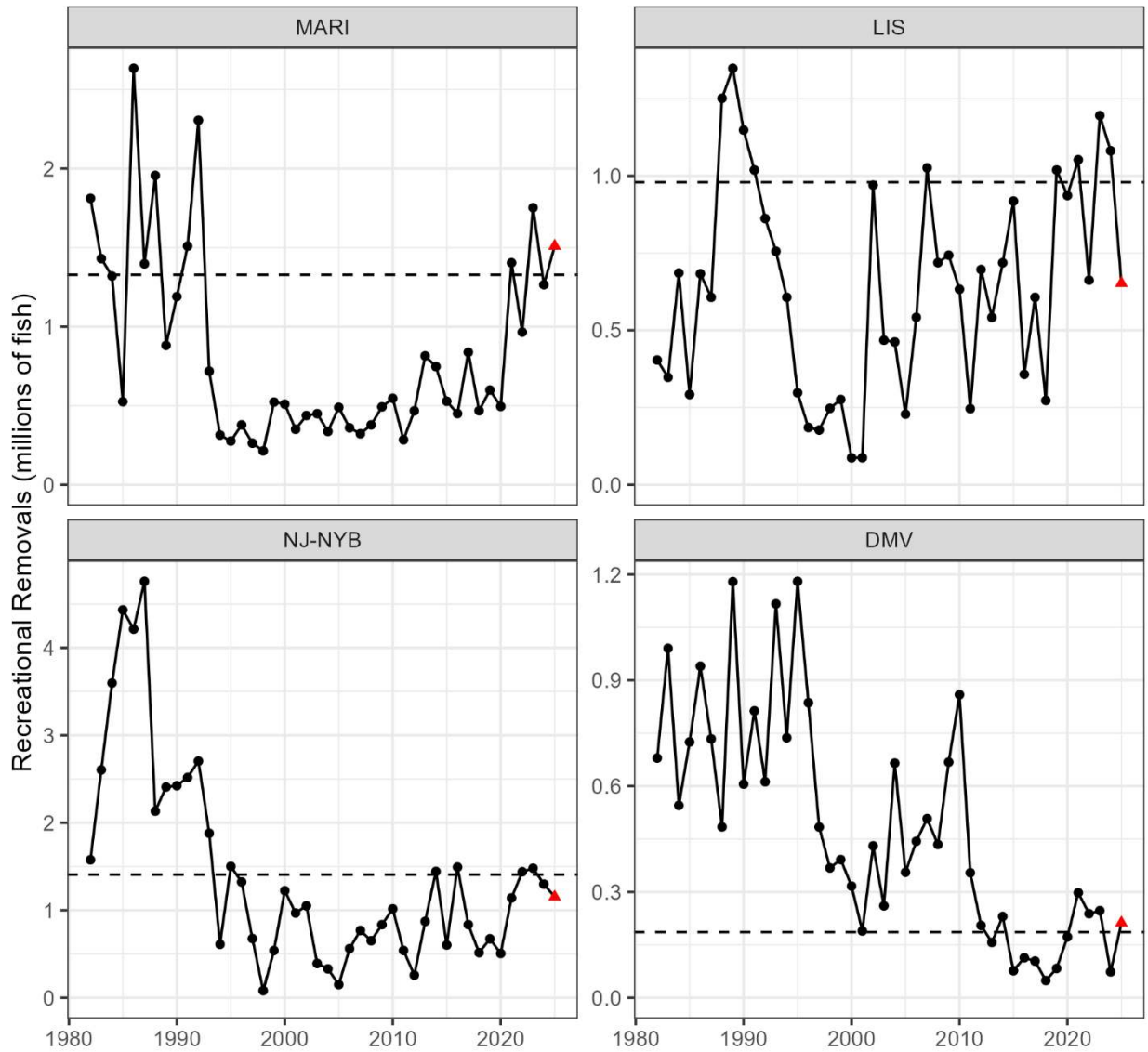


Figure 3. Recreational removals by region, with the preliminary 2025 estimates indicated by the red triangle. The dashed line is the 2022-2024 average of removals for comparison.

