**Gulf menhaden**

**Scientific Name**: Brevoortia patronus

**Species Name(s)**: Gulf menhaden

**Stock Identification**: Gulf of Mexico menhaden. *Brevoortia patronus* is considered one stock unit based on genetic studies and cohort analysis in the commercial catch. Some hybridization with yellowfin and Gulf menhaden is known to occur, but is likely small (Anderson and Karel 2007).

**Assessment**

**Strengths**
- Per the most recent updated assessment (2016), the stock is not overfished and overfishing is not occurring.
- Biomass is very high with fishing mortality very low.
- Several management measures are in place to protect juveniles and spawners.
- Managers have changed the fishery management plan to incorporate vulnerable input and to incorporate precautionary reference points and control rules.
- Along with Atlantic menhaden, this stock is under review for MSC certification. Results are expected later in 2018.

**Weaknesses**
- For catch sampling data, sampling only the last catch of the day may be an additional source of bias. Ageing bias and imprecision could be problematic.
- Effort controls (e.g. seasons & closed areas) rather than quotas are used to limit removals.
- Reference points do not account for menhaden’s role as a forage species under changing predator demand.
- Neither F at low biomass nor rebuilding time frames are set within the management plan, currently.
- Interactions with protected marine turtles and mammals probable, but minor when compared to other fisheries. Data on these potential interactions (at-sea observer data) has been collected, but is confidential.
- Bait landings remain a source of uncertainty, but are likely small compared to reduction landings.

**Scores**

**Management Quality**:  
- Managers Compliance: ≥ 8  
- Fishers Compliance: ≥ 6

**FIPS**
- No related FIPs

**MSC**
- U.S. Gulf of Mexico menhaden purse seine: MSC Full Assessment

**Recommendations**

**Retailers & Supply Chain**

- Ensure the data inputs to the stock assessment (e.g. abundance survey, catch sampling, age data, but fishery landings) are of sufficient quality (quantity, accuracy, precision, lack of bias, and timeliness) to support a high-quality stock assessment.
- Companies owning vessels in the Gulf menhaden fishery obtain and release the by-catch data from the government observer program (not releasable by the government because of the low number of vessels/companies observed). Engage with scientists and catchers to analyse and publish the scale and trends of ETP by-catch.
- Conduct outreach to the Gulf States Marine Fisheries Commission to encourage them to implement a precautionary annual quota based on scientific advice.
- Conduct outreach to the Gulf States Marine Fisheries Commission to encourage them to set biomass and fishing mortality targets that account for the ecosystem services provided by menhaden as prey for many species.