

**TECHNICAL COORDINATING COMMITTEE
MINUTES
Tuesday, October 18, 2022**

On Tuesday, October 18, 2022, The Technical Coordinating Committee Chair, **Darin Topping**, called the meeting to order at approximately 8:30 a.m. The following were in attendance:

Members

Beverly Sauls, FL FWC/FWRI, St. Petersburg, FL
Christopher Mace, TPWD, Rockport, TX
Dan Ellinor, FL FWC, Tallahassee, FL
Darin Topping, TPWD, Rockport, TX
Glenn Constant, USFWS, Baton Rouge, LA
Jason Froeba, LDWF, Baton Rouge, LA
John Mareska, ADCNR/MRD, Dauphin Island, AL
Matt Hill, MDMR, Biloxi, MS
Nicole Beckham, ADCNR/MRD, Gulf Shores, AL
Rick Burris, MDMR, Biloxi, MS

Staff

Ali Wilhelm, GSMFC, Ocean Springs, MS
Angie Rabideau, GSMFC, Ocean Springs, MS
Charlie Robertson, GSMFC, Ocean Springs, MS
Dave Donaldson, GSMFC, Ocean Springs, MS
Deanna Valentine, GSMFC, Ocean Springs, MS
Donna Bellais, GSMFC, Ocean Springs, MS
Gregg Bray, GSMFC, Ocean Springs, MS
James Ballard, GSMFC, Ocean Springs, MS
Jeff Rester, GSMFC, Ocean Springs, MS
Joe Ferrer, GSMFC, Ocean Springs, MS
Steve VanderKooy, GSMFC, Ocean Springs, MS

Others

Adam Pollock, NOAA Fisheries, Pascagoula, MS
Alan Lowther, NOAA Fisheries/SEFSC, Miami, FL
Alexis Sabine, TX Sea Grant, Corpus Christi, TX
Andrew Peterson, Bluefin Data, New Orleans, LA
Carey Gelpi, TPWD, Port Arthur, TX
Chris Blankenship, ADCNR, Montgomery, AL
Chris Bradshaw, FL FWC, Charleston, SC
Corky Perrett, GSMFC-Commission (former), Poplarville, MS

Douglas Boyd, GSMFC-Commission, TX
Doug Myers, Chesapeake Bay Foundation, Annapolis, MD
Earl Melancon, LA Sea Grant, Baton Rouge, LA
Emma Clarkson, TPWD, Corpus Christi, TX
Eric Gigli, MDMR, Biloxi, MS
Eric Hoffmayer, NOAA Fisheries, Pascagoula, MS
Evan Pettis, TPWD, Corpus Christi, TX
Gary Decossas, NOAA/NMFS, Pascagoula, MS
Geoff White, ASMFC/ACCSP, Arlington, VA
James Swarthout, ADCNR/MRD, Gulf Shores, AL
Jason Adriance, LDWF, New Orleans, LA
Jason Rider, MDMR, Biloxi, MS
Jason Saucier, MDMR, Biloxi, MS
Jill Hendon, USM/GCRL, Ocean Springs, MS
Jim Brown, GSMFC-Commission, Apalachicola, FL
Joel Anderson, TPWD, Palacios, TX
Julian Magras, St. Thomas/St. John Fisherman's Association, St. Thomas, USVI
Justin Esslinger, TPWD, Rockport, TX
Kelley Kowal, TPWD, Port O'Connor, TX
Kristian Rogers, DNV, Austin, TX
Margaret Lamont, USGS, Gainesville, FL
Marie Head, ADCNR/MRD, Gulf Shores, AL
Michael Harden, LDWF, Baton Rouge, LA
Peter Himchak, Omega Protein Corporation, Tuckerton, NJ
Portia Sapp, FDACS, Tallahassee, FL
Scott Bannon, ADCNR/MRD, Dauphin Island, AL
Steve Brown, FL FWC, St. Petersburg, FL
Ted Switzer, FL FWC/FWRI, St. Petersburg, FL
Tershara Matthews, BOEM, New Orleans, LA
Tiffanie Cross, FL FWC/FWRI, St. Petersburg, FL
Tony Reisinger, TX Sea Grant, San Benito, TX
Travis Williams, MDMR, Biloxi, MS

Adoption of Agenda

Nicole Beckham moved and it was seconded by Rick Burris to adopt the agenda. Motion passed with no opposition.