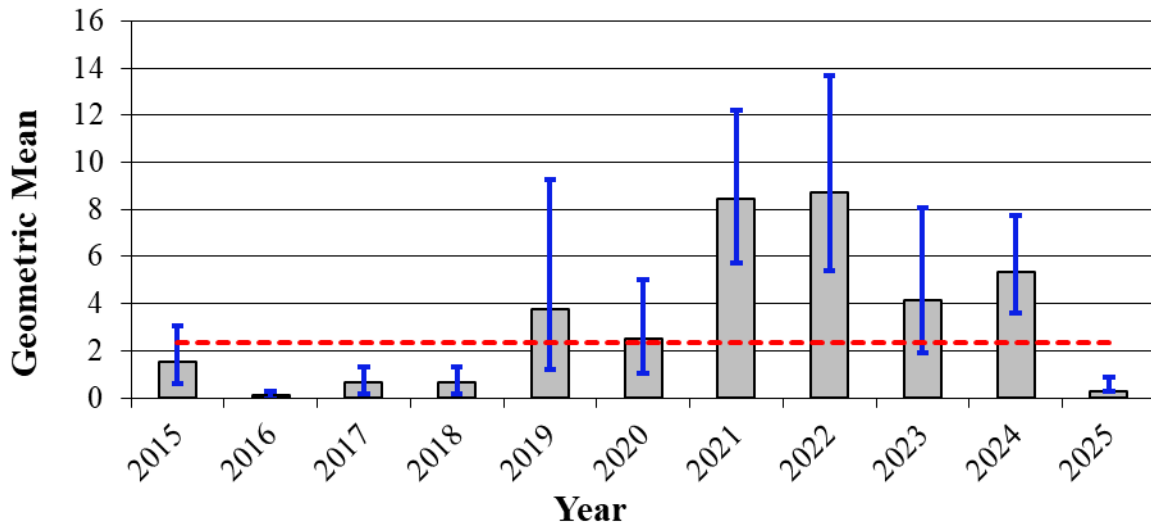


Figure 4. MD SAV habitat index for young-of-year tautog, 2015-2025.

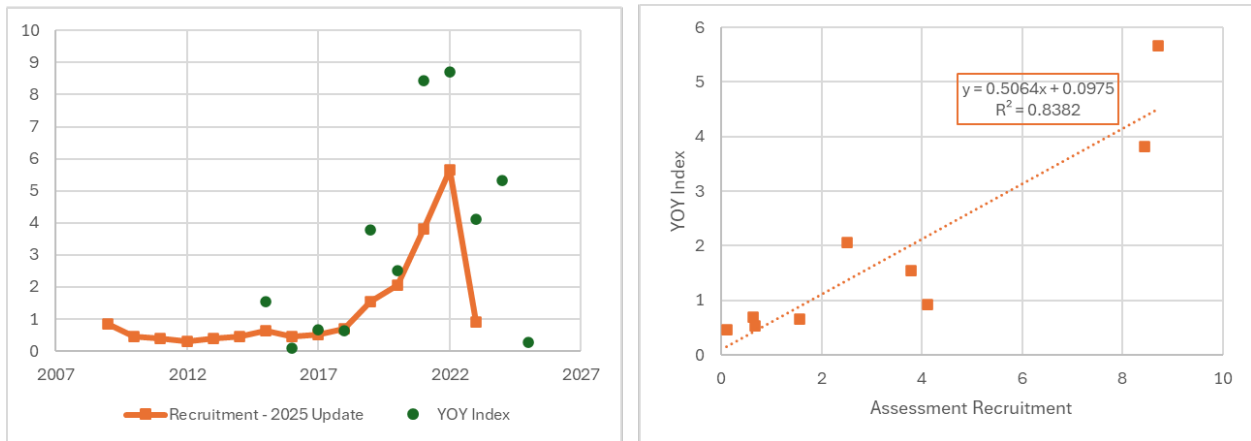


Figure 5. Comparison of the MD SAV YOY index for tautog with the estimates of recruitment from the 2025 assessment update.

