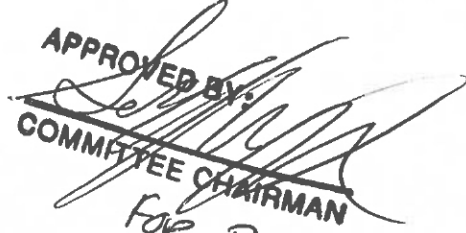


**S-FFMC MENHADEN ADVISORY COMMITTEE
MINUTES
October 17, 2022
San Antonio, TX**

APPROVED BY:

COMMITTEE CHAIRMAN
For Ray Mroch

Chairman **Moncrief** called the meeting to order at 1:00 p.m. with the following in attendance

Members

- Peter Himchak, Omega Protein, Tuckerton, NJ
- Jason Adriance, LDWF, New Orleans, LA
- Ben Landry, Ocean Fleet Services, Abbeville, LA
- Ray Mroch, NOAA Beaufort Lab, Beaufort, NC
- Trevor Moncrief, MDMR, Biloxi, MS
- Scott Herbert, Daybrook Fisheries, New Orleans, LA
- John Mareska, ADCNR/MRD, Dauphin Island, AL
- Francois Kuttel, Westbank Fishing, LLC, New Orleans, LA
- Chris Swanson, FWC, St. Petersburg, FL
- Carey Gelpi, TPWD, Port Arthur, TX

Others

- Kim de Mutsert, USM GCRL, Ocean Springs, MS
- Catherine Wilhelm, USM GCRL, Ocean Springs, MS
- Robert Leaf, USM GCRL, Ocean Springs, MS
- Kristian Rogers, DNV
- Matt Hill, MDMR, Biloxi, MS
- Shane Treadaway, Westbank Fishing, Empire, LA
- Jaclyn Higgins, TRCP, Washington D.C.
- Gary Decossas, NOAA/Observer Program, SEFSC, Miami, FL
- Rick Burris, MDMR, Biloxi, MS

Staff

- David Donaldson, GSMFC, Ocean Springs, MS
- Steve VanderKooy, GSMFC, Ocean Springs, MS
- Jeff Rester, GSMFC, Ocean Springs, MS
- James Ballard, GSMFC, Ocean Springs, MS
- Debbie McIntyre, GSMFC, Ocean Springs, MS

Adoption of Agenda

Moncrief reviewed the agenda with the group. On motion by **Adriance** and second by **Swanson**, the agenda was unanimously adopted.

Approval of Minutes

The minutes from the last meeting on March 15, 2022 were reviewed. **Kuttel** moved to accept the minutes as written and with a second by **Adriance**, the minutes were approved.

Review of 2022 Gulf Menhaden Season

Mroch (NOAA) presented a review of the 2022 season. There were very few weather days to keep the fleet off the water in 2022. Through September, **Mroch** reported that almost 454,000 mt were landed in the Gulf which was a 41.5% increase over 2021 and 9.1% over the 5-yr average. June and July landings

were the highest since 2016. The historic average landings for October are around 33,000 mt so the predicted final landings should be around 487,000 mt for the year which is a 26% increase from 2021 but right at the 5-yr average. A total of 30 steamers along with 5 run boats operated in the Gulf in 2022. Nominal effort was estimated at 239,000 vessel/ton/weeks through September which was an increase of 1.5% from the previous year. The final landings were 25% higher than the forecast provided by **Mroch** in March. The forecast is based on the previous year's effort and landings so it is not always accurate. **Mroch** will discuss more later on the agenda.

The Beaufort Lab has nearly completed the transition to using microscopes rather than the old Eberbach machine to age the port samples. In addition, the port samplers should begin using electronic reporting when processing the port samples coming from the plants in 2024.

Update on the Atlantic Menhaden Fishery

Mroch reported that Reedville is still in operation. Through September, the Atlantic landings for reduction were 84,598 mt which was a decrease of 14.5% from the previous year. The TAC remains at 194,000 mt. Seven vessels unloaded for reduction along with one Virginia snapper boat (bait). Few storms affected the Atlantic fishing this past year. Coastwide, there were a number of fishery closures at the usual times and no episodic event carryovers like there have been in other years.