Approval of Minutes

Jason Froeba moved and it was seconded by Dan Ellinor to approve the minutes as written for the March 16, 2022 meeting. Motion passed with no opposition.

General Session – Advanced Technologies in Marine Fisheries

The first half of the TCC meeting consisted of a general session on the most recent advances in technology that may be applied to marine fisheries. For more details on this general session, see the proceedings which can be found on the Commission's website under publications. These proceedings serve as the administrative record of this session.

Saildrone

Matt Womble gave an overview of some of the capabilities of Saildrone's Unscrewed Surface Vehicles (USVs) and highlighted some of their global operations. Their USVs are able to overcome spatial and temporal limitations that traditional ocean-monitoring assets face by using wind and solar energy. This allows USVs to complete year-round missions covering tens of thousands of nautical miles without returning to port for maintenance or fuel. Their drones are capable of completing missions that focus on regulatory and enforcement monitoring (e.g. surveillance, intelligence, reconnaissance), ocean mapping (e.g. single and multi-beam bathymetry, telecommunications, and oceanography), and ocean data collection. Various sizes of USVs, ranging from 23 to 72 feet long, are able to serve different roles depending on mission objectives, and perform well in harsh ocean conditions

Life History Investigative Tools for Gulf Sturgeon

Meg Lamont introduced the presentation, and explained instead of focusing specifically on Gulf Sturgeon, it focused on the broader topic of marine animal telemetry, sensors and analyses. **Mike Randall** outlined the various decision factors that investigators consider when determining which type of technology may be best suited to help evaluate the specific question(s) being asked by investigators. New technologies offer many advantages over past technologies, such as automation, around-the-clock detections, reduced effort, high data intensity, less data gaps, and most are smaller, cheaper, and faster. Machine learning and network analysis are some of the techniques used to synthesize the different types of data provided by different technologies. Future technologies will continue to advance and provide new pathways to collect various types of data.

Chesapeake Bay Foundation Oyster Monitoring Technology Challenge

Doug Myers explained the Chesapeake Bay Foundation's (CBF) primary focus has been oyster restoration using spat on shell. Past monitoring efforts have been conducted using destructive sampling techniques that could only cover small areas of reef and required lots of resources. In Maryland, they've developed a technique called "clearwater box," which uses distilled water as a medium, that divers use along transects to collect photographic data from the reefs. This technique produces clear images that are proportional and allow enumeration of live oysters. Images are used to "train" computers to detect oysters in photographs and grade reefs on a zero-to-three scale to classify the health of oyster reefs. Hydrophones were also deployed to record spectrographs over various categories of reefs to work in conjunction with acoustics and imagery to identify, locate, and categorize oyster reefs. A team from the CBF and engineers at Northrup Grumman developed a unique partnership combining the powers of science and engineering to develop a system to integrate all of these technologies. Once the project is complete, the team hopes it can be applied in other regions of the U.S. to improve monitoring efforts for oyster restoration areas across the country.

Mapping and Remote Sensing for Oysters in Texas

Emma Clarkson began by describing the need to identify changes in oyster habitats, and their extents for resource management and restoration purposes. In Texas, oyster habitat is exclusively in shallow bays with turbid waters that present challenges to the use of traditional sonar used to map bottom substrates. The two approaches for mapping oyster habitat are the use of scientific sonar for system-wide surveys, and recreational sonar that can be used for rapid assessments. Knowing how to properly use the two types of sonar can enable practitioners to effectively use sonar for oyster restoration. Oyster restoration sites can often be identified using recreational sonar equipment (e.g. Humminbird or Garmin), which is usually lower cost than other sonar, and can easily fit most vessels to be rapidly deployed. Post-restoration verification can also be assessed using echosounder and multibeam sonar to measure the accuracy and placement of materials according to the design plans. Texas Parks and

Wildlife Division not only uses sonar technology for oyster restoration, but also for producing system-wide benthic maps of oyster habitat along the Texas coast. The data and maps they produce from these efforts are hosted on ArcGIS online so they can be easily accessed by the public (<https://tpwd.texas.gov/landwater/water/habitats/coastal-fisheries-habitat-assessment-team/>).

