



# Atlantic States Marine Fisheries Commission

## NEWS RELEASE

*Working towards healthy, self-sustaining populations of all Atlantic coast fish species, or successful restoration well in progress by the year 2015*

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### Updated Biological Reference Points for Atlantic Striped Bass Confirm Previously Released Stock Status

Alexandria, VA – The Atlantic Striped Bass Management Board approved new estimates of the biological reference points established in Amendment 6, as well as improved estimates of female spawning stock biomass for 1982-2006 (see accompanying Table 1 and Figures 1 & 2). This action was taken in response to recommendations of the 46<sup>th</sup> Stock Assessment Review Committee, which reviewed the 2007 striped bass stock assessment.

With these updates, the stock status of Atlantic striped bass remains not overfished and not experiencing overfishing. The new estimate of female spawning stock biomass (SSB) in 2006 (40,639 metric tons) is above the new threshold and target levels (30,000 mt and 37,500 mt, respectively). The 2006 estimate of fishing mortality (F) from the statistical catch at age model (0.31) is below the new threshold of 0.34. Retrospective estimates of F from the statistical catch at age (SCA) model, as well as tag-based estimates of F, indicate that the 2006 fishing mortality is likely below the target F rate, which remains at 0.30.

|           | Fishing Mortality Rate | Female Spawning Stock Biomass |
|-----------|------------------------|-------------------------------|
| Target    | 0.30                   | 37,500 metric tons            |
| Threshold | 0.34                   | 30,000 metric tons            |

In its review of the 2007 stock assessment, the Review Committee recommended that the Striped Bass Technical Committee reconsider the ratio of male to female fish used in the estimation of female SSB. The Review Committee also recommended that the Technical Committee re-estimate the fishing mortality threshold based on data from the new preferred assessment model (the SCA model), and that the female SSB target and threshold be linked to the new assessment. The estimates of these reference points for Amendment 6 were based on data from the 2001 virtual population analysis stock assessment. Implementing these changes to the biological reference points does not change their definitions, but rather updates them with new data and estimates of stock size.

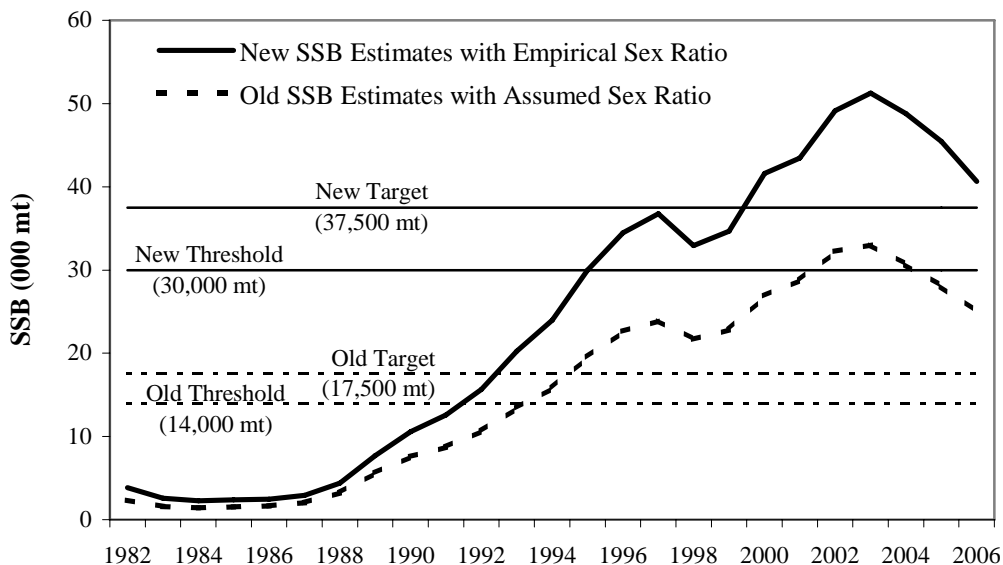
The Technical Committee undertook the recommended work. Based on biological sampling data, new estimates of the sex ratio at age were developed, resulting in the improved estimates of female SSB for 1982-2006. Included in this time series was a new estimate of female SSB in 1995 (29,985 mt), the year the Atlantic coast stock was declared restored, and the value upon which the management program female SSB threshold is based. Given that Amendment 6 set the female SSB target as 125 percent of the female SSB threshold, the Technical Committee recommended an updated female SSB threshold of 30,000 mt and an updated female SSB target of 37,500 mt.