The Atlantic assessment has been updated for single species. The update will be presented in the next month. **Himchak** noted that the update is still below the ecological reference point so fishing is at a very precautionary level.

Landry reported that the state of Virginia is exploring pushing fishing a little offshore but it is unclear what the amount is and when it might happen. It is in discussion in the legislature. There were a number of fish in Maine again and many of the New England states are opening fisheries now that fish are available and they may want more of the quota. **Landry** noted that there has been a petition from the ENGOs on the Atlantic to close fishing for reduction in Chesapeake Bay. It is not clear if that could actually happen. He will keep the MAC updated.

Report on Texas Cap for 2022

Gelpi (TPWD) reported that a total of 1.9M lbs had been landed against the 34M lb cap in Texas waters in 2022 which was 6% of the available catch.

Port Sample Acquisition and Processing in 2022 and 2023

VanderKooy reported that this year is better with sampling. The bailers are pulling the samplers and providing labels in most of the bags. The Commission includes travel for the samplers to go to the plants taking the transportation responsibility off the LDWF who helped bring samples from the plants in the past. We seem to be on pace for getting closer to the optimal number of samples. One of our current samplers is leaving so **Mroch** is checking on potential candidates for the upcoming season.

Mroch reported that his replacement at NOAA, **Sydney Alhale**, has been hired and she starts October 26th. **Mroch** will help her with the training of the port sampler and transition his responsibilities over as we approach next season.

Ecosystem Approach to Menhaden Management

Dr. Kim de Mutsert (USM) gave an overview of the two ecosystem-based models that have been developed in the Gulf related to menhaden using Ecopath, Ecosim, and Ecospace.

The Gulf-wide Ecopath model includes 78 functional groups with 12 commercial fleets and 4 recreational fleets. The model creates a foodweb of predators and prey in the ecosystem which is mass balanced and is a snapshot in time (1980). Using Ecosim, you can create the timeseries calibrations using abundance, catch, and fishing mortalities (1980-2016). The model also includes nutrient load from the Mississippi-Atchafalaya River basin. The predator diet matrix is derived from a review of the literature. Diet data is critical for these models and is a major need. The Gulf-wide model is useful to management for trophic interactions linking predator and prey biomass and the ecosystem effects of bycatch from all the fleets which includes reduction. Menhaden have low ecotrophic efficiency, in the model there is a lot of biomass of menhaden that is unaccounted for. Age-specific diet data would be important year-round as well as more bycatch detail.

The MAC discussed what type of data collection programs would need to be developed in the Gulf to accomplish an extensive diet analysis. Florida currently has the only dedicated effort at the state level but it would not be difficult to extend this kind of work to the other states. **Himchak** noted that there are a couple of projects being funded by the NSA to study eDNA which might be able to expand to diets once the organism libraries are built. SEAMAP already collects a number of species from various trophic groups and might be able to include stomach analyses if it was a priority and funding was available. **De Mutsert** suggested that a wide-ranging study covering year-round data collection is critical and would go a long way to inform any ecosystem-based models.

The northern Gulf model (NGOMEX) is an Ecospace model that was really focused on the effects of hypoxia on fish and fisheries but modified to look at menhaden in the area. The model is a snapshot of 2000 with 66 functional groups, four commercial fleets, and one recreational fleet. This was to look at different scenarios to look at hypoxia which is why the start year is 2000 and extends to 2016. It includes DO, temperature, salinity, and primary production. The response curves were derived from SEAMAP surveys which had matching environmental data. This allowed **De Mutsert** to generate species specific responses to changing water quality. The model fits well to the time series of biomass and the harvest and is split by ages 1, 2, and 3+. The usefulness for management is that the effects of environmental variables can be tied to biomass and distribution, there are indirect effects from trophic interactions, and the model includes the spatial dynamics of fishing and the influence of the environmental variables. For example, the model can map the shifts in spatial distribution of menhaden biomass when hypoxia is included in the model. Simulated reduction of nutrients from the Mississippi River outflow is also modeled and can show a positive response in menhaden with a slight reduction in nutrient loads which reduces hypoxia.

