

**MOLLUSCAN SHELLFISH SUBCOMMITTEE MEETING
MINUTES
Monday, October 17, 2022
San Antonio, TX**

APPROVED BY:

COMMITTEE CHAIRMAN

On Monday, October 17, 2022, the Subcommittee Chair, **Evan Pettis**, called the meeting to order at approximately 1:15 p.m. The following were in attendance:

Members

Carolina Bourque, LDWF, Lafayette, LA
Christine Jensen, TPWD, Dickinson, TX
Erik Broussard, MDMR, Biloxi, MS
Evan Pettis, TPWD, Rockport, TX
Jason Rider, MDMR, Biloxi, MS
Portia Sapp, FDACS, Tallahassee, FL
Ryan Gandy, FL FWC, St. Petersburg, FL

Staff

Ali Wilhelm, GSMFC, Ocean Springs, MS
Charlie Robertson, GSMFC, Ocean Springs, MS

Others

Christopher Mace, TPWD, Corpus Christi, TX
Chris Nelson, Bon Secour Fisheries, Bon Secour, AL
Earl Melancon, LA Sea Grant, Thibodaux, LA
Emma Clarkson, TPWD, Corpus Christi, TX
Eric Saillant, USM – GCRL, Ocean Springs, MS
Jennifer Granneman, FL FWC, San Antonio, TX
Jim Brown, GSMFC, Apalachicola, FL
Joel Anderson, TPWD, Palacios, TX
Lauren Williams, The Nature Conservancy, TX
Scott Bannon, ADCNR, Dauphin Island, AL
Tony Reisinger, TX Sea Grant, Palacios, TX

Adoption of Agenda

Portia Sapp moved and it was seconded by Erik Broussard to adopt the agenda. Motion carried unanimously.

Approval of Minutes

Jason Rider moved and it was seconded by Portia Sapp to approve the minutes as written for the March 15, 2022 meeting. Motion carried unanimously.

State Oyster Updates

The meeting began with high level updates from each state focusing on the status of the oyster resource, on- and off-bottom harvest, and oyster restoration efforts. Each state participated in this session.

Texas

Evan Pettis explained past legislature measures to create a Texas Oyster Mariculture Program, which The Texas Parks and Wildlife Commission (TPWC) adopted rules for in May 2020. In the fall of that same year, TPWC adopted rules for the program and began accepting applications. They currently have permitted three oyster grow-out facilities and one oyster hatchery. The first harvest from the permitted sites was in April 2022. Additionally, there are three grow-out facilities and another hatchery pending approvals. Texas Sea Grant has applied for funding to establish an aquaculture park and would work with applicants to apply for permits and leases.

Commercial oyster landings in Texas have been variable over the last 20 years, fluctuating from as low as around 300,000 sacks to as high as over a million sacks harvested in a year. The 2022 oyster season had 428,438 sacks harvested, which is a significant downturn compared to the last two years. One factor that could be affecting landings totals is the number of active oyster vessels, which showed a positive correlation with landings. There is a moratorium on new oyster harvest licenses, but inactive licenses are being transferred to active oyster fishers.

HB51 requires dealers purchasing oysters harvested from Texas bays to return 30%, by volume, of the total quantity of oysters harvested during the previous license year. Since 2018, \$1,160,655 in fees have been collected and 43,094 cubic yards of cultch have been placed in Texas bays by oyster dealers. Funds collected as a result of this legislation were used to restore oyster habitat in Espiritu Santo Bay, where restoration activities were completed on October 1, 2022. Post-restoration monitoring of this site collected data that will be used to perform a cost-benefit analysis to inform future restoration strategies.

Texas Parks and Wildlife Division also applied for funding from NOAA's Coastal Habitat Restoration and Resilience Grants for Underserved Communities to establish ten restoration sites in the Aransas Bay system. Restoration sites will be between one to five acres and would seed surrounding oyster habitat.