Continuous Video with AI to Monitor Recreational Fisheries

Tiffany Cross provided an overview of the recreational fishery in Florida, including their current monitoring methods and how they've begun to test using camera-based methods to integrate machine learning and artificial intelligence (AI) into their future monitoring methods. The majority of anglers and trips in Florida are on board private boats, which makes it difficult to monitor given the various challenges (e.g. pulse fisheries, high effort, high spatio-temporal variability, and large areas) they must consider. Using a network of cameras that can be used to monitor recreational fishing effort that is reviewed by humans and uses machine learning is one way these surveys could be improved in the future. Florida decided to develop a pilot study to test the feasibility of using AI to continuously monitor recreational boating activity along Florida's Atlantic coast. Despite the numerous challenges that presented themselves during the first year, the iterative processes required to train and develop the machine learning algorithms proved to be mostly successful in detecting, tracking, and counting recreational fishing vessels.

Development of Genomic Tools for Genetic Management of the Tripletail

Eric Saillant highlighted the fact that Tripletail are typically found in warm waters floating in structures in the Gulf of Mexico. They are an important recreational species in the Gulf and are managed by a minimum catch size and bag limits. The objectives of his study are to develop genomic resources and survey wild Tripletail populations in the U.S. and abroad to assess stock structures in U.S. waters and their connectivity with other stocks around the world. Genetic analysis produced results showing genetic distance between Tripletail sampled in Peru, Brazil, and Australia. Fish from these regions of the world were genetically isolated from U.S. populations.

SEFSC Shrimp Bycatch Survey

Gary Decossas gave a general overview of the objectives of the shrimp bycatch survey, the design of the vessel selection process, bycatch characterization protocols, and how to obtain access to the summarized data. The Shrimp Trawl Bycatch Observer Program's objective is to refine catch rate estimates of finfish and shrimp by area and season for use in stock assessments (e.g. SEDARs), and evaluate bycatch reduction devices. The survey is done on an annual basis and selection is done randomly based on the previous year's landings and effort. It covers approximately two percent of annual directed effort. He outlined the sampling process and how species are identified through the various surveys that are conducted in an attempt to respond to questions from the TCC regarding how *Cynoscion* spp. are identified and accounted for through this survey. A large portion of the bycatch in the Gulf are finfish and one of the subcategories is *Cynoscion*, which doesn't differentiate between spotted sea trout and other species in that genus. The concern was raised from the states that there may be a large number of spotted sea trout being caught as bycatch in the Gulf, which could have implications on state stock assessments for this species, and this survey may be missing the opportunity to accurately capture that data. **Decossas** was not able to address this question and a follow up may be required. GSMFC staff (Gregg Bray and Charlie Robertson) will coordinate with the states and NOAA to follow up on this issue.

DWH Hotspots Mapping Initiative Update

Brett Falterman highlighted the goals of the Deepwater Horizon (DWH) Hotspots Mapping

Initiative. This is a five-year voluntary project managed by the NFWF and NOAA to evaluate the feasibility of fisheries hotspot communication networks to improve fishing in and around the Gulf of Mexico, and identify data and technology requirements for successful implementation of hotspot mapping and communication networks. Using hotspots mapping will improve commercial and recreational fishing experiences, create potential marketing or certification opportunities, and restore natural resources damaged by the DWH oil spill by allowing more fish to grow and reproduce. Currently, their team is at the stage of initiative where they are researching and identifying focal fisheries, regions, fleets, and/or ports that would benefit from bycatch hotspot communication networks. For more project information, please go to <https://www.nfwf.org/programs/bycatch-hotspots-initiative>.

BOEM Gulf of Mexico Renewable Wind Energy Update

Tershara Matthews provided some background information and updates on renewable wind energy in the Gulf of Mexico. The Bureau of Ocean Energy Management (BOEM) is in the area identification phase of the wind energy development process and is conducting an environmental review, which is the first of four major stages over many years. The environmental review included the entire call for information area. Major comments received and incorporated into the review, included buffers for migratory birds and menhaden, buffers for Rice's Whale, and exclusions of high-moderate and high shrimping areas. Companies have submitted areas of interest to BOEM and have been mapped. All of the requests for areas of interest are for jacket-type structures to capture wind energy. BOEM has been working closely with NOAA to use the ocean planning model to weight locations relative to each other based on specified criteria arranged in data layers. Criteria used to weight and map areas included exclusion and buffer areas suggested in comments received during the comment period.

