

**Gulf of Mexico Fishery Management Council
Scientific and Statistical Committee
Review of SEDAR 37 Update: West Florida Hogfish
May 31-June 1, 2018**

Mr. Dustin Addis presented a summary of the SEDAR 37 hogfish update assessment of the Gulf stock of hogfish. The assessment used the same life history and conversion factors as the SEDAR 37 assessment, and the Stock Synthesis 3 model configuration was the same except for changes made to correct for model warnings and parameter bounding issues. In addition, the steepness of the spawner-recruit curve was estimated at a slightly greater value (from 0.847 to 0.867).

The update assessment results indicated a higher total biomass estimate over time than the original benchmark assessment. The retrospective patterns within the assessment indicated that the results were highly influenced by the terminal years used, thus suggesting undesirable increased uncertainty about the results.

Following the presentation, the Committee passed the following motions.

Motion: The Committee recommends that the SEDAR 37 hogfish update assessment is considered the best scientific information available.

Motion carried unanimously.

Motion: The Committee considers the SEDAR 37 hogfish update assessment suitable for management advice.

Motion carried with one opposition.

Stock status estimates were presented using both the assessment calculated MSY and an MSY proxy of the yield at $F_{30\% SPR}$. The Committee felt that, due to uncertainty about the spawner-recruit relationship, the calculated MSY should not be used. The Committee decided to base its findings on the 30% SPR proxy.

Using an MSY proxy based on the yield at 30% SPR, the fishing mortality ratio of $F_{CURRENT}/F_{30\% SPR}$ was 0.51 indicating that overfishing was not occurring. With MSST set to 50% of the biomass at $F_{30\% SPR}$, the ratio of current (2016) spawning stock biomass to MSST ($SSB_{CURRENT}/MSST$) was 4.71, indicating that the stock was not overfished.

Motion: The Committee estimates that the Gulf hogfish stock is neither overfished nor currently experiencing overfishing.

Motion carried unanimously.

OFL and ABC projections through 2026 were provided. OFL was based on the yield from a probability distribution function (PDF) with a $P^* = 0.50$ and a Coefficient of Variation (CV) = 0.37 in keeping with the previous assessment. Due to increasing uncertainties with long-range projections, the SSC limited their OFL and ABC recommendations to three years.

Motion: The Committee recommends that for the years 2019 – 2021 the yield at that F 30% SPR using a P* of 0.5 applied to the OFL PDF for Gulf hogfish be the OFL per the table below.

Year	OFL (1,000s lbs ww)
2019	151.5
2020	163.7
2021	172.5

Motion carried unanimously.

ABC projections were initially provided based on the yield from a PDF with a $P^* = 0.40$ and a $CV = 0.37$, also in keeping with the previous assessment. However, due to the increased uncertainty resulting from the retrospective analysis, the Committee decided to set ABC based on the yield at a fishing mortality level equal to 75% of $F_{30\% SPR}$. The Committee passed the following motion.

Motion: The Committee recommends that ABC for the Gulf hogfish stock be set at the yield at $0.75 \times F_{30\% SPR}$ for the projection time period 2019-2021.

Year	ABC (1,000s lbs ww)
2019	129.5
2020	141.3
2021	150.4

Motion carried with one opposed and one abstention.

Committee members felt that, due to the uncertainties in the update assessment, as exemplified by the retrospective analysis, plus the fact that since the last benchmark assessment hogfish in the southeast have been divided into three stocks, with the Gulf hogfish now considered a separate stock, the next hogfish assessment should be a benchmark assessment.

Motion: The Committee recommends that by 2021 that a benchmark assessment for Gulf Hogfish be performed.

Motion carried 10-5 with one abstention.