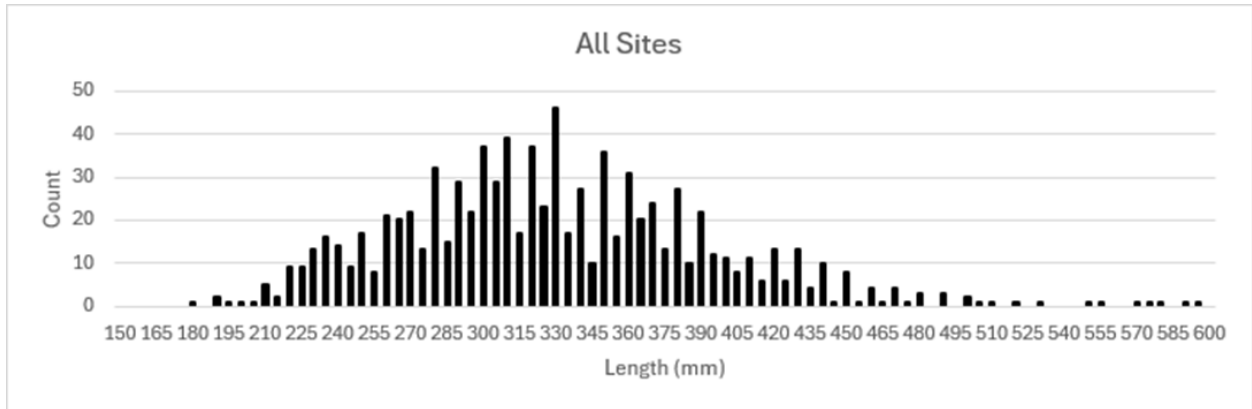


Figure 6. Length frequency of the DE Ventless Trap Survey, pooled across all sites and years.

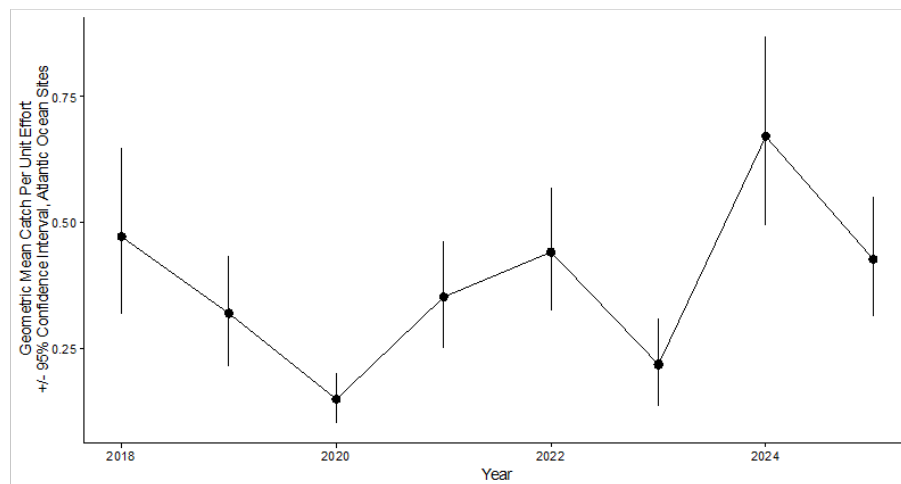
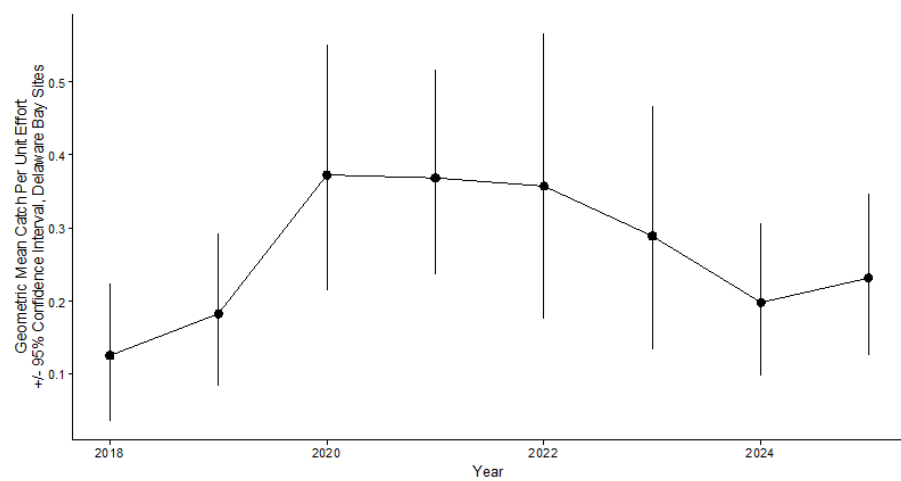


Figure 7. DE Ventless Trap Survey indices from the Delaware Bay sites (top) and Atlantic Ocean sites (bottom).