SuRF Updates

Steve VanderKooy gave a brief update on state-by-state IJF SuRF projects. He presented a table showing FY2023 project by state agency, project name, project amount, and total dollar amount by state.

John Mareska took the opportunity to discuss the Red Drum profile. He explained that in the red drum stock in the Gulf is managed as one stock, separate from the Atlantic stock. States managed to an escapement rate while federal waters were closed in 1987 and have not been opened since. During the 2016 SEDAR, it was determined no data was available to assess offshore red drum populations, so the stock status is not defined. There remains a need for data, including routine fishery independent surveys, distribution and migration, reproduction, and habitat.

Review and Approval of Onboarding Materials for New TCC Members

Charlie Robertson discussed the Commission's current procedures for newly appointed incoming members of the TCC and asked current members what type of information they would like to provide for future members. **In addition to the suggested materials (i.e. welcome letter, subcommittee SOP's, most recent state reports, minutes from most recent two meetings, and committee listings), the Committee directed TCC staff to provide new members with the committee listing with head shots, history and flowchart of TCC and its Subcommittees, and a link to Robert's Rules of Order.**

Subcommittee Reports

Artificial Reef

James Ballard reported the subcommittee has not met since the last time TCC met but they've

reached out to the Atlantic States Marine Fisheries Commission (ASMFC) to discuss beginning to hold joint meetings with them. ASMFC will reach out when they're ready to begin meeting again. The Gulf Subcommittee will be holding a meeting in Gulf Shores, Alabama on November 10th, where they plan to discuss permanently adding the Artificial Reef Subcommittee back into the TCC so they can consistently meet once a year at GSMFC's annual meeting.

Data Management

Steve Brown outlined discussions from the subcommittee regarding updates on the progress of development for VESL. Bluefin Data recently completed several system improvements focusing on how data gets into and out of the VESL system, customizing data collection forms, and developing data export processes. States expressed frustration with the speed of development progress. **The Committee directed FIN staff to organize coordinated monthly calls between Bluefin, state, and federal partners, which could be developed to potentially improve the development process and improve understanding of different partners' needs.**

They also discussed progress on current efforts to assess the accuracy of commercial conversion factors for several reef fish species. Most states are in the process of obtaining fish samples but some states expressed the need for additional time to collect samples in 2023. Extending grants could be done with proper justification from grantees. It is expected the project will be completed and a final report developed late 2023.

The GulfFIN Recreational Technical Workgroup has been working on developing a process for warehousing state recreational survey data to allow NOAA Fisheries to access data in one location and make obtaining the data easier. States are coordinating on this process with the long-term goal to create a standardized database for warehousing datasets and discussing the desire to create tools for public to query landings estimates.

GSMFC is preparing to move all Oracle databases from a local server to an Oracle Cloud service in early 2023, which will cause a temporary loss of access but partners will be informed well in advance.

States provided feedback on commercial landings data from 2019, 2020, and 2021. A few coding errors were identified and states will make necessary corrections on their end and the data will be submitted to GSMFC for loading into GulfFIN DMS.

Molluscan Shellfish

Evan Pettis reported the subcommittee members provided oyster resource updates across the Gulf including trends in landings, aquaculture developments, and restoration efforts. Oyster landings in the Gulf have generally been highly variable over time, driven by storm and freshwater inflow events. In general, the status of the oyster resources in Gulf states is mainly declining or recovering. Alabama is the only state reporting increased landings for several years in a row now.

Several states are working to increase their capacity for off-bottom aquaculture and investing in large aquaculture parks to support oyster fishers. State-sponsored training for off-bottom aquaculture continues to be successful in assisting entry into the fishery.

Various oyster restoration projects are assessing the benefits of using different cultch sizes, different vertical reliefs, spat-on-shell deployments, remote setting of spat, timing restoration construction to

maximize recruitment, and establishing sanctuary reefs. Multiple states are compiling environmental and bathymetric data to establish restoration suitability indices.

Members heard presentations on 1) a project to assist industry and states to improve oyster production through genetic breeding of oysters tolerant of extreme conditions, and 2) a presentation about Gulf of Mexico Alliance's Oyster Community of Practice.