Louisiana

Carolina Bourque began with some background information on the trends of historic oyster landings in Louisiana (LA). Following the 2019 opening of the Bonnet Carre Spillway, oyster landings in 2020 were the lowest ever on record in LA. In 2021, Hurricane Ida also affected a lot of the dealers and fishermen in the central and eastern regions of the state.

There was a large disparity in oyster landings between the private and public oyster reefs in 2021, with private oyster reefs accounting for 99.6% of oyster landings. To add even more context to this disparity, the public oyster grounds in LA consist of 1.7 million acres of water bottoms while the private leases account for about 400,000 acres of water bottoms.

Louisiana Department of Wildlife and Fisheries (LDWF) has developed the Oyster Strategic Plan to serve as a guide for LA public oyster resources and the oyster industry to strive for more productivity and a sustainable future. This is a living document with the following goals: increase oyster density, expand oyster resources in public oyster areas, expand oyster resource resilience, and provide resilience to the industry by offering options to expand operations into Alternative Oyster Aquaculture (AOC). The estimated cost to achieve this plan is about \$132 million dollars.

To date, LDWF has started traditional cultch planting and water bottom mapping, cultch planting with remote-set oysters, development of a network of spawning stock sanctuary reefs, expansion of

AOC, research and development, and expansion of hydrologic monitoring. They completed cultch plants in Sister Lake (200 acres; \$5.3M) and Drum Bay (two 100-acre sites; \$2.39M) Initial monitoring shows high recruitment and productivity on the Sister Lake cultch plant. Water bottom surveys have covered about 24,000 acres in Morgan Harbor and Calcasieu Lake to help determine future locations for cultch plants and brood reefs. They are producing hatchery spat-on-shell on recycled oyster shells to plant a couple reefs in areas of need, such as the West Karako Bay Artificial Reef. LDWF has completed construction of four 10-acre spawning sanctuary reefs to create off-bottom relief and create connectivity among public and private oyster areas.

LA Sea Grant was awarded a contract to conduct an AOC expansion program in LA. **Dr. Earl Melancon** explained that grants have been awarded to 16 farmers and six traditional oyster fishers. They've also provided grant funding for oyster nurseries, grow-outs, hatcheries, and a park for farmers to lease areas to grow oysters. The Cameron Parish Port was selected for a grant from the program for the establishment of a new 48-acre oyster park in the southern portion of Lake Calcasieu. Currently, there are nine applicants for this new oyster park. More information on LA's AOC grant program can be found by going to <https://www.laseafoodfuture.com/aoc>.

Partnering with other agencies LA has been able to expand their hydrologic monitoring program.

LDWF has partnered with University of LA at Lafayette to work on a project focusing on selective breeding oysters from populations known to survive extended freshwater events to develop a genetic line of low salinity tolerant oysters for use in future breeding programs.

Mississippi

Jason Rider explained that oyster resources in Mississippi (MS) have been decimated in recent years. Mississippi Department of Marine Resources (MDMR) has been working to restore and rebuild the local reefs through various projects, shifting between cultivating, re-establishing reefs, and cultch deployments. Their main goal is to rebuild and enhance oyster reef production and balance size class dynamics to re-establish sustainable public harvesting. Secondary goals are to provide ecosystem services, water quality improvements, and shoreline protection.

Current activities they've been engaged in include, off-bottom oyster aquaculture, sanitary surveys, investigation of point source pollution, water quality and harmful algae bloom analysis, and scoping of a remote oyster setting facility project. In 2021 and 2022, MDMR deployed over 117 cubic yards of remote set spat-on-shell cultch materials over five acres, which equates to almost 24 million spat on deployed materials at a cost of \$0.005 per oyster. They continue to cultivate oyster reefs using the R/V Conservationist and have cultivated approximately 160 acres of public oyster reefs in the Western MS Sound. Their reef assessment completed 70 one-minute dredge tows and 406 square meter diver samples. Reef assessment results show increases in abundance of size-class distribution of oysters since 2019; however, numbers of harvest-size oysters are still too low to support having an oyster season.

MDMR staff have also been investigating oyster recruitment and settlement patterns in the MS Sound and have been sampling nine sites on a monthly basis to identify peak seasons and locations for oyster spat settlement. They hope to use this information to improve the effectiveness of oyster restoration efforts.