As with the Gulf-wide model, the NGOMEX requires age-specific predation and consumption which is lacking as well as environmental data from both inshore and offshore areas. These models would be informed with any additional bycatch work on the reduction fishery just because of the scale of the fishery. Small percentages of bycatch overall can be large quantities considering the amount of menhaden harvested. The Gulf-wide model showed that changing menhaden fishing effort influences menhaden predator biomass as a result of predator-prey interactions as well as changes in predator biomass caught as bycatch.

Pre-Season Forecast Historic Performance

Mroch stated an annual forecast has been provided for the past 50 years. He explained the model is simple using the previous year's catch and effort to predict subsequent seasons catches. **Mroch** will continue to provide the committee with forecasts prior to the beginning of each season even though the MAC may not formally meet in March.

Harvest Control Rule and Annual Index

The Committee received an update from **Dr. Robert Leaf** (USM) and his graduate student **Catherine Wilhelm**, on the Harvest Control Rule (HCR) and annual abundance indices. The HCR is a potential tool to restrict the fishery when there are detectable shifts in menhaden abundances in the Gulf which the industry can use in their MSC certification to adjust harvest levels based on the indices. **Wilhelm** explained the web portal she is developing for the HCR and how to use it as a proof of concept. They are trying to solicit input from industry and others as to what else would be helpful on the portal. This is for industry and state use right now and do not have updated data from the stock assessment. The states indicated that they will provide this information upon **Leaf's** request. **Leaf** suggested that maybe there could be a standing data request to contact the state reps prior to annual MAC meetings. **Wilhelm** also demonstrated how model adjustment is built in.

At this time, the Gulf menhaden reference points are based on historical average that we do not want to exceed and were used in the SEDAR and GDAR updates. **Dr. Schueller** had provided other reference point options that we could use and the MAC was beginning to explore in the stakeholder workshops in 2019 before COVID. The MAC and the states still need to determine reference points for management as well as goals and objectives. If the states agree to implementation an HCR, this portal could already be in place. The next SEDAR for Gulf Menhaden is scheduled for 2024 so time is of the essence.

In order to continue working on developing meaningful reference points, **Himchak** made the following motion:

The MAC requests approval to hold another facilitated workshop to develop the biological reference points for management to define overfishing and overfished status for the Gulf Menhaden stock.

Mareska seconded and the motion passed unanimously. Staff will begin working on identifying a potential facilitator and location and query the original workshop participants regarding dates. The workshop will be held sometime in the spring if possible.

Marine Stewardship Certification of Gulf Menhaden Updates

Gulf Certification - Himchak reminded that the Gulf Menhaden fishery was certified in 2018 and the industry is preparing for their second surveillance audit. There is a good chance that the assessment body may reach out to this group. Industry will provide them the information on the data portal and the harvest control rule. A continuous HCR is not necessary for certification but we need to determine an HCR based on scientific data that can be implemented when necessary. There are still discussions with LDWF or someone to do a bycatch study of the fishery. Finally, we really need to determine the short and long-term goals of the fishery but we did not really finish it at the stakeholder workshops. The group will continue to work on these.

NOAA Observer Steering Committee - Kuttel explained that this group has settled on having electronic monitoring on eight boats across the boats from the three plants. They have been running all year but have not gotten feedback on results of the study yet. It looks like there were some issues early with the monitoring but they are waiting to see how it has gone.

Election of Officers

The chair rotates to the Federal seat so until a replacement is trained, **Mroch** was elected as the MAC chair without objection.

Other Business

VanderKooy reminded the members to get their travel expense reports to Ali Wilhelm soon.

VanderKooy stated that webinars can be facilitated at any time in lieu of a March meeting. **Kuttel** reminded that forecast should be submitted by **Mroch** to the MAC prior to the season. **VanderKooy** can set up a conference call or webinar at any time if needed. As long as **Mroch** can send it out, the industry would be happy. **Mroch** will send out the forecast to the whole MAC in March.

Adjourn

With no further business to discuss, *on motion by **Adriance** and second by **Mroch**, the meeting was adjourned at 4:40 p.m.*