States representatives also reviewed criteria and methodologies in each state for managing oyster harvest closures. Louisiana, Mississippi, and Alabama set quotas/thresholds based on seasonal stock assessments and closing areas based on frequent harvest reports and other monitoring data. Texas conducts intensive targeted dredge sampling prior to each season and intermittently during the season upon indication of overharvest. Florida has traditionally based closures on market oyster densities, but is evaluating alternative protocols. The spatial scales of harvest closures vary by state, ranging from individual reefs to large health department monitoring areas.

Portia Sapp was elected to serve as Chair of the Molluscan Shellfish Subcommittee and Jason Herrmann as Vice-chair.

SEAMAP

Ted Switzer outlined how the subcommittee concluded that indices of abundance from the vertical line survey were not suitable for use in the assessment and the survey should be discontinued in 2023. Remaining funds not spent as a result of discontinuing the survey could be used to support state participating in reef fish sampling and habitat mapping.

Concerns were also raised about trawls encountering areas where the nets become filled with mud and sand during routine trawl sampling. It was decided that an operation code specific for tows that encounter mud will be developed to better track these uncommon events.

The subcommittee discussed distribution of SEAMAP data to researchers and the public. Despite concerns regarding information contained in the database that doesn't conform to SEAMAP survey standards, it was decided to distribute all of the data with the inclusion of a SEAMAP trawl only database.

Ted Switzer was elected to serve as Chair of the SEAMAP Subcommittee and Jill Hendon as Vice-chair.

During the SEAMAP meeting in March 2022, a resolution in honor of Tommy Van Devender was drafted and a motion was made to accept the resolution as written and forward it to the TCC for their approval.

MOTION: TCC moves to approve the resolution for Tommy Van Devender and move it to the full Commission for their approval.

Crab

Jason Saucier said the subcommittee received updates on state crab monitoring through SuRF funding. Florida is using the funding for fishery-dependent monitoring data on crabs and Mississippi is using it to enhance fishery-independent data.

The group also discussed status of the crab fishery and the effectiveness of current approaches to management. Each state provided some rough index of abundance (IOA) of the last several years. The group agreed to hold conference calls over the next several months to look at the original data sets and models, and determine a way to continue those datasets for comparison. If trends are able to be explored, it may be time to revise the last Blue Crab FMP as a Management profile and potentially conduct another Gulf-wide assessment through the Gulf Data Assessment and Review program. This will be determined after updates to the IOAs have been completed.

Harriet Perry prepared a chronology of blue crab research in the Gulf and explained that early on leading crab biologists determined that climate was likely a driving factor in the region. They predicted sustainability in the blue crab population may not be possible over the long term. It was suggested if the populations cannot be recovered with effort management, we may need to assume the fishery exists in a new carrying capacity which is lower than the historic levels.

It was also discussed to update the state specific tables of the various requirements for licenses and bycatch reduction devices for the crab fishery. There is no place to easily reference this information and it may be helpful to have a single source for this information.

Jason Saucier was elected to serve as Chair of the Crab Subcommittee.

State/Federal Highlights

Representatives from each state took turns providing high-level highlights from their respective states that took place since the last meeting.

Darin Topping stated the full reports were provided by GSMFC staff in the pre-meeting materials for the TCC and others to reference for more information.

Election of Officers

A brief discussion took place regarding how to handle election of officers moving forward since future meetings will only be held once a year. Typically, elections are held each year allowing elected officers to hold their chair for two meetings. To maintain continuity in the rotation of officers and allow them to continue holding their chairs for two meetings, it was suggested that elections be held every other year from this meeting forward and maintain the rotation.

MOTION: John Mareska moved and it was seconded by Dan Ellinor that election of officers for the TCC be held on a two-year term and rotate east to west around the Gulf. Motion passed with no opposition.

MOTION: John Mareska moved and it was seconded by Dan Ellinor that Beverly Sauls serve as Chair of the TCC. Motion passed with no opposition.

MOTION: John Mareska moved and it was seconded by Beverly Sauls that Nicole Beckham serve as Vice-chair of the TCC. Motion passed with no opposition.

Other Business

No additional topics were discussed under this section of the agenda.

With no other business to discuss, Chris Mace moved and it was seconded by Rick Burris to adjourn the meeting at approximately 5:00 p.m. Motion passed with no opposition.