Future efforts will continue to testing new aquaculture bag systems to consider new alternative

methods to grow oysters in aquaculture, and the oyster gardening program, which has 43 active participants.

Alabama

Scott Bannon stepped in to provide an update to the subcommittee since the Alabama (AL) representative was unable to attend. He explained that oyster landings in 2022 increased for the fourth year in a row, with just over five million meat pounds of oysters landed. Alabama Marine Resources Division (AMRD) continues to monitor oyster densities on public oyster reefs, having conducted a total of 187 SCUBA quadrat samples in 2022. The density of spat and sublegal oysters was substantially higher in 2022 than in the 2021 quadrat survey results. As of this report, the AL oyster season has been open for eleven working days and a total of 12,718 sacks have been harvested. They are averaging 1,156 sacks and 217 harvesters per day. AMRD will open reefs on the first four Saturdays of the season to provide opportunities for youth participation.

AMDR continues to use their oyster reef grid system to manage harvest on individual reef areas. This allows them to open and close reefs based on amount of harvest and ensures a more even distribution of harvest effort across productive reefs. Harvesters are able to see the grid system by using a web link to access dashboard on the smart phones.

Several projects have been funded through NOAA Restore to aid in the restoration of AL's public oyster reefs. They have completed high resolution side scan mapping of oyster reefs to determine location of live oyster reefs and other suitable bottoms for oyster reef restoration. AMRD is also conducting a series of studies to evaluate different methods of cultch deployment to compare deployment of cultch mounds against traditional broadcast methods. Preliminary results indicate that recruitment was higher on oyster shell cultch than on limestone cultch, and higher on the crests of the mounds than near the base of the mounds.

Florida

Ryan Gandy reported that the biggest production area in Florida (FL) is Apalachicola Bay. Most of the oyster harvesting effort has shifted further east towards the big bend area of the state, but those areas are still in decline. Apalachicola Bay is planned to open for harvest in 2025; however, monitoring efforts indicate no survival of oysters in areas outside of restoration areas with production almost exclusively on those sites. Restoration sites are about 300 acres each with about 300 cubic yards of cultch per acre, and only about 58 acres of restoration sites have oysters that could potentially be harvested.

FL plans to do experimental restoration with National Fish and Wildlife Foundation (NFWF) to evaluate different elevations (between six and 12 inches) and different cultch types. They intend to develop future restoration plans by hold workshops to discuss strategies with stakeholders and map areas to develop habitat suitability indexes based off of the results of their monitoring efforts. They are also working with TNC to develop a state-wide fisheries management plan, which could also be expanded to help look at restoration.

Portia Sapp mentioned that oyster aquaculture is growing and clam production is the highest since 2016. They have 760 leases with over 2,700 acres. Several shellfish projects are being supported through legislation, including oyster gardening and restoration of clam beds. Many south FL aquaculture farmers were impacted by Hurricane Ian and are still recovering.

Gulf of Mexico Oyster Genetics and Breeding Research Consortium

Eric Saillant updated the subcommittee on the Gulf of Mexico Genetics and Breeding Research Consortium, also referred to as the SALT project. The objective of this project is to assist industry and state agencies by developing an oyster breeding program to improve production and market value traits as directed by industry needs, and a germplasm repository for management of restoration programs and/or dissemination of genetic progress. Currently, the project is in its third year and they have begun measuring phenotypes, temperature and salinity tolerances of oysters. They are working to estimate genetic parameters, breed and grow out various genetic strains they've identified to this point in the project. To accomplish this, they mix equal numbers of fertilized embryos from each family of oysters. Traits are measured before genotyping and pedigree analysis are done, then they estimate breeding values and select parents for the next generation. A crossing design randomizes males and females from different locations for breeding.

Oysters were stocked on growout sites in April of 2021. Harvest took place at Alligator Harbor, Mobile Bay, Deer Island, and Grand Isle during October and early November that same year. This project will continue for several more years and updates will continue to be provided as the project unfolds.

