ASMFC Atlantic Menhaden Board Adopts Ecological Reference Points

Arlington, VA – The Atlantic Menhaden Management Board approved the use of ecological reference points (ERPs) in the management of Atlantic menhaden. By adopting ERPs, the Board will be accounting for the species’ role as an important forage fish. The 2020 Atlantic menhaden benchmark assessments, which were endorsed by an independent panel of fisheries scientists, used the Northwest Atlantic Coastal Shelf Model of Intermediate Complexity for Ecosystems (NWACS-MICE) in combination with the single-species model (Beaufort Assessment Model or BAM) to develop Atlantic menhaden ERPs by evaluating trade-offs between menhaden harvest and predator biomass.

“The Board took another important step in managing Atlantic menhaden in a broader ecosystem context,” stated Board Chair Spud Woodward of Georgia. “It’s the culmination of more than a decade of effort by state, federal, and academic scientists to develop ERPs that reflect menhaden’s role as a key food source for several fish species. These ERPs are not a silver bullet to resolve all our fisheries management issues, and the models on which they are based will continue to evolve. However, the use of ERPs for menhaden management will enhance the success of predator management by providing a more abundant forage base for rebuilding predator fish populations. It is important for us to keep those rebuilding efforts on track through the use of proven management tools such as controls on fishing mortality.”

In February and May, the Board tasked the ERP Work Group with additional analyses to explore the ERPs sensitivity to a range of ecosystem scenarios (different assumptions about fishing mortality for other key predator and prey species) and Atlantic herring biomass. These analyses suggested the original scenario (ERP target and threshold outlined below) most closely approximates short-term conditions for the ecosystem. As a result, the ERP Work Group recommended using the original scenario ERPs presented in the assessment report. Moving forward, the ERPs for Atlantic menhaden are:

**ERP target:** the maximum fishing mortality rate ($F$) on Atlantic menhaden that sustains Atlantic striped bass at their biomass target when striped bass are fished at their $F$ target

**ERP threshold:** the maximum $F$ on Atlantic menhaden that keeps Atlantic striped bass at their biomass threshold when striped bass are fished at their $F$ target.
Atlantic striped bass was the focal species for the ERP definitions because it was the most sensitive predator fish species to Atlantic menhaden harvest in the model, so an ERP target and threshold that sustained striped bass would likely provide sufficient forage for other predators under current ecosystem conditions. For the development of the ERPS, all other focal species in the model (bluefish, weakfish, spiny dogfish, and Atlantic herring) were assumed to be fished at 2017 levels.

In addition to adopting ERPs, the Board discussed setting fishery specifications for 2021-2022. In 2017, the Board set the total allowable catch (TAC) at 216,000 metric tons for 2018-2019, and then maintained that TAC for 2020 with the expectation that it would be set in future years using ERPs. With the adoption of ERPs, the Board tasked the Atlantic Menhaden Technical Committee to run a projection analysis to provide a variety of TAC scenarios and their risk of exceeding the ERP $F$ target to compare in setting specifications for 2021-2022. The Board will review the projection analysis at the Annual Meeting in October and then determine a TAC for 2021-2022. As stated in Amendment 3, if a TAC is not set at the Annual Meeting, the TAC from the previous year will be maintained.

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