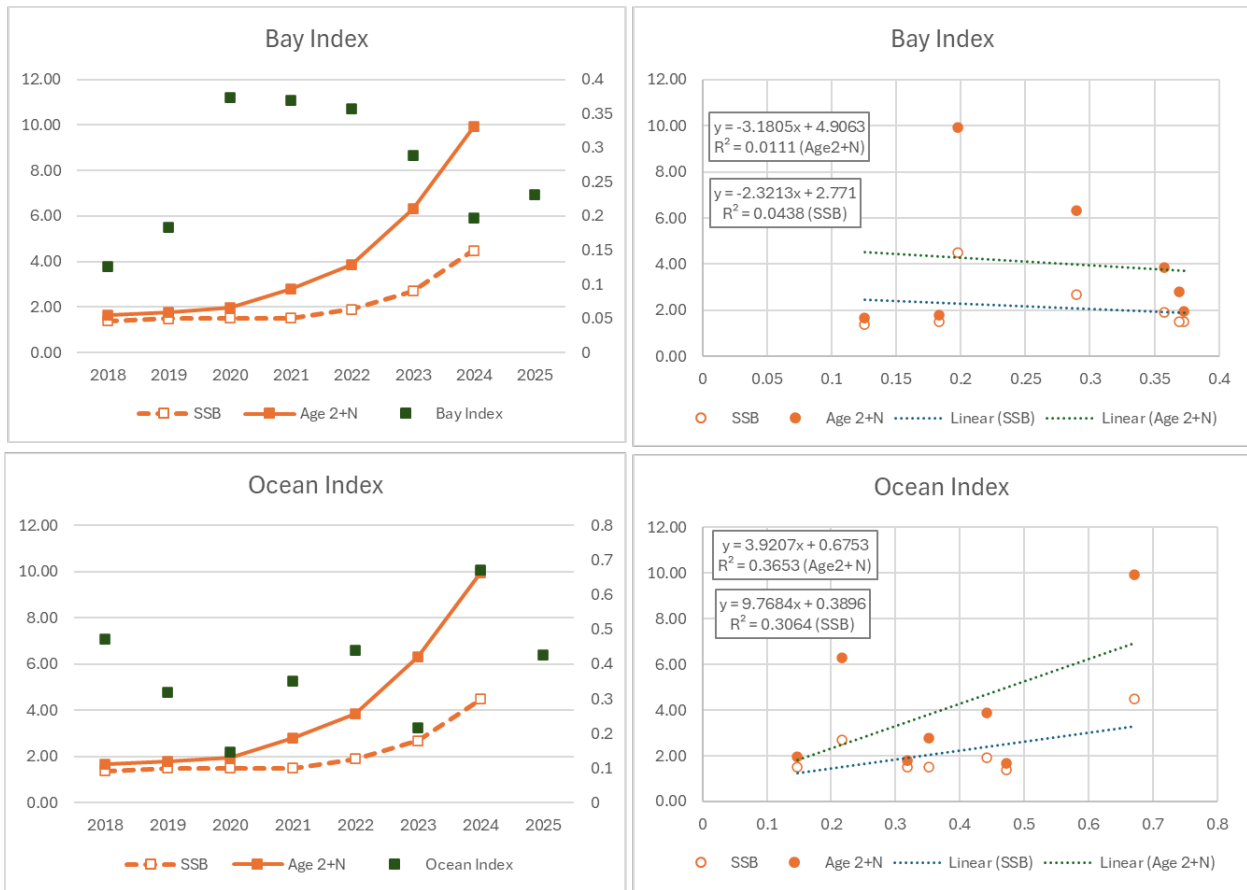


Figure 8. Comparison of the DE Ventless Trap Survey index with estimates of age-2+ abundance and SSB from the 2025 assessment update.