Discussion of Harvest Closure Criteria and Methodology

Texas

Pettis mentioned that Texas plans to close three ecologically important, sensitive bays that have experienced increased harvest pressure. An initial proposal was tabled in March 2022, following opposition from commercial fishers. They recommended forming a work group representing different groups that provided public testimony at a meeting held in March. They subsequently formed an oyster workgroup that met several times to discuss management options. It was decided to close several bays to oyster harvest beginning in November.

TPWD continues to complete bathymetric surveys in priority bays and mapping oyster habitat and depth using sidescan sonar and single beam echosounders. They began surveying Aransas Bay this year and expect to complete the survey in 2024. The data will be made publicly available on their website and ArcGIS Online. They continue to use aerial imagery to map shallow oyster habitat.

Louisiana

Bourque explained LDWF manages oyster closures based on their Louisiana Oyster Fisheries Management Plan (2016). It outlines several factors to consider for a closure to happen in state waters. One factor they consider is whether biological sampling indicates the presence of a recent successful spat set in an area with a high probability of survival in the absence of fishing. They also consider whether harvest fraction exceeds fifty percent of available oyster resources in the area or just fifteen percent for Calcasieu Lake, harvest exceeds the threshold established by the shell budget model, if enforcement issues become unmanageable, or significant mortality reduced oyster stock size in excess of fifty percent of the original estimate stock size. They develop a table with stock estimates based on size-classes of oysters for each public oyster area that is used as a reference for the various closure elements described.

Mississippi

Rider said that MS has not had an oyster season in quite some time and remains closed based on there

being no significant oyster resources available for harvest on their public oyster harvest areas.

Alabama

Bannon referenced as he mentioned earlier in the meeting that AMRD closely monitors catch per unit effort (CPUE) and compares this to estimated thresholds based on their seasonal stock assessments. They use the new mobile application grid system to open and close different areas based on whether CPUE is stable or decreasing. If they notice effort increasing or total harvest decreasing in a particular area, they will close it and encourage fishers to move to an area open to harvest. This system has been effective in helping distribute effort evenly across the reef complexes in AL.

Florida

Gandy said FL has traditionally based oyster area closures on market oyster densities, but they are evaluating alternative protocols.

GOMA Oyster Community of Practice

Emma Clarkson chairs the Gulf of Mexico Alliance's (GOMA) Oyster Community of Practice (CoP) and presented an overview of the CoP's goals and objectives as it relates to the subcommittee's purview. She explained how other CoPs are structured and how many have been very successful, such as the Seagrass CoP.

The Oyster CoP was formed after GOMA held an oyster blueprint workshop on 2020 to identify oyster data needs in the Gulf, as well as an oyster data inventory workshop to prioritize the oyster data needs for incorporation into the Gulf of Mexico Open Data (GOMOD) platform. In 2021, they formed a steering committee and set a direction for future meetings. One of the focuses of the GOMA Oyster CoP is to tackle policy issues, such as protection from harvest and permitting. The CoP is also intended to be a space for information exchange and collaboration for oyster management, understanding and sharing habitat types to compare across regions, regulation and program updates, mapping data products and accessibility, and lessons learned from restoration and fisheries management.

Some of the next steps for the Oyster CoP include an upcoming oyster restoration "lessons learned" webinar to take place in early 2023, technical guidance webinar series, and policy summaries. The CoP recognizes their content is very similar to that of the GSMFC Molluscan Shellfish Subcommittee, and may overlap in certain places, but GOMA's focus is mainly on communication and collaboration.

Election of Officers

Pettis opened the discussion by outlining a few options for the subcommittee to consider, one of which was a rotational chair based on location of the annual meetings.

Jason Rider moved and it was seconded by Erik Broussard to elect Portia Sapp as Chair and Jason Herrmann as Vice-chair of the Molluscan Shellfish Subcommittee. Motion carried unanimously.

Other Business

With no other business to discuss, Ryan Gandy moved and it was seconded by Christine Jensen to adjourn the meeting at 5:00 p.m. Motion carried with no opposition.