The Atlantic States Marine Fisheries Commission was formed by the 15 Atlantic coastal states in 1942 for the promotion and protection of coastal fishery resources. The Commission serves as a deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and anadromous species.

The Review Committee's recommendation to update the F threshold meant re-estimating  $F_{MSY}$ , the fishing mortality rate that allows for maximum sustainable yield. Using the new estimates of female SSB and age-1 recruitment from the 2007 assessment, the Technical Committee adopted a model averaging approach to account for uncertainty in the stock-recruitment relationship. The resulting estimate of  $F_{MSY}$  was 0.34, which the Technical Committee recommended to the Board for use. The F target in Amendment 6 of 0.30 remains the same because it was not based specifically on estimates of stock size, but is based on the objective to maintain an age structure that provides adequate spawning potential to sustain long-term abundance of striped bass populations.

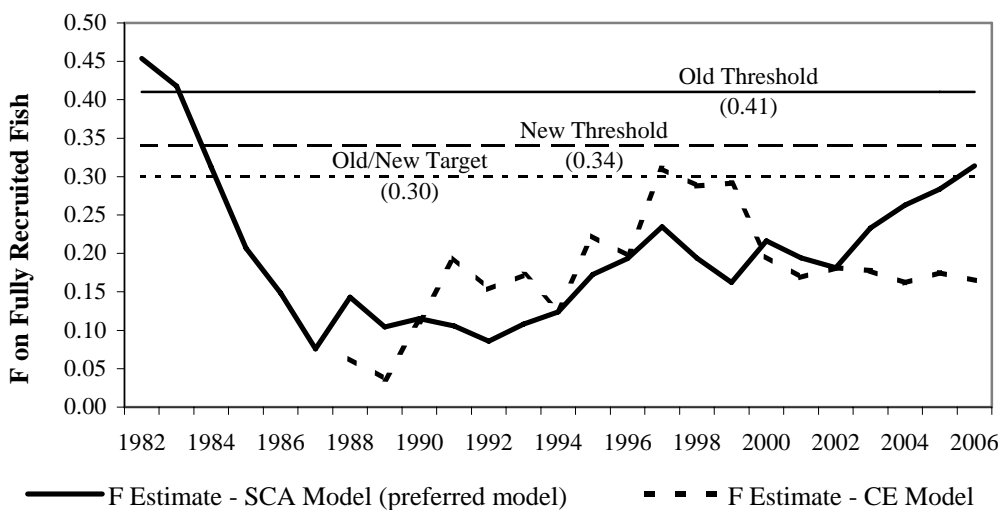
**Figure 1. Atlantic Striped Bass Female Spawning Stock Biomass Estimates and Biological Reference Points**

Amendment 6 defines the female SSB threshold as the 1995 level of female SSB, when the stock was declared restored, and the female SSB target as 125 percent of the female SSB threshold. The old female SSB threshold and target are based on data from the 2001 virtual population analysis, while the new female SSB threshold and target are based on data from the 2007 statistical catch at age (SCA) model, incorporating an empirical (based on data) sex ratio. Both sets of female SSB estimates are from the 2007 SCA model; however, the new set incorporates the same empirical sex ratio.



**Figure 2. Atlantic Striped Bass Fishing Mortality Estimates and Biological Reference Points**

Amendment 6 defines the F threshold as  $F_{MSY}$ , and the F target based on management objectives. The old F threshold is based on data from the 2001 virtual population analysis, while the new F threshold is based on data from the 2007 statistical catch at age (SCA) model. Estimates from the SCA model were preferred by the 46th Stock Assessment Review Committee for comparison to biological reference points. However, estimates from the tag-based catch equation (CE) model, as well as retrospective estimates of F from the SCA model, are used to indicate that the terminal year F estimate from the SCA model is likely overestimated and will decline below the F target with the addition of future